THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato
Research Commons

http://researchcommons.waikato.ac.nz/

Research Commons at the University of Waikato

Copyright Statement:

The digital copy of this thesis is protected by the Copyright Act 1994 (New Zealand).

The thesis may be consulted by you, provided you comply with the provisions of the Act and the following conditions of use:

- Any use you make of these documents or images must be for research or private study purposes only, and you may not make them available to any other person.
- Authors control the copyright of their thesis. You will recognise the author's right to be identified as the author of the thesis, and due acknowledgement will be made to the author where appropriate.
- You will obtain the author's permission before publishing any material from the thesis.

Mental Health of Transgender People in Aotearoa/New Zealand: Inequities, Minority Stress, and Protective Factors

A thesis

submitted in fulfilment

of the requirements for the degree

of

Doctor of Philosophy in Psychology

at

The University of Waikato

by

TAN Kar Hou (Kyle)

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

2021

Abstract

In 2018, the Counting Ourselves: Aotearoa/New Zealand Trans and Non-Binary Health Survey recruited a total of 1,178 transgender people aged 14 or older ($M_{age} = 29.5$) who lived in Aotearoa/New Zealand. This comprehensive survey included mental health measures from Aotearoa/New Zealand population-based surveys, as well as questions specific to experiences of being a transgender person, which were either adopted from overseas transgender surveys or developed in consultation with the project's community advisory group. The study recruited participants using various recruitment techniques, such as advertising on social media (e.g., Facebook), making connections with transgender community organisations, and reaching out to the network of academic researchers and health professionals working in the field of transgender health.

This thesis comprises two review studies and three empirical studies that report findings from the Counting Ourselves survey. Informed by the health equity perspective of LGBTQ-affirmative psychology, these studies fill in the literature gap related to transgender people in Aotearoa/New Zealand by (1) critically reviewing existing literature on Gender minority stress theory, and putting forward a framework that aligns with the understanding of cisgenderism as a marginalising prejudice for transgender people; (2) drawing on existing transgender research in Aotearoa/New Zealand to provide an overview of the social determinants of mental health for transgender people in Aotearoa/New Zealand; (3) examining the extent of mental health inequities affecting transgender people relative to the Aotearoa/New Zealand general population across all age groups; (4) exploring the predictive power of transgender-specific enacted stigma and protective factors on mental health outcomes of transgender people; and (5) using an inductive thematic analysis to analyse qualitative comments from an open-ended question to understand the nuances of mental health indicators affecting transgender people.

Findings from empirical studies noted large inequities in mental health between transgender people and the Aotearoa/New Zealand general population, and the differences were especially prominent for those in younger age groups. Enacted stigma or overt experiences of gender minority stress (e.g., discrimination, harassment, and violence experienced for being transgender) were associated with elevated rates of mental health problems, while protective factors such as support and connection from friends, family members, neighbourhood, and transgender communities were associated with better mental health. Besides gender minority stress experiences, qualitative analysis revealed other mental health determinants that were important for transgender people, such as the ability to affirm their gender, equitable access to gender-affirming care and mental healthcare services, and support from families and the wider community.

Overall, this thesis addresses important literature gaps by providing insight into the associations of enacted stigma and protective factors with mental health inequities among transgender people in Aotearoa/New Zealand. The reported findings have crucial public and healthcare implications, which include the need to promote anti-discriminatory practices against transgender people and trans-cultural competency in healthcare settings. Furthermore, this thesis evidenced a need to move beyond pathologising approach that views transgender people as “deficit” when understanding their mental health experiences. Instead, this thesis highlights the importance of examining enacted stigma related to cisgenderism and social determinants of mental health for transgender people.

Acknowledgements

A journey of a thousand miles begins with a single step (Lao Tzu)

千里之行，始於足下(老子)

I would first like to sincerely thank my chief supervisor, Dr Jaimie Veale. Jaimie is not just the advisor of this research, but also a mentor of mine. Jaimie has offered a lot of her wisdom and guidance to help shape me into a qualified researcher, and I am blessed that I have the opportunity to learn from her. My gratitude also extends to both Associate Professor Sonja Ellis and Dr Johanna Schmidt as my secondary supervisors for their support, advice, and contribution throughout this research. I am thankful for Sonja's remarkable level of insight and experience, and Johanna's eye for detail and editing prowess. Coming from different disciplines, the knowledge that Jaimie, Sonja, and Johanna brought to the supervision panel complemented each other really well and the three of them made up an amazing supervisory team.

My appreciation also goes out to Associate Professor Gareth Treharne and Jack Byrne for their contributions in two of my studies, respectively. Gareth is a great asset to have for his impressive theoretical knowledge and Jack's strong activist background has helped to strengthen the implications of this research. I am also grateful for the efforts contributed by the Counting Ourselves team members including Jaimie, Jack, Ryan Bentham, Sam Guy, Tāwhanga Nopera, and Ashe Yee, in multiple phases of the research process from survey design, data collection, to data analysis. Without their involvements, this research journey would not have been this smooth. I would also like to thank the University of Waikato for the doctoral scholarship award, and staff members in School of Psychology, School of Graduate Research, and Centre for Tertiary Teaching and Learning for their supports throughout the many years I have spent at this university.

Special recognition to my partner, Win Chanpiwat, who I know I can count on for every life circumstance. Win has always been there for me when I needed motivation to stay focused on my writing or someone to rant about my exhausting day; I know I could not have asked for a better partner to share my life with. For my parents who I have been trying to reconcile, I hope me reaching this far has made you proud. Extended thanks to my sister, Kar Yow, who has been a great mediator between my parents and I and shown much understandings in my life choices. I am also thankful to my friends in different parts of the world such as Alex Wee, Allen Mok, Frank Wang, Hoi Chau, Kar Wai, Kin Wei, Mabel Sim, Wendell Wang, Zien Wei, and Zhun Chieh who supported my decision to begin a PhD and my fellow PhD peers such as Amy Yong, Andrew Saw, Juliana Brown, Poh Thin, and Rathee Siva who offered many essential tips for me to feel confident in writing and gave me much encouragement since I embarked on the research journey. Finally, I would like to thank Hilary van Uden for proofreading and offering many valuable advices in perfecting the unpublished chapters.

It takes a lot of courage for me, as an international student from Malaysia, to undertake a doctoral study in Aotearoa/New Zealand. While the PhD journey has not been entirely smooth sailing, it is one of the most fruitful and satisfying things that I have done in my life. PhD is, undoubtedly, a path less taken by rainbow people from where I come from, due to the immense amounts of discrimination and oppression of a largely heterosexist and cisgenderist society that hinder us from pursuing our aspirations. I would like to dedicate this thesis to all my rainbow peers, including allies of the rainbow communities, who have advocated for equal rights and health equity at grassroots level. May my journey, that once only begins with a single step, be an inspiration for some of you to travel a thousand miles.

Ngā mihi

TAN Kar Hou (Kyle)

Contents

Abstract ii

Acknowledgements iv

List of Figures ix

List of Tables ix

Chapter 1: Introduction 1

1.1 Chapter Overview 1

1.2 Terminology 1

1.3 Demography of Transgender People in New Zealand 4

1.4 Thesis Journey 6

1.4.1 Changes in Terminology 6

1.4.2 Research Position 8

1.5 Cisgenderism and Gender Minority Stress 10

1.6 Pathologisation of Transgender People 13

1.7 Literature Review 17

1.7.1 North America 18

1.7.2 Europe 22

1.7.3 Asia 23

1.7.4 Australasia 24

1.7.5 Summary of Literature Review and Gaps 27

1.8 Research Objectives and Questions 31

1.9 Thesis Structure 34

Chapter 2: Gender Minority Stress: A Critical Review 37

2.1 Preface 37

Chapter 3: Mental Health of Trans and Gender Diverse People in Aotearoa/New Zealand: A Review of the Social Determinants of Inequities 58

3.1 Preface 58

3.2. Summary of Chapters 2 and 3 69

Chapter 4: Study Design and Methods 70

4.1 Chapter Overview 70

4.2 Philosophy 70

4.2.1 Positivism 70

4.2.2 Critical Realism 71

4.3 The Counting Ourselves Survey 73

4.3.1 Guiding Framework: Te Pae Māhutonga 73

4.3.2 Survey Design 77

4.3.3 Recruitment 79

4.3.4 Participants' Demographics 81

4.4 Conclusion 83

Chapter 5: Mental Health Inequities Among Transgender People in Aotearoa/New Zealand: Findings from the Counting Ourselves Survey 84

5.1 Preface 84

5.2 Results and Discussion of General Mental Health 118

Chapter 6: Enacted Stigma Experiences and Protective Factors are Strongly Associated with Mental Health Outcomes of Transgender People in Aotearoa/New Zealand 125

6.1 Preface 125

Chapter 7: "It's How the World Around You Treats You for Being Trans": Mental Health and Wellbeing of Transgender People in Aotearoa New Zealand 143

7.1 Preface 143

Chapter 8: Conclusion 171

8.1 Chapter Overview 171

8.2 Summary of Research 171

8.3 Research Question 1 172

8.4 Research Question 2 174

8.5 Research Question 3 176

8.6 Research Question 4 177

8.7 Significance of the Current Thesis 178

8.7.1 Contribution to Literature and Theory..179

8.7.2 Contribution to Applied Settings 182

8.8 Strengths and Limitations..188

8.9 Future Directions..190

8.10 Final Conclusion 195

References (Chapters 1, 4, and 8) 198

Appendices..225

Appendix 1. Data Analysis 225

Appendix 2: Counting Ourselves Survey Items..230

Appendix 3. Ethics Approval Letter 240

Appendix 4. Examples of Illustrated Images alongside Quotes Used to Recruit Participants 242

Appendix 5. A Flyer Used to Promote the Counting Ourselves Survey..243

Appendix 6. A Poster used to Promote the Counting Ourselves Survey 244

Appendix 7. Co-authorship Form (Chapter 2) 245

Appendix 8. Co-authorship Form (Chapter 3) 246

Appendix 9. Co-authorship Form (Chapter 5) 247

Appendix 10. Co-authorship Form (Chapter 6) 248

Appendix 11. Co-authorship Form (Chapter 7) 249

List of Figures

Figure 1 Te Pae Māhutonga as an Indigenous Māori Health Model 74

Figure 2 The Interaction Effect of Age and Gender on Life Satisfaction of Counting Ourselves Participants (Age 14+) 123

Figure 3 The Interaction Effect of Age and Gender on Life Worthwhileness of Counting Ourselves Participants (Age 14+) 123

Figure 4 The Interaction Effect of Age and Gender on Ability to Cope With Stress of Counting Ourselves Participants (Age 14+) 124

Figure 5 Probability Profile of Counting Ourselves Participants Manifesting Very High Psychological Distress With Different Combinations of Risk and Protective Factors...140

Figure 6 Probability Profile of Counting Ourselves Participants Engaging in NSSI in the Last 12 Months With Different Combinations of Risk and Protective Factors............141

Figure 7 Probability Profile of Counting Ourselves Participants Thinking About Suicides in the Last 12 Months With Different Combinations of Risk and Protective Factors 142

List of Tables

Table 1 Overview of Thesis Structures and Contents Covered 35

Table 2 General Mental Health Outcomes Across Age Groups and Comparisons with New Zealand Mental Health Survey 2016 (Age 15+)..120

Table 3 Ordinal Logistic Regression of Gender and Age on General Mental Health Variables Among Counting Ourselves Age 14+ Participants...121

Table 4 Ordinal Logistic Regression of Gender and Age on General Mental Health Variables Among Counting Ourselves Age 14+ Participants (continued) 122

Chapter 1: Introduction

1.1 Chapter Overview

This chapter sets the context of the research on which this thesis is based. First, transgender terminology relevant to the Aotearoa/New Zealand context is introduced. The context in which this research examined mental health inequities among transgender people is then presented; this includes a discussion of the gender minority stress that transgender people face in relation to cisgenderism and the pathologising history of medicalising transgender people's lived experiences. Drawing on large-scale transgender health studies that have emerged over the years, this chapter provides a review on the prevalence of mental health difficulties, and the relationship between mental health inequities and enacted stigma and protective factors among transgender people in various countries. Finally, the research objectives and questions for the overall thesis are presented and the structure of this thesis is outlined.

1.2 Terminology

Transgender, or the shorthand *trans,* commonly refers to people who identify their gender as different from their sex assigned at birth. Transgender populations include trans women, trans men, and people with non-binary genders; these are the three most studied gender groups within transgender populations in recent years (see Crissman et al., 2019; Rimes et al., 2019; Veale, Watson, et al., 2017). More specifically, transgender people can be understood through the concepts of gender identity (inherent sense of gender; American Psychological Association, 2015; Castro-Peraza et al., 2019). A trans man is someone who is assigned female at birth but may have an inherent sense of feeling like a man, whereas a trans woman is someone who is assigned male at birth but may have an inherent sense of feeling like a woman (American Psychological Association, 2015). Some trans men and trans women may simply identify themselves as a man or woman, without the preceding word, "trans"

(American Psychological Association, 2015). A narrow conceptualisation of "gender" as mutually exclusive categories comprising only men and women, however, can be problematic (Green et al., 2018). It is important to note that not all transgender people align their genders comfortably within cisnormative expectations or the fixed construct of the culturally bound gender associated with one's sex assigned at birth. For instance, people with non-binary genders (also sometimes known as genderqueer and gender non-conforming) include those who identify their genders as both men and women, neither men nor women, or as moving between genders in a fluid way (American Psychological Association, 2015; Green et al., 2018). The increasing recognition of non-binary genders is reflective of the finding from a recent population-based study in the United States which showed that non-binary was the most common self-defined gender in their transgender youth sample (Crissman et al., 2019).

As an umbrella term, while it attempts to encapsulate the full breadth of diversity of transgender people, the term "transgender" itself may not fully capture the full spectrum of gender diversity. This is especially true for gender diversity within non-western cultures whose existence has long been documented throughout history and across regions (see Alexeyeff & Besnier, 2014; Hazenberg & Meyeroff, 2017; Herdt, 1996). Scholars studying non-western gender diversity, such as mak nyah in Malaysia, or sistergirl and brotherboy in Australia, recommend using a culturally appropriate lens to understand transgender people rather than merely equating their experiences of gender with the western definitions of gender (Kerry, 2014; Nemoto et al., 2018). The culture-specific conceptualisation of transgender identities is pertinent in Aotearoa/New Zealand to acknowledge Māori as tangata whenua (indigenous people or people of the land) and the substantial influences of Pasifika cultures.

Originally rooted in Māori precolonial history, the Māori term *takatāpui* translates literally to "intimate companion of the same sex" (Kerekere, 2017, p. 5). In contemporary understanding, in Aotearoa/New Zealand, takatāpui is an inclusive term for Māori people

with diverse sexual and gender identities (Kerekere, 2017; Marino, 2020). Some Māori transgender people may find solidarity with the non-gendered specificity that the term "takatāpui" encapsulates; but others may prefer to accentuate their gender identities through terms such as "whakawahine," which translates literally as "in the manner of, towards woman" (Feu'u, 2017, p. 172) and is also sometimes interpreted as an assigned male with the *wairua* or spirit of a woman (see also, Kerekere, 2017), and "tangata ira tāne" which translates roughly as a person with the essence or wairua of a man (Kerekere, 2017). There are many instances of gender diversity within Pasifika cultures, such as Samoan fa'afafine, Cook Islands Māori akava'ine, Tongan fakaleiti, and Niuean fakafifine (Brown-Acton, 2014). Most Pasifika diverse gender identities translate roughly as "in the manner of a woman" (Schmidt, 2017, p. 3) and have an emphasis on gender role to denote people who are assigned male at birth but engage in feminine practices (see also, Alexeyeff & Besnier, 2014; Feu'u, 2017; Howell & Allen, 2020).

The experiences of people with intersecting identities, both Māori and/or Pasifika and transgender, are often intricate and require the consideration of various aspects and values that constitute their cultural identities (Kerekere, 2017; Marino, 2020). For instance, indigenous scholars suggested that people who identify as takatāpui may wish to connect to the Māori cultural aspects such as *whakapapa* or genealogy, *mana* (prestige, authority, power, influence, and charisma), *whānau* or family, and *te aroha* or love (Kerekere, 2017; Māori dictionary, n.d.; Marino, 2020). Over many decades, western colonisation has affected the ways of Māori, Pasifika, and other minority cultures conceive gender by marginalising and erasing gender diversity in these cultures (Farran, 2010; Kerekere, 2017; Marino, 2020). In this era, some transgender people of indigenous or other non-western cultural backgrounds view the adoption of gender identities specific to their culture as a part of the journey to reclaim their identities that have been long subjugated by the colonising (western) cultures

(Kerekere, 2017; Kerry, 2014; Marino, 2020). Often, the journey to reclaim cultural identities for transgender people of non-Western cultures also includes challenging both the cisnormativity (the normalisation of people who express genders in cisgender ways) and racism (Marino, 2020). For more context on transgender identities in Māori and Pasifika cultures in Aotearoa/New Zealand, see Chapter 3.

1.3 Demography of Transgender People in New Zealand

Historically, Statistics New Zealand, the official data agency in Aotearoa/New Zealand, has not collected data on the size of the transgender population. The first population-based or nationally representative survey to measure this among New Zealanders of all age groups, the 2019/20 Household Economic Survey, began in late 2019 and at the time of writing the results have not yet been released (Statistics New Zealand, 2020c). One of the earliest attempts to estimate the size of the transgender population in Aotearoa/New Zealand was through the number of people requesting a change of sex marker on their passport, and Veale (2008) reported that 1 in 6,364 had done so. This estimate from a decade ago is likely to have changed substantially, however, given the increase in overall population size over the years, as well as easier access for transgender people to change their passport's sex marker via a statutory declaration (Collins, 2012; Ministry of Internal Affairs, 2020). In 2012, Clark et al. (2014) conducted a population-based survey in Aotearoa/New Zealand, as part of the Youth2000 survey series. The Youth'12 study of 8,500 high school students asked a single question: "Do you think you are transgender? This is a girl who feels like she should have been a boy, or a boy who feels like he should have been a girl (e.g., Trans, Queen, Fa'faffine [sic], Whakawahine, Tangata ira Tane, Genderqueer)" to determine transgender identities, and they found 1.2% identified as transgender (Clark et al., 2012, p. 25). The estimated prevalence of transgender youth was found to remain similar (1%) in the latest Youth2000 survey series, the Youth'19 study (Fenaughty et al., in press). In 2018, the New

Zealand Mental Health Monitor (NZMHM; Health Promotion Agency, 2019), a population-based study of 2,938 people in Aotearoa/New Zealand, reported that 3.2% identified as part of the rainbow communities (including lesbian, gay, bisexual, transgender, and takatāpui people). It is unclear how many transgender people are captured by this proportion, as the NZMHM (Health Promotion Agency, 2019) did not report on the prevalence of transgender people separately.

At present, there is no Aotearoa/New Zealand population-based data on the prevalence of transgender adults and older adults, but research in North America has produced an estimate on this. In the 2016 United States population-based survey, the Center for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS) employed the two-question method by asking participants about their sex assigned at birth and current gender identification (Flores et al., 2016). The BRFSS reported that 0.51% of the adult United States population identified as transgender (0.25% trans women, 0.15% trans men, and 0.11% non-binary; Crissman et al., 2019; Flores et al., 2016). The United States estimate is slightly higher than the proportion of transgender people reported in large-scale Canadian nationally representative surveys. Utilising the two-question method to identify transgender people, the population of Canadian transgender people was estimated to range from 0.24% to 0.35% (Jaffray, 2020; Statistics Canada, 2020).

Recent large-scale community-based studies including the 2015 United States Transgender Survey (James et al., 2016), The 2019 Canadian Trans PULSE (Trans PULSE Canada Team, 2020), The 2016 Australian Trans Pathway (Strauss et al., 2020), and the 2018 Aotearoa/New Zealand Counting Ourselves Survey (from which this thesis drew data; Veale et al., 2019) found that the gender descriptor *non-binary* was more commonly used in their sample than either trans man or trans woman. This gender distribution differed considerably from those published a decade ago, where trans men and trans women were much more

common (e.g., Couch et al., 2007; Rotondi, Bauer, Scanlon, et al., 2011). While these community-based studies did not provide a reliable measure of population estimates of transgender people, they highlighted the evolving nature of transgender language and conceptualisations of gender. The greater numbers of transgender people seen in community-based studies in recent years also suggest an increasing visibility of this population and a greater willingness for transgender people to publicly disclose their gender.

The following sections of this chapter discuss the relevance of conducting transgender research in Aotearoa/New Zealand and the frameworks used by this thesis that constitute a part of transgender-affirmative research. This chapter is divided into three parts. The first part focuses on the research position by introducing the research journey, as well as core concepts related to transgender mental health. Specifically, section 1.4.1 describes the decisions made in choosing the appropriate terminology, and section 1.4.2 details the concepts drawn from LGBTQ-affirmative psychology that inform the background of this thesis. The second part (sections 1.5 and 1.6) focuses on the theoretical frameworks used to explain mental health inequities faced by transgender people; and the third part presents a literature review of large-scale mental health research on transgender people in various countries.

1.4 Thesis Journey

1.4.1 Changes in Terminology

Finding an umbrella term that could adequately represent the gender diversity within the transgender population in Aotearoa/New Zealand was a challenge for this thesis. Language in this field has evolved over the time as transgender people have created more empowering and less binary terminology such as “non-binary” (Green et al., 2018). The change in terminology has involved transgender people shifting away from the hegemonic use of the terms “transvestite” and “transsexual” in the medical discourse (see Section 1.6 for a brief timeline), as well as transgender people of non-western backgrounds seeking to

reclaim culturally specific identities that have been marginalised and threatened through colonial influences (Green et al., 2018). To date, the term *transgender* remains one of the most commonly used in psychology and other related disciplines (American Psychological Association, 2015; Pega & Veale, 2015; White Hughto et al., 2015). The term transgender is also relatively acceptable among transgender communities in Aotearoa/New Zealand (Clunie, 2018) and has been used by the Counting Ourselves research team to recruit participants who fall under the broader "transgender and non-binary" umbrella term (see Chapter 4). The Counting Ourselves research team opted to include non-binary in the title of the survey (see Veale et al., 2019) to enhance inclusivity for non-binary people who do not necessarily identify themselves as transgender (Jones et al., 2019).

Other studies have used similar broad terms, such as "transgender and gender non-conforming" and "transgender and gender diverse" with the aim of capturing a wider group of gender diverse people who do not necessarily align themselves with the transgender identity (e.g., Adams et al., 2017; Grant et al., 2011). Different terminology was used throughout the series of published papers (Chapters 2, 3, 5, 6, and 7) due to changing terminology in the field. The term *transgender and gender diverse* and the accompanying acronym "TGD" were initially used in Chapters 2 and 3 when reviewing literature across various countries. This thesis later removed the reference to the term *gender diverse* for reporting empirical findings from the Counting Ourselves study after consulting with the supervision panel and the wider Counting Ourselves team members. The term gender diverse has a mixed history in Aotearoa/New Zealand, as its usage appears to be more led by cisgender researchers in government agencies (e.g., Statistics New Zealand) than transgender people themselves (Pega et al., 2017; J. L. Byrne, personal communication, November 22, 2019). Indeed, only about 1 in 8 Counting Ourselves participants (13%) identified with the term gender diverse and this percentage was much lower than that of other terms such as non-

binary (40%), transgender (35%), trans man (25%), and trans woman (22%; Veale et al., 2019). As this thesis endorses the rights of transgender people to exercise autonomy in naming themselves, and following the author's understanding of the evolving nature of community-driven terms, this thesis changed the umbrella term from "trans and gender diverse" for Chapters 2 and 3 to "transgender" for Chapters 5, 6, and 7.

1.4.2 Research Position

Transgender mental health has been recently described as a "public health crisis" (dickey & Budge, 2020, p. 381) due to the major mental health inequities that transgender people face (see findings of systematic reviews on this topic, for example McNeil et al., 2017; Millet et al., 2017; Valentine & Shipherd, 2018). Historically, the mental health of transgender people has been viewed through a pathological lens (see Section 1.6) and examined through the mainstream psychology disciplines that emphasise individual determinants of health (Sandil & Henise, 2017; Treharne & Adams, 2017). Because mainstream psychology intervenes primarily via the clinical treatment of so-called mental disorders, the root causes of mental health inequities among transgender people, or the manner in which individual determinants of health are shaped by broader social contexts, have traditionally been largely overlooked in the clinical psychology literature (Harper & Schneider, 2003; Sandil & Henise, 2017). This thesis is informed by the lesbian, gay, bisexual, transgender, queer (LGBTQ) psychology, which has a commitment to "social justice" that serves as an essential tool to create social change for rainbow[1] populations who experience mental health inequities (Harper & Schneider, 2003; Sandil & Henise, 2017). The term *inequity* is used throughout this thesis to illustrate the extent of mental health differences

[1]In this thesis, I used the term *rainbow* to refer to people whose sexual orientations, gender identities or expressions, or sex characteristics differ from the conventional social norms of being a cisgender and a heterosexual person. The term rainbow is commonly used in preference to other western umbrella terminologies (e.g., lesbian, gay, bisexual, transgender, and queer; LGBTQ) in Aotearoa/New Zealand for its inclusivity in acknowledging the diversity of culturally-based identities (Clunie, 2018).

in comparison to cisgender people, which arise due to the impacts of unjust social norms (e.g., cisgenderism; see Section 1.5 for a definition) that prevent transgender people from attaining their full health potential (Fredriksen-Goldsen et al., 2014; Sheridan et al., 2011).

A recent article on the need to establish LGBTQ psychology in Aotearoa/New Zealand[2] (Tan, 2018) argues that this branch of psychology, whose knowledge spans across various disciplines (e.g., community psychology, sociology, and population health), has the potential to not only empower transgender people who are disadvantaged by unjust social structures, but also to challenge and transform the broader processes and social structures that perpetuate social and health inequities. The role of LGBTQ psychology also includes investigating the paradox underlying the public discourse of transgender people's mental health, such as the Diagnostic Statistical Manual (DSM) pathologising approach that attributes transgender people's mental health problems to gender dysphoria (Ellis et al., 2020; Sandil & Henise, 2017; see Section 1.6 for elaboration). This branch of psychology shifts the focus away from the medical interventions that objectify transgender people, and instead bases itself on scientific, rational, and humane approaches to understand the root causes of mental health distress among this population (Sandil & Henise, 2017).

LGBTQ psychology asserts that reductionist biomedical approaches to mental health treatments that do not adequately attend to the social contexts and environments and do not fully recognise rainbow people's right to optimum health (Harper & Schneider, 2003; Sandil & Henise, 2017; Treharne & Adams, 2017). Indeed, the World Health Organization has affirmed that "the root causes of health inequities are to be found in the social, economic, and political mechanisms" (Solar & Irwin, 2010, p. 64), prompting scholars to examine the social

[2]Drawing on previous (limited) LGBTQ works in Aotearoa/New Zealand, I wrote an article (Tan, 2018) on the establishment of LGBTQ psychology with the aim to raise awareness of the need to employ affirmative psychological perspectives to explore the lives and experiences of transgender people in this country.

determinants of health or the conditions in which transgender people are born, grow, live, work and age. Professional organisations in Aotearoa/New Zealand such as the New Zealand Psychologists Board and the Professional Association for Transgender Health Aotearoa have issued statements about the importance of exploring and improving social determinants of health for transgender people, such as healthcare access (New Zealand Psychologists Board, 2019; Professional Association for Transgender Health Aotearoa, 2019).

The exploration of social determinants of health aligns with the health equity perspective in LGBTQ psychology (Fredriksen-Goldsen et al., 2014; Sandil & Henise, 2017) to account for the influences of structural and environmental contexts alongside the full range of determinants—from biological, behavioural, psychological, to social—that play essential roles in promoting mental health equity among transgender people. Specifically, the mental health consequences of enacted stigma (i.e., actual or overt experiences of discrimination, rejection, and violence) at interpersonal and structural levels have led scholars to call for the World Health Organization to designate gender identity as a social determinant of health (Pega & Veale, 2015). According to Pega and Veale (2015), enacted stigma experiences targeted at transgender people produce differential levels of social exclusion across healthcare, employment, and educational settings, which can create stressful environments for people to live in. Testa et al. (2015) postulated that transgender people face additional social stressors (i.e., gender minority stress) because of their stigmatised identities, and these stressors account for the disproportionate mental health burden faced by transgender people.

1.5 Cisgenderism and Gender Minority Stress

One of the most influential theoretical frameworks used to explain the health inequities that transgender people is gender minority stress theory (Hendricks & Testa, 2012; Testa et al., 2015). This theory outlines the path from social and psychological processes that drive mental health inequities among transgender people (Testa et al., 2015). It is an adaption

of minority stress theory (Meyer, 1995, 2003) which was conceptualised to identify the mental health effects of the additional social stressors that sexual minorities (e.g., lesbian, gay, and bisexual people) experience. Then, Testa et al. (2015) developed gender minority stress theory to explore stressors relevant to transgender people, such as non-affirmation of transgender identities and rejection for being transgender (Testa et al., 2015). Recently, scholars have noted that some research applying gender minority stress theory only focused on internal stressors (e.g., internalised transphobia), which risked creating a narrative of victim-blaming for transgender people (i.e., assuming that gender minority stressors have an impact on mental health only if transgender people fail to cope with the negative effects of stressors; Riggs & Treharne, 2017; Treharne & Adams, 2017). There is also a need for more consideration of the social origins of gender minority stress in Testa et al.'s original framework (Riggs & Treharne, 2017; Testa et al., 2015), and this thesis (specifically Chapter 2) seeks to address this critical theoretical gap by emphasising how cisgenderism exposes transgender people to enacted stigma experiences.

The term *cisgenderism* originates from the term *cisgender* (Ansara, 2010; Ansara & Hegarty, 2012), which was derived from the Latin prefix *cis* meaning "on the same side," in contrast to the prefix *trans* meaning "across from." The term cisgender was first coined by Carl Buijs, a Dutch trans man, in 1995, to refer to people whose sex assigned at birth matches their gender identity and expression (Ansara, 2010). The concept of cisgenderism was later defined by Gavriel Ansara (2010) as the "individual, social, and institutional attitudes, policies, and practices that assume people with non-assigned gender identities are inferior, unnatural, or disordered" (p. 168). Compared to concepts of "transphobia" and "anti-trans prejudice" that largely focus on individual-level hatred and unfair treatment towards transgender people, using the term cisgenderism has the advantage of focusing on and

challenging the perceived inferior status of the transgender population at a systemic level (Ansara, 2010; Ansara & Hegarty, 2012).

Contemporary scholars use the term cisgenderism to refer to the prejudicial ideology that constructs cisgender identities as “normal” and perpetuates the belief that cisgender people are more valued than transgender people, which creates an inherent system of associated power and privilege (Ansara & Hegarty, 2012; Riggs et al., 2015). Riggs et al. (2015) posited that cisgenderism could affect transgender people in two primary ways: (1) through the reinforcement that transgender identities and experiences are disordered, and that only people whose gender follows from their assigned sex are socially acceptable; (2) by misgendering experiences such as not using correct names and pronouns that are essential in affirming transgender people’s gender. The privileging of cisgender people through cisgenderism is an example of the injustice of exclusionary social norms, as it leads to prejudice, discrimination, and violence against people who do not conform to the cisnormative expectations of being a cisgender man or a cisgender woman (Ansara & Hegarty, 2012; Riggs et al., 2015). The hierarchal structure that is generated by cisgenderism, which delegitimises transgender identities, experiences, and languages, is a substantive source of daily minority stressors for many transgender people (Riggs et al., 2015; Riggs & Treharne, 2017). When transgender people are unable to compensate for the effects of cisgenderism, they risk putting themselves in a state of “decompensation” (Riggs et al., 2015; Riggs & Treharne, 2017). Initially used within medical literature to suggest a state when a bodily organ ceases being able to compensate for stressors, decompensation in the context of cisgenderism refers to the vulnerabilities that may arise when a transgender person is unable to psychologically compensate for the effects of gender minority stressors. The decompensation framework proposed by Riggs and colleagues (2015, 2017) supplements the gender minority stress theory by accounting for the effects of marginalising social norm (i.e.,

cisgenderism) that render transgender people vulnerable to mental health difficulties. Drawing from previous theoretical papers on minority stress, this thesis (see Chapter 2 for an extensive review) offers a comprehensive framework that accounts for the effects of social norms (i.e., cisgenderism) in the form of enacted stigma to explain the higher occurrence of mental health difficulties among transgender people.

1.6 Pathologisation of Transgender People

As mentioned in Section 1.5, cisgenderism can affect transgender people by positioning transgender people as having a mental disorder because of their gender. Diagnostic tools such as Diagnostic Statistical Manual (DSM-5; published by the American Psychiatric Association, 2013) and International Classification of Disease (ICD-11; published by the World Health Organisation, 2020) are widely utilised by mental health professionals in Aotearoa/New Zealand, such as psychiatrists and clinical psychologists, to inform their training and practices (Counties Manukau District Health Board, 2011). These tools outline a standardised list of symptoms and diagnostic criteria for all categories of "mental disorders" for both children and adults, which aim to help mental health professionals to arrive at consistent diagnoses of clients (American Psychiatric Association, 2013; World Health Organization, 2020). Evidently, transgender people have long been medicalised through the DSM and ICD in healthcare settings, as well as in research in the discipline of psychology (Ansara & Hegarty, 2012; Riggs et al., 2015). This medicalised approach, however, has been criticised over the years by transgender scholars and advocates in both Aotearoa/New Zealand (Oliphant et al., 2018) and overseas (Castro-Peraza et al., 2019; Davy, 2015; Riggs et al., 2019; Schulz, 2018) for its controversial usage in pathologising people who do not conform to cisnormative expectations.

The perception that gender diversity is an indicator of mental disorder has existed since the listing of "transvestism" in DSM-I (American Psychiatric Association [APA], 1952)

and DSM-II (APA, 1968) before being replaced with "gender identity disorder of childhood" for transgender children and youth and "transsexualism" for transgender adults in DSM-III (APA, 1980). Transsexualism also appeared in the ICD in 1975 (World Health Organization, 1975), which described transgender people as those who desire to transition to the "opposite sex," and there was little understanding of "gender" as a social construct that differed from *sex* as a biological construct during this time (Riggs et al., 2019). In the DSM-IV and DSM-IV-TR, "gender identity disorder," or GID, replaced transsexualism in previous versions of the DSM and had an emphasis on cross-gender identification (APA, 1994, 2000). The framing of transgender identities as a mental disorder is pathologising, and this has received much critique from transgender advocates for institutionalising cisgenderism in healthcare settings (Ansara & Hegarty, 2012; Castro-Peraza et al., 2019; Suess et al., 2014).

Amid the challenges against medical pathologisation, the DSM-5 was released in 2013 and replaced the GID diagnosis with "gender dysphoria" (APA, 2013). This shifted the focus to the distress experienced by transgender people due to gender incongruence. While the shift from viewing transgender identity as a mental disorder represented a symbolic milestone, there has been much contestation of the emphasis on transgender people's experiences of dysphoria (Davy, 2015; Davy & Toze, 2018). In 2018, the World Health Organization shifted the classification of transsexualism and "gender identity disorder of children" in ICD 10 to "gender incongruence" for transgender children and adults in ICD 11. In this latest version of the ICD, the World Health Organization has publicly affirmed that transgender identities are not mental disorders by proposing to move the gender incongruence diagnosis from the "Mental and Behavioural Disorders" chapter to the new chapter of "Conditions Related to Sexual Health," which is due to come into effect in 2022 (World Health Organization, 2020). Transgender scholars and advocates have celebrated the ICD's depathologising movement, as being transgender is no longer considered as a mental health

deficit. The persisting medicalisation of transgender people's experiences in the DSM and ICD, however, continues to be questioned (Castro-Peraza et al., 2019; Riggs et al., 2019).

Diagnosis within the medical approaches has held potential promise and peril for transgender people. One of the problematic assumptions that arises from medicalisation of gender diversity is that the path of gender affirmation is a linear process and that all transgender people wish to undertake medical interventions to be seen as cisgender (Ellis et al., 2020); this assumption has gained increasing criticism from transgender scholars and advocates in recent years (Castro-Peraza et al., 2019; Davy, 2015; Riggs et al., 2019). Furthermore, Davy (2015) posited that a focus on the DSM diagnosis of gender incongruences could violate transgender people's right to access equitable healthcare. Although a diagnosis allows health professionals to assist transgender people in pursuing access to insurance payments for gender-affirming care (especially relevant in the North American context; Schulz, 2018), there are no concessions in the DSM around gender-affirming pathways as transgender people's own self-determination and agency (Davy, 2015; Riggs et al., 2019). Scholars have noted that the reliance on DSM diagnoses in healthcare settings not only undermines transgender people's autonomy in articulating their health needs, but also forces transgender people to conform to the DSM's pathologising narrative by presenting particular behaviours indicative of gender dysphoria in order to be granted access to gender-affirming care (Davy, 2015; Davy & Toze, 2018; Riggs et al., 2019). The need for transgender people to fulfil the gatekeeping criteria of receiving a diagnosis of gender dysphoria by healthcare providers prior to accessing desired gender-affirming care has been noted in previous studies (Alpert et al., 2017; Ellis et al., 2015).

Another example of the pathologising of transgender people is the gender identity conversion efforts (GICE) that aim to "cure" a person's transgender identity (Turban et al., 2020). While gender identity conversion practices are currently banned in four countries (i.e.,

Brazil, Ecuador, Malta, and Taiwan) for treating transgender people as inherently pathological, these unethical practices remain permitted in many countries including Aotearoa/New Zealand (OutRight Action International, 2019). Using community-based nationwide data from the 2015 United States Transgender Survey, Turban et al. (2020) found that 20% of transgender people had experienced practices that impeded them from affirming their gender while consulting a health professional (e.g., psychologist and counsellor) or religious advisor at some point in their lives. There were considerable associations found between GICE exposure and mental health of transgender people, with those experiencing GICE having a 56% increased likelihood of reporting psychological distress in the past month and a 49% increased likelihood of attempting suicide in the past year (Turban et al., 2020).

The lack of representation of transgender people at the forefront of the development of DSM and ICD may be the reason for the overreach of the medical jurisdiction in dictating transgender people's lived experiences (Davy, 2015). The World Professional Association for Transgender Health's (WPATH) Standards of Care 7 (SOC7; Coleman et al., 2012) takes a different approach with the aspiration to promote the highest standards of health care for transgender people. While the SOC7 makes references to the DSM in guiding the path to providing access to gender-affirming care, it does not insist on evidence of gender dysphoria (Coleman et al., 2012). Instead, the SOC7 allows health professionals to shift from a gatekeeper role to an informed consent model to address the issues with provision of equitable healthcare services for transgender people (Coleman et al., 2012). An informed consent model acknowledges transgender people as the experts of their own lives and emphasises that transgender people have the capabilities in authorising their own treatment, in collaboration with health professionals (Schulz, 2018). The SOC7 also highlights that transgender people's experiences of dysphoria may be the consequences of enacted stigma

and minority stress (Meyer, 2003; Testa et al., 2015), urging health professional to consider that the mental distress that transgender people face may be socially induced rather than inherently pathological (Coleman et al., 2012). The continued reliance on a diagnostic approach in SOC7, however, has been criticised for pathologising transgender identities and setting a precedent that transgender people require validation from mental health professionals to be able to access gender-affirming care (Lipshie-Williams, 2020). The SOC7 is currently being revised and version 8 is believed to have a stronger focus on the informed-consent process to provide autonomy for transgender people to access care (Ashley, 2019). Cognisant of these pathologising histories, this thesis seeks to create a depathologising narrative around gender diversity that aligns with the approach that is affirmative of transgender people's genders.

The previous sections have outlined the concepts and theoretical frameworks used in this thesis to understand mental health inequities among transgender people. These included a commitment to social justice (Section 1.4.2), a health equity perspective to examine social determinants of health (Section 1.4.2; see also Chapter 3), a focus on cisgenderism that leads to gender minority stress experiences (Section 1.5; see also Chapter 2), and the perspective that being transgender is pathological, which stands in contrast with a health equity perspective (Section 1.6). The next section reviews literature with findings on mental health inequities among transgender people, and minority stress and protective factors, that aligns with the postulation of gender minority stress theory.

1.7 Literature Review

Drawing from literature across various continents, this section provides a review on the prevalence of mental health problems, and the relationship of minority stress factors such as enacted stigma (i.e., actual or overt experiences of discrimination, rejection, and violence) and protective factors (i.e., factors that provide buffering effects against minority stress and

reduce vulnerabilities towards mental health difficulties) to the mental health of transgender people.

Note that this review is not exhaustive,[3] as it only includes existing large-scale survey studies that have reported findings on at least one of the mental health indicators: psychological distress (including depression and anxiety), non-suicidal self-injury (NSSI), and suicidality, which are used in this thesis. Findings presented here primarily focus on the international context, as a detailed review of findings from studies undertaken in Aotearoa/New Zealand studies is outlined in Chapter 3. This section ends with a summary of the literature review and a description of literature gaps that need to be filled for trasgender people in Aotearoa/New Zealand.

1.7.1 North America

This section reviews evidence of transgender people from US and Canada studies on the prevalence of mental health difficulties and the associations among enacted stigma, protective factors, and mental health.

Canada. One of the earliest studies to examine health and wellbeing of transgender people from a health equity perspective was the Ontario Trans PULSE study in Canada. First launched in 2009, Trans PULSE was a community-based sample of 433 transgender people aged 16 and over (Bauer et al., 2013; Rotondi, Bauer, Scanlon, et al., 2011; Rotondi, Bauer, Travers, et al., 2011). This study reported that 66% of trans men and 61% of trans women had depression (Rotondi, Bauer, Scanlon, et al., 2011; Rotondi, Bauer, Travers, et al., 2011), and 36% of the overall transgender sample had considered suicide, with 10% reported attempting suicide in the past year (Bauer et al., 2013). Transgender people who reported

[3]The goal of this review is not to include every published transgender study, but rather to provide a broad picture of the mental health trends of transgender people in different regions of the world. For instance, I excluded community-based studies with a relatively small sample size of transgender people and clinical-based studies as these usually target a specific population of treatment-seeking transgender people (e.g., Poteat et al., 2020).

exposure to physical or sexual assault due to their gender were 2 times more likely to seriously think about suicide (56% vs 28%) and 7 times more likely to have attempted suicide in the past year (29% vs 4%) than those without such experiences. Suicide risk also varied across levels of social support, as transgender people with high levels of social support had a lower likelihood of attempted suicide in the past year than those with little support (2% vs 16%; Bauer et al., 2013). Trans PULSE was also one of the few studies in the current literature to examine the mental health of transgender people from indigenous backgrounds; it found 73% of this group had experienced violence because of their transgender identities and 76% had considered suicide in their lifetime (Scheim et al., 2013). The risk of suicidal ideation and suicide attempts, however, did not differ significantly between indigenous and non-indigenous transgender people (Bauer et al., 2013).

In 2019, after almost a decade, the Trans PULSE study recruited 2,837 transgender people aged 14 and over across all of Canada. Preliminary findings of the Trans PULSE study showed that suicidality remained a concern for transgender people in Canada, with 31% having considered suicide and 6% attempting suicide in the past year (Trans PULSE Canada Team, 2020).

The Canadian Trans Youth Health Survey recruited an online sample of 923 transgender youth in 2014 and explored the prevalence of mental health issues within this group (Veale et al., 2015, Veale, Watson, et al., 2017). Veale, Watson, et al. (2017) reported that transgender youth had a higher prevalence of psychological distress, self-harm, and suicidality compared to the Canadian general population for both younger (14 to 18 years old) and older (19 to 25 years old) age groups. While there were no significant differences found for psychological stress and suicidality across trans men, trans women, and non-binary gender groups, youth with non-binary genders had a higher risk of engaging in self-harm than trans women (Veale, Watson, et al., 2017). Rates of self-harm and suicidality also differed for

the two age groups, as younger transgender youth had an increased likelihood of engaging in self-harm in their lifetime (75% vs 51%) and seriously thinking about suicide in the last 12 months (13% vs 5%) compared to the older transgender youth (Veale et al., 2015, Veale, Watson, et al., 2017).The high prevalence of mental health concerns found among transgender youth had strong associations with the enacted stigma encounters and protective factors that this population experienced (Veale, Peter, et al., 2017). For instance, Veale, Peter, et al. (2017) found that transgender youth with high levels of exposure to enacted stigma and low levels of family connectedness and friends caring, had a 10 times greater risk of attempting suicide than those with low levels of enacted stigma and high levels of access to protective factors (72% vs 7%).

Five years later, the Canadian Trans Youth Health Survey launched their second wave of recruitment in 2019 and recently released their preliminary findings based on 1,519 transgender youth aged 14 to 25 (Taylor et al., 2020). More than three-fifths (63%) of transgender youth had severe levels of emotional distress. Taylor et al. (2020) reported that in the last 12 months, 64% of transgender youth had self-harmed, 64% had seriously considered suicide, and 21% had attempted suicide.

United States. The National Center for Transgender Equality and the National Gay and Lesbian Task Force in the United States have produced two of the largest community-based transgender surveys to date, the National Transgender Discrimination Survey in 2010 (Grant et al., 2011) and the United States Transgender Survey in 2015 (James et al., 2016). Based on findings from 6,450 transgender people aged 18 and over, Grant et al. (2011) reported 41% had attempted suicide in their lifetime compared with 2% among the United States general population. The same study also found the risk of suicide attempts increased when transgender people were victimised by physical assault (61%) or sexual assault (64%; Grant et al., 2011). The subsequent United States Transgender Survey recruited 27,715

transgender people aged 18 and over (James et al., 2016). This survey found that transgender people were 8 times more likely to manifest severe levels of psychological distress than the United States general population (39% vs 5%; James et al., 2016). The United States Transgender Survey clearly illustrated the mental health differences across various age groups, as it reported a higher prevalence of severe psychological distress among younger transgender people than those of older age groups. When compared to the United States general population, the inequities in psychological distress level were also found to be more apparent among younger transgender people (James et al., 2016).

In the United States, existing population-based studies with nationally representative samples of transgender people have mostly involved youth or high school students (e.g., Eisenberg et al., 2017; Ross-Reed et al., 2019; Taliaferro et al., 2018). Ross-Reed et al. (2019) used data from the Youth Risk Behavior Surveillance System that recruited 15,046 participants (14,188 cisgender youth and 858 transgender youth) in Grades 6–8 (middle school) and 9–12 (high school) to identify mental health inequities among transgender youth. There were approximately threefold differences in rates found for non-suicidal self-injury (49% vs 18%) and suicide attempts (32% vs 8%) in the past year between transgender and cisgender youth (Ross-Reed et al., 2019).

To the best of knowledge, only one existing population-based study has recruited transgender people across all age groups, and this is the BRFSS study in the United States (Crissman et al., 2019; Flores et al., 2016). Using data from the 2016 BRFSS that recruited a probability sample aged 18 and over (528,986 respondents, and 0.51% identified as transgender), Crissman et al. (2019) reported higher rates of frequent mental distress (20% vs 11%) and depression disorder diagnosis (27% vs 17%) among transgender people relative to the cisgender populations. When looking at mental health differences across age and gender groups, Crissman et al. (2019) found increased vulnerabilities to mental health difficulties

among younger transgender people compared to other age groups and that trans men and non-binary people had worse mental health than trans women.

Summary. Trans Pulse Ontario, Canada was one of the first community-based survey to examine social determinants of health of transgender people (Bauer et al., 2013). Subsequent research in Canada has focused specifically on youth (Veale et al., 2015; Taylor et al., 2020). The US has made major advancements in the transgender research field by conducting the largest community-based survey of transgender people (The US Trans Survey; James et al., 2016) and the only population-based survey that recruited transgender people of all age groups (BRFSS; Crissman et al., 2019). These studies have shown the importance of using a health equity framework to examine the sociocultural contexts of enacted stigma that are associated with poor mental health outcomes of transgender people.

1.7.2 Europe

This section review studies conducted in the UK and Spain. Studies in Europe have explored mental health differences across gender groups and exposure levels of enacted stigma among transgender people.

United Kingdom. The Trans Mental Health Study is the largest community-based survey of transgender people in Europe to date, with recruitment of 889 transgender people aged 18 and older from the United Kingdom in 2012 (Bailey et al., 2014; McNeil et al., 2012). McNeil et al. (2012) reported a high prevalence of mental health difficulties among transgender people, for example 84% had lifetime suicidal ideation, 63% had suicidal ideation in the past year, and 36% had clinically significant depressive symptoms. Subsequent publications of the Trans Mental Health Study included a mixture of quantitative and qualitative data to examine minority stress and protective factors across various settings that were relevant to the mental health of transgender people (see Ellis et al., 2015; Ellis et al., 2016).

One wider LGBTQ community-based studies involving transgender youth emerged later in England (Youth Chances; Baker et al., 2016; Rimes et al., 2019). Based on findings from 677 transgender youth, the Youth Chances study by examined mental health differences across gender groups and sexes assigned at birth; they found those assigned female at birth (trans men and non-binary assigned female at birth) were significantly more likely than those assigned male at birth (trans women and non-binary assigned male at birth) to report lifetime self-harm and a mental health condition that interfered with their daily activities. Higher rates of mental health difficulties among transgender youth assigned female at birth could be due to increased exposure of sexual abuse among this group compared with trans women and non-binary assigned male at birth (Rimes et al., 2019).

Spain. Aparicio-García et al. (2018) carried out a large online survey in Spain to explore the inequities in mental health, and the differences in exposure rate of enacted stigma and protective factors among three groups aged 14 to 25 years old: transgender (n = 180), non-binary (n = 70) and cisgender people (n = 574). This online study found transgender (70%) and non-binary (78%) youth were significantly more likely to have ever considered suicide than cisgender (41%) youth.

1.7.3 Asia

This section reviews a community-based study of transgender people in China, which has documented the correlation between enacted stigma at family and public settings, and suicidality.

China. In 2017, Chen et al. (2019) conducted the largest online survey in China to examine the mental health of transgender people. A total of 1,309 participants (622 trans men and 687 trans women) aged 12 and above were recruited (Chen et al., 2019). This online study reported 56% of transgender participants had seriously thought about suicide and 16% had attempted suicide in their lifetime, and the prevalence of suicidal ideation and suicide

attempts for the Chinese general population were 12% and 3%, respectively (Chen et al., 2019). When exploring mental health differences between trans men and trans women, trans women were found to fare worse across all mental health outcomes such as depression (72% vs 65%), self-harm (28% vs 21%), suicidal ideation (61% vs 52%) and suicide attempts (21% vs 11%). For both gender groups, Chen et al. (2019) found that minority stressors such as discrimination and violence at public settings and conflicts with parents correlated with increased risks of suicidal ideation and suicide attempts. Using a subset of this China online study, Peng et al. (2019) assessed the relationship of minority stressors and mental health among transgender youth aged 12 to 18 (n = 385). In the Chinese transgender youth sample, 51% had seriously thought about suicide, and among those reporting suicidal ideation, 31% had attempted suicide in their lifetime (Peng et al., 2019). In this study, transgender youth were found to have a higher risk of suicidal ideation when they had also experienced abuse or bullying at schools (Peng et al., 2019).

1.7.4 Australasia

As Chapter 3 reviews studies conducted in Aotearoa/New Zealand, this section focuses on studies with samples of Australian transgender people.

To date, the Youth'12 study (Clark et al., 2014) is the only study that has produced findings on mental health of transgender people in Aotearoa/New Zealand.[4] The Youth'12 study of 96 transgender youth attending Year 9–13 reported a higher prevalence of depression (41% of transgender youth vs 12% of cisgender youth), NSSI (46% vs 23%), and suicide attempts (20% vs 4%) among transgender youth relative to cisgender youth (Clark et al., 2014). Detailed reviews on findings of the Youth'12 study and other Aotearoa/New Zealand studies involving transgender people are outlined in Chapter 3.

[4]The latest Youth2000 survey series, the Youth'19 study, has also included questions to examine mental health of transgender people but the data analysis of this study is still in its early stage.

This section reviews only research conducted in Australia or trans-Tasman research.[5] The earliest research with the involvement of transgender people in Australia was the 2005 Private Lives study (Pitts et al., 2006). With a sample of 5,476 LGBTQ people aged 16 and over (including 100 transgender people), Pitts et al. (2006) reported transgender people were more likely than their LGBI counterparts to indicate that they had visited a counsellor or psychiatrist for a mental health issue. The TranZnation study extended from the Private Lives study by recruiting a larger sample of transgender people aged 18 and over from Australia (*n* = 253) and New Zealand (*n* = 24) in 2007 (Couch et al., 2007; Pitts et al., 2009). TranZnation reported 36% of transgender people met the criteria for a current major depressive episode, a rate higher than that found in the general Australia population (7%; Couch et al., 2007). The same study also showed a higher rate of depressive episodes among trans women (41%) compared to trans men (21%) and that those of younger ages had increased vulnerabilities to manifest depression (Couch et al., 2007).

In 2013, Hyde et al. (2013) launched the first Australian National Trans Mental Health Study and recruited 946 transgender people aged at least 18 years old. A high proportion of mental health problems were found among transgender people, with 57% having been diagnosed with depression and 40% with an anxiety disorder in their lifetime (Hyde et al., 2013). One fifth of participants (21%) had thought about suicide or self-harm in the previous 2 weeks, and this rate was 10 times higher than the Australian general population (2%; Hyde et al., 2013). Trans men (62%) and trans women (59%) were more likely to report having been diagnosed with depression than non-binary people who were assigned female at birth (54%) and assigned male at birth (41%). The gender differences for lifetime depression diagnosis, however, altered when the effect of age was controlled; Hyde et al. reported non-binary assigned female at birth to be the most vulnerable group (75%)

[5]I am not aware of any existing transgender health research being conducted in the Pacific Islands.

followed by trans men (59%), trans women (58%), and non-binary assigned male at birth (40%).

A large Australian study of transgender youth was carried out in 2017 through the Trans Pathways project, with a sample of 859 people aged 14 to 25 years old (Strauss et al., 2017, 2020a, 2020b). Self-harm and suicidality were found to be serious concerns in this study, as Strauss et al. (2017) reported 91% had a desire to self-harm, 80% had self-harmed, 83% had suicidal thoughts, and 48% had attempted suicide in their lifetime. Transgender youth assigned female at birth were more susceptible to self-harm (85% vs 65%) and to think about suicide (84% vs 77%) compared to those assigned male at birth (Strauss et al., 2020a).

In 2017, Treharne et al. (2020) conducted an online survey to examine the prevalence and correlates of suicidality and self-harm among cisgender and transgender people aged 18 and over. With a combined sample of 700 people from Australia (n = 372) and Aotearoa/New Zealand (n = 328, of which 45% of the Aotearoa/New Zealand sample identified as transgender), transgender participants were found to have been significantly more likely to self-harm (37% vs 15%), think about suicide (40% vs 17%) and attempt suicide (17% vs 5%) than their cisgender counterparts in the past year (Treharne et al., 2020). Transgender people also faced a greater level of discrimination but a lower level of social supports relative to cisgender people (Treharne et al., 2020). This study also reported that transgender participants with less exposure to discrimination and greater levels of support from friends and family members were significantly less likely to have attempted suicide in their lifetime (Treharne et al., 2020).

Summary. One of the earliest studies involving transgender people in Australia was the Private Lives study with a LGBTI sample (Pitts et al., 2006). The subsequent transgender-specific studies (Hyde et al., 2013; Pitts et al., 2009; Strauss et al., 2017) reported a high prevalence of mental health difficulties affecting this population, especially for those who

were assigned female at birth. One study recruited a mixed sample of cisgender and transgender people from Australia and Aotearoa/New Zealand (Treharne et al., 2020), and the researchers found that elevated rates of suicidality among transgender participants were correlated with high exposure of enacted stigma and low level of social support. While Treharne and colleagues have examined the relationships among enacted stigma, protective factors, and suicidality, their study did not examine other mental health outcomes such as psychological distress and was limited to a smaller sample of transgender people from Aotearoa/New Zealand that was recruited exclusively online.

1.7.5 Summary of Literature Review and Gaps

Research Design. International studies in North America, Europe, Asia, and Australasia[6] have documented high rates of depression, anxiety, NSSI or self-harm, and suicidality among transgender people. The wide range of rates of mental health issues is partially due to differences in methods for measuring mental health outcomes, which included participants' recollection of ever being diagnosed with a mental health issues (e.g., depression and anxiety) by a health professional (e.g., Hyde et al., 2013), various self-report scales that examined symptoms of mental health difficulties such as the Center for Epidemiologic Studies Depression (CESD) scale (e.g., McNeil et al., 2012; Rotondi, Bauer, Scanlon, et al., 2011) and the Patient Health Questionnaire (PHQ; e.g., Strauss et al., 2020), and different versions of self-report scales such as the longer version (K10; Veale, Watson, et al., 2017) and shorter version (K6; James et al., 2016) of Kessler Psychological Distress Scale. While NSSI and suicidality (including suicidal ideation and suicide attempts) were mainly measured with single-item questions, these rates were restricted to a timeframe of

[6]There were no large-scale studies found in South American and African regions exploring mental health of transgender people; this could be due to the literature gaps in these regions or language differences that presented challenges to searching for relevant literature for inclusion in this review.

interest such as in the past year (e.g., Ross-Reed et al., 2019; Treharne et al., 2020) or lifetime (e.g., Chen et al., 2019; Strauss et al., 2020).

Recruitment Design. The recruitment design of existing transgender studies also varied, including respondent-driven sampling that used a network-based approach (e.g., Bauer et al., 2013; Chen et al., 2019), convenience sampling that recruits participants that are conveniently available (e.g., James et al., 2016; Treharne et al., 2020), and probability sampling that recruits nationally representative samples (e.g., Crissman et al., 2019; Ross-Reed et al., 2019). Compared to a probability sampling, the external validity or generalisability to a broader population of samples drawn from other recruitment designs is reduced. Convenience sampling inherently contains selection bias (e.g., some studies recruited participants entirely online; Treharne et al., 2020) and the estimates generated from this sampling design are difficult to replicate as there is no guarantee that other researchers will yield similar respondents through a similar type of recruitment (Rivera, 2019). Some studies only recruited transgender people of specific demographic groups such as transgender youth (e.g., Aparicio-García et al., 2018; Rimes et al., 2019; Veale et al., 2015), and these findings should not be generalised to wider transgender populations.

Prior to the 2010s, international research on transgender people mostly focused on those with binary identities (i.e., trans men and trans women; Couch et al., 2007; Rotondi, Bauer, Scanlon, et al., 2011; Rotondi, Bauer, Travers, et al., 2011) as non-binary identities were not widely known or utilised until recently; or were housed within the larger context of rainbow communities (e.g., Pitts et al., 2006). The National Transgender Discrimination Survey was one of the first studies to explore mental health experiences of those with non-binary identities (Grant et al., 2011) and there was a growing interest in subsequent research to identify mental health differences among trans men, trans women, and non-binary people (e.g., Hyde et al., 2013; Rimes et al., 2019; Veale, Watson, et al., 2017).

Mental Health Findings. Studies in different countries have had inconsistent findings on the differences among mental health outcomes across gender groups. For instance, two studies (Chen et al., 2019; Couch et al., 2007) reported trans women had worse mental health outcomes than trans men, but other studies (e.g., Crissman et al., 2019; Rimes et al., 2019; Veale, Watson, et al., 2017) have collected findings that indicated trans men had worse mental health outcomes than trans women. An Australian study (Hyde et al., 2013) found age had an important influence in explaining gender differences as the researchers reported two different sets of results before and after accounting for the effect of age (see Section 1.7.4). However, existing literature that explores the influences of age on mental health differences across gender groups is limited. Given that the age demographic of trans men and non-binary people tends to be younger than the general population (see Crissman et al., 2019), studies that do not consider age differences when investigating the mental health of various gender groups within the transgender populations may give biased findings. See Chapter 5 for a more in-depth discussion about associations between age and gender with transgender people's mental health.

There are a number of studies emerging that explore the mental health inequities among transgender people by making comparisons with the general population (e.g., Hyde et al., 2013; James et al., 2016; Veale, Watson, et al., 2017) and samples of cisgender people (e.g., Aparicio-García et al., 2018; Crissman et al., 2019; Treharne et al., 2020), but as outlined in Chapter 3, this work in Aotearoa/New Zealand is limited to one youth-focused study and some trans-Tasman studies. While the Australian-based TranZnation study recruited 24 transgender adults from New Zealand, this study only reported findings based on the combined sample of transgender people in Australia and New Zealand (Couch et al., 2007). A recent study by Treharne et al. (2020) with a larger sample of transgender people in Aotearoa/New Zealand (*n* = 328) found large inequities in the prevalence of NSSI and

suicidality among this population. Treharne et al. (2020), however, did not explore other components of mental health such as general mental health and psychological distress that have been found to severely affect transgender people in overseas research (e.g., James et al., 2016). Given the critical gaps in knowledge of the broader range of mental health experiences of transgender people living in Aotearoa/New Zealand, there is a need to collect this essential information to more effectively implement policies and programmes that can address mental health inequities affecting this population.

Minority Stress and Protective Factors. Increasing numbers of overseas studies have noted strong correlations between mental health difficulties among transgender people and the experiences of enacted stigma (e.g., stigma, discrimination, and victimisation) that transgender people face because of their gender (e.g., Bauer et al., 2013; Chen et al., 2019; Veale, Peter, et al., 2017). In Aotearoa/New Zealand, a few studies (e.g., Dickson, 2017; Human Rights Commission, 2008) have shown that enacted stigma exposures were common experiences for transgender people (see Chapter 3 for a review). While Treharne et al. (2020) identified associations between discrimination, and NSSI and suicidality in a combined sample of transgender people in Australia and Aotearoa/New Zealand, they did not explore the mental health influences of enacted stigma experiences that are specific to transgender people. In line with gender minority stress theory (Testa et al., 2015), there is a need to explore the association between transgender-specific enacted stigma experiences and the mental health of transgender people in Aotearoa/New Zealand.

Overseas studies have also examined the relationship between protective factors at an interpersonal level, such as social support from peers and family, and the mental health of transgender people (e.g., Aparicio-García et al., 2018; Bauer et al., 2013; Treharne et al., 2020; Veale, Peter, et al., 2017). Studies that researched the mental health influences of protective factors of secondary social ties (e.g., transgender communities) and beyond friends

and family members, however, remain limited in both Aotearoa/New Zealand and overseas (see Valentine & Shipherd, 2018). Given the potential mental health benefits that protective factors could offer for transgender people such as offsetting the negative impacts of enacted stigma (Veale, Peter, et al., 2017), it is therefore important to investigate the types of protective factors that need to be strengthened among transgender people in Aotearoa/New Zealand.

1.8 Research Objectives and Questions

As noted in section 1.7, there is a wealth of transgender mental health research being conducted in overseas, especially in North America. While increasing overseas research has uncovered large mental health inequities affecting transgender people, the review study in Chapter 3 noted that Aotearoa/New Zealand based research on this topic remains limited. Research specifically on transgender people in this country is required due to the unique demography, healthcare, and legal contexts, as well as to provide data to advocate for policy change at national level.

Aotearoa/New Zealand is a Commonwealth nation in South Pacific Ocean. The Treaty of Waitangi signed between the representatives of British crown and iwi (tribes) of indigenous Māori in 1840 acknowledges Māori as the tangata whenua (people of the land) and put in place a bicultural relationship between the two entities (Bennett & Liu, 2018). The demography of Aotearoa/New Zealand today can be referred to as multicultural (Bennett & Liu, 2018), with five major ethnic groups: New Zealand Europe/Pākehā (70.2%), Māori (16.5%), Asian (15.1%), Pasifika (8.1%), and Middle Eastern, Latin American, and African (MELAA; 1.5%; Statistics New Zealand, 2020b). Different from other countries with a predominant Western culture, the unique demographic makeup of Aotearoa/New Zealand has a specific influence of how people in this country comprehend mental health. As demonstrated in health models for indigenous Māori (Durie, 1985; 1999; see also Chapters 4

and 5), Pasifika (Tamasese et al., 2005), and Asian (Sobrun-Maharaj & Wong, 2010) populations, there is a growing recognition that mental health of people in Aotearoa/New Zealand is an integral part of holistic health and that it is interconnected with spirituality, family, and social environments.

Furthermore, the gender-affirming care provision context is unique to transgender people in Aotearoa/New Zealand. In Aotearoa/New Zealand, gender-affirming care such as top surgeries (e.g., breast augmentation and chest reconstruction) and hormone therapy (except genital surgeries) can be accessed through primary care clinics or local District Health Boards (DHBs; Ministry of Health, 2020), although not all DHBs provide comprehensive gender-affirming care (Fraser et al., 2018). The Ministry of Health has decided to expand the public fund for gender-affirmign genital surgeries in 2019. The current waiting list for genital surgeries is long due to the cap (2 surgeries per year) set by Ministry of Health during the years 2004 to 2018 to access high cost treatment pool, and lack of surgeons who can provide these procedures in Aotearoa/New Zealand (Fraser et al., 2018). Overseas studies (e.g., Chen et al., 2019) have found higher levels of mental health difficultiues among transgender people who faced barriers in accessing gender-affirming care; the inequities in provision of gender-affirming care in Aotearoa/New Zealand is likely to have an effect on mental health of transgender people.

Transgender people in Aotearoa/New Zealand also share a different legal and policy environment to other countries. For example, some states in the United States and Australia have implemented laws that prohibit discrimination on the basis of transgender identities (Australian Human Rights Commission, n.d.; Gleason et al., 2016) but there is no such existing laws in Aotearoa/New Zealand at present (Human Rights Commission, 2020). Transgender-inclusive structural determinants are crucial for mental health of transgender people as overseas studies have documented the relationship between positive mental health

and existence of laws and policies that protect transgender people against discrimination (Gleason et al., 2016; Restar et al., 2020).

It is not until recently that policy and research has begun to pay attention to the health inequities experienced by transgender people in Aotearoa/New Zealand (see Clunie, 2018; Treharne & Adams, 2017, for a review). The first large quantitative study to examine the mental health status of transgender people in Aotearoa/New Zealand was the Youth'12 study that focused on youth (Clark et al., 2014). To date, there have been no large studies in Aotearoa/New Zealand exploring the mental health of transgender people across all age groups, from youth, adults, to older adults. Because of the lack of research on transgender people in this country, there is limited understanding of the extent of the mental health inequities faced by this population compared to the general population.

To understand the root causes of mental health inequities among transgender people in Aotearoa/New Zealand (see Section 1.4.2), this thesis utilised the health equity perspective that focuses on the social determinants of mental health specific to transgender people. This comprised quantitative analyses that assessed the associations of experiences of enacted stigma and protective factors to transgender people's mental health, as well as qualitative analyses that identified mental health determinants based on reported experiences of transgender people in Aotearoa/New Zealand. Moving away from the pathologising explanation that positions transgender identity as the cause of the elevated rate of mental health difficulties, this thesis builds on gender minority stress theory to explain the role of cisgenderism as a key social determinant of mental health underpinning the mental health inequities faced by transgender people.

The research questions of the current thesis are summarised below.

1. What are the mental health inequities faced by the transgender population relative to the general population in Aotearoa/New Zealand? Are there differences in mental

health outcomes across transgender people of different age and gender groups (i.e., trans men, trans women, and non-binary)?

2. To what degree is cisgenderism, in the form of enacted stigma, associated with mental health difficulties for transgender people? Can gender minority stress theory explain the negative effect of enacted stigma on the mental health of transgender people in Aotearoa/New Zealand?
3. What are the protective factors that are important for the mental health of transgender people in Aotearoa/New Zealand? To what degree might protective factors mitigate against the negative effects of minority stress?
4. What do transgender people in Aotearoa/New Zealand describe as the most important determinants of their mental health?

1.9 Thesis Structure

Table 1 presents the organisation of the thesis and an overview of the contents covered in each chapter. This thesis consists of three unpublished chapters (Chapters 1, 4, and 8), two review articles (Chapters 2 and 3), and three empirical articles (Chapters 5, 6, and 7) that report findings from the Counting Ourselves survey. Chapters 2, 3, 5, and 6 have been peer reviewed and published in academic journals. Chapter 7 was accepted for publication in early February 2021 and waiting for the publisher to typeset.

Note that Chapter 2 comprises a published paper, and an introductory section providing some context for this paper; this approach is also used for subsequent chapters (3, 5, 6, and 7) that comprise already peer reviewed papers. The writing and referencing style of each paper is presented based on the journal's requirements.

Table 1

Overview of Thesis Structures and Contents Covered

Chapter	Title	Contents
Chapter 1	Introduction	This chapter begins with terminology used for transgender populations in Aotearoa/New Zealand. The context of the research is then presented by outlining the research position and theoretical framework (i.e., gender minority stress theory) that shapes the direction of current thesis. This chapter also draws on international literature to provide a review regarding the prevalence of mental health, minority stress, and protective factors of transgender people. Research objectives and questions are also discussed here.
Chapter 2	Article 1—Gender minority stress: A critical review	This paper extends from Chapter 1 to provide a more thorough review of gender minority stress theory that also accounts for the impacts of cisgenderism.
Chapter 3	Article 2—Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities	This paper reviews existing transgender research in Aotearoa/New Zealand and explains the utility of employing a health equity perspective to understand transgender people’s mental health.
Chapter 4	Study design and methods	This chapter outlines on the philosophy, study design, and methods of the thesis.
Chapter 5	Article 3—Mental health inequities among transgender people in Aotearoa/New	This paper explores the prevalence of mental health difficulties among transgender people in Aotearoa/New Zealand and identifies the extent of inequities by comparing to the general

	Zealand: Findings from the Counting Ourselves survey	population estimates. This paper also provides a novel finding regarding transgender people's mental health by examining the interaction effect of age and gender.
Chapter 6	Article 4—Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand	This paper examines the associations of transgender-specific enacted stigma and protective factors (family and friend support, neighborhood belongingness, and transgender community belongingness), with psychological distress, NSSI, and suicidality among transgender people in Aotearoa/New Zealand.
Chapter 7	Article 5—"It's how the world around you treats you for being trans": Mental health and wellbeing of transgender people in Aotearoa New Zealand	This paper provides an analysis of qualitative responses of transgender people on the mental health determinants that are crucial for their mental health. This analysis is guided by a critical realist framework (see Chapter 4) to explore how transgender people make sense of their mental health in relation to cisgenderism.
Chapter 8	Conclusion	This chapter provides a summary of the overall findings, while detailing the limitations of the current study. Recommendations for future research and interventions are also presented.

Chapter 2: Gender Minority Stress: A Critical Review

2.1 Preface

Initially conceptualised to help understand the lived experiences of cisgender gay men (Meyer, 1995), minority stress theory has been widely used to explain the disproportionate burden of mental health difficulties affecting ethnic and religious minorities (e.g., Every & Perry, 2014), sexual minorities (e.g., McCarthy et al., 2014), and more recently, gender minorities or transgender people (Testa et al., 2015). Minority stress theory (Meyer, 2003) has been cited more than 8,500 times to date (source: Google Scholar; October 2020), with its primary application being the elucidation of how marginalised social status and identity-specific stress due to minority identification can lead to mental health inequities. The utilisation of minority stress theory with transgender people, however, requires critical evaluation as the minority stressors faced by this population (e.g., non-affirmation of transgender identity) differ from other minority populations (Testa et al., 2015).

To facilitate a better understanding of reasons for mental health inequities among transgender people in Aotearoa/New Zealand, this paper reviewed existing literature on minority stress theory. The review also critically evaluated Meyer's account of minority stress based on various other theoretical frameworks in minority health. These frameworks include the decompensation framework (Riggs & Treharne, 2017) that calls for the conceptualisation of minority stress as the result of oppressive social norms (i.e., cisgenderism) that privilege identities in dominant social positions and marginalise others; the psychological mediation framework (Hatzenbuehler, 2009) that suggest examination of general psychological outcomes alongside minority stress; and the intersectionality framework (Crenshaw, 1991) that highlights the need to understand the variations of minority stress experiences in relation to the complexities of multifaceted identities and intersecting social norms. In particular, this paper critically examined the relationship between gender

minority stress and cisgenderism that has been serving to police and repudiate manifestations of gender that fall outside of the cisnormative gender binary.

Declaration: After reviewing all relevant literature, I developed the outline of the paper and wrote the first full draft of the paper. I was also the main person responsible for making revisions of the paper based on feedback from the other co-authors and journal reviewers. Overall, I contributed 75% to this paper, and the other co-authors contributed the remaining 25%.

Acknowledgement: Publisher permits the right to include the article in a thesis or dissertation that is not to be published commercially, provided that acknowledgement to prior publication in the Journal is given. This section <Gender minority stress: A critical review> is derived in part from an article published in <Journal of Homosexuality> <26th March 2019> < Taylor & Francis>, available online: <10.1080/00918369.2019.1591789>

Publication status: Published – Citation: Tan, K. K. H., Treharne, G. J., Ellis, S. J., Schmidt., J. M., & Veale, J. F. (2020). Gender minority stress: A critical review. *Journal of Homosexuality, 67*(10), 1471–1489. doi:10.1080/00918369.2019.1591789

JOURNAL OF HOMOSEXUALITY
2020, VOL. 67, NO. 10, 1471–1489
https://doi.org/10.1080/00918369.2019.1591789

Gender Minority Stress: A Critical Review

Kyle K. H. Tan, Bsc (Hons), PhD Candidate [a], Gareth J. Treharne, PhD[b], Sonja J. Ellis, PhD[c], Johanna M. Schmidt, PhD[d], and Jaimie F. Veale, PhD[a]

[a]School of Psychology, University of Waikato, Hamilton, New Zealand; [b]Department of Psychology, University of Otago, Dunedin, New Zealand; [c]School of Human Development and Counselling, University of Waikato, Hamilton, New Zealand; [d]School of Social Science, University of Waikato, Hamilton, New Zealand

ABSTRACT

Past studies that compare cisgender to transgender (or trans) and gender diverse people have found a higher prevalence of mental health problems among the latter groups. This article uses Testa's gender minority stress framework, which is an expansion of minority stress theory, to assess minority stressors that are specific to the experiences of trans and gender diverse people. The concept of cisnormativity, an ideology that positions cisgender identities as a norm, is used in relation to the gender minority stress framework to describe the marginalizing nature of social environments for trans and gender diverse people. This article provides a critical review that integrates and expands on past theoretical perspectives on gender minority stressors and protective factors. Specifically, this article demonstrates the relevance of cultural and ethnic backgrounds to complement the application of intersectionality in research on health disparities experienced by trans and gender diverse people.

KEYWORDS
Transgender; gender diverse; gender minority stress; cisnormativity; intersectionality

Transgender, or the shorthand *trans*, is an umbrella term referring to people whose gender does not correspond with the sex assigned to them at birth, such as trans women and trans men (American Psychological Association, 2015). *Gender diverse* is a term that describes people whose gender identity or expression does not conform to societal expectations of gender in a binary construct (Adams et al., 2017). Gender diverse people may define their gender outside the binary constructs of "man" or "woman," identifying as neither men nor women (e.g., agender or nonbinary), or as moving between binary genders (e.g., genderfluid; American Psychological Association, 2015). Gender diverse people do not necessarily ascribe to a trans identity, particularly those of non-Western cultural backgrounds who might identify with non-Western terms that are best understood within their specific cultural context (e.g., Samoan fa'afafine and Cook Islands akava'ine; Adams et al.,

CONTACT Kyle K. H. Tan kht5@students.waikato.ac.nz School of Psychology, University of Waikato, Private Bag 3105, Hamilton 3240, New Zealand.

© 2019 Taylor & Francis Group, LLC

2017; Alexeyeff & Besnier, 2014). In this article, the abbreviation *TGD* is used to refer to *trans and gender diverse* to encompass all whose gender identity might differ from normative binary constructions of gender. *Cisgender* is used to refer to those whose gender identity aligns with their assigned physical sex in socially accepted ways (American Psychological Association, 2015).

This article provides an integration and expansion of theories of mental health disparities relating to gender identity by (1) critically reviewing Meyer's conceptualization of minority stress and its relevance to the experiences of TGD people; (2) engaging in an in-depth reading of other explanatory frameworks, in order to discuss the effectiveness of Testa, Habarth, Peta, Balsam, & Bockting's (2015) GMSF in encapsulating gender-minority stressors and protective factors experienced by TGD people; and (3) using intersectionality to explain how TGD people with multiple marginalized identities may experience specific forms of minority stress.

A number of review studies have investigated the prevalence of mental health problems among TGD people (see Dhejne, Van Vlerken, Heylens, & Arcelus, 2016; McNeil, Ellis, & Eccles, 2017; Millet, Longworth, & Arcelus, 2017). These review studies found that TGD people manifest higher rates of various mental health problems when compared to either cisgender people or general population prevalence figures. For example, a systematic review of the prevalence of anxiety symptoms and disorders among TGD people across countries in the regions of Americas, Europe, and Asia found that the prevalence of anxiety among TGD people may be as high as 68.0%, compared to the 18.0% found in general population surveys (Millet et al., 2017).

The high prevalence of mental health problems among TGD people has been found to correlate with the impact of minority stress. *Minority stress* is the "excess stress to which individuals from stigmatised social categories are exposed as a result of their social, often a minority, position" (Meyer, 2003, p. 675). Minority stress theory (MST) was originally developed by Meyer (1995, 2003) to provide theoretical explanations for the effect of minority stress on the mental health of specific sexual minority groups, namely lesbian, gay, and bisexual (LGB) people. Tokenistic incorporation of TGD people in the overarching concept of sexual orientation and gender minorities (conventionally known as LGBT people) may seem to render MST applicable to TGD people. However, research has demonstrated that the stressors experienced by TGD people on the basis of gender identity and expression are not necessarily the same as those experienced by LGB people (see Clarke, Ellis, Peel, & Riggs, 2010). Testa and colleagues subsequently developed the gender minority stress framework (GMSF; Testa et al., 2015), which considers specific minority stressors that are unique to TGD people to elucidate the disparities in mental health problems between TGD and cisgender people.

Gender minority stress

The gender minority stress framework (Testa et al., 2015) is built on Meyer's minority stress theory (Meyer, 1995, 2003). The GMSF employs a stress discourse to examine the social environments affecting TGD people (Testa et al., 2015). MST conceptualizes stress based on the application of an engineering analogy, in which stress is assessed as "a load relative to a supportive surface" (Meyer, 2003, p. 675). In this instance, a load is depicted as a stressor, which can be conceptualized as a stimulus that threatens the optimal functioning of a person's cognitive perception (Koolhaas et al., 2011). When a stressor becomes uncontrollable and unpredictable for an individual, the person concerned is said to be experiencing stress (Koolhaas et al., 2011). Meyer (2003) further postulated that loads can be differentiated into individual and social stressors and that people of minority groups are subjected to an additional form of social stressor that is not experienced by those in dominant groups: *minority stress.*

Riggs and Treharne (2017) argued that Meyer's definition of minority stress as a distinctive or additional form of social stress does not correspond with the understanding of the engineering analogy. Figure 1 depicts the difference in the application of engineering analogy between Meyer (2003) and Riggs and Treharne (2017). Riggs and Treharne (2017) raised an example to consider stressful social environments as a load that places social exertion on a supportive surface (i.e., a minority person or group). In this instance, the load has incorporated both individual and social characteristics of a stressor, thus generating a cumulative form of stress that exerts its influence on a minority person. Given that stress is a product of cumulative effects of stressors, Riggs and Treharne (2017) refuted Meyer's view that minority stress arises from a person's marginalized social position mediated entirely via intra-individual factors such as internalized homophobia. Riggs and Treharne (2017) instead argued that minority stress should be perceived to originate from institutionalized ideologies and social norms that accord a minority position. Hence, in this review we conceptualize gender minority stress as a form of stress that is unique to TGD people, and that the minority

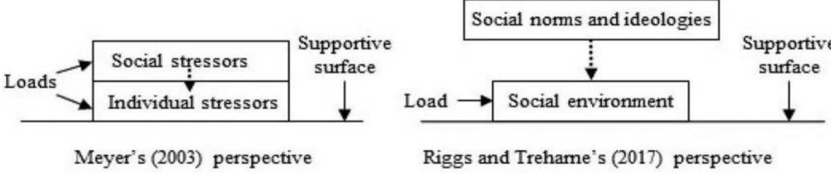


Figure 1. Perspectives on the engineering analogy. Dashed line indicates a mediation or influential effect.

position of TGD people is the product of marginalizing ideologies and social norms that privilege cisgender people.

Conceptualization of gender minority stress from social theories

The integrative conceptualization of the GMSF that this article proposes is not based on one congruous theory, but it is rather informed by several sociological and psychological theoretical frameworks (Meyer, 1995, 2003). Below is the discussion of the frameworks that outline the role of institutionalized ideologies and social norms that consign TGD people to a minority position.

In Meyer's original conceptualization of MST (2003), reference was made to Merton's (1968) work on institutionalized social norms in relation to minority groups. According to Merton, social norms generate stressors that conflict with the minority cultures and with the interests of minority groups. In societies where distinctions of social status between dominant groups (e.g., cisgender people) and minority groups (e.g., TGD people) are particularly prominent, there is a tendency for dominant groups to marginalize minority groups. Meyer (1995) drew on societal reaction theory to provide explanations for the "processes by which persons come to be defined as deviant" by societies (Kitsuse, 1962, p. 248). A behavior or social norm is considered "deviant" if it departs from the conventional understanding of an appropriate behavior or social norm (Kitsuse, 1962). This theory assists in identifying the members of a minority group who are defined by social norms as deviant, as well as determining how these members are thus treated.

Cisnormativity refers to the assumption that it is "normal" for one's gender identity to reflect the physical sex assigned at birth in the expected way, and that both sex and gender are only binary (Baril & Trevenen, 2014). Cisnormativity as an ideology and the institutionalized social norm of being cisgender (a prejudice known as cisgenderism) explain why TGD identity is treated as deviant by contemporary societies. Cisnormativity is used to describe situations where people fail or refuse to comprehend the identities or experiences of TGD people (Riggs, Ansara, & Treharne, 2015). This ideology privileges cisgender people, as it reinforces the understanding that there are only two valid genders (i.e., woman and man) and that these should always correlate with biological sex in the expected ways, delegitimizing TGD people's own understanding of their genders and bodies (Ansara & Hegarty, 2012; Baril & Trevenen, 2014; Riggs et al., 2015). Cisnormativity is prejudicial for TGD people, because it treats people as deviant if they decline, or are suspected of declining, the maintenance of a conventional consistency between genitalia and gender presentation (e.g., physical body and attire) as deviant. An example of pathologization of TGD people is the usage of negative classifications in various versions of the *Diagnostic Statistical*

Manual of Mental Disorders (DSM), such as gender identity disorder (American Psychiatric Association, 1994), which was more recently relabeled as gender dysphoria (American Psychiatric Association, 2013) but is still conceptualized as a divergence from norms requiring psychiatric attention. Examples such as this demonstrate that the pathologization of TGD people is embedded in the construction of gender within a cisnormative framework.

Cisnormativity also includes the *misgendering* of TGD people, which involves misclassifying TGD people based on dominant understandings of genders and bodies (Riggs et al., 2015). Misgendering of TGD people results in *non-affirmation*, where surrounding people are unable or unwilling to acknowledge or use the appropriate name, pronoun, or gender of a TGD person. For instance, a trans woman may be labeled as a man, addressed with male pronouns or referred to by a former male name. Those who identify as genderqueer or gender diverse may also be subjected to non-affirmation, when surrounding people are unable to recognize them in a gender-neutral manner (Testa et al., 2015). Testa et al. (2015) identified non-affirmation as a form of distal stressor in the GMSF framework.

Much psychological research is conducted from a cisnormative perspective (Ansara & Hegarty, 2012). Psychological research has presumed being cisgender to be the social norm, and most psychological researchers conceptualize human experience in strictly cisgender terms (Ansara & Hegarty, 2012). Past psychological and medical researchers who have applied a cisnormative framework have at best neglected and invalidated the existence of TGD people. If psychological research assumes the population of interest to be cisgender, it is difficult to examine the issues affecting the TGD populations and to develop measures to address the health and social needs of TGD people. At its worst, psychological and psychiatric research has taken an active anti-trans stance—for example, by attempting to produce evidence of the effectiveness of conversion therapies (Bernal & Coolhart, 2012).

The social exclusion framework provides explanations for the effects of marginalizing social norms on members who are considered as deviant (Iwasaki, Bartlett, MacKay, Mactavish, & Ristock, 2005). In this instance, cisgenderism causes TGD people to be at risk of social exclusion, as they face limited opportunities and access to resources at various levels. The U.S. National Transgender Discrimination Survey (NTDS) of 6,450 TGD people revealed that TGD people experience labor market exclusions (unemployment and underemployment); economic exclusions (poverty); institutional and medical exclusions (structural discrimination); social isolations (limited social networks); cultural exclusions (inability to live according to culturally accepted norms); and spatial exclusions (difficulty accessing public spaces and services; Grant et al., 2011). The NTDS also identified the issue of accessing gender-segregated bathrooms to be of concern among TGD people, especially for those who do not conform to reified expectations of how men

and women should behave. A secondary analysis of NTDS data of 2,325 TGD college students on their experiences of accessing public bathroom found that 24.9% had been denied access (Seelman, 2016). When correlated with frequency of suicide attempts, TGD college students who had been denied access to a school bathroom were more likely to have reported attempting suicides (Seelman, 2016).

Conceptualization of gender minority stress from social psychological theories

Meyer (2003) also drew on social psychological theories in developing MST, in an attempt to uncover the social origins of negative societal reactions based on intergroup relations, developed through the process of categorization. Identity categories are formed because there are distinctions between social groups (e.g., cisgender and TGD people). These categories serve as a platform for individuals within a group or multiple groups to self-define, thus forming a social identity of their own. Differences in social identities result in intergroup processes taking place between groups that are dominant or subordinate (Turner, 1999). In this instance, intergroup processes such as discrimination and prejudice constitute minority stressors on the lives of TGD people.

In addition to the intergroup relations, Mead (1934) provided another perspective on the social origins of negative societal reactions, based on symbolic interaction theory. This theory views social environments as providing people with meaning for their world and organization of their experiences, positing that a person's sense of self develops through social interactions that ingrain meanings through symbols and signifiers. As part of growing up, a person observes and makes connections with the people surrounding them and their social environment and learns to form judgments about social norms. In this instance, lack of acceptance of TGD identities and exposure to direct stereotypes and prejudice lead TGD people to realize the cisnormative nature of their social environment. As a result, TGD people may form negative self- regard in respect of their minority identity (Meyer, 2003). In particular, TGD people who hold negative self-regard and experience internalized stigmatization of their TGD identity may manifest high distress levels (Sánchez & Vilain, 2009).

Meyer's shift from institutionalized social norms (e.g., being cisgender as the idealized norm) to a person's self-regard as the locus of stress has been argued to be problematic based on interpretation of the engineering analogy (Riggs & Treharne, 2017). The engineering analogy views stress in a social context, but in social psychological theories, stress is reduced to an individualized phenomenon. In these theories, stress is prioritized in relation to the subjective experiences of each TGD person toward negative societal

reactions. Consequently, the importance of social norms in shaping how TGD people may be rendered legitimate targets of negative regard is diminished.

Gender minority stressors

Meyer (1995, 2003) made a distinction between distal sources of stress and proximal appraisals of stress, as in a continuum to classify the minority stressors that TGD people face into three processes: distal stressors, negative expectations, and internalized transphobia. Although Riggs and Treharne (2017) made suggestions to reframe the language used to describe minority stress, they did not criticize Meyer's original intent to account for the effects of discrimination, nor the potential utility of MST if stressors are not considered to be purely resultant from personal internalization of stigma.

Distal stressors

The first process relating to discrimination in MST is distal stressors, which are events experienced by people with minority identities, and they range from everyday events of discrimination or microaggressions to other factors. Testa et al. (2015) posited that expressions of TGD identity expose TGD people to distal stressors that comprise *gender-based victimization* (verbal or physical acts committed against TGD people); *gender-based rejection* (rejection or nonacceptance by people, institutions, and communities); *gender-based discrimination* (difficulty accessing housing, employment, medical care, or legal documents) and *non-affirmation* (internal sense of gender identity of TGD people is not recognized by others). As purportedly objective factors, distal stressors are conceptualized as independent of personal identification and associated with the assigned minority position within a society (Meyer, 2003). For example, a woman who was assigned male at birth and has since undergone a medical gender transition so that her body is "female" might not self-identify as trans. However, she may still be subjected to a similar degree of distal stressors as other trans women because she is perceived as a "trans" by others.

The U.S. Transgender Survey of 27,715 TGD people discovered that incidences of victimization were relatively common among TGD people (James et al., 2016). Approximately half (48%) of participants in this study reported experiencing at least one form of victimization such as verbal harassment, physical attack, or sexual assault. When compared to cisgender counterparts, the New Zealand Youth'12 study of 96 TGD and 8070 cisgender high school students found a threefold increase in the percentage of TGD students who reported incidences of bullying on a weekly basis (17.6% vs. 5.8%; Clark et al., 2014). In the same study, TGD students were significantly

more likely than their cisgender counterparts to report being physically harmed by another person (49.9% vs. 32.5%). These differences in experiences demonstrate some of the ways that TGD people are more likely to experience distal stressors than the cisgender population.

Negative expectations

Based on the minority stressors continuum that Meyer (1995, 2003) postulated, distal stressors play an important role in influencing a person's perceptions and appraisals of stress. He conceptualized the subjective appraisals of minority stress as proximal stressors, which comprise the second and third processes relating to discrimination in MST (Meyer, 2003). The second process is *negative expectations for future events*, which describes the anxiety of TGD people in anticipating distal stressors because of previous experiences with prejudice and discrimination toward their TGD identity (Hatzenbuehler & Pachankis, 2016). Evidence of negative expectations for future events among TGD was observed in the New Zealand Youth'12 study, where more than half of TGD students (53.5%) reported being afraid that someone at school would hurt or bother them (Clark et al., 2014). Comparatively, cisgender students (39.8%) were less likely to report fear of victimization (Clark et al., 2014). Proximal stressors also includes *nondisclosure*, which describes attempts made by TGD people to conceal their TGD identity in an attempt to protect themselves or others close to them from directly experiencing distal stressors (Testa et al., 2015). During this process, TGD people often feel the need to be vigilant in deciding if they should conceal or disclose their TGD identity. The maintenance of a vigilant state when anticipating discrimination can result in high levels of distress (Meyer, 1995).

Internalized transphobia

For TGD people, the third process relating to discrimination in MST is the proximal stressors of *internalized transphobia* or the internalization of negative societal attitudes about one's own TGD identity and TGD people as a social group (Hatzenbuehler & Pachankis, 2016). As a case in point, a study of 482 Argentinian TGD people found that more than half (55.8%) of participants experienced some forms of internalized transphobia, such as feeling ashamed or low self-esteem in relation to their TGD identity (Marshall et al., 2016). Often, these responses arise from pervasive exposure to negative societal reactions resulting from cisnormativity (Marshall et al., 2016).

In contrast with the distal stressors, negative expectations for future events, nondisclosure, and internalized transphobia are theorized in MST

to be more subjective and rely on internal appraisals among minority people (Meyer, 2003; Testa et al., 2015). The degree of anticipation of stressful events and internalized negative attitudes is thus theorized to vary for each TGD person. Hatzenbuehler's psychological mediation framework postulates that MST does not sufficiently explain the proximal pathways through which distal stressors are implicated in the process of contributing to mental health problems (Hatzenbuehler, 2009). This is because MST does not investigate the general psychological processes of people of minority groups, as part of the understandings of proximal stressors. In this instance, general psychological processes refers to the "common vulnerabilities in psychological and social processes" that are shared by both cisgender and TGD people (Hatzenbuehler, 2009, p. 712). The psychological mediation framework suggests that distal stressors may cause TGD people to be more vulnerable to general psychological processes such as maladaptive emotion regulations, social exclusions, and feelings of hopelessness. However, this review focuses on minority stressors that are specific to TGD people and therefore characteristically different from stressors that apply to cisgender people.

In the understanding of proximal stressors experienced by TGD people, there is a need to recognize their linkages to cisnormativity. Allowing for these linkages is necessary to address the disjuncture between the social context and the individualized conceptualization of internalization. As suggested by Riggs and Treharne (2017), application of the MST is often limited to a reified understanding of proximal stressors as a form of internalized cognition that enacts the theoretical switch from stressful social environments (as the results of marginalizing social norms) to a personalized account.

Gender minority protective factors

Despite not fitting into the dominant engineering analogy that views stress in a social context, Meyer's (2003) and Hatzenbuehler's (2009) position of speculating stress as proximal is important, as it opens up the possibility for protective factors (i.e., resilience and coping) to buffer against the negative ramification of minority stressors. Protective factors for TGD people can be divided into individual-level and social-level (Testa et al., 2015). Within this conceptualization, there is one individual-level protective factor—identity pride—while social-level protective factors include community connectedness, family support, and culture connectedness.

Singh, Hays, and Watson (2011) reported the primary aspect of resilience among TGD people as *identity pride*, which is the ability to define one's own gender identity and embrace one's self-worth. Notably, embracing self-worth was a critical component of enabling a strong "internal coach" to negotiate negative messages from societal discrimination and internalized transphobia

(Singh et al., 2011, p. 23). TGD people who have a strong TGD identity have a reinforced sense of self and are also more able to advocate for themselves in a cisnormative social environment (Singh et al., 2011).

TGD people who have been exposed to resources pertaining to social-level protective factors (e.g., peer networks and connectedness to trans-specific support groups) have reported these social supports as being beneficial for them to learn about medical resources, speak out about political concerns, and strengthen their TGD social networks (Singh et al., 2011). In particular, developing a sense of *community connectedness* with TGD-specific support groups and social networks was found to serve as a counterpoint to minority stressors by facilitating social-level coping resources, such as fostering connections with other TGD people, finding positive role models, and normalizing emotional reactions related to discrimination through shared experiences with TGD peers (Pflum, Testa, Balsam, Goldblum, & Bongar, 2015).

Differences in values across Western and non-Western contexts mean Western understandings of TGD experiences are inadequate for understanding TGD experiences in other cultural contexts, including many indigenous cultures (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009; Walters & Simoni, 2002). Although there are important convergences between the proposed protective factors and indigenous concepts of health and wellbeing, there is a definite need to integrate indigenous perspectives to understand the specific minority stressors that indigenous TGD people face (Kirmayer et al., 2009; Walters & Simoni, 2002). For instance, the indigenous people in Aotearoa/New Zealand known collectively as Māori recognize health more holistically, in comparison to the biomedical manner that is typical of Western views of health that has often neglected the ways in which health is interconnected and interdependent with other components of wellbeing, such as *family support* and *cultural connectedness* (Durie, 1999; Rochford, 2004).

Family members are often characterized as “primary group members” with whom TGD people can form emotional ties and are thus viewed as important or influential in their lives (Thoits, 2011). In the U.S. Transgender Survey, a comparison to TGD people with unsupportive family members found that TGD people who receive positive familial responses toward their TGD identity are less likely to experience psychological distress (31% vs. 50%), as they are better equipped with coping mechanisms to deal with minority stressors (James et al., 2016). When family support is translated into the indigenous context, this factor also exerts a protective effect to buffer against the impacts of minority stressors (Pettingell et al., 2008). For example, a study of cisgender Alaskan indigenous young adults found that those who get along well with family members or have someone in their family who cares for their wellbeing are protected against suicidality (Pettingell et al., 2008).

The GMSF fails to take into account *cultural connectedness* among TGD people, which is an important protective factor in mitigating the negative impacts of minority stressors (Scheim et al., 2013; Walters & Simoni, 2002). The Canadian Trans PULSE study of 433 TGD people (including 32 who identified as indigenous) found that the indigenous TGD people perceived community and spiritual sources of support as vital, with 19.0% of them having approached cultural community leaders for mental health support (Scheim et al., 2013). Cultural connectedness can be assessed with the cultural factors in the indigenist stress-coping model (Walters & Simoni, 2002) that includes identity attitude (the extent to which one internalizes or externalizes one's attitude toward their cultural or ethnic background) and enculturation (learning and identifying with one's cultural or ethnic background), spiritual methods of coping, and traditional health practices.

Consideration of multiple and intersecting identities

Past uses of MST (Meyer, 1995, 2003) and the GMSF (Testa et al., 2015) have been critiqued around the usage of broad identity terms to effectively refer to one particular population (Meyer, 2010, 2015). For instance, the term *TGD* often connotes only Western, middle-class, or urban TGD people. Applications of the GMSF that do not include indigenous, underprivileged, or rural TGD people can lead to homogenized and limited understandings of TGD people's experiences and, consequently, only advance the interests of subsections of the TGD population who are already relatively privileged (Meyer, 2010, 2015; Parent, DeBlaere, & Moradi, 2013). Hence, a comprehensive understanding of gender minority stress requires consideration of multiple identities.

Additive approaches to minority stressors

An additive approach treats marginalized identities as independent of each other and sees them as combining to shape the experiences of a person or a group who possess more than one marginalized identity (Parent et al., 2013). MST illustrates this approach by referring to having two minority identities (e.g., TGD and ethnic-minority) as *double jeopardy*, and three minority identities (e.g., TGD, ethnic-minority, and rural) as *triple jeopardy* (Meyer, 2010). Within MST, people who face double or triple jeopardy would have higher prevalence of mental health problems because of the greater risks of minority stress resulting from adding other minority identities to the TGD identity, when compared to people who have a single minority identity (Jaspal, 2015; Meyer, 2010). In terms of social-level protective factors, the added minority identity may also restrict the ways in which TGD people with two minority identities identify and

affiliate with TGD groups (Meyer, 2015). For instance, TGD people from ethnic-minority groups may end up marginalized within predominantly Western TGD support networks (Singh, 2013). Lessening community connectedness may in turn amplify the negative impact of gender minority stressors on these TGD people. Double jeopardy for TGD people is demonstrated in the U.S. National College Health Assessment-II, which reported ethnic-minority TGD students may experience exacerbated amounts of minority stress in relation to their double minority identities (Lytle, Blosnich, & Kamen, 2016).

However, not every person with an additional minority identity experiences greater effects of minority stress. Meyer (2010) proposed that because ethnic-minority people commonly have prior exposure of racism, they may be resilient to the effect of minority stressors related to their other minority identity. This is suggested in an analysis of data from New Zealand Youth'07 and '12 studies, which found that ethnic-minority TGD people have better mental health outcomes than Western TGD people (Chiang et al., 2017). People of two minority identities have also been found to develop resilience in a more effective manner, by drawing on social-level resources (e.g., community support, family values, cultural beliefs) to buffer against the impact of minority stressors on mental health outcomes (Sanders & Munford, 2015). For instance, indigenous Māori culture in Aotearoa/New Zealand provides specific resources (e.g., spiritual practices, and community gatherings) that can be drawn on to address the effects of minority stressors (Sanders & Munford, 2015). Western people, on the other hand, may be more susceptible to minority stressors because they lack collectivist cultural resources to provide them with a stronger positive sense of identity (Sanders & Munford, 2015).

Intersectional approaches to minority stressors

Intersectionality acknowledges that a person may possess multiple identities that result in distinctive individual and collective experiences (Parent et al., 2013). Compared to an additive approach that treats identity categories as mutually exclusive variables, an intersectional approach contends that multiple identity categories construct novel experiences that are not necessarily divisible into their component identities (Parent et al., 2013). The focus of intersectionality is the result of a "fusing" of multiple identity categories (Choo & Ferree, 2010; Parent et al., 2013). For example, Singh (2013) used an intersectional approach to examine the resilience experiences of ethnic-minority TGD youth. An African American trans man participant described his transgender culture and Black culture as inseparable, and that the minority stress he had experienced was distinctive. Singh (2013) also found that ethnic-minority TGD youth who valued the interconnectedness of their

ethnicity and gender were more likely to develop a sense of empowerment and pride.

Intersectionality is used to explore how multiple and overlapping prejudices (e.g., racism and cisgenderism) shape the experiences of those with multiple marginalized identities (Crenshaw, 1991; Parent et al., 2013). Often, these social norms and prejudices contribute to the construction of relative privileging and marginalizing systems that impact a person and their wider social groups (Parent et al., 2013). The emphasis of an intersectional approach aligns with the understanding of the engineering analogy of MST, which focuses on how ideologies and social norms serve to marginalize or privilege certain groups of people. Intersectionality was briefly discussed in Meyer's work (Meyer, 2010), but there has yet been extensive research on the application of intersectionality in relation to MST and the GMSF. Detailed reviews and meta-analyses will be possible after further research has been conducted into the GMSF. This further research will need to take into consideration the multiple and simultaneous effects of marginalizing ideologies on TGD people, who may be oppressed along the multiple axes of inequality.

The selection of either an additive or an intersectional approach when conducting research with TGD people with multiple marginalized identity would depend on the theoretical approach adopted by the researcher. An additive approach can be applied in quantitative studies where identity categories (e.g., ethnicity and gender) are appraised as predictor variables in the equation of MST to ascertain their influences on criterion variable (e.g., mental health outcomes; Parent et al., 2013). The effects of the predictor variables are tested through their main effects (e.g., the independent effect of ethnicity and gender). At the same time, quantitative studies can apply an intersectional approach by testing interactive effects (e.g., the interaction outcomes of ethnicity and gender). Qualitative methods can also be employed to examine the issues of intersectionality, with specific advantages in generating a nuanced understanding of the complexities and multiplicities of experiences (Parent et al., 2013). An intersectional approach resolves the "problem of addition" that results from the way in which an additive approach treats identity categories as mutually exclusive variables. Well-designed quantitative research can advance understanding of intersecting identities by testing research questions that attend to the needs of people with multiple identities, and the operationalization of outcome variables that can reflect the unique experiences of these people (Parent et al., 2013). An example of quantitative research that used intersectionality is Jefferson, Neilands, and Sevelius (2013), which adapted scales about experiences of racism and cisgenderism to explore the combined effects of these experiences on ethnic-minority trans women and found that combined discrimination related to the likelihood of depression.

Conclusions and summary of future directions

There is a growing body of research that has employed MST (Meyer, 1995, 2003, 2015) to elucidate mental health disparities among minority groups. MST has provided fundamental scaffolding to describe the stress process experienced by members of minority groups, although the use of this theory has largely been taken for granted, and ongoing critical evaluation and expansion are required. This article attends to the critiques of Meyer's initial account of minority stress, which includes the definition of minority stress based on the engineering analogy (Riggs & Treharne, 2017), the lack of emphasis on institutionalized ideologies and social norms (Riggs & Treharne, 2017), inadequate explanations of general psychological outcomes (Hatzenbuehler, 2009), and the lack of consideration of the specific experiences resulting from having multiple and intersecting identities (Meyer, 2010, 2015).

This article expands on the GMSF (Testa et al., 2015) to highlight specific minority stressors and protective factors for TGD people. By drawing on the sociological and social psychological theories that were used to conceptualize MST, this article analyzes these perspectives using the lens of cisnormativity. In this instance, a critical understanding of the ideology of cisnormativity is used in relation to the GMSF to provide explanations for the source of stressful social environments that affect TGD people. Cisnormativity also serves to describe how cisgender identities are constructed as the ideal social norm, and how they are privileged at the expense of TGD identities while also being constrained by narrow cisgender norms.

Although distal and proximal minority stressors in relation to the sexual minority groups have been widely tested among TGD people, most TGD mental health studies (e.g., Marshall et al., 2016; McCarthy, Fisher, Irwin, Coleman, & Pelster, 2014) have neglected TGD-specific minority stressors, such as non-affirmation and nondisclosure of gender identity. These two stressors were found to contribute substantially to the minority stress experiences of TGD people (Testa et al., 2015) and therefore should be included when considering minority stressors for TGD people. This article has also demonstrated the relevance of two additional protective factors in relation to the original GMSF (Testa et al., 2015), which are family support and cultural connectedness. Although these two factors have not yet been tested in the GMSF as a whole framework, specific studies have suggested that these factors correlate with positive mental health outcomes among TGD people (Klein & Golub, 2016; Scheim et al., 2013). Assessment of cultural connections should be conducted in a culturally sensitive manner and could benefit from the application of indigenous frameworks of health promotion, such as the New Zealand Te Pae Māhutonga model (Durie, 1999) or the Samoan Fa'afaletui model (Tamasese, Peteru, Waldegrave, & Bush, 2005). Future

TGD research should operationalize family support and cultural connectedness in ways that align with indigenous definitions of health, which often recognize health as interconnected and interdependent with other components of wellbeing (e.g., spirituality and connectedness to physical environments; Kirmayer et al., 2009; Walters & Simoni, 2002).

This article has explored the intersection of ethnicity and gender, in relation to overlapping effects of racism and cisgenderism on TGD people's experiences of minority stressors and their mental health outcomes. The inclusion of an intersectional approach is important in TGD health research to facilitate a shift in focus from the unitary effect of cisgenderism to the intersections among multiple systems of oppression. This intersectional shift would allow for a greater consideration of systemic inequalities within the TGD populations. There are other identities and systems of oppression that may affect the health outcomes of TGD people that we have not explored in this article—these include those related to sexuality, religion, disability status, and socioeconomic status. Constraints in resources and knowledge within specific research projects may preclude a simultaneous analysis of every form of inequality, but studies that focus on TGD identities without at least considering other axes of identity are inadequate and reductive.

In conclusion, this article argues that the GMSF is a useful framework for understanding TGD-specific minority stressors and protective factors and their roles in predicting mental health outcomes. However, the original GMSF is not comprehensive enough. This article proposes the integration of the GMSF into a broader culturally embedded framework that would include indigenous perspectives and intersectional approaches, in order to adequately account for the gender minority stressors experienced by TGD people, while accounting for the importance of family support and culture connectedness.

Conflict of Interest

The authors declare that they have no conflict of interest.

ORCID

Kyle K. H. Tan http://orcid.org/0000-0001-6831-7045

References

Adams, N., Pearce, R., Veale, J., Radix, A., Castro, D., Sarkar, A., & Thom, K. C. (2017). Guidance and ethical considerations for undertaking transgender health research and institutional review boards adjudicating this research. *Transgender Health*, *2*(1), 165–175. doi:10.1089/trgh.2017.0012

Alexeyeff, K., & Besnier, N. (2014). Gender on the edge: Identities, politics, transformations. In N. Besnier & K. Alexeyeff (Eds.), *Gender on the edge: Transgender, gay, and other Pacific Islanders* (pp. 1–32). Honolulu, HI: University of Hawai'i Press.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders: DSM-IV*. Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist, 70*, 832–864. doi:10.1037/a0039906

Ansara, Y. G., & Hegarty, P. (2012). Cisgenderism in psychology: Pathologising and misgendering children from 1999 to 2008. *Psychology & Sexuality, 3*, 137–160. doi:10.1080/19419899.2011.576696

Baril, A., & Trevenen, K. (2014). Exploring ableism and cisnormativity in the conceptualization of identity and sexuality 'disorders'. *Annual Review of Critical Psychology, 11*(1), 389–416.

Bernal, A. T., & Coolhart, D. (2012). Treatment and ethical considerations with transgender children and youth in family therapy. *Journal of Family Psychotherapy, 23*, 287–303. doi:10.1080/08975353.2012.735594

Chiang, S.-Y., Fleming, T., Lucassen, M., Fenaughty, J., Clark, T., & Denny, S. (2017). Mental health status of double minority adolescents: Findings from national cross-sectional health surveys. *Journal of Immigrant and Minority Health, 19*, 499–510. doi:10.1007/s10903-016-0530-z

Choo, H. Y., & Ferree, M. M. (2010). Practicing intersectionality in sociological research: A critical analysis of inclusions, interactions, and institutions in the study of inequalities. *Sociological Theory, 28*, 129–149. doi:10.1111/j.1467-9558.2010.01370.x

Clark, T. C., Lucassen, M. F. G., Bullen, P., Denny, S. J., Fleming, T. M., Robinson, E. M., & Rossen, F. V. (2014). The health and well-being of transgender high school students: Results from the New Zealand adolescent health survey (Youth'12). *Journal of Adolescent Health, 55*(1), 93–99. doi:10.1016/j.jadohealth.2013.11.008

Clarke, V., Ellis, S. J., Peel, E. A., & Riggs, D. W. (2010). *Lesbian, gay, bisexual, trans and queer psychology: An introduction*. Cambridge, UK: Cambridge University Press.

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review, 43*, 1241–1299. doi:10.2307/1229039

Dhejne, C., Van Vlerken, R., Heylens, G., & Arcelus, J. (2016). Mental health and gender dysphoria: A review of the literature. *International Review of Psychiatry, 28*(1), 44–57. doi:10.3109/09540261.2015.1115753

Durie, M. (1999). Te Pae Mahutonga: A model for Māori health promotion. *Health Promotion Forum of New Zealand Newsletter, 49*.

Grant, J. M., Mottet, L. A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). *Injustice at every turn: A report of the national transgender discrimination survey*. Washington, DC: National Center for Transgender Equality and National Gay and Lesbian Task Force.

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "Get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135*, 707–730. doi:10.1037/a0016441

Hatzenbuehler, M. L., & Pachankis, J. E. (2016). Stigma and minority stress as social determinants of health among lesbian, gay, bisexual, and transgender youth: Research evidence and clinical implications. *Pediatric Clinics of North America, 63*, 985–997. doi:10.1016/j.pcl.2016.07.003

Iwasaki, Y., Bartlett, J., MacKay, K., Mactavish, J., & Ristock, J. (2005). Social exclusion and resilience as frameworks of stress and coping among selected non-dominant groups. *International Journal of Mental Health Promotion*, *7*, 4–17. doi:10.1080/14623730.2005.9721870

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. Transgender Survey*. Washington, DC: National Center for Transgender Equality

Jaspal, R. (2015). Non-heterosexual British Asian men: Social representations, identity and social relations. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences* (pp. 861–866). Oxford, Amsterdam: Elsevier.

Jefferson, K., Neilands, T. B., & Sevelius, J. (2013). Transgender women of color: Discrimination and depression symptoms. *Ethnicity and Inequalities in Health and Social Care*, *6*, 121–136. doi:10.1108/EIHSC-08-2013-0013

Kirmayer, L. J., Sehdev, M., Whitley, R., Dandeneau, S. F., & Isaac, C. (2009). Community Resilience: Models, metaphors and measures. *Journal of Aboriginal Health*, *7*(1), 62–117.

Kitsuse, J. I. (1962). Societal reaction to deviant behavior: Problems of theory and method. *Social Problems*, *9*, 247–256. doi:10.2307/799235

Klein, A., & Golub, S. A. (2016). Family rejection as a predictor of suicide attempts and substance misuse among transgender and gender nonconforming adults. *LGBT Health*, *3*, 193–199. doi:10.1089/lgbt.2015.0111

Koolhaas, J. M., Bartolomucci, A., Buwalda, B., de Boer, S. F., Flügge, G., Korte, S. M., … Fuchs, E. (2011). Stress revisited: A critical evaluation of the stress concept. *Neuroscience & Biobehavioral Reviews*, *35*, 1291–1301. doi:10.1016/j.neubiorev.2011.02.003

Lytle, M. C., Blosnich, J. R., & Kamen, C. (2016). The association of multiple identities with self-directed violence and depression among transgender individuals. *Suicide and Life-Threatening Behavior*, *46*, 535–544. doi:10.1111/sltb.12234

Marshall, B. D. L., Socías, M. E., Kerr, T., Zalazar, V., Sued, O., & Arístegui, I. (2016). Prevalence and correlates of lifetime suicide attempts among transgender persons in Argentina. *Journal of Homosexuality*, *63*, 955–967. doi:10.1080/00918369.2015.1117898

McCarthy, M. A., Fisher, C. M., Irwin, J. A., Coleman, J. D., & Pelster, A. D. K. (2014). Using the minority stress model to understand depression in lesbian, gay, bisexual, and transgender individuals in Nebraska. *Journal of Gay & Lesbian Mental Health*, *18*, 346–360. doi:10.1080/19359705.2014.908445

McNeil, J., Ellis, S. J., & Eccles, F. J. R. (2017). Suicide in trans populations: A systematic review of prevalence and correlates. *Psychology of Sexual Orientation and Gender Diversity*, *4*, 341–353. doi:10.1037/sgd0000235

Mead, G. H. (1934). *Mind, Self, and Society*. Chicago, CHI: University of Chicago Press.

Merton, R. K. (1968). *Social theory and social structure*. New York, NY: Free Press.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, *36*(1), 38–56. doi:10.2307/2137286

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, *129*, 674–697. doi:10.1037/0033-2909.129.5.674

Meyer, I. H. (2010). Identity, stress, and resilience in lesbians, gay men, and bisexuals of color. *The Counseling Psychologist*, *38*, 442–454. doi:10.1177/0011000009351601

Meyer, I. H. (2015). Resilience in the study of minority stress and health of sexual and gender minorities. *Psychology of Sexual Orientation and Gender Diversity*, *2*, 209–213. doi:10.1037/sgd0000132

Millet, N., Longworth, J., & Arcelus, J. (2017). Prevalence of anxiety symptoms and disorders in the transgender population: A systematic review of the literature. *The International Journal of Transgenderism*, *18*(1), 27–38. doi:10.1080/15532739.2016.1258353

Parent, M., DeBlaere, C., & Moradi, B. (2013). Approaches to research on intersectionality: Perspectives on gender, LGBT, and racial/ethnic Identities. *Sex Roles*, *68*, 639–645. doi:10.1007/s11199-013-0283-2

Pettingell, S. L., Bearinger, L. H., Skay, C. L., Resnick, M. D., Potthoff, S. J., & Eichhorn, J. B. (2008). Protecting urban American Indian young people from suicide. *American Journal of Health Behavior*, *32*, 465–476. doi:10.5993/AJHB.32.5.2

Pflum, S. R., Testa, R. J., Balsam, K. F., Goldblum, P. B., & Bongar, B. (2015). Social support, trans community connectedness, and mental health symptoms among transgender and gender nonconforming adults. *Psychology of Sexual Orientation and Gender Diversity*, *2*, 281–286. doi:10.1037/sgd0000122

Riggs, D. W., Ansara, G. Y., & Treharne, G. J. (2015). An evidence-based model for understanding the mental health experiences of transgender Australians. *Australian Psychologist*, *50*(1), 32–39. doi:10.1111/ap.12088

Riggs, D. W., & Treharne, G. J. (2017). Decompensation: A novel approach to accounting for stress arising from the effects of ideology and social norms. *Journal of Homosexuality*, *64*, 592–605. doi:10.1080/00918369.2016.1194116

Rochford, T. (2004). Whare Tapa Wha: A Māori model of a unified theory of health. *Journal of Primary Prevention*, *25*(1), 41–57. doi:10.1023/B:JOPP.0000039938.39574.9e

Sánchez, F. J., & Vilain, E. (2009). Collective self-esteem as a coping resource for male-to-female transsexuals. *Journal of Counseling Psychology*, *56*(1), 202–209. doi:10.1037/a0014573

Sanders, J., & Munford, R. (2015). The interaction between culture, resilience, risks and outcomes: A New Zealand study. In L. C. Theron, L. Liebenberg, & M. Ungar (Eds.), *Youth resilience and culture* (pp. 81–92). New York, NY: Springer.

Scheim, A. I., Jackson, R., James, L., Sharp Dopler, T., Pyne, J., & Bauer, R. G. (2013). Barriers to well-being for aboriginal gender-diverse people: Results from the Trans PULSE Project in Ontario, Canada. *Ethnicity and Inequalities in Health and Social Care*, *6*, 108–120. doi:10.1108/EIHSC-08-2013-0010

Seelman, K. L. (2016). Transgender adults' access to college bathrooms and housing and the relationship to suicidality. *Journal of Homosexuality*, *63*, 1378–1399. doi:10.1080/00918369.2016.1157998

Singh, A. A. (2013). Transgender youth of color and resilience: Negotiating oppression and finding support. *Sex Roles*, *68*(11–12), 690–702. doi:10.1007/s11199-012-0149-z

Singh, A. A., Hays, D. G., & Watson, L. S. (2011). Strength in the face of adversity: Resilience strategies of transgender individuals. *Journal of Counseling and Development*, *89*(1), 20–27. doi:10.1002/j.1556-6678.2011.tb00057.x

Tamasese, K., Peteru, C., Waldegrave, C., & Bush, A. (2005). Ole Taeao Afua, the new morning: A qualitative investigation into Samoan perspectives on mental health and culturally appropriate services. *Australian & New Zealand Journal of Psychiatry*, *39*, 300–309. doi:10.1080/j.1440-1614.2005.01572.x

Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity*, *2*(1), 65–77. doi:10.1037/sgd0000081

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior*, *52*, 145–161. doi:10.1177/0022146510395592

Turner, J. C. (1999). Some current issues in research on social identity and self-categorization theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity: Context, commitment, content* (pp. 6–34). Oxford, UK: Blackwell.

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing native women's health: An "Indigenist" stress-coping model. *American Journal of Public Health, 92*, 520–524. doi:10.2105/AJPH.92.4.520

Chapter 3: Mental Health of Trans and Gender Diverse People in Aotearoa/New Zealand: A Review of the Social Determinants of Inequities

3.1 Preface

Despite a growing body of international research calling for the understanding of transgender identity as a social determinant of mental health, there has been little exploration of the social aspects of transgender mental health in Aotearoa/New Zealand. To fill this literature gap, this review drew on the health equity perspective to understand social determinants of mental health relevant to transgender people in Aotearoa/New Zealand. To do this, this paper provided a comprehensive review on existing New Zealand-based findings on the prevalence of mental health problems, minority stressors, and protective factors among transgender people. In particular, findings of the Youth'12 study (Clark et al., 2014), the first Aotearoa/New Zealand study to examine transgender people's mental health, were discussed in-depth and the study's limitations were highlighted. This paper also critically reviewed the two competing perspectives that have been used, in both Aotearoa/New Zealand and overseas, to explain mental health inequities: (1) the conceptualisation of transgender identity as a mental health condition through a lens of pathology; and (2) mental health difficulties that arise from specific social stressors (i.e., gender minority stress) associated with being transgender. The specificities of these theories were discussed by bringing together evidence on social aspects of transgender mental health from theoretical and empirical research, and these arguments were used to inform empirical findings in Chapter 6 and 7. This paper concluded by providing recommendations for future psychological research with the transgender populations in Aotearoa/New Zealand.

Declaration: After reviewing all relevant literature, I developed the outline of the paper and wrote the first full draft of the paper. I held the leading role in making revisions of

the paper based on feedback from the other co-authors and journal reviewers. Overall, I contributed 75% to this paper, and the other co-authors contributed the remaining 25%.

Acknowledgement: Permission has been sought from the publisher to reuse the published version of the paper in the compilation of this thesis.

Publication status: Published– Citation: Tan, K. K. H., Schmidt., J. M., Ellis, S. J., & Veale, J. F. (2019). Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities. *New Zealand Journal of Psychology, 48*(2), 64–72.

Mental Health of Trans and Gender Diverse People in Aotearoa/New Zealand: A Review of the Social Determinants of Inequities

Kyle K.H. Tan, Johanna M. Schmidt, Sonja J. Ellis, Jaimie F. Veale
University of Waikato

The effects of health inequities on transgender (or trans) and gender diverse populations have been well documented internationally. Studies that compared the mental health of trans and gender diverse populations to cisgender populations found significant inequities for mental health problems. There has been very little research on this topic, however, from Aotearoa/New Zealand. We conducted database search in the PsycINFO, as well as manual searches for published grey literature in Aotearoa/New Zealand to identify theoretical and empirical literature on social determinants of health and related frameworks to explain the effects of social environments on health inequities experienced by trans and gender diverse people. We also complement international studies by considering Māori and Pacific trans and gender diverse identities and the ramifications of colonisation on the mental health and wellbeing of these populations.

Keywords: Transgender, Gender Diverse, Mental Health, Social Determinants of Health.

Scope of Research

This review examines mental health and wellbeing, and the social determinants that lead to mental health problems among transgender and gender diverse (TGD) people in Aotearoa/New Zealand. We provide an overview of existent transgender and gender diverse health research in Aotearoa/New Zealand and some recommendations for enhancing research design with this population. We used the PsycINFO database to locate relevant mental health research in Aotearoa/New Zealand. Due to the limited amount of local research about indigenous TGD people's health, we searched for international literature that has examined this topic. We also searched the international literature for theories that explain the high prevalence of mental health problems among TGD people.

The database search was based on publications from database inception until June 2019, using the search term keywords, transgender, trans, and gender diverse, and mental health keywords such as depression, anxiety, and mental health problems. Lesbian, gay, bisexual and transgender (LGBT) studies that did not examine TGD people as a separate category were excluded, as previous research has demonstrated TGD and LGB people do not have similar experiences related to gender identity and expression (Tan, Treharne, Ellis, Schmidt, & Veale, 2019). We also explored published grey literature such as reports and conference papers through Google Scholar to provide a comprehensive overview of TGD mental health in Aotearoa/New Zealand.

Introduction

The demographic makeup of Aotearoa/New Zealand is specific to this country, and this has a particular effect on the ways in which mental health is understood. Nearly three-quarters of the Aotearoa/New Zealand population (74.0%) identify with one or more European ethnicity, followed by the indigenous Māori who comprise 14.9% of the national population (Statistics New Zealand, 2015). Aotearoa/New Zealand is also home to Asian people, who comprise 11.8% of the population, and various Pacific people, who make up 7.4% of the population, and are Samoan, Cook Islands Māori, Tongan, Niuean, and other Pacific ethnicities (Statistics New Zealand, 2015). Since the colonisation of Aotearoa/New Zealand by Pākehā (European) settlers during the nineteenth century, the social and cultural status of indigenous Māori have been severely affected, with detrimental impacts on their wellbeing (Hutchings & Aspin, 2007). The process of colonisation has involved degrees of assimilation into Pākehā settings, and a commensurate loss of Māori cultural knowledge. One of the outcomes of colonisation is the marginalisation of the diverse expressions of gender which were specific to Māori culture, but were understood as 'perverse' by many Pākehā missionaries and other colonisers (Hutchings & Aspin, 2007; Kerekere, 2017).

In Aotearoa/New Zealand, there are many ways of understanding gender diversity including Pākehā, Māori, Pacific and Asian ways. Pākehā perspectives of gender diversity are based on the western understandings of gender identity (i.e., the internal sense of individuals toward their experience of gender) and include those who identify under the umbrella terms of transgender or gender diverse. Transgender (or trans) denotes people whose gender identity does not correspond with the gender typically associated with the sex assigned to them at birth (American Psychological Association, 2015). Transgender people may identify as neither men nor women (e.g., non-binary); both men and women (e.g., bigender); as moving between binary genders (e.g., genderfluid); or as no gender (e.g., agender) (Adams et al., 2017; American Psychological Association, 2015).

Gender diverse is a broader term which includes people who identify as transgender or any of the other identities that we describe in the following section. In this review, we use the abbreviation TGD to refer to transgender and gender diverse people.

There is little research into Asian understandings of gender diversity in Aotearoa/New Zealand, but more research has been conducted on Māori and Pacific understandings that are unique to our region.

Māori and Pacific Gender Diversity in Aotearoa/New Zealand

All colonised states have a specific and unique history of colonisation, and Aotearoa/New Zealand is no exception. European settlement of Aotearoa/New Zealand occurred throughout the 17th and 18th centuries, and the Treaty of Waitangi was signed between the representatives of the British Crown and some rangatira (chiefs) in 1840 (King, 2003). Given the distinctive colonial context of Aotearoa/New Zealand, Burford, Lucassen, and Hamilton (2017) urged researchers to reflect on the "history of indigenous inhabitation, settler colonisation and the migration of peoples from the islands of the South Pacific, and among other migrant groups" (p. 213). For TGD research to be relevant to Aotearoa/New Zealand, Māori and Pacific understandings of gender diversity need to be central to this work.

Diversity in gender identity, gender role (i.e., social roles associated with gender in a culture), and gender expression (i.e., the presentation of an individual to reflect aspects of gender identity or role) have always been part of Māori society (Hutchings & Aspin, 2007). Although many details were lost as a consequence of colonisation and the imposition of binary western gender frameworks onto indigenous understandings of gender (Feu'u, 2017; Hutchings & Aspin, 2007), there are various sources (e.g., oral accounts, archival material and carvings) that provide evidence of the existence of gender diversity within pre-colonial Māori culture (Kerekere, 2017). For instance, there is a Māori traditional narrative of an ancestor, Tāwhaki who was on a journey when he encountered Tongameha, a tipua (spiritual force who had the ability to change form and gender in remarkable ways). The ability of tipua to embody both female and male, and alter gender provides a sense of cultural resonance for contemporary Māori TGD people (Feu'u, 2017; Kerekere, 2017). Feu'u (2017) also brought up accounts from James Cook's crew members on the Endeavor voyage, who commented on the striking beauty of Māori "maidens", although they soon realised these maidens were whakawahine (Feu'u, 2017), a term that literally translates as "like a woman". Contemporary usage of this term denotes a person assigned male at birth with the wairua (spirituality) of a woman (Kerekere, 2017).

There are many instances of gender diversity among Pacific populations in Aotearoa/New Zealand, such as Samoan fa'afāfine, Cook Islands Māori akava'ine, Tongan fakaleiti, and Niuean fakafifine (Brown-Acton, 2014). As Samoans are the largest population of Pacific origin in Aotearoa/New Zealand (Statistics New Zealand, 2015), the Samoan fa'afāfine are relatively common within Pacific TGD populations. Fa'afafine literally translates as "in the manner of a woman", and fa'afāfine are traditionally identified by virtue of their propensity for feminine labour (Schmidt, 2017). Contemporary fa'afāfine represent a broad range of gender expressions that sometimes (although not always) encompass more western aspects of trans and gender diversity and/or might be understood as 'gay men', while still aligning themselves with the traditional identity of fa'afafine (Schmidt, 2017). While globalised discourses of gender and sexuality diversity have been actively utilised by fa'afāfine in constructing their identities, they have also led to a range of stereotypical representations of fa'afāfine within both popular and academic texts (Schmidt, 2017), and Farran (2010) noted similar ramifications of colonisation and globalisation on gender diverse people across other Pacific cultural contexts.

Māori and Pacific TGD people ascribe to various identities — some affiliate with terms of their specific cultural context, others align only with Pākehā TGD identities, and others encompass both their own cultural backgrounds and western models within their identities (Adams et al., 2017; Brown-Acton, 2014). Māori and Pacific terms often carry historical, political and social connotations that are not necessarily interchangeable with Pākehā terms, which are reflected in the range of identifications adopted by Māori and Pacific TGD people in Aotearoa/New Zealand (Feu'u, 2017). The uniqueness of Māori and Pacific gender diversity, and the specific social outcomes wrought by colonisation and westernisation mean that considering the mental health and wellbeing of TGD people in Aoteaora/New Zealand necessitates awareness and consideration of the additional marginalisation faced by people with these identities.

Mental Health in Aotearoa/New Zealand

Mental health can be defined as a state of wellbeing which allows people to "realise their abilities, deal with life's challenges and stresses, enjoy life, work productively and contribute to their communities" (Brunton, 2018, p. 1). Those who experience mental health problems face psychological and emotional reactions that may affect their ability to perform daily routine activities (Brunton, 2018). Various surveys have been developed to examine the health and wellbeing of Aotearoa/New Zealand populations. The 2015 New Zealand Mental Health Survey is a population-based study of 1,377 adult participants from the general Aotearoa/New Zealand population. It found that 9.3% and 6.5% of Aotearoa/New Zealand population reported symptoms of depression and anxiety respectively (Hudson, Russell, & Holland, 2017). Mental health problems can have life-threatening consequences, with Aotearoa/New Zealand studies (e.g., Beautrais, 2003) finding that mental health problems are associated with an increased risk of developing suicidal ideation and attempting suicide.

The Aotearoa/New Zealand National Health Committee (1998) posited a need to examine upstream factors influencing mental health, which comprise determinants of health that are social (e.g., accessibility to health services), cultural (e.g., connectedness to cultural group) and economic (e.g., socioeconomic status). The Committee highlighted the importance of investigating health within a social context, as social environments

comprise upstream factors that exert predominant influences on health and are often beyond the control of individuals (Blane, 2006; Jayasinghe, 2015). Hence, a holistic health model should contemplate social determinants of health as a collection of intermediary factors that intertwine with social systems (e.g., education system), social norms (e.g., racism), and social structures (e.g., policy) in generating health outcomes (Jayasinghe, 2015).

TGD Mental Health and Social Determinants of Health

Recent published review studies in the Europe and North America found that TGD people manifest higher rates of various mental health problems when compared to general population prevalence figures. For example, Millet, Longworth, and Arcelus (2017) conducted a systematic review of the prevalence of anxiety symptoms and disorders among TGD people across various countries in the regions of Americas, Europe and Asia, and found that the prevalence of anxiety disorders among this population may be as high as 68.0% compared to the 18.1% found in general population surveys. Public health literature correlates the relative susceptibility of minority populations (TGD populations in this instance) in manifesting mental health problems with their marginalised social positions (Brunner & Marmot, 2006).

These review studies have generally not taken into consideration issues of ethnicity and indigenous backgrounds. Burford and colleagues (2017) noted the importance of acknowledging the ramifications of colonisation in taking into account the wellbeing of gender diverse people who are marginalised in contemporary westernised society as well as the ethnic and cultural differences among Aotearoa/New Zealand populations in gender diversity research. Such acknowledgement promotes the inclusivity of Māori and Pacific populations, and this in turn fosters their mana (authority, influence, and power).

Historic colonialism has resulted in destruction of Māori communities and Māori becoming disconnected from their land (Durie, 2011; National Health Committee, 1998). Deleterious effects of colonialism on the wellbeing of indigenous populations are outlined in the Indigenist Stress-Coping Model (Walters & Simoni, 2002). According to this model, indigenous people experience heightened levels of life stressors (e.g., historical trauma) that in turn affect health negatively. Reid and Robson (2007) attributed the high prevalence of mental health problems among indigenous Māori populations to their loss of mana, rangatiratanga (autonomy), and sense of belonging.

When gender diversity is examined in health-related research, it is clear that TGD people are at risk of a range of health inequities when compared to cisgender people (Pega & Veale, 2015). Health inequity refers to those inequalities or disparities in health outcomes, which are "deemed to be unfair or stemming from some form of injustice" (Kawachi, Subramanian, & Almeida-Filho, 2002, p. 647). In order to understand the fundamental causes of mental health inequities for TGD people, we need to examine the circumstances in which people live and work—the social determinants of health (SDHs) (Brunner & Marmot, 2006) and refer to theoretical frameworks that explain the roles of social determinants in causing health inequities that TGD people experience. Pega and Veale (2015) argued that gender diversity has been neglected as a social determinant of health and that health inequities specifically affecting TGD people arise as the result of cisgenderism. Cisgenderism is a form of structural marginalisation of TGD people through a process that privileges cisgender people by reinforcing the understanding that there are only two valid genders (i.e., woman and man) and that people's gender must align with expectations of their sex assigned at birth (Riggs, Ansara, & Treharne, 2015). Consequently, cisgenderism causes the delegitimising of TGD identities and genders. The privileging of cisgender people situates TGD people in a lower social position and causes TGD-related negative experiences, such as discrimination, rejection, and victimisation at individual, interpersonal, and structural levels (Pega & Veale, 2015; Testa, Habarth, Peta, Balsam, & Bockting, 2015). These negative experiences also limit TGD people's ability to access other determinants of health including education, employment, social programmes, and healthcare services.

Existing TGD Mental Health Research in Aotearoa/New Zealand

The Youth'12 study (Clark et al., 2014) is the only research based in Aoteaora/New Zealand to investigate TGD people's health inequity with comparisons to cisgender populations. Youth'12 is the third of the Youth2000 series of population-based surveys that focused on the health and well-being of secondary school students in Aotearoa/New Zealand. It included the question "Do you think you are transgender? This is a girl who feels like she should have been a boy, or a boy who feels like he should have been a girl (e.g. Trans, Queen, Fa'faffine, Whakawahine, Tangata ira Tane, Genderqueer)". In response, 1.2% of the sample responded yes to the question, and a further 2.5% reported being not sure about their gender.

Youth'12 found an almost 4-fold increased risk of depression among TGD students (41.3% vs 11.8%), an almost 2-fold increase in non-suicidal self-injury (NSSI) risk (45.5% vs 23.4%), and an almost 5-fold increase in risk of a suicide attempt in past 12 months (19.8% vs 4.1%) when compared to cisgender students (Clark et al., 2014). TGD students were significantly more likely than cisgender students to experience external stressors including being physically harmed (49.9% vs 32.5%) and bullied at school (17.6% vs 5.8%), and internal stressors such as being afraid of someone hurting them at school (53.5% vs 39.8%). TGD students also reported being significantly less likely to experience protective factors, such as getting along with family members (63.9% vs 81.5%), enjoying the school environment (74.1% vs 90.4%), and feeling connected with friends (63.9% vs 81.5%) (Clark et al., 2014). This decreased access to protective factors is important for TGD youth, as studies have shown that family acceptance and social support aid in reducing the risk of manifesting mental health problems (e.g., Veale, Peter, Travers, & Saewyc, 2017).

However, there is a need to interpret the results of Youth'12 on TGD students with caution. Although

Youth'12 was a product of its time, its transgender question defined TGD people based on their sex assigned at birth, referring to TGD youth as a girl who feels like she should have been a boy, or a boy who feels like he should have a girl. This narrow conceptualisation of "transgender" could present TGD identities as arbitrary choices, and fail to include students whose gender is outside the binary of boys and girls. It is unclear what effect, if any, this had on TGD participants' responding.

It is also possible that some cisgender students may have responded yes to the transgender identity question because of misunderstanding of the question or not answering the question seriously, and it would have only taken a small proportion of cisgender students to endorse this question to meaningfully dilute the transgender sample. Pega, Reisner, Sell, and Veale (2017) also raised concern about the usage of the one-question method (i.e., asking if one identifies as transgender) in a population-based survey, because it runs the risks of undercounting TGD people whose gender is different from their sex assigned at birth but who only identify themselves within the gender binary framework. Hence, the current best practice in population-based surveys includes using the two-question method, which involves collecting both sex assigned at birth (i.e., female or male), and current gender identity (in a way that is inclusive of non-binary genders). This allows for the responses for these two items to be cross-classified to determine TGD identity (Pega et al., 2017; The GenIUSS Group, 2014).

TranZnation was an Australian-based TGD health study that has included 24 TGD participants from Aotearoa/New Zealand (Pitts, Couch, Hunter, Croy, & Mitchell, 2009). New Zealand participants in this study comprised less than 10% of the total sample, and the researchers did not report separately on data from this group. TranZnation found an approximate 6-fold increase in depression among TGD people (36.2% vs 6.8%) in comparison to the Australian general population. TGD people who had faced a greater number of different types of stressors (e.g., verbal abuse, physical attack, and sexual assault) were found to be more likely to exhibit depressive symptoms.

Theoretical Frameworks in TGD Mental Health

There are competing theoretical frameworks to explain these mental health inequities, one that suggests that being TGD is psychopathological (i.e., psychologically disordered and inferior) and another that focuses on the stigma and minority stresses that TGD people face.

Psychiatric diagnoses related to being TGD have existed in the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) since the 1980s (American Psychiatric Association, 2013; Drescher, 2014), reflecting the idea that being TGD is mentally disordered (Zucker, Lawrence, & Kreukels, 2016). Because mental health problems tend to co-occur, the belief that this pathology can explain the increased prevalence of mental health problems among TGD people was widely taken for granted without much consideration of the role of cisgenderism as a social determinant of mental health inequities (Schulz, 2017). The existence of psychiatric diagnoses is a form of social determinant of inequities affecting TGD people, as these diagnoses serve as gatekeeping criteria and compel this population to undergo extensive assessment and referral prior to obtaining medically necessary healthcare services (Schulz, 2017). During this process, TGD people may risk exposing themselves to mental health professionals who are not equipped with sufficient level of TGD healthcare knowledge, or worse, who utilise the pathologisation perspective to invalidate lived experiences of a TGD person (Schulz, 2017).

TGD populations mobilised to criticise this pathologisation for its lack of conderation of the role of cisgenderism as a social determinant of health; they also noted that this pathologisation leads to harmful stereotypes about TGD people and advocated the end of the pathologisation of TGD people (Suess, Espineira, & Walters, 2014). While the pathologisation explanation for mental health problems in TGD people is still taken seriously by some (Zucker et al., 2016), as more researchers and health professionals listen to the views of TGD people, this approach is becoming less accepted. Professional organisations such as the World Professional Association for Transgender Health (WPATH, 2018) and the American Psychological Association (American Psychological Association, 2015) have publicly affirmed that being TGD is not pathological. In June 2018, the World Health Organization (2018) announced that Gender Incongruence will be moved from the mental health to section of the ICD to a new section called Conditions Related to Sexual Health.

One of the most widely adopted theories to explain health inequities that TGD people experience is the Gender Minority Stress Framework (GMSF; Testa et al., 2015), which is an adaptation of Minority Stress Theory (Meyer, 2003). The GMSF focuses on the impact of cisgenderism on the mental health of TGD people (Tan et al., 2019). This framework proposes that TGD people experience risk factors (that create adverse experiences and increase vulnerability to negative mental health outcomes) and protective factors (that buffer risks and promote health and wellbeing). Risk factors that TGD people face include distal (external) minority stressors (e.g., TGD-related discrimination and non-affirmation of identity), which lead to the development of proximal (internal) minority stressors within TGD people (e.g., internalisation of negative societal attitudes about one's own TGD identity and TGD people as a social group). Testa et al. (2015) proposed that the negative impacts of minority stressors can be mitigated when TGD people are exposed to protective factors, such as education, access to affirmative healthcare services, and social support (e.g., TGD community organisations and family support).

Numerous studies have found correlations between distal and proximal stressors and mental health problems (e.g., Veale et al., 2017). When put together, Testa et al. (2015) postulated a plausible chain: cisgenderism causes TGD people to experience distal stressors; some, or all of these distal stressors lead to proximal stressors that affect TGD people internally, and the accumulation of these stressors contribute to heightened levels of stress among TGD people. In this instance, stress is displayed through the over-activation of fight-or-flight responses. The

physiological changes associated with the dysregulation of flight-or-flight responses resonate with the symptoms of mental health problems (Brunner & Marmot, 2006).

Intersectionality can be used in relation to the Minority Stress Theory to investigate the experiences of TGD people with multiple and intersecting identities, who have distinctive individual and collective experiences (Parent, DeBlaere, and Moradi, 2013). In Aotearoa/New Zealand, this includes understanding the experiences and needs of TGD people of a range of ethnic groups, including Māori and Pacific TGD people. Intersectionality is used to explore how multiple and overlapping structural marginalisations (e.g., racism and cisgenderism) shape the experiences of TGD people with multiple and intersecting marginalised identities (Crenshaw, 1991; Parent et al., 2013). Overlooking intersectionality in mental health research would lead to a lack of a full understanding of the experiences of those most negatively affected by more than one form of marginalisation (Blane, 2006).

TGD Mental Health and Ethnicity

Because no research has yet examined differences in TGD people's mental health in Aotearoa/New Zealand on the basis of ethnicity, here we review international research on this topic. The 2010 U.S. National Transgender Discrimination Survey was a community-based survey that recruited 6,450 TGD people (Grant et al., 2011). A higher prevalence of suicide attempts was reported among non-white TGD people (categorised as aboriginal American Indian, Asian, Latino and Black) when compared to white TGD people (54.0% vs 38.0%). Significance test was not carried out for this comparison, however. The 2009 U.S. National College Health Assessment-II was a population-based survey that recruited 111,415 students, of whom 174 identified as TGD (Lytle, Blosnich, & Kamen, 2016). In a comparison between non-white and white TGD people, the former group was significantly more likely to engage in NSSI (38.0% vs 27.8%), develop suicidal ideation (35.2% vs 31.1%), and attempt suicides (29.6% vs 10.0%). A Canadian community-based study, TransPULSE Ontario, recruited 398 TGD people, of whom 32 identified as indigenous (Scheim et al., 2013), and this study found indigenous TGD participants reported high rates of lifetime suicidal thoughts (76.0%) and lifetime suicide attempts (48.0%).

An additive approach is commonly used in relation to the Minority Stress Theory to explain mental health outcomes of those with multiple marginalised identities (Meyer, 2010). This approach treats marginalised identities as independent of each other, and sees social inequality increasing linearly with each additional marginalised identity (Parent et al., 2013). Intersectionality, however, extends on the additive approach, recognising not only the independent effects of minority identity statuses (e.g., being indigenous and TGD) but also the combinative and interactive effects of minority statuses in shaping the experience of a person (Parent et al., 2013). Intersectionality is used to provide explanations for the impacts of multiple and overlapping structural marginalisation (e.g., racism and cisgenderism) in constructing the experiences of those with multiple marginalised identities (Crenshaw, 1991; Parent et al., 2013).

Two studies have explored intersectionality quantitatively among TGD people. Jefferson, Neilands, and Sevelius (2013) adapted scales measuring experiences of racism and cisgenderism to explore the combined effects of these experiences on trans women of colour and found that combined discrimination related to the likelihood of depression. Scheim et al. (2013) reported only one-fifth of indigenous TGD people in TransPULSE Ontario had parents who embraced their TGD identity. Many indigenous TGD participants, however, were found to develop a strong sense of their indigenous identity, with 56.0% reporting high levels of spirituality and 19.0% having sought cultural or tribal leaders for mental health support (Scheim et al., 2013). A positive integration of indigenous identity and culture has been linked to buffering effects on the impacts of minority stressors, as well as those related to ramifications of colonialism (Chae & Walters, 2009).

Other Trans and Gender Diverse Research in Aotearoa/New Zealand

Three further studies in Aotearoa/New Zealand have examined the experiences of distal stressors among TGD people. The Human Rights Commission's Transgender Inquiry was conducted in 2006 and 2007 to investigate the discrimination experienced by TGD people in Aotearoa/New Zealand (Human Rights Commission, 2008). Based on the accounts of over 200 TGD people, the inquiry reported multiple forms of discrimination that affected TGD people, ranging from individual (e.g., low self-acceptance of their own TGD identity), interpersonal (e.g., facing rejection from peers at school), to structural levels (e.g., difficulty in changing name and gender details on legal documents). The inquiry also identified notable gaps and inconsistencies for TGD people in the provision of health services and accessing gender-affirming services.

In 2015, the Hohou Te Orongo Kahukura: Outing Violence community-based survey was launched to explore the prevalence of intimate partner and sexual violence among rainbow communities (Dickson, 2017). Out of 149 TGD participants, 53% reported being subjected to physical violence by partners, 40% received threats of sexual assault, and 17% experienced gender-affirming resources (e.g., hormones and clothes) being thrown away. Despite facing physical violence threats, TGD participants reported reluctance to seek assistance as 35.0% did not believe that they would be treated fairly and 16.0% were worried about prejudiced nature of specialist violence services. When asked to elaborate on the barriers of seeking assistance in comment boxes, non-binary people raised the issue of cisgenderism, suggesting that most professional organisations were operating within a binary gender framework.

The Auckland District Health Board initiated a project in 2011 to examine the experiences of rainbow communities in accessing mental health and addiction services in the Auckland DHB region (Birkenhead & Rands, 2012). In qualitative interviews with four TGD people, participants reported TGD-specific barriers in accessing appropriate mental healthcare, including stigma

about TGD identities, lack of professional understanding about TGD issues, and an insufficient number of clinicians who were experienced in working with TGD people.

Future Directions for TGD Research in Aotearoa/New Zealand

Our review has identified a need to account for plural and intersecting identities in future research with TGD people in Aotearoa/New Zealand. Standard western definitions of mental health and understandings of mental health problems are inadequate to the Aotearoa/New Zealand context. During Te Ara Ahu Whakamua, a hui (conference) held in Rotorua in March 1994, more than one thousand Māori health, community, and tribal leaders gathered alongside tauiwi (non-Māori) health leaders, to assess the state of Māori health and propose a strategic direction for Māori health (Rochford, 2004; Te Puni Kōkiri, 1994). The hui was marked as an important indicator of implementing the principles of Treaty of Waitangi into practice in Māori health, and Māori people were consulted to advise on health needs and the direction of health services. They came to an agreement that Māori health should constitute:

a strong sense of identity, self-esteem, confidence and pride, control of his/her own destiny, leadership, intellectual, physical, spiritual, and whānau (extended family) awareness, personal responsibility, respect for others, knowledge of te reo (the Māori language) and tikanga (custom), economic security, and solid whānau support (Rochford, 2004, p. 46)

This definition of Māori health reflects the need to recognise health in a holistic manner and as a state of balance including the self, others, and the environment. Māori models of health should be viewed as complementary to the western biomedical paradigm, as the latter has often neglected the ways in which health is interconnected and interdependent with other components of well-being (e.g., spirituality, whānau support, and cultural connections) (Durie, 2011; Rochford, 2004). Kaupapa Māori health frameworks, in which people are embedded in their social worlds and natural environments, are more consistent with the Minority Stress Theory, which focuses on social stressors, than the pathologisation understanding that only focuses on the individual as a discrete entity.

Durie (1985) developed a Māori model of health, Te Whare Tapa Whā, which conceptualises four dimensions of Māori health that interconnect with each other and are interdependent. These four dimensions comprise taha wairua (spiritual health), taha hinengaro (mental and emotional health), taha tinana (physical health) and taha whānau (family and social health). Future TGD mental health research is needed to investigate the interconnection of dimensions of wairua, tinana and whānau in relation to the hinengaro (mental health) of TGD people. The roles of spiritual and family health acting as protective factors for mental health among indigenous TGD people were documented in the TransPulse Ontario study (Scheim et al., 2013).

The recent published guidelines for gender-affirming healthcare in Aotearoa/New Zealand recognise the negative repercussions of the heavy reliance on pathologising diagnoses among health professionals in granting TGD people access to healthcare services (Oliphant et al., 2018). The guidelines use Māori health frameworks, Te Pae Māhutonga and Te Whare Tapa Whā, to inform the provision of culturally competent, as well as TGD-competent healthcare services. For example, health professionals are encouraged to facilitate autonomy to TGD people in making decisions about their own care, as well as to connect mental health with other components of health as part of the holistic healthcare delivery. The guidelines also highlight the need to avoid pathologising TGD people as being mentally disordered, as this approach negates the minority stress results from everyday distal stressors that TGD people experience.

To ensure that indigenous conceptualisations of health are accounted for comprehensively in psychological research, researchers need to consider how they are collecting data. Bethune et al. (2018) discussed the importance of using self-reported health to examine the health outcomes of indigenous populations, as this allows participants to incorporate multiple dimensions of health when considering satisfaction with their lives. In Aotearoa/New Zealand, self-reported health is necessary for researchers who may wish to incorporate the four Te Whare Tapa Whā dimensions into their conceptualisation of health. It is also important to consider which topics are focused on. Contemporary TGD mental health research often takes a deficit approach, which emphasises the relative vulnerability of TGD people in manifesting mental health problems. Brough, Bond, and Hunt (2004) suggested a focus on deficits may obscure investigation into the strength of populations and their resilience in sustaining mental health and wellbeing. Durie (2011) encouraged an examination of indigenous resilience that centres on the potential of indigenous people to overcome the effects of racism and colonialism through the formation of collective bonds with whānau and communities, and engagement with te ao Māori (Māori worldview), for example through fluency in te reo and connection to whenua (land).

Quantitative research that employs categorisation to classify gender and ethnicity run the risks of overlooking the breadth of diversity within the TGD populations and rendering indigenous concepts of gender invisible (Adams et al., 2017). For instance, the term transgender has been criticised for its inadequency in representing the deeper underlying meanings of the Māori and Pacific gender diverse identities (Brown-Acton, 2014; Kerekere, 2017). Durie (2011) pointed out that adoption of an indigenous identity assists people in conveying a sense of connectedness to their indigenous identity and wider indigenous communities. Kerry (2018) conducted unstructured interviews with indigenous TGD people in Australia and reported that those who affiliated with indigenous identities have an improved sense of self, spirituality, mental health and wellbeing. Cisgenderism was found to generate stigma towards TGD people, which detached TGD people from their indigenous communities, consequently hindering them from adopting indigenous identities (Kerry, 2018). The strength of quantitative approaches in generating data from a larger population can be complemented with qualitative approaches which better encapsulate the nuanced

differences of experiences among TGD people across a range of diverse backgrounds. These can include TGD people with disabilities, non-binary people who situate their gender within a gender spectrum, and Māori and Pacific TGD people who have gender diverse identities that are relevant to their cultural backgrounds.

We recommend community-based participatory research (CBPR) approaches for TGD health research. CBPR emphasises conducting research with a community rather than on a community (dickey, Hendricks, & Bockting, 2016). TGD people in Aotearoa/New Zealand who have knowledge and interest in advancing the health of TGD populations should be invited to participate as research team members to provide input on research design. In doing so, it would be optimal to include TGD people with a diverse range of intersecting identities. Other than allowing the research to benefit from extensive TGD in-group knowledge, partnership with TGD people also enhances the efficacy of the research through the provision of opportunities for marginalised voices to have space in research (Adams et al., 2017).

Conclusion

International literature has documented the relationships of social determinants of health and mental health of TGD people. This article extends the existent literature in some important ways. We found that existent research on TGD people's mental health in Aotearoa/New Zealand has focused on TGD youth, and that the limited research that currently exists shows that TGD people have a high prevalence of experiences of distal stressors and mental health problems. We suggest psychologists and researchers working in TGD health in Aotearoa/New Zealand to ensure they are accounting for Māori and Pacific notions of gender diversity and indigenous understandings of mental health as interconnected with other dimensions of health. Psychological and research instruments should avoid utilising problematic juxtapositions that pathologise TGD people (e.g., attributing TGD identities with mental health problems).

While the Gender Minority Stress Framework has been commonly used to elucidate the effects of cisgenderism on TGD mental health, we proposed a need to complement this framework with the use of intersectionality. Intersectionality plays a crucial role among psychology practitioners and researchers in Aotearoa/New Zealand to meet the diverse needs of TGD people across ethnicities, genders, abilities, and other areas of need. In particular, a TGD-competent psychologist workforce requires a comprehensive understanding the nuanced differences among people with intersecting identities to fully understand and formulate their mental health problems and presenting problems. This will allow psychologists to take into account the impacts of colonialism and racism for indigenous Māori, Pacific and other TGD tauiwi of colour in Aotearoa/New Zealand.

References

Adams, N., Pearce, R., Veale, J., Radix, A., Castro, D., Sarkar, A., & Thom, K. C. (2017). Guidance and ethical considerations for undertaking transgender health research and institutional review boards adjudicating this research. *Transgender Health, 2*, 165-175. doi:10.1089/trgh.2017.0012

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, 70, 832-864. doi:10.1037/a0039906

Beautrais, A. (2003). Suicide in New Zealand II: A review of risk factors and prevention. *The New Zealand Medical Journal, 116*, 461-474.

Bethune, R., Absher, N., Obiagwu, M., Qarmout, T., Steeves, M., Yaghoubi, M., . . . Farag, M. (2018). Social determinants of self-reported health for Canada's indigenous peoples: A public health approach. *Public Health*. Advance Online Publication. doi:10.1016/j.puhe.2018.03.007

Birkenhead, A., & Rands, D. (2012). *Let's talk about sex...(sexuality and gender): Improving mental health and addiction services for Rainbow Communities*. Retrieved from Auckland, New Zealand: Auckland District Health Board.

Blane, D. (2006). The life course, the social gradient and health. In M. Marmot & R. G. Wilkinson (Eds.), *Social determinants of health* (2nd ed., pp. 54-77). New York, NY: Oxford University Press.

Brough, M., Bond, C., & Hunt, J. (2004). Strong in the City: Towards a strength-based approach in Indigenous health promotion. *Health Promotion Journal of Australia, 15*, 215-220. doi:10.1071/HE04215

Brown-Acton, P. (2014). *Strengthening solutions for Pacifica Rainbow*. Keynote speech presented at the Growing Pacific Solutions for our Communities National Pacific Conference, Auckland, New Zealand. Retrieved from https://www.leva.co.nz/uploads/files/resources/strengthening-solutions-for-pasefika-rainbow.pdf

Brunner, E., & Marmot, M. (2006). Social organisation, stress and health. In M. Marmot & R. G. Wilkinson (Eds.), *Social determinants of health* (2nd ed., pp. 6-30). New York, NY: Oxford University Press.

Brunton, W. (2018). 'Mental health services - Mental health and mental illness', Te Ara - the Encyclopedia of New Zealand. Retrieved from http://www.TeAra.govt.nz/en/mental-health-services/page-1

Burford, J., Lucassen, M. F. G., & Hamilton, T. (2017). Evaluating a gender diversity workshop to promote positive learning environments. *Journal of LGBT Youth, 14*, 211-227. doi:10.1080/19361653.2016.1264910

Chae, D. H., & Walters, K. L. (2009). Racial discrimination and racial identity attitudes in relation to self-rated health and physical pain and impairment among Two-Spirit American Indians/Alaska Natives. *American Journal of Public Health, 99*, S144-151. doi:10.2105/AJPH.2007.126003

Clark, T. C., Lucassen, M. F. G., Bullen, P., Denny, S. J., Fleming, T. M., Robinson, E. M., & Rossen, F. V. (2014). The health and well-being of transgender high school students: Results from the New Zealand Adolescent Health Survey (Youth'12). *Journal of Adolescent Health, 55*, 93-99. doi:10.1016/j.jadohealth.2013.11.008

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review, 43*, 1241-1299. doi:10.2307/1229039

dickey, l. m., Hendricks, M. L., & Bockting, W. O. (2016). Innovations in research with transgender and gender nonconforming people and their communities. *Psychology of Sexual Orientation and Gender Diversity, 3*, 187-194. doi:10.1037/sgd0000158

Dickson, S. (2017). *Trans and gender diverse responses: Building Rainbow communities free of partner and sexual violence*. Retrieved from Wellington, New Zealand: Hohou Te Rongo Kahukura – Outing Violence. Retrieved from http://www.kahukura.co.nz/wp-content/uploads/2017/07/Trans-and-Gender-Diverse-People-2017.pdf

Drescher, J. (2014). Gender identity diagnoses: History and controversies. In B. P. C. Kreukels, T. D. Steensma, & A. L. C. de Vries (Eds.), *Gender dysphoria and disorders of sex development: Progress in care and knowledge* (pp. 137–150). Boston, MA: Springer US.

Durie, M. H. (1985). A Maori perspective of health. *Social Science & Medicine, 20*(5), 483-486. doi: 10.1016/0277-9536(85)90363-6.

Durie, M. (2011). *Ngā tini whetū: Navigating Māori futures*. Wellington, New Zealand: Huia Publishers.

Farran, S. (2010). Pacific perspectives: Fa'afafine and Fakaleiti in Samoa and Tonga: People between worlds. *Liverpool Law Review, 31*, 13-28. doi:10.1007/s10991-010-9070-0

Feu'u, P. J. A. (2017). A comparative study of the fa'afafine of Samoa and the whakawahine of Aotearoa New Zealand. In E. Hazenberg & M. Meyeroff (Eds.), *Representing trans: Linguistic, legal and everyday perspectives* (pp. 171-203). Wellington, New Zealand: Victoria University Press.

Grant, J. M., Mottet, L. A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). *Injustice at every turn: A report of the National Transgender Discrimination Survey*. Retrieved from Washington, DC: National Center for Transgender Equality and National Gay and Lesbian Task Force.

Hudson, S., Russell, L., & Holland, K. (2017). *Indicators of mental health and wellbeing of adults: Findings from the 2015 New Zealand Mental Health Monitor*. Retrieved from Wellington, New Zealand: Health Promotion Agency.

Human Rights Commission. (2008). *To be who I am: Report of the inquiry into discrimination experienced by transgender people*. Retrieved from Auckland, New Zealand: Human Rights Commission.

Hutchings, J., & Aspin, C. (2007). *Sexuality and the stories of indigenous people*. Wellington, New Zealand: Huia Publishers.

Jayasinghe, S. (2015). Social determinants of health inequalities: Towards a theoretical perspective using systems science. *International Journal for Equity in Health, 14*, 71-79. doi:10.1186/s12939-015-0205-8

Jefferson, K., Neilands, T. B., & Sevelius, J. (2013). Transgender women of color: Discrimination and depression symptoms. *Ethnicity and Inequalities in Health and Social Care, 6*, 121-136. doi:10.1108/EIHSC-08-2013-0013

Kawachi, I., Subramanian, S. V., & Almeida-Filho, N. (2002). A glossary for health inequalities. *Journal of Epidemiology and Community Health, 56*, 647-652.

Kerekere, E. (2017). *Part of the whānau: The emergence of takatāpui identity He Whāriki Takatāpui.* (Unpublished Doctoral dissertation), Victoria University of Wellington, Wellington, New Zealand.

Kerry, S. (2018). Payback: The custom of assault and rape of sistergirls and brotherboys; Australia's trans and sex/gender diverse first peoples. *Violence and Gender, 5*, 37-41. doi:10.1089/vio.2017.0028

King, M. (2003). *The Penguin history of New Zealand*. North Shore, New Zealand: Penguin Books

Lytle, M. C., Blosnich, J. R., & Kamen, C. (2016). The association of multiple identities with self-directed violence and depression among transgender individuals. *Suicide and Life-Threatening Behavior, 46*, 535-544. doi:10.1111/sltb.12234

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674-697. doi:10.1037/0033-2909.129.5.674

Meyer, I. H. (2010). Identity, stress, and resilience in lesbians, gay men, and bisexuals of color. *The Counseling Psychologist, 38*, 442-454. doi:10.1177/0011000009351601

Millet, N., Longworth, J., & Arcelus, J. (2017). Prevalence of anxiety symptoms and disorders in the transgender population: A systematic review of the literature. *International Journal of Transgenderism, 18*, 27-38. doi:10.1080/15532739.2016.1258353

National Health Committee. (1998). *The social, cultural and economic determinants of health in New Zealand: Action to improve health*. Retrieved from https://www.health.govt.nz/system/files/documents/publications/det-health.pdf (url-retrieved?)

Oliphant, J., Veale, J. F., Macdonald, J., Carroll, R., Johnson, R., Harte, M., … Bullock, J. (2018). *Guidelines for gender affirming healthcare for gender diverse and transgender children, young people and adults in Aotearoa, New Zealand*. Hamilton, New Zealand: Transgender Health Research Lab, University of Waikato.

Parent, M., DeBlaere, C., & Moradi, B. (2013). Approaches to research on intersectionality: Perspectives on gender, LGBT, and racial/ethnic Identities. *Sex Roles, 68*, 639-645. doi:10.1007/s11199-013-0283-2

Pega, F., Reisner, S. L., Sell, R. L., & Veale, J. F. (2017). Transgender health: New Zealand's innovative statistical standard for gender identity. *American Journal of Public Health, 107*, 217-221. doi:10.2105/AJPH.2016.303465

Pega, F., & Veale, J. F. (2015). The case for the World Health Organization's commission on social determinants of health to address gender identity. *American Journal of Public Health, 105*, 58-62. doi:10.2105/AJPH.2014.30237

Pitts, M. K., Couch, M., Hunter, M., Croy, S., & Mitchell, A. (2009). Transgender people in Australia and New Zealand: Health, well-being and access to health services. *Feminism & Psychology, 19*, 475-495. doi:10.1177/0959353509342771

Reid, P., & Robson, B. (2007). Understanding health inequities. In R. Bridget & R. Harris (Eds.), *Hauora: Maori standards of health IV. A study of the years 2000-2005.* (pp. 3-10). Wellington, New Zealand: Te Rōpū Rangahau Hauora a Eru Pōmare.

Riggs, D. W., Ansara, G. Y., & Treharne, G. J. (2015). An evidence-based model for understanding the mental health experiences of transgender Australians. *Australian Psychologist, 50*, 32-39. doi:10.1111/ap.12088

Rochford, T. (2004). Whare Tapa Wha: A Māori model of a unified theory of health. *Journal of Primary Prevention, 25*, 41-57. doi:10.1023/B:JOPP.0000039938.39574.9e
Scheim, A. I., Jackson, R., James, L., Sharp Dopler, T., Pyne, J., & Bauer, G. (2013). Barriers to well-being for aboriginal gender-diverse people: Results from the Trans PULSE Project in Ontario, Canada. *Ethnicity and Inequalities in Health and Social Care, 6*, 108-120. doi:10.1108/EIHSC-08-2013-0010
Schmidt, J. M. (2017). Translating transgender: Using western discourses to understand Samoan fa'afāfine. *Sociology Compass, 11*, 1-17. doi:10.1111/soc4.12485
Schulz, S. L. (2017). The informed consent model of transgender care: An alternative to the diagnosis of gender dysphoria. *Journal of Humanistic Psychology, 58*, 72-92. doi:10.1177/0022167817745217
Statistics New Zealand. (2015). Major ethnic groups in New Zealand. Retrieved from https://www.stats.govt.nz/infographics/major-ethnic-groups-in-new-zealand
Suess, A., Espineira, K., & Walters, P.C. (2014). Depathologisation. *Transgender Studies Quarterly, 1*(1-2), 73-77. doi:10.1215/23289252-2399650
Tan, K. K. H., Treharne, G. J., Ellis, S. J., Schmidt, J. M., & Veale, J. F. (2019). Gender minority stress: A critical review. *Journal of Homosexuality*. Advance online publication. doi:10.1080/00918369.2019.1591789
Te Puni Kōkiri. (1994). *Te ara ahu whakamua—Proceedings of the Maori health decade hui*, Wellington, New Zealand.
Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity, 2*, 65-77. doi:10.1037/sgd0000081
The GenIUSS Group. (2014). *Best practices for asking questions to identify transgender and other gender minority respondents on population-based surveys*. Los Angeles, CA: The Williams Institute.
Veale, J. F., Peter, T., Travers, R., & Saewyc, E. M. (2017). Enacted stigma, mental health, and protective factors among transgender youth in Canada. *Transgender Health, 2*, 207–216.
Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing native women's health: An "Indigenist" stress-coping model. *American Journal of Public Health, 92*, 520-524.
World Health Organisation. (2018). ICD-11: Classifying disease to map the way we live and die. Retrieved from http://www.who.int/health-topics/international-classification-of-diseases
World Professional Association for Transgender Health. (2018). WPATH position on "Rapid-Onset Gender Dysphoria (ROGD)". Retrieved from https://www.wpath.org/media/cms/Documents/Public%20Policies/2018/9_Sept/WPATH%20Position%20on%20Rapid-Onset%20Gender%20Dysphoria_9-4-2018.pdf
Zucker, K. J., Lawrence, A. A., & Kreukels, B. P. C. (2016). Gender dysphoria in adults. *Annual Review of Clinical Psychology*, 12(1), 217-247. doi:10.1146/annurev-clinpsy-021815-093034

Corresponding Author
Kyle K.H. Tan
School of Psychology, University of Waikato, Private Bag 3105, Hamilton 3240, New Zealand.
E-mail: kht5@students.waikato.ac.nz

Acknowledgment
The authors would like to thank the editor and anonymous reviewers for their constructive suggestions in making this a stronger manuscript.

3.2. Summary of Chapters 2 and 3

Chapters 2 and 3 set the context for this research as reviews were conducted on gender minority stress theory (Testa et al., 2015) and existing transgender studies in Aotearoa/New Zealand. The discussions of gender minority stress in relation to cisgenderism in Chapter 3 are subsequently used in Chapters 5, 6, and 7 to explain the heightened rates of mental health issues among transgender people in Aotearoa/New Zealand. Chapter 4 expands on Chapter 3 by linking cisgenderism to a marginalising prejudice that hinders transgender people to access social determinants of health. The types of social determinants that are crucial for mental health of transgender people in Aotearoa/New Zealand are examined in Chapter 7.

Chapter 4: Study Design and Methods

4.1 Chapter Overview

This chapter establishes the research framework for the current study. It begins with an introduction to the philosophy that underpins the methodology used for analysing and reporting the data. An overview of the Counting Ourselves survey—the source of the data for empirical studies of this thesis—is then detailed, from survey design and guiding framework, to recruitment design. Finally, this chapter discusses the methods used in each stage of the study to analyse the quantitative and qualitative data from the survey.

4.2 Philosophy

While the empirical studies in this thesis have largely drawn on a positivist framework to conduct analyses that would be replicable and generalisable to wider transgender populations, the discussion of findings was based on critical realism. This section provides an overview, as well as the rationale of utilising the critical realist paradigm to inform the pathway from the ontology (nature of reality) and epistemology (knowledge of reality) to the theoretical position that underpins the foundation of this thesis.

4.2.1 Positivism

Empiricist epistemology within positivism has long been contended as the only legitimate form of science and scholarship (Breen & Darlaston-Jones, 2010). Despite the existence of alternatives (e.g., social constructivism and critical realism), positivism continues to be the dominant philosophical paradigm within the field of psychology (Breen & Darlaston-Jones, 2010; Lyons & Chamberlain, 2017). Positivism aims to yield a hypothetico-deductive approach wherein (usually experimental) variables are operationally defined, with some being manipulated or controlled, and hypotheses based on predetermined variables are clearly stated on a priori basis, enabling the identification of correlational or causational relationships (Breen & Darlaston-Jones, 2010; Cruickshank, 2012; McEvoy & Richards,

2006). By employing scientifically or methodologically sound measures to quantify psychological phenomena, positivism aims to achieve findings that are objective and free from the influence of subjective values and experiences (Breen & Darlaston-Jones, 2010).

Research that strictly adheres to positivism may be seen as problematic, however, especially when it involves marginalised groups (Breen & Darlaston-Jones, 2010; Nelson & Prilleltensky, 2010). For example, the positivist paradigm has been critiqued for its limited capacity to address prejudice at societal level (e.g., cisgenderism) and for its uncritical application in exploring the relevance of social phenomena such as norms, cultures, and structures in the search for an accurate and comprehensive reality. The problem of "context stripping" in positivism has been highlighted by researchers who adopt alternative epistemological approaches, pointing out that the reduction of a social phenomenon to restricted numbers of predetermined variables may create a "closed system" that may not only fail to examine the role of social determinants of health, but also risks misconstruing the actual social worlds (Cruickshank, 2012).

4.2.2 Critical Realism

The perception that the world is a stratified open system, and that there are unobservable social events and structures that interact in contingent ways to produce changes at observable levels, was posited by Bhaskar (1997) who developed the critical realism framework. Critical realism argues that there is a need to look beyond positivism, and strives to provide a contextual analysis by minimising the disjuncture between human beings (treated as data in positivism) and social contexts (Cruickshank, 2012; Danermark et al., 2002; McEvoy & Richards, 2006). Critical realism involves a shift from the assumption that there are only objective truths about a social phenomenon to the proposal that the existence of an authentic reality is socially determined and subjective in nature. Rather than engaging in a relatively rigid form of empirical analysis of a given dataset, Bhaskar (1997) condoned the

use of established theories to facilitate a deeper analysis, which are congruent with the reality of the social world. The use of theories, however, does not necessarily negate or compromise the systematic pursuit of scientific knowledge that is favoured by positivist researchers if the conceptual models can be empirically tested (Breen & Darlaston-Jones, 2010; Cruickshank, 2012; Danermark et al., 2002; McEvoy & Richards, 2006).

Critical realism also recognises the influence of a researcher's subjectivity on interpretation of experiences and stories that are being told by the participants (Cruickshank, 2012; Danermark et al., 2002; Lyons & Chamberlain, 2017). In this research, the use of critical realism is driven by a health equity perspective that aims to challenge the narrative that pathologises the experiences of transgender people, with the goal that this population can achieve their full health potential (Fredriksen-Goldsen et al., 2014). A health equity perspective endorses LGBTQ psychology's social justice lens (see Section 1.4.2) by examining the role of cisgenderism as an unjust social structure that can compromise transgender people's access to social determinants of health (Harper & Schneider, 2003; Sandil & Henise, 2017).

In line with the ways in which critical realism treats the social world as theory-laden (Cruickshank, 2012; Danermark et al., 2002), this research draws on gender minority stress theory (Hendricks & Testa, 2012; Testa et al., 2015), which asserts that mental health difficulties are the result of a hostile or stressful social environment, thus suggesting that observed inequities in mental health among transgender people are socially produced through cisgenderism (see Chapter 2). The applications of gender minority stress theory were evident in the empirical studies of this thesis. For instance, gender minority stress theory was used to explain the social implications of cisgenderism in the quantitative findings of Chapter 5 on the extent of mental health inequities and Chapter 6 on the relationships between enacted stigma experiences and protective factors on the mental health of transgender people. In

Chapter 7, the qualitative analysis, within a critical realist paradigm, went beyond participants' descriptions of mental health experiences by examining the role of cisgenderism to generate a socially located exploration of mental health determinants for transgender people.

4.3 The Counting Ourselves Survey

The data analysed for the research publications in this thesis were derived from a larger research project: Counting Ourselves: Trans and Non-Binary Health Survey. This section presents the overall structure and recruitment methods of the Counting Ourselves survey, as well as the demographic details of transgender people who participated in the survey.

4.3.1 Guiding Framework: Te Pae Māhutonga

The Treaty of Waitangi (1840), signed between Māori (the indigenous peoples of Aotearoa/New Zealand) and the British Crown not only set the foundation of Aotearoa/New Zealand's sovereignty, but also recognised the position of indigenous Māori people as one that should be constitutive of rights and responsibilities (Bennett & Liu, 2018). Therefore, all people in Aotearoa/New Zealand should play their part in resisting the privileged position of western knowledge (Smith, 2013), and enable Māori to practise self-determination in reconnecting with their cultural identities. As more researchers in Aotearoa/New Zealand embark on the decolonising journey, the incorporation of Māori insights into psychological research in Aotearoa/New Zealand has become more pertinent than ever.

The Counting Ourselves survey was kaupapa Māori[7]-informed by Te Pae Māhutonga (the Māori term for the constellation also known as the Southern Cross) framework of public health (Durie, 1999, 2004). First developed by Professor Sir Mason Durie, Te Pae Māhutonga

---

[7]The Counting Ourselves research team (including me) worked with one of our team members, Dr Tāwhanga Nopera, to ensure the approach taken by the survey aligned with the knowledge, skills, and values of Te Ao Māori or Māori worldview.

builds on the Ottawa Charter to contextualise a public health framework that is specific to the history and culture of Aotearoa/New Zealand (Durie, 1999). Te Pae Māhutonga comprises four central stars forming a cross and two pointer stars pointing toward the cross (Durie, 1999, 2004). Figure 1 presents the diagram for the framework of Te Pae Māhutonga.

Figure 1

Te Pae Māhutonga as an Indigenous Māori Health Model

Note. From Māori health models—Te Pae Mahutonga, by Ministry of Health, 2017. (https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models/maori-health-models-te-pae-mahutonga). Copyright 2017 by Ministry of Health.

Te Pae Māhutonga not only acts as a navigational aid for sailors and explorers, it also is a symbolic map for effective health promotion (Durie, 1999). The four central stars can be used to represent four key domains of health: cultural identity and access to the Māori world (mauriora), environmental protection (waiora), wellbeing and healthy lifestyles (toiora), and full participation in wider society (te oranga). The two pointers of effective leadership (ngā manukura) and autonomy (te mana whakahaere) symbolise two key guiding principles that are needed to make progress toward the four domains of health (Durie, 1999, 2004). While Te Pae Māhutonga has mostly been acknowledged as a framework that aligns with

indigenous Māori worldviews, the Counting Ourselves research team recognised its relevance for promoting access to social determinants of health among transgender people (Veale et al., 2019). The kaupapa of Te Pae Mahutonga was also acknowledged by health professionals and transgender communities when designing guidelines for the provision of gender-affirming care in Aotearoa/New Zealand (see Oliphant et al., 2018).

The domains of health and guiding principles that are relevant to this thesis are elaborated further in the following paragraphs. Two of these, mauriora and waiora, are not mentioned here because they fall outside of the scope of this thesis. The Counting Ourselves survey included questions within the mauriora and waiora domains such as the Multigroup Ethnic Identity Measure-Revised (MEIM-R) to measure cultural connectedness, involvement in cultural activities, and Nature Relatedness Scale (NR-6) to measure natural connectedness. Preliminary analyses found a statistically significant positive correlation between a sense of belongingness to ethnic group and lower level of suicidal ideation for non-Pākehā (i.e., Māori, Pasifika, Asian, and MELAA) participants, but not when the sample also included Pākehā participants (Veale et al., 2019). Examination of mauriora and waiora domains as protective factors to promote mental health for specific ethnic groups of the transgender population requires a comprehensive planning with the Counting Ourselves community advisory group members; there are plans under way to examine whānaugatanga (relationships with natural environments and people) experiences of Māori transgender people in another study.

Ngā Manukura. Ngā Manukura asserts that people within communities hold valuable knowledge and ought to be meaningfully incorporated in the research process to share their personal experiences and insights. The Counting Ourselves project was led by researchers who identified as transgender and involved transgender community members in multiple phases of the research process. In early 2018, a community advisory group was set up with 10

transgender people of various backgrounds. This group was chosen to maximise the diversity of expertise (across ages, ethnicities, and regions) and this included leaders within transgender communities in Aotearoa/New Zealand. The centring of transgender people in the research process aligns with the LGBTQ psychology ethos, which views community members as an important social force in the process of promoting health equity (Nic Giolla Easpaig et al., 2018).

Te Mana Whakahaere. Te mana whakahaere refers to the ability of a community or population to have a level of autonomy and self-determination in promoting their own health. This process includes shifting away from the hierarchical research relationship (i.e., researcher and researched) by facilitating a partnership approach wherein transgender people can take ownership of the issues that matter to them. In the context of transgender health, Oliphant et al. (2018) noted that te mana whakahaere could be reflected through the involvement of transgender people in making informed decisions to advance access to gender-affirming care and to create a non-pathologised understanding of transgender health. Since the early phase of the research process, the Counting Ourselves research team has worked closely with the community advisory group in a collaborative manner, with group members playing key roles in providing advice for participant recruitment and assessing the relevance and implication of survey items (Veale et al., 2019). With the involvement of transgender people as community stakeholders, the findings produced are more likely to be inclusive (e.g., not using language that pathologises transgender people) and be relevant to wider communities (Adams et al., 2017).

Toiora. Toiora is often discussed alongside the Te Whare Tapa Whā, a Māori model that views health as a holistic concept with four components, which are spirituality (taha wairua), emotion and mental wellbeing (taha hinengaro), physical body (taha tinana) and human relationships (taha whanau; Durie, 1985). Importantly, toiora points towards the

importance of examining individuals' lifestyles, which can influence their holistic health, while accounting for the effects of unjust social structures that can lead to the unequal distribution of opportunities for making suitable health decisions (Durie, 1999, 2004).

This holistic perspective of viewing mental health has similarities with the World Health Organization's (2004) definition of mental health as "as a state of wellbeing wherein people realise their own abilities, cope with life stresses, work productively, and contribute to their communities, and that it is an integral part of health alongside physical and social wellbeing" (p. 12). The broad definition of mental health given by the World Health Organization is partially captured by the various mental health measures used such as mental health difficulties (i.e., psychological distress, NSSI, and suicidality) that can interfere with daily functioning, as well as OECD measures of general mental health (i.e., life satisfaction, life worthwhileness, and coping with stress) that allow for consideration of multiple aspects of health (also noted in Chapter 3).

Te Oranga. Te Oranga acknowledges the sociocultural elements of wellbeing, with a focus on people's socioeconomic situations and access to social determinants. As a marginalised population in Aotearoa/New Zealand, transgender participation in the wider society and social services are known to fall considerably short than the general populations due to the barriers presented by cisgenderism (Human Rights Commission, 2008).. This thesis examines the mental health effects of enacted stigma that limit transgender people's ability to access social institutions such as employment, healthcare, and legal services.

4.3.2 Survey Design

The Counting Ourselves study was a comprehensive survey that examined the health and wellbeing of transgender people in Aotearoa/New Zealand (Veale et al., 2019). The Counting Ourselves project was led by researchers who identify as transgender, and there was a core research team that included academic staff and students who were transgender and

cisgender, Māori, Pākehā (New Zealand European), and Asian. Designed in 2018, the survey had a simple and direct objective—to ensure transgender people in Aotearoa/New Zealand were "counted" in both quantitative and qualitative data that could improve their health status. For many years, New Zealand population-based surveys such as the Census, the New Zealand Health Survey, and the New Zealand General Social Survey have operated on a cisnormative framework that assumes all people are cisgender and that their genders align with their sex assigned at birth (Ministry of Health, 2017b; Statistics New Zealand, 2016, 2020a). The lack of data collection on transgender identities is an example of cisgenderism as it neglects the health needs of people whose gender does not conform to cisnormative expectations (Riggs et al., 2015). To counter the long-held invisibility of transgender people in national statistics, the Counting Ourselves survey aimed to fill in the gap by asking participants many of the same questions as the national population-based surveys. These questions included mental health measures such as the Kessler Psychological Distress Scale (K10; Kessler et al. (2003) and depression and anxiety diagnoses (i.e., "Have you ever been told by a doctor that you have depression/anxiety disorder?") from the 2016/7 New Zealand Health Survey (Ministry of Health, 2017b), the OECD subjective wellbeing questions (i.e., life satisfaction, life worthwhileness, and ability to cope with stress) that were also used in the 2016 New Zealand Mental Health Survey (Health Promotion Agency, 2016), and the adapted version of non-suicidal self-injury and suicidality questions that were used in the Aotearoa/New Zealand Youth'12 study (Clark et al., 2012). Quantitative findings from these specific questions allowed comparisons to be made between the transgender participants who responded to the Counting Ourselves survey and the general population estimates of Aotearoa/New Zealand population-based surveys.

Other questions that were also taken from the Aotearoa/New Zealand population-based surveys included enacted stigma experiences such as discrimination, unfair treatment,

verbal harassment, and physical assault, from the 2016 New Zealand General Social Survey (Statistics New Zealand, 2016); protective factors such as friend and family support that were measured with a single-item question from the New Zealand Mental Health Survey 2016 (Health Promotion Agency, 2016); and sense of belongingness measures that were either adopted (i.e., neighbourhood) or adapted (i.e., transgender or non-binary communities) from the 2016 New Zealand General Social Survey (Statistics New Zealand, 2016). The Counting Ourselves survey also incorporated questions about experiences related to access to gender-affirming care and transgender-specific enacted stigma, from overseas transgender surveys (e.g., the 2015 United States Transgender Survey; James et al., 2016), such as homelessness experiences due to violence from family members, and gender identity conversion efforts. There were additional questions that were designed by the Counting Ourselves research team in collaboration with the community advisory group, health professionals and experienced researchers in specific areas of transgender health. A copy of the paper-form survey containing questions relevant to the studies of this thesis is in Appendix 1.

4.3.3 Recruitment

Counting Ourselves was an anonymous survey that was open for anyone who identified as a transgender or non-binary person, aged at least 14 years old, and who was living in Aotearoa/New Zealand. Participants had the option of completing the survey online or on papers, although almost all participants (99%) elected to complete the survey online (Veale et al., 2019). Both online and paper surveys explained the objectives of the study to participants, and participants provided their consent by completing the survey. Counting Ourselves received ethical approval from the New Zealand Health and Disability Ethics Committee (18/NTB/66/AM01) and was open for participation from June to October 2018. See Appendix 2 for the ethics approval letter.

Given that transgender people are a stigmatised population in Aotearoa/New Zealand, many who have affirmed their gender may choose to remain in stealth (not disclosing their transgender history to people in their surroundings) which makes recruiting this population difficult. In attempts to capture a wide representation of the diversity among transgender people, members from the community advisory group, as well as community members from Māori, Pasifika, and Asian ethnic groups, older aged, disabled, and those living in rural areas were invited to share quotes about the importance of the survey to them. Illustrated images of these members and their quotes (for example, see Appendix 3) were shared on the project website (https://countingourselves.nz/) and distributed on Facebook and Twitter. Approximately 4 out of 5 participants (79%) reported hearing about the survey via a social media platform (Veale et al., 2019), suggesting that its relatively anonymous nature may have allowed more transgender people in stealth to participate.

The Counting Ourselves research team also utilised other recruitment techniques to reach out to parts of transgender communities that were likely to be harder to access online. The research team made connections (e.g., sending out flyers, posters, and paper-form surveys) with transgender, rainbow, and takatāpui community groups and organisations, and networks of academic researchers and health professionals who were interested in transgender health, to spread the word about the survey. See Appendix 4 and 5 for the flyers and posters used for recruitment. Support was sought from key transgender people within Māori, Pasifika, Asian, disability, and sex-work networks to promote the survey. Direct contact (e.g., via phone, email, and social media messages) were also made with transgender people who had strong networks of people who were less likely to be part of online trans communities, including those who were older and living in rural areas, to encourage them to complete the survey. During the process of community outreach, the research team used language that covered terms that are relevant to a broad range of people and communities, for

example transgender people of Māori (e.g., whakawahine, tāhine, tangata ira tāne) and Pasifika (e.g., fa'afafine, fa'afatama, fakaleiti) ethnic groups.

4.3.4 Participants' Demographics

A total of 1,380 people commenced the survey, but some responses were removed for not meeting the eligibility criteria. During the filtering process, responses were removed if they were duplicates (*n* = 22), younger than 14 years old (*n* = 2), not residing in Aotearoa/New Zealand (*n* = 12), or not genuine (e.g., provided offensive responses such as leaving a transphobic comment or illogical responses such as a current age that was younger than the age of realising their transgender identities; *n* = 5). A further 161 were excluded for not completing the demographic section, which included the questions that indicated participants were transgender, leaving a final sample of 1,178 participants. Not all 1,178 participants completed the whole survey, however, as questions in the later part of the survey had a lower number of participants due to participant attrition. For instance, 905 participants completed the mental health section of the survey, giving a completion rate of 77%. Note that different numbers of participants were included for each analysis as they depended on the measures used, hence each study in Chapters 5, 6, and 7 has reported the total number of participants. Nonetheless, the Counting Ourselves survey remains the largest of its kind in Aotearoa/New Zealand to date, with a community-based sample that indicates a relatively larger proportion than the representation of transgender people in overseas large-scale studies of a similar nature in Australia, Asia, Europe, and North America (e.g., Chen et al., 2019; Hyde et al., 2013; James et al., 2016; McNeil et al., 2012; Trans PULSE Canada Team, 2020).

The mean age of transgender people for the overall sample was 29.5 (median = 25.0, SD = 13.3), with a range from 14 to 83 years. See Chapter 5 for further details about the age distribution of the Counting Ourselves sample. Participants were allowed to select more than

one ethnic group and the findings here were reported using the concept of total response (i.e., participants can be counted as more than one ethnic group; Ministry of Health, 2017). Most participants identified as New Zealand European/Pākehā (*n* = 920; 82%), followed by Māori (*n* = 160; 14%), Samoan (*n* = 21; 2%), Chinese (*n* = 17; 2%), Cook Island Māori (*n* = 13; 1%), Filipino (*n* = 11; 1%), and other ethnic groups with less than 1%. When prioritised ethnicity (i.e., participants are prioritised into one of the four ethnic groups in a priority order of Māori, Pasifika, Asian, and New Zealand European/Pākehā or other) of Counting Ourselves participants was compared to the Aotearoa/New Zealand general population (using estimates of 2016/7 New Zealand Health Survey), there was an greater proportion of New Zealand European/Pākehā or other (78% vs 69%) and Māori (14% vs 13%) participants, and an undersampling of Pasifika (4% vs 5%) and Asian (4% vs 13%) participants in the Counting Ourselves survey (Veale et al., 2019).

Participants were classified into three gender groups based on their responses to questions on sex assigned at birth and current gender identities. Trans men included those who selected one of the current gender identities as man, trans man, transsexual, or tangata ira tāne and were assigned female at birth. Trans women were participants who selected woman, trans woman, transsexual, tangata ira wahine, or whakawahine and were assigned male at birth. Participants who did not meet these criteria were classified as non-binary, and this group included those who selected genderqueer, gender fluid, bigender, pangender, or non-binary as their current gender. Almost half of participants were non-binary (45%), and there were similar proportions of trans women (28%) and trans men (27%). There was a higher proportion of non-binary people who were assigned female at birth (76%). The three gender groups had distinctive age structures, with a relatively higher proportion of trans women among older adults (aged 55 and above) and relatively higher proportions of trans men and non-binary people among younger participants (for more details, see Chapter 5).

Using the postcodes provided by participants, the Counting Ourselves research team identified the regions in which the participants lived. More than half reported currently living in major regions of Auckland (32%) and Wellington (28%), followed by regions of Canterbury (10%), Otago (7%), Waikato (7%), Manawatū (4%), Bay of Plenty (3%), Hawke's Bay (2%), Taranaki (2%), Tasman (2%), other South Island regions (2%), and other North Island regions (2%).

4.4 Conclusion

This chapter reviewed the two philosophical approaches that underpinned both quantitative and qualitative methods of this research. The research design of the Counting Ourselves survey was then discussed, followed by a detailed description of participants' demographic information. Then, this chapter gave a brief overview of the quantitative and qualitative methods used to provide additional information on methods that were not covered in Chapters 5, 6, and 7. The next chapter presents a published paper with empirical findings on mental health inequities among transgender people. The paper aimed to investigate the prevalence of mental health difficulties and the extent of mental health inequities with the Aotearoa/New Zealand general populations.

Chapter 5: Mental Health Inequities Among Transgender People in Aotearoa/New Zealand: Findings from the Counting Ourselves Survey

5.1 Preface

Overseas studies (e.g., Aparicio-García et al., 2018; Crissman et al., 2019) have consistently documented that transgender people experience heightened levels of depression, anxiety, and symptoms related to psychological distress, relative to cisgender people. Aotearoa/New Zealand-based findings on this topic, however, were limited to the Youth'12 study (Clark et al., 2014) that recruited a relatively small sample of transgender adolescents (n = 96) and studies with a combined sample of Australian and Aotearoa/New Zealand transgender people (Couch et al., 2007; Treharne et al., 2020). The findings of Youth'12 need to be interpreted with caution when generalising to transgender people of older age groups as previous overseas studies have shown varying rates of mental health concerns among transgender people of different age groups (e.g., Hyde et al., 2013; James et al., 2016). To the best of knowledge, only one existing study (the United States Transgender Survey; James et al., 2016) has examined in detail mental health inequities among transgender people across age groups.

This study expanded on previous studies by investigating the extent of mental health inequities between transgender people and the Aotearoa/New Zealand general population (based on New Zealand Health Survey 2016/7 estimates) across the life course, from youth, adults, to older adults. While overseas studies (e.g., Chen et al., 2019; Rimes et al., 2019; Veale, Watson et al., 2017) have compared mental health of transgender people across gender groups (i.e., trans men, trans women, and non-binary), findings produced have been mixed which may be partially due to the lack of consideration for age differences. This study examined mental health differences for gender groups by conducting two sets of analyses (1) controlling for the effect of age and (2) exploring the interaction effect of age and gender.

Findings of this study have important implications for future research to understand the life course perspective (Fredriksen-Goldsen et al., 2014) when exploring the mental health, social contexts, and life trajectory of transgender people of various age groups.

Declaration: I developed the outline of the paper after discussing with my supervisors. I wrote the first full draft of the paper and was the main person responsible for conducting data analysis. I also held the leading role in making revisions of the paper based on feedback from the other co-authors and journal reviewers. Overall, I contributed 80% to this paper, and the other co-authors contributed the remaining 20%.

Acknowledgement: As this paper is published under an open access licence, the publisher allows for the exact reproduction of the paper in pdf format.

Publication status: Published in the special issue: Health Inequalities and Social Support among LGBT+ Populations– Citation: Tan, K. K. H., Ellis, S. J., Schmidt., J. M., Byrne, J. L., & Veale, J. F. (2020). Mental health inequities among transgender people in Aotearoa New Zealand: Findings from the Counting Ourselves survey. *International Journal of Environmental Research and Public Health, 17*(8), 2862. doi:10.3390/ijerph17082862

An earlier version of this paper was presented at the following conference:

Tan, K. K. H & Veale, J. F. (2019, August). *Mental health inequities among trans and non-binary people in Aotearoa/New Zealand*. Trans and Non-Binary Mental Health Mini-Symposium, New Zealand Psychology Society Annual Conference, Rotorua, New Zealand.

International Journal of
Environmental Research and Public Health

Article

Mental Health Inequities among Transgender People in Aotearoa New Zealand: Findings from the Counting Ourselves Survey

Kyle K.H. Tan [1,*], Sonja J. Ellis [2], Johanna M. Schmidt [3], Jack L. Byrne [1,4] and Jaimie F. Veale [1]

1. School of Psychology, University of Waikato, Hamilton 3240, New Zealand; jackbyrne@trans-action.nz (J.L.B.); jveale@waikato.ac.nz (J.F.V.)
2. School of Education, University of Waikato, Hamilton 3240, New Zealand; sonjaell@waikato.ac.nz
3. School of Social Sciences, University of Waikato, Hamilton 3240, New Zealand; jschmidt@waikato.ac.nz
4. TransAction, Auckland 1025, New Zealand

* Correspondence: kht5@students.waikato.ac.nz

Received: 22 February 2020; Accepted: 28 March 2020; Published: 21 April 2020

Abstract: There has been little international research looking at differences in mental health across different age groups. This study examines mental health inequities between transgender people and the Aotearoa/New Zealand general population from youth to older adulthood. The 2018 Counting Ourselves survey (N = 1178) assessed participants' mental health using the Kessler Psychological Distress Scale (K10) and diagnoses of depression and anxiety disorders, questions that were the same as those used in the New Zealand Health Survey. Our results showed significant mean score differences for transgender people on K10, and these differences were almost two standard deviations higher than the general population (Cohen's d = 1.87). The effect size differences, however, decreased from youth to older adults. Regression analyses indicated trans women were less likely to report psychological distress than trans men and non-binary participants. There was an interaction effect for age and gender, with lower psychological distress scores found for younger trans women but higher scores for older trans women. The stark mental health inequities faced by transgender people, especially youth, demonstrate an urgent need to improve the mental health and wellbeing of this population by implementing inclusive institutional practices to protect them from gender minority stress.

Keywords: transgender; mental health inequity; psychological distress; depression; anxiety; age

---

1. Introduction

Transgender (or trans) people are those whose gender does not correspond with their sex assigned at birth. In this article, we use transgender as an umbrella term to encompass trans men (those who identify as men but were assigned female at birth), trans women (those who identify as women but were assigned male at birth), and non-binary people (those whose gender is neither man nor woman) [1]. These broad descriptions include identities formed in both Western and non-Western cultural contexts. The primary ethnic groups in Aotearoa/New Zealand are New Zealand European (also known as Pākehā and equating to the term "White" in many other English-speaking places), indigenous Māori, Pacific Island, and Asian. Māori terms that encompass gender diversity include whakawahine, takatāpui, and tangata ira tāne [2]. The significant Pacific population also means that New Zealanders are relatively familiar with terms such as the Samoan identity, fa'afafine [3].

Increasing international evidence has shown that transgender people experience significant mental health inequities when compared to the cisgender population (people whose gender aligns with their sex assigned at birth). This has been demonstrated across North America [4–7], South

America [8], Europe [9], Oceania [10,11], and Asia [12]. A population-based health survey in the United States, the 2014–2016 Behavioral Risk Factor Surveillance System (BRFSS) survey, found transgender people had a higher self-rating of mental distress (20% vs. 11%) and were more likely to report a depression diagnosis (27% vs. 17%) than the cisgender population [4]. The Aotearoa/New Zealand population-based adolescent health survey, Youth'12, reported an almost fourfold increase in depressive symptoms (42% vs. 12%), a twofold increase in non-suicidal self-injury risk in the past year (46% vs. 23%), and a fivefold increase in suicide attempts in the past year (20% vs. 4%) among transgender high school students compared to their cisgender counterparts [10]. The Youth'12 study, however, focused only on adolescents and was limited to 96 transgender participants.

Public health literature commonly defines *health inequalities* as differences in health outcomes between groups or specific cultures within a population [13]. The term *health inequities* reflects a social justice lens and foregrounds the impacts of unjust social norms that prevent a population from attaining their full health potential [13,14]. In this instance, the systemic difference in health status between transgender and cisgender populations are affected by cisgenderism, a prejudicial norm that asserts that there are only two valid genders (i.e., man and woman) which correspond to one's assigned sex at birth [15,16]. The Gender Minority Stress Theory posits that cisgenderism leads to a form of stress that is specific to transgender people, and that elevated mental health concerns among this population are due to their experiences of distal (e.g., external discrimination) and proximal (e.g., internalised transphobia) stressors [16–18].

Evidence from recent studies in the United States showed younger transgender participants reporting higher levels of mental health concerns, and that these people were more likely to experience gender minority stressors, such as discrimination and internalised stigma (a form of internalised discomfort with one's transgender identity that is stimulated by distal stressors) than older participants [19,20]. Realising these generational differences in mental health, we extended existing transgender mental health studies that have only examined specific age groups, such as youth [1,6,9,10] and older adults [21] by assessing mental health inequities across the lifespan from adolescence to older adults.

Findings of mental health differences among gender groups within the transgender population (i.e., trans men, trans women, and non-binary people) have been mixed. While some studies documented significantly poorer mental health outcomes for non-binary participants relative to trans men and trans women [6,9], their results were restricted to transgender youth. Other studies have recruited transgender people of all age groups and adjusted for the effects of demographic variables, such as age, in identifying gender differences; contrary to the transgender youth studies, these found that non-binary participants had better mental health than trans men and trans women [5,22]. Given these discrepancies, this study explores the relationship of gender, along with age, on mental health, and does so in more detail than previous studies by also assessing the interaction effect between these variables.

2. Materials and Methods

2.1. Procedure

Counting Ourselves: the Aotearoa New Zealand Trans and Non-Binary Health Survey was a survey of transgender and non-binary people who were at least 14 years old and resided in Aotearoa/New Zealand. The recruitment strategy focused on ensuring that there was adequate representation of the diversity among transgender people. To do this, transgender people of older age groups, Māori, Pacific, and Asian ethnic groups, and those residing in rural areas were invited to share quotes about the importance of the survey to them, and have their images drawn alongside their quotes in posters. These posters were shared on the project website and distributed through social media. Participants were also recruited through billboards and word-of-mouth with help from our networks of transgender community organisations, academic researchers, and health professionals working in transgender healthcare (see [23] for more details). The study received ethical approval from the New Zealand

Health and Disability Ethics Committee (18/NTB/66/AM01) and was open for participation from June to September 2018 in both online and paper forms.

2.2. Participants

The survey had 1380 initial responses. After filtering out responses that were duplicates (n = 22), not from Aotearoa/New Zealand (n = 12), less than the age 14 requirement (n = 2), did not complete the initial demographic section to confirm that they were transgender (n = 161), or were not genuine (n = 5) (see [23] for more details), the final sample for analysis included 1178 transgender people whose ages ranged from 14 to 83 years (M = 29.5, SD = 13.3). However, not all participants completed the whole survey due to attrition over a long survey; more than three quarters (n = 905) completed the mental health section of the survey.

Most participants were New Zealand European/Pākehā (82%), followed by Māori (14%), Samoan (2%), Tongan (1%), Chinese (1%), and Filipino (1%). When compared to the estimates of the Aotearoa/New Zealand general population, the Counting Ourselves survey had relatively more New Zealand European/Pākehā and Māori participants and relatively fewer Asian participants. Our sample had many non-binary people (45%; with 76% of this group having been assigned female at birth), and similar proportions of trans women (28%) and trans men (27%) (Note that these demographic details may differ slightly from the published findings from the same survey dataset ([23]) which were weighted to by ethnic groups to match the Aotearoa/New Zealand population.). Figure 1 presents the distribution of gender groups across the lifespan, with three gender groups displaying distinctive age structures. There was a relatively higher proportion of trans women among older adults and higher proportions of trans men and non-binary people among younger participants.

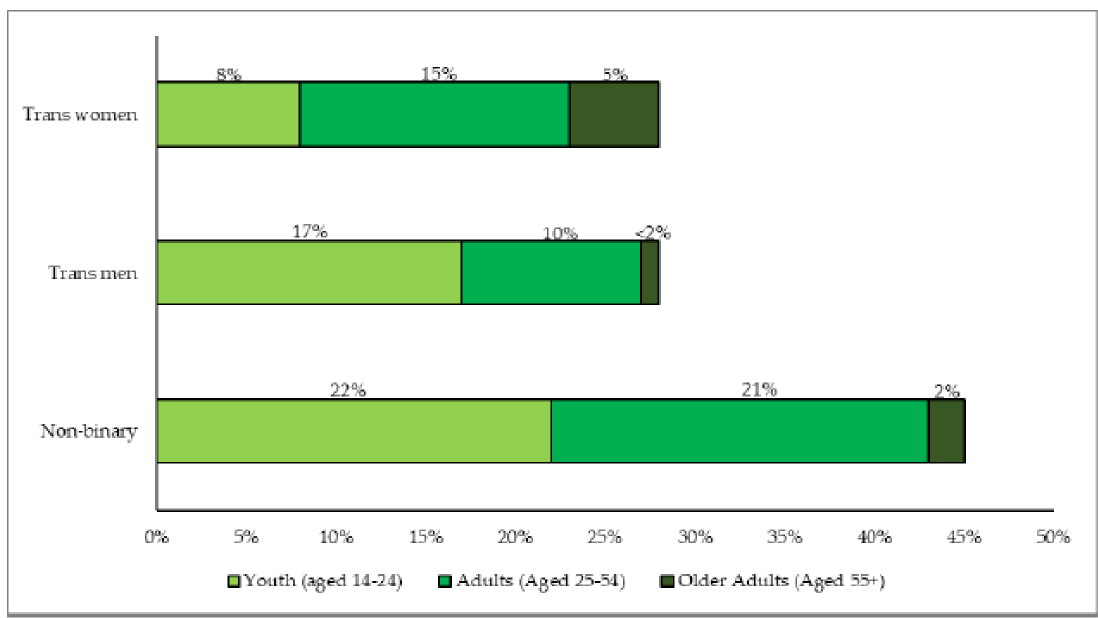


Figure 1. The distribution of gender groups across the lifespan among Counting Ourselves participants.

2.3. Population Comparisons

Existing population-based health surveys in Aotearoa/New Zealand, such as the New Zealand Health Survey (NZHS) 2016/17 of 13,598 people aged 15 and above, did not collect data about whether someone was transgender [24]. The NZHS 2016/17 employed the probability proportional to size sampling and also applied weighting to ensure data were representative of the New Zealand demographic distribution [24].

2.4. Measures

2.4.1. Gender

Participants were classified into three gender groups (trans men, trans women, and non-binary) using two items that asked about sex assigned at birth and current gender identities. We classified participants as trans men if they reported man, trans man, or transsexual as their gender and were assigned female at birth. Trans women were participants who selected woman, trans woman, or transsexual and were assigned male at birth. All other participants were classified as non-binary.

2.4.2. Number of Years Living Full-Time in Affirmed Gender

Trans women and trans men were asked to list the age of started living full-time as a woman or man. The number of years lived full-time in their affirmed gender for these groups was calculated by subtracting the age they started living full-time as a woman or man from their current age.

2.4.3. Mental Health Diagnoses

We used the same measures of mental health diagnoses found in questions from the NZHS 2016/17 [24]. Participants were asked whether they had ever been told by a doctor that they had depression or an anxiety disorder, with "yes" and "no" response options. We avoided using the term "disorder", given the history of transgender people resisting having their gender diversity or health needs framed pathologically in this way. The term appears in the text where this study used questions from a population-based survey to compare the prevalence of depression and anxiety diagnoses among transgender people with the general population estimates.

2.4.4. Psychological Distress

Psychological distress was measured in our study and the New Zealand Health Survey using the Kessler Psychological Distress scale (K10). This scale measures the presence of non-specific psychological distress symptoms in the past 4 weeks, using 10 items with a five-point response scale, from none of the time (0) to all of the time (4) [25]. Scores can range from 0 to 40, with higher scores indicating someone is manifesting higher levels of behavioural, emotional, cognitive, and/or psychophysiological symptoms of psychological distress. A score of 12 or more suggests the presence of high levels of psychological distress symptoms [24]. The K10 has demonstrated sound validity in screening for cases of mood and anxiety disorders among the Aotearoa/New Zealand general population [26]. In the current dataset, the internal consistency of the K10 was high ($\alpha = 0.94$).

2.5. Data Analysis

All statistical analyses were performed in IBM SPSS Statistics version 25 (IBM, Armonk, NY, USA). The percentage of missing data for each K10 item ranged from 0.2% to 1.1%, and these missing values were imputed using the expectation maximisation method in which values were estimated by regression methods based on means and covariances of available data [27]. We identified mental health inequities between transgender participants and the general population by conducting independent sample t-tests to assess the differences in means of the psychological stress scores. Chi-square goodness of fit tests were used to compare the observed proportion for dichotomous mental health diagnoses with the expected value of the general population. Cohen's d and risk ratio estimates were used to measure the effect size differences of mental health inequities.

The multivariate relationships among mental health, gender, and age were explored by employing the linear and logistic regression analyses with gender and age (and their interaction) predicting mental health diagnoses and K10 psychological distress. Low variance inflation factors (VIFs = 1.09) of age and gender variables in our sample indicated that the assumption of independence was not violated. An alpha level of $p < 0.05$ was used to determine statistical significance for all analyses in this study.

3. Results

Nearly three quarters (72%) of participants manifested high or very high psychological distress symptoms (i.e., a score of 12 or more on the K10 scale). Nearly two-thirds reported having been told by a doctor that they had depression (65%), and over half (56%) had been told by a doctor they had an anxiety disorder.

3.1. Mental Health Inequities

New Zealand general population-based estimates were for those aged 15 and older, so we excluded data from 14-year-old participants ($n = 25$) in this analysis. Table 1 outlines comparisons between Counting Ourselves and the New Zealand Health Survey for K10 psychological distress scores and mental health diagnoses. The inequity in psychological distress scores was particularly prominent, with effect size differences of almost two standard deviations for the overall sample. Considerable differences were also found for rates of being diagnosed with a mental health disorder, with participants having almost three times the risk of reporting a lifetime depression diagnosis and a more than five times greater risk of reporting an anxiety disorder diagnosis.

Table 1. Mental health characteristics across age groups and comparisons with New Zealand Health Survey 2016/7 (age 15+).

Age Groups	Counting Ourselves		NZHS 2016/7		
	n	%/M (SD)	%/M (SD)	t-Test/Chi-Square Statistics	Effect Size
Depression (Yes; No)	854	65.7%	16.7%	49.45 **	RR = 2.88 (2.47, 6.12)
15–18	112	53.6%	6.8%	52.11 **	RR = 7.71 (3.69, 16.12)
19–25	288	71.5%	14.7%	64.85 **	RR = 4.80 (2.96, 7.78)
26–30	149	72.5%	18.2%	59.75 **	RR = 4.06 (2.63, 6.27)
31–35	75	69.3%	15.4%	59.85 **	RR = 4.60 (2.83, 7.37)
36–40	51	70.6%	17.5%	57.59 **	RR = 3.94 (2.55, 6.10)
41–45	43	62.8%	19.3%	40.02 **	RR = 3.32 (2.15, 5.11)
46–54	64	56.3%	18.9%	29.21 **	RR = 2.95 (1.90, 4.58)
55+	72	50.0%	17.5%	23.24 **	RR = 2.78 (1.75, 4.41)
Anxiety (Yes; No)	853	55.2%	10.3%	44.49 **	RR = 5.50 (2.98, 10.16)
15–18	117	53.8%	5.4%	57.72 **	RR = 10.80 (4.51, 25.86)
19–25	291	66.0%	11.7%	61.29 **	RR = 5.50 (3.18, 9.52)
26–30	149	58.4%	12.6%	44.22 **	RR = 4.46 (2.62, 7.61)
31–35	74	59.5%	9.1%	56.63 **	RR = 6.67 (3.50, 12.69)
36–40	47	55.3%	10.7%	43.78 **	RR = 5.00 (2.79, 8.98)
41–45	43	32.6%	11.8%	12.65 **	RR = 2.75 (1.51, 5.01)
46–54	60	40.0%	11.3%	22.13 **	RR = 3.64 (1.98, 6.67)
55+	72	29.2%	9.4%	13.00 **	RR = 3.22 (1.61, 6.45)
K10 (0–40)	886	17.86 (9.56)	3.54 (5.12)	83.11 **	*d* = 1.87 (1.80, 1.93)
15–18	124	24.80 (8.65)	4.39 (5.31)	42.78 **	*d* = 2.84 (2.67, 3.02)
19–25	298	19.96 (8.49)	4.55 (5.96)	44.61 **	*d* = 2.10 (1.99, 2.22)
26–30	152	18.22 (8.60)	4.16 (5.93)	29.22 **	*d* = 1.90 (1.75, 2.06)
31–35	75	16.03 (8.89)	3.62 (5.05)	21.26 **	*d* = 1.72 (1.49, 1.94)
36–40	53	14.63 (8.24)	3.38 (4.93)	16.60 **	*d* = 1.66 (1.39, 1.93)
41–45	46	12.43 (8.17)	3.58 (5.24)	11.46 **	*d* = 1.29 (1.00, 1.58)
46–54	64	12.58 (9.49)	3.29 (4.88)	15.22 **	*d* = 1.23 (0.98, 1.48)
55+	74	9.08 (7.57)	2.95 (4.49)	11.73 **	*d* = 0.98 (0.76, 1.21)

Significant difference ** $p < 0.01$.

3.2. Age Group Differences

Figure 2 illustrates the extent of inequities for psychological distress scores across age groups. This shows a reduction of effect size differences from younger to older age groups.

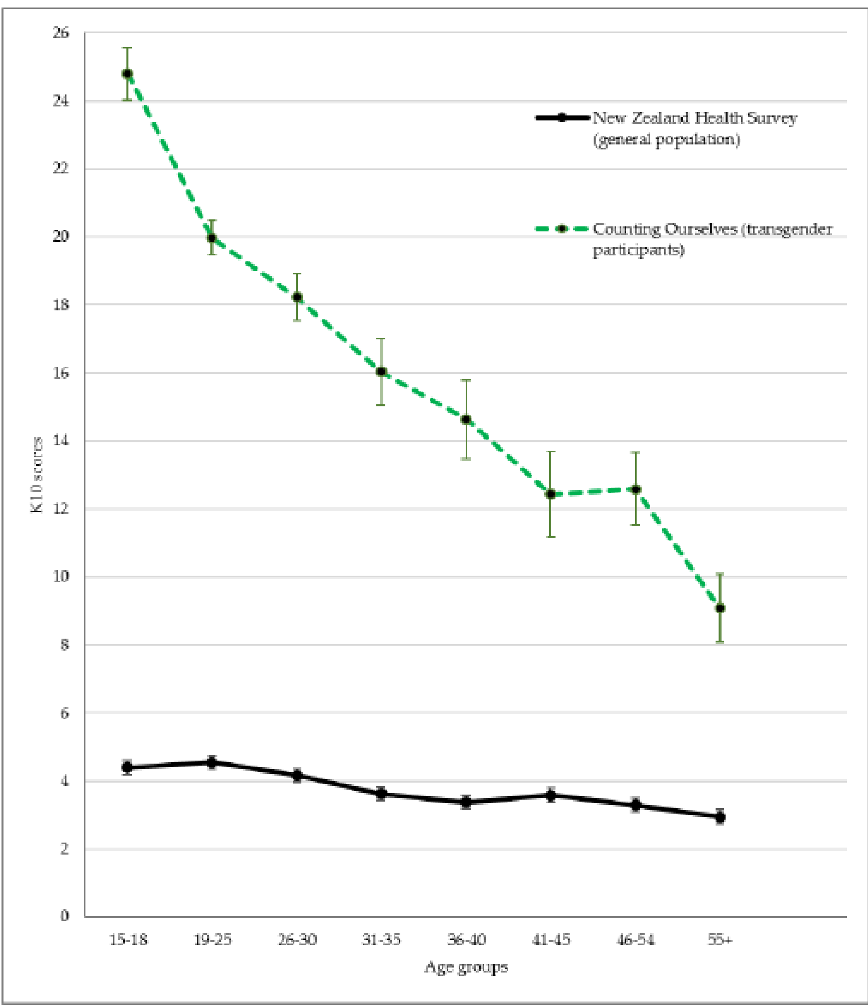


Figure 2. The inequities in K10 psychological distress scores between Counting Ourselves participants and the Aotearoa/New Zealand general population across age groups.

A similar trend was observed for the mental health diagnoses findings in Table 1. For depression, risk ratios varied from more than seven for 15- to 18-year-olds, to almost three times for those aged 55 and above. Transgender youth aged 15 to 18 years had ten times the risk of reporting having a diagnosis of anxiety disorder.

3.3. Gender and Age Differences

Regression analyses revealed strong negative associations of age with an anxiety diagnosis and psychological distress scores (see Table 2; This analysis included 14-year-old participants.). There were statistically significant main effects for gender for depression and anxiety diagnoses in the age-adjusted models, but not for psychological distress. Table 2 reports the differences in odds ratios and predicted scores from the respective gender groups to the reference category (trans women). The regression model noted trans men and non-binary participants had significantly higher odds of depression and anxiety diagnoses than trans women, independently of these groups. There were, however, no significant gender differences, and the interaction effect of age and gender found for mental health diagnoses in the age-interaction models. The results of these interaction effects are presented in Table S1.

Table 2. Regression analyses of gender and age on mental health variables among Counting Ourselves age 14+ participants.

Variables	Depression Diagnosis		Anxiety Diagnosis		K10 Psychological Distress			
	Age-adj Model		Age-adj Model		Age-adj Model		Age-int Model	
	Wald Statistics	OR (95% CI)	Wald Statistics	OR (95% CI)	Wald Statistics	b (95% CI)	Wald Statistics	b (95% CI)
Age	0.82	1.00 (0.98, 1.01)	15.18 **	0.98 (0.97, 0.99)	189.20 **	−0.31 (−0.35, −0.27)	195.66 **	−0.24 (−0.30, −0.18)
Gender	7.76 *		21.121 **		0.87		9.59 **	
Trans women		1.00 (ref)		1.00 (ref)		1.00 (ref)		1.00 (ref)
Trans men	7.38 **	1.72 (1.16, 2.55)	17.91**	2.29 (1.56, 3.36)	0.13	−0.28 (−1.85, 1.29)	8.39 **	5.67 (1.83, 9.51)
Non-binary	4.00 *	1.42 (1.01, 2.01)	15.03**	1.97 (1.40, 2.77)	0.24	0.36 (−1.06, 1.77)	5.80 *	4.27 (0.79, 7.74)
Gender x Age	-	-	-	-	-	-	11.90 **	
Trans women	-	-	-	-	-	-		1.00 (ref)
Trans men	-	-	-	-	-	-	10.27 **	−0.20 (−0.32, −0.08)
Non-binary	-	-	-	-	-	-	5.06 *	−0.11 (−0.21, −0.02)
n	870		871		904			

Trans women were used as a reference group for comparison. Age-adj model = Regression models adjusted for the effects of age. Age-int model = Regression models examining the interaction effect of gender groups and age. Significant difference * $p < 0.05$ ** $p < 0.01$.

The interaction effect between age and gender, however, was a statistically significant predictor of psychological distress. Compared to trans women, our findings in the age interaction model showed trans men and non-binary participants to have 5.67 and 4.26 points higher average psychological distress scores, respectively. We illustrated the interaction effect of gender and age on psychological stress scores in Figure 3. The presence of more steeply negative regression lines for trans men and non-binary participants indicated a more rapid decrease in psychological distress scores from younger to older ages within these gender groups when compared to trans women.

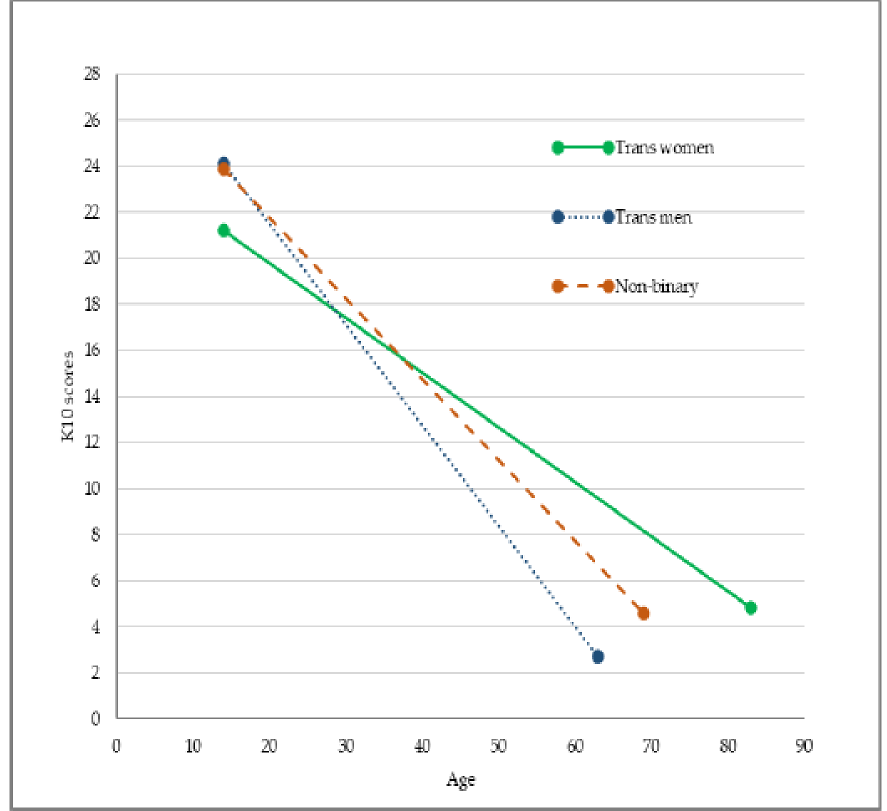


Figure 3. The interaction effect of age and gender on K10 psychological distress scores.

Upon recommendations from anonymous reviewers, we conducted supplementary analyses, including the effect of the number of years living in the affirmed gender, to examine whether there were any changes to the effects of age and gender on transgender people's mental health (see Table S2). As we did not ask our non-binary participants the age first lived in their affirmed gender, this gender group was excluded from this analysis. We found that statistically significant gender differences for depression and anxiety diagnoses remained on the supplementary analysis, as well as for the interaction effect of age and gender on psychological distress scores.

4. Discussion

4.1. Population-Based Comparisons

Using data from the Counting Ourselves survey, this study explored the extent of mental health inequities that transgender people in Aotearoa/New Zealand face. There was a ninefold increase in the manifestation of high or very high psychological distress symptoms when comparing transgender participants (72%) to the general population (8%). While some studies have found high levels of psychological distress among transgender participants [19,28], the other studies we could find using the Kessler Psychological Distress Scale were the United States Trans Survey 2015 using the shortened

version—K6 [7], and an Australian study [29]. Comparatively, our sample had a higher prevalence of serious psychological distress than that reported in the United States study (44% vs. 39%; measured with K6) (We used same items that are in the K6 scale to compare with the findings of the 2015 U.S. Trans Survey. A serious psychological distress level was identified by a total score of 13 or more on the K6), and high or very high levels of psychological distress compared to the Australian study (72% vs. 46%; measured with K10) community-based studies.

Our transgender participants were also more likely to report having received a mental health diagnosis by a health professional than the general population, with approximately fourfold differences for depression and more than fivefold differences for anxiety disorders. The prevalence of depression (66%) and anxiety disorders (55%) among our Aotearoa/New Zealand transgender participants were also higher than those reported in the United States (47% for depression and 42% for anxiety disorders) [22] and Australian studies (57% for depression and 40% for anxiety disorders) [11]. The discrepancy in prevalence could be due to the older average age of transgender participants in the other studies; these warrant further investigation. The mental health inequities between transgender and cisgender participants found in this study are consistent with and add to the body of evidence confirming the deleterious impacts of gender minority stress [16–18]. Our questions on depression and anxiety asked about the lifetime prevalences of these diagnoses; we are aware that these might be prone to recall bias, and that we cannot necessarily infer one's current mental health status from these particular questions in the way that we can from our psychological distress questions. Nevertheless, a strength of our study is that it highlights inequities with the general population for both current mental health status (psychological distress in the past 4 weeks) and lifetime meantal health status (depression and anxiety diagnoses).

4.2. Age Comparisons

Our study also looked at inequities (i.e., comparisons with the general population) for transgender people across different age groups from youth to older adults. Other studies have found that younger transgender participants reported a higher prevalence of mental health diagnoses [11] and psychological distress symptoms [28,29], but we also know that in the general population, youth were at higher risk of mental health difficulties than adults and older adults ([30]; see also Figure 2). The 2015 United States Transgender Survey also compared the prevalence of serious psychological distress across age groups relative to the general population [7]. Similar to our findings, James et al. reported higher inequities for transgender participants aged 18 to 25 (53% vs 10%, RR = 5.3) than those aged 65 and older (8% vs 2%, RR = 4.0) [7]. We are not aware of any studies that have examined inequities between transgender people and the general population in the prevalence of depression and anxiety diagnoses for younger transgender youth; other studies on this topic only recruited participants of 18 years or older [4,7,11,22], although other studies have found that adolescent trans youth were more likely to report self-depression and anxiety symptoms than older transgender youth (e.g., [31]). It is important to note, however, that while mental health inequities faced by older transgender people were less, they still faced substantial mental health inequities compared to the older aged general population.

Examining research on gender minority stressors may help to explain these mental health inequities across different age groups. A United States online survey revealed younger transgender people were more vulnerable to the negative mental health effects of gender minority stressors than their older counterparts [28]. Jackman et al. in the United States found lower levels of internalised stigma among older transgender people, and suggested that this may be due to them having developed better coping skills and social support systems (maturation effect) in counteracting the effects of gender minority stressors [19]. Longitudinal research is needed to uncover the ways that transgender people build resilience and support over time that may provide mental health benefits.

While our study has identified age as an important demographic factor in predicting transgender people's mental health, we could not be certain whether the mental health differences across age groups represented changes as this population grew older (aging effect), their development of the ability to

cope with gender minority stressors later in life (maturation effect), or whether they were the result of historical and social contexts that occurred for specific age groups (cohort effects). A comprehensive understanding of the mental health status of transgender people of different age groups would require an examination on how minority stress and resilience for transgender people changes over the life span [14,19,32].

4.3. Gender Group Comparisons

In our sample, trans women were over-represented in older age groups (aged 55 and above), while the younger participants were more likely to be trans men or non-binary. A population-based study in United States [4] and community-based studies in United Kingdom [1,5], United States [22], and Canada [6] demonstrated similar findings, with trans men and non-binary individuals being more common in the trans youth samples of these studies. Because of these differences, we included age as a variable in the regression models that examined gender group differences.

After controlling for the age effect, we found that trans men reported higher prevalences of depression and anxiety diagnoses. This aligns with the findings of other population-based studies [4] and community-based studies that employed convenience sampling [1,28]. Such findings might be explained partly by research on differential experiences of gender minority stressors among gender groups within the transgender population which have found trans men to be more likely to report sexual abuse and domestic violence [1], and discrimination when accessing employment and healthcare services [28]. One study in the United Kingdom noted trans men and women were no more or less likely to seek professional help for mental health problems [1].

In our sample, non-binary participants were more likely than trans women to have been diagnosed with depression and anxiety disorders. Findings from previous studies of non-binary people's mental health compared to the other two gender groups have been mixed. Studies of transgender youth [6,9] and a population-based study of adults in the United States [4] found that non-binary participants reported higher levels of mental health concerns. Crissman et al. also found that this difference held after accounting for age differences among the gender groups. This finding, however, was not replicated in a recent United States community-based study which found that non-binary participants had lower odds of reporting depression and anxiety diagnoses by health professionals compared to trans men and trans women, even after adjusting for the effects of demographic variables, such as age [22]. This discrepancy could be due to Reisner and Hughto's study having an equal proportion of non-binary participants who were assigned male and female at birth, respectively [22], whereas our study and the other studies had a higher proportion of non-binary people assigned female at birth.

To extend our knowledge about this topic, we were the first study to also examine the interaction effect between age and gender on transgender people's mental health outcomes. It is important to examine the interaction of independent variables in regression analyses, because omitting the interaction effect can lead to a biased estimation of model parameters when an interaction effect is present [33]. Notably, gender differences in mental health diagnoses were no longer statistically significant when we included the age and gender interaction term in the models. This finding suggests that when the interaction effect of age and gender is estimated, trans men and non-binary participants no longer had significantly higher rates of having been diagnosed with depression and anxiety disorders relative to trans women.

Our exploratory finding of an interaction effect on the K10 scale, however, suggested that the relationship between age and psychological distress scores varied across different gender groups. For instance, we found that younger trans women reported less psychological distress compared to trans men and non-binary people of the same age groups. This trend changed for older age groups, where trans women reported more symptoms of psychological distress than other gender groups. This interaction effect remained statistically significant after adjusting for the number of years lived in the affirmed gender (see Table S2), suggesting that the length of time living in the affirmed gender is not the reason for this difference. Increased rejection and less social support for older trans women may

explain this finding. A United States study that examined mental health of trans women across the life span found older trans women were less likely to have stable relationships with family members and friends [32]. More research is needed to replicate this interaction finding and further explore the reasons for it, but this research suggests a clear need to consider interaction effects when exploring how age and gender are related to mental health for transgender people.

There are other within-group differences that can be assessed of our data that is beyond the scope of this paper, including race/ethnicity, disability status, and cultural connectedness, and future research should consider the variations of mental health outcomes for these different subgroups of transgender people.

5. Limitations

It is difficult to determine the degree to which the convenience sample used in Counting Ourselves was representative of transgender people in Aotearoa/New Zealand. While the use of a recruitment strategy to promote the survey via online platforms and community organisations has allowed us to achieve a large sample that enabled us to conduct comparisons based on age and gender groups, it risks under-representing transgender people who were not active in transgender communities, including those who transitioned a long time ago. This may have contributed to the relatively small sample of older (age 55 and older) transgender participants in our study. However, clinically based research in Aotearoa/New Zealand also found a relatively lower proportion of older transgender people accessing gender-affirming care [34], and this demographic profile has also been seen in a recent population-based study in the United States [4]. Relative to the overall population in Aotearoa/New Zealand, Counting Ourselves achieved a sample size that was many times larger than other recent national transgender surveys that employed convenience sampling [6,7,11].

6. Conclusions

Counting Ourselves is the first large quantitative study in Aotearoa/New Zealand to describe mental health inequities for transgender people from youth to older adulthood. Our findings indicate significant mental health inequities faced by transgender participants, which is consistent with the Gender Minority Stress Theory. This study is the first, to our knowledge, to explore the interaction effect of age and gender on mental health outcomes, finding that trans men and non-binary participants had larger changes in psychological distress from youth to older adulthood.

7. Study Implications

To ameliorate the risk of mental health problems among transgender people, we recommend immediate actions on behalf of the policy makers in Aotearoa/New Zealand to identify transgender people as a named priority in mental health policies, for mental health professionals to receive training on cultural competency for working with transgender communities, and for funding for peer support and other wellbeing initiatives led by transgender communities [35]. Mental healthcare providers and service workers should be aware of the very high risk of psychological distress and mental health problems faced by transgender people. Where there are gaps in delivering care that is appropriate to transgender people, relevant training should be required so that mental healthcare workers can better serve the needs of this population. Mental health inequities affecting transgender people need to be understood in relation to gender minority stress as a social determinant, as studies have shown that discrimination, stigma, and social exclusion against transgender people could limit their abilities to access services that are crucial to health and wellbeing, including education, employment, and healthcare services [36,37]. In line with the international human rights standards [38], institutions across different settings, such as schools, employers, and government agencies have an obligation to generate a safe and welcoming environment for transgender people, as well as to implement trans-inclusive policies and interventions to protect this population from exposure to gender minority stressors (e.g., discrimination and workplace bullying) [23].

While these inequities in mental health outcomes apply to transgender people of all genders and ages, it is important to recognise the specific gender minority stress experiences and mental health needs of transgender youth who have been found to be at extreme risk of developing mental health problems. With the recent surge of negative media aimed at negating transgender people's lived experiences and discrediting the merits of gender-affirming care, there is still much work to be done to ensure this population can enjoy human rights to health without being jeopardised by discrimination or stigma. Healthcare providers should advocate for equitable access to mental healthcare services and gender-affirming care for transgender people to attain the highest standard of health [38,39]. It is also important for health professionals working with transgender youth to respect their privacy, self-determination, autonomy, as well as their evolving capacity to make informed decisions about their health [40].

Transgender people remain understudied in Aotearoa/New Zealand, and we urge government agencies to include standardised survey items to identify transgender people in population-based surveys. Health surveillance efforts that are done in collaboration with transgender communities will allow health professionals, policy makers, and transgender people themselves to monitor and evaluate efforts to achieve health equity. More specific recommendations to improve transgender people's mental health and wellbeing in Aotearoa/New Zealand can be read from the published report [23]. Finally, our findings of differential levels of psychological distress across various gender and age groups also show that future research should consider the effect of age when examining gender group differences in mental health among transgender people.

Supplementary Materials: The following are available online at http://www.mdpi.com/1660-4601/17/8/2862/s1, Table S1: Regression analyses of gender and age on mental health variables among Counting Ourselves age 14+ participants. Table S2. Regression analyses of number of years living in affirmed gender, gender, and age on mental health variables among Counting Ourselves age 14+ trans men and trans women participants.

Author Contributions: Conceptualization, K.K.H.T. and J.F.V.; methodology, K.K.H.T., J.L.B. and J.F.V.; formal analysis, K.K.H.T.; writing—original draft preparation, K.K.H.T.; writing—review and editing, S.J.E., J.M.S., J.L.B., and J.F.V.; funding acquisition, J.F.V. All authors have read and agreed to the published version of the manuscript.

Funding: This study was supported by a research grant from Health Research Council of New Zealand (J.F.V., 17/587); the Rule Foundation; and the University of Waikato. The first author would like to acknowledge the financial support received through a University of Waikato Doctoral Scholarship.

Acknowledgments: We would like to acknowledge the work of Counting Ourselves research team, and give special thanks to the community advisory group members, anonymous reviewers, and to the survey participants. Our access to population-based data (i.e., New Zealand Health Survey 2016/17) was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the authors and not Statistics New Zealand.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Rimes, K.A.; Goodship, N.; Ussher, G.; Baker, D.; West, E. Non-binary and binary transgender youth: Comparison of mental health, self-harm, suicidality, substance use and victimization experiences. *Int. J. Transgend.* **2019**, *20*, 230–240. [CrossRef]
2. Kerekere, E. Part of the Whānau: The Emergence of Takatāpui Identity He Whāriki Takatāpui. Ph.D. Thesis, Victoria University of Wellington, Wellington, New Zealand, 2017.
3. Schmidt, J.M. Translating transgender: Using western discourses to understand Samoan fa'afāfine. *Sociol. Compass* **2017**, *11*, e12485. [CrossRef]
4. Crissman, H.P.; Stroumsa, D.; Kobernik, E.K.; Berger, M.B. Gender and frequent mental distress: Comparing transgender and non-transgender individuals' self-rated mental health. *J. Womens Health* **2019**, *28*, 143–151. [CrossRef]
5. Jones, B.A.; Bouman, W.P.; Haycraft, E.; Arcelus, J. Mental health and quality of life in non-binary transgender adults: A case control study. *Int. J. Transgend.* **2019**, *20*, 251–262. [CrossRef]
6. Veale, J.F.; Watson, R.J.; Peter, T.; Saewyc, E.M. Mental health disparities among Canadian transgender youth. *J. Adolesc. Health* **2017**, *60*, 44–49. [CrossRef] [PubMed]

7. James, S.E.; Herman, J.L.; Rankin, S.; Keisling, M.; Mottet, L.; Anafi, M. *The Report of the 2015 U.S. Transgender Survey*; National Center for Transgender Equality: Washington, DC, USA, 2016.
8. Marshall, B.D.L.; Socías, M.E.; Kerr, T.; Zalazar, V.; Sued, O.; Arístegui, I. Prevalence and correlates of lifetime suicide attempts among transgender persons in Argentina. *J. Homosexual.* **2016**, *63*, 955–967. [CrossRef] [PubMed]
9. Aparicio-García, M.E.; Díaz-Ramiro, E.M.; Rubio-Valdehita, S.; López-Núñez, M.I.; García-Nieto, I. Health and well-being of cisgender, transgender and non-binary young people. *Int. J. Environ. Res. Public Health* **2018**, *15*, 2133. [CrossRef]
10. Clark, T.C.; Lucassen, M.F.G.; Bullen, P.; Denny, S.J.; Fleming, T.M.; Robinson, E.M.; Rossen, F.V. The health and well-being of transgender high school students: Results from the New Zealand Adolescent Health Survey (Youth'12). *J. Adolesc. Health* **2014**, *55*, 93–99. [CrossRef]
11. Hyde, Z.; Doherty, M.; Tilley, P.J.M.; McCaul, K.A.; Rooney, R.; Jancey, J. *The First Australian Trans Mental Health Study: Summary of Results*; School of Public Health, Curtin University: Perth, Australia, 2013.
12. Chen, R.; Zhu, X.; Wright, L.; Drescher, J.; Gao, Y.; Wu, L.; Ying, X.; Qi, J.; Chen, C.; Xi, Y.; et al. Suicidal ideation and attempted suicide amongst Chinese transgender persons: National population study. *J. Affect. Disord.* **2019**, *245*, 1126–1134. [CrossRef]
13. Sheridan, N.F.; Kenealy, T.W.; Connolly, M.J.; Mahony, F.; Barber, P.A.; Boyd, M.A.; Carswell, P.; Clinton, J.; Devlin, G.; Doughty, R.; et al. Health equity in the New Zealand health care system: A national survey. *Int. J. Equity Health* **2011**, *10*, 45. [CrossRef]
14. Fredriksen-Goldsen, K.I.; Simoni, J.M.; Kim, H.-J.; Lehavot, K.; Walters, K.L.; Yang, J.; Hoy-Ellis, C.P.; Muraco, A. The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *Am. J. Orthopsychiat.* **2014**, *84*, 653–663. [CrossRef] [PubMed]
15. Riggs, D.W.; Ansara, G.Y.; Treharne, G.J. An evidence-based model for understanding the mental health experiences of transgender Australians. *Aust. Psychol.* **2015**, *50*, 32–39. [CrossRef]
16. Tan, K.K.H.; Treharne, G.J.; Ellis, S.J.; Schmidt, J.M.; Veale, J.F. Gender minority stress: A critical review. *J. Homosexual.* **2019**. Advanced online publication. [CrossRef] [PubMed]
17. Testa, R.J.; Habarth, J.; Peta, J.; Balsam, K.; Bockting, W. Development of the gender minority stress and resilience measure. *Psychol. Sex. Orientat. Gend. Divers.* **2015**, *2*, 65–77. [CrossRef]
18. Meyer, I.H. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychol. Bull.* **2003**, *129*, 674–697. [CrossRef]
19. Jackman, K.B.; Dolezal, C.; Bockting, W.O. Generational differences in internalized transnegativity and psychological distress among feminine spectrum transgender people. *LGBT Health* **2018**, *5*, 54–60. [CrossRef]
20. Kattari, S.K.; Hasche, L. Differences across age groups in transgender and gender non-conforming people's experiences of health care discrimination, harassment, and victimization. *J. Aging Health* **2016**, *28*, 285–306. [CrossRef]
21. Hoy-Ellis, C.P.; Fredriksen-Goldsen, K.I. Depression among transgender older adults: General and minority stress. *Am. J. Community Psychol.* **2017**, *59*, 295–305. [CrossRef]
22. Reisner, S.L.; Hughto, J.M.W. Comparing the health of non-binary and binary transgender adults in a statewide non-probability sample. *PLoS ONE* **2019**, *14*, e0221583. [CrossRef]
23. Veale, J.F.; Byrne, J.L.; Tan, K.K.H.; Guy, S.; Yee, A.; Nopera, T.; Bentham, R. *Counting Ourselves: The Health and Wellbeing of Trans and Non-Binary People in Aotearoa New Zealand*; Transgender Health Research Lab, University of Waikato: Hamilton, New Zealand, 2019.
24. Ministry of Health. *Methodology Report 2016/17: New Zealand Health Survey*; Ministry of Health: Wellington, New Zealand, 2017.
25. Kessler, R.C.; Barker, P.R.; Colpe, L.J.; Epstein, J.F.; Gfroerer, J.C.; Hiripi, E.; Howes, M.J.; Normand, S.-L.T.; Manderscheid, R.W.; Walters, E.E.; et al. Screening for serious mental illness in the general population. *Arch. Gen. Psychiatry* **2003**, *60*, 184–189. [CrossRef]
26. Oakley Browne, M.A.; Wells, J.E.; Scott, K.M.; McGee, M.A. The Kessler Psychological Distress Scale in Te Rau Hinengaro: The New Zealand Mental Health Survey. *Aust. N. Z. J. Psychiatry* **2010**, *44*, 314–322. [CrossRef] [PubMed]
27. Enders, C.K. Using the expectation maximization algorithm to estimate coefficient alpha for scales with item-level missing data. *Psychol. Methods* **2003**, *8*, 322–337. [CrossRef] [PubMed]

28. Bockting, W.; Miner, M.; Romine, R.; Hamilton, A.; Coleman, E. Stigma, mental health, and resilience in an online sample of the US transgender population. *Am. J. Public Health* **2013**, *103*, 943–951. [CrossRef] [PubMed]
29. Bariola, E.; Lyons, A.; Leonard, W.; Pitts, M.; Badcock, P.; Couch, M. Demographic and psychosocial factors associated with psychological distress and resilience among transgender individuals. *Am. J. Public Health* **2015**, *105*, 2108–2116. [CrossRef]
30. Wells, J.E.; Oakley Browne, M.A.; Scott, K.M.; McGee, M.A.; Baxter, J.; Kokaua, J. Prevalence, interference with life and severity of 12 month DSM-IV disorders in Te Rau Hinengaro: The New Zealand Mental Health Survey. *Aust. N. Z. J. Psychiatry* **2006**, *40*, 845–854. [CrossRef]
31. Higgins, A.; Doyle, L.; Downes, C.; Murphy, R.; Sharek, D.; DeVries, J.; Begley, T.; McCann, E.; Sheerin, F.; Smyth, S. *The LGBTIreland Report: National Study of the Mental Health and Wellbeing of Lesbian, Gay, Bisexual, Transgender and Intersex People in Ireland*; GLEN and BeLonG To: Dublin, Ireland, 2016.
32. Nuttbrock, L.; Bockting, W.; Rosenblum, A.; Mason, M.; Macri, M.; Becker, J. Gender identity conflict/affirmation and major depression across the life course of transgender women. *Int. J. Transgender* **2012**, *13*, 91–103. [CrossRef]
33. Leppink, J. Analysis of covariance (ANCOVA) vs. moderated regression (MODREG): Why the interaction matters. *Health Prof. Educ.* **2018**, *4*, 225–232. [CrossRef]
34. Delahunt, J.W.; Denison, H.J.; Kennedy, J.; Hilton, J.; Young, H.; Chaudhri, O.B.; Elston, M.S. Specialist services for management of individuals identifying as transgender in New Zealand. *N. Z. Med. J.* **2016**, *129*, 49–58.
35. Clunie, M. Rainbow Communities, Mental Health and Addiction: A Submission to the Government Inquiry Into Mental Health and Addiction—Oranga Tāngata, Oranga Whānau. Available online: www.mentalhealth.org.nz/assets/Our-Work/policy-advocacy/Rainbow-communities-and-mental-health-submission-to-the-Inquiry-into-Mental-Health-and-Addiction-08062018.pdf (accessed on 28 March 2020).
36. Pega, F.; Veale, J.F. The case for the World Health Organization's commission on social determinants of health to address gender identity. *Am. J. Public Health* **2015**, *105*, 58–62. [CrossRef]
37. Tan, K.K.H.; Schmidt, J.M.; Ellis, S.J.; Veale, J.F. Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities. *N. Z. J. Psychol.* **2019**, *48*, 64–72.
38. The Yogyakarta Principles. The Yogyakarta Principles: Principles on the Application of International Human Rights Law in Relation to Sexual Orientation and Gender Identity. Available online: http://yogyakartaprinciples.org/principles-en/official-versions-pdf/ (accessed on 20 March 2020).
39. PATHA. AusPATH and PATHA Welcome RACP Advice to Australian Minister Greg Hunt. Available online: https://patha.nz/News/8822288 (accessed on 20 March 2020).
40. Kismodi, E.; Cabral, M.; Byrne, J.L. Transgender health care and human rights. In *Principles of Transgender Medicine and Surgery*, 2nd ed.; Ettner, R., Monstrey, S., Coleman, E., Eds.; Routledge: New York, NY, USA, 2016.

© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

Table S1. Regression analyses of gender and age on mental health variables among Counting Ourselves age 14+ participants.

	Depression diagnosis		Anxiety diagnosis	
	Age-int Model		**Age-int Model**	
Variables	**Wald statistics**	**OR (95% CI)**	**Wald statistics**	**OR (95% CI)**
Age	3.57	0.99 (0.97, 1.00)	9.97 **	0.97 (0.96, 0.99)
Gender	0.42		1.26	
Trans women		1.00 (ref)		1.00 (ref)
Trans men	0.37	0.73 (0.27, 1.99)	0.89	1.59 (0.61, 4.16)
Non-binary	0.22	0.81 (0.34, 1.94)	1.01	1.56 (0.66, 3.73)
Gender x Age	3.69		0.69	
Trans women		1.00 (ref)		1.00 (ref)
Trans men	2.96	1.03 (1.00, 1.06)	0.62	1.01 (0.98, 1.04)
Non-binary	1.67	1.02 (0.99, 1.04)	0.28	1.01 (0.98, 1.03)

Trans women were used as a reference group for comparison. Age-int model = Regression models examining the interaction effect of age and gender groups.
Significant difference * $p < 0.05$ ** $p < 0.01$

Table S2. Regression analyses of number of years living in affirmed gender, gender, and age on mental health variables among Counting Ourselves age 14+ trans men and trans women participants.

	Depression		Anxiety		K10			
	Age-adj Model		**Age-adj Model**		**Age-adj Model**		**Age-int Model**	
Variables	**Wald statistics**	**OR (95% CI)**	**Wald Statistics**	**OR (95% CI)**	**Wald Statistics**	**B (95% CI)**	**Wald Statistics**	**B (95% CI)**
Age	0.23	1.00 (0.98, 1.01)	5.66 *	0.98 (0.96, 1.00)	31.44 **	-0.22 (-0.30, -0.15)	16.45 **	-0.18 (-0.27, -0.09)
Years living in affirmed gender	0.55	0.99 (0.96, 1.02)	1.20	0.98 (0.94, 1.02)	1.97	-0.10 (-0.25, 0.04)	1.63	-0.09 (-0.24, 0.05)
Gender [a]	8.48 **	2.09 (1.27, 3.43)	13.31 **	2.38 (1.50, 3.80)	0.01	-0.09 (-2.12, 1.93)	3.63	4.75 (-0.14, 9.63)
Gender x Age [a]	-	-	-	-	-	-	4.55 *	-0.16 (-0.31, -0.01)

Number of years since living in affirmed gender was calculated with the equation "current age - age of first started living as a woman or man". We did not ask non-binary participants their age of first living in affirmed gender so we could not calculate the number of years of living in affirmed gender for this gender group. [a] Trans women were used as a reference group for comparison. Age-adj model = Regression models adjusted for the effects of age. Age-int model = Regression models examining the interaction effect of age and gender groups.
Significant difference * $p < 0.05$ ** $p < 0.01$

Due to the word count restriction of the journal, a decision was made to not include the general mental health measures in the published paper. Expanding on the published paper that documents large inequities in depression, anxiety, and psychological distress affecting transgender participants, the next section presents findings on the extent of inequities of OECD general mental health outcomes between transgender participants and the Aotearoa/New Zealand general populations. This section also examines age and gender differences on transgender people's general mental health outcomes. Note that each gender group has a different age range: trans women (14 to 83); trans men (14 to 63); and non-binary (14 to 73).

Variables

General mental health was assessed using the Organization for Economic Co-operation and Development (OECD) subjective wellbeing single-item questions. These OECD questions were also asked in the 2016 New Zealand Mental Health Survey, a population-based study of 1,300 participants in Aotearoa/New Zealand (Health Promotion Agency, 2016).

Life satisfaction. Overall, how satisfied are you with life as a whole these days? The item had a 5-point response scale from “very satisfied (1)” to “very dissatisfied (5)”.

Life worthwhileness. Overall, to what extent do you feel the things you do in your life are worthwhile? The item had a 5-point response scale from “not at all worthwhile (1)” to “very worthwhile (5)”.

Coping with stress. How much you agree or disagree with the following statement: I am able to cope with everyday stresses of life. The item had a 5-point response scale from “strongly disagree (1)” to “strongly agree (5)”.

Methods

Independent sample t-tests were carried out to identify the extent of inequities of OECD general mental health outcomes (i.e., life satisfaction, life worthwhileness, and ability to cope with stress) between transgender participants and the general population (from the estimates of the New Zealand Mental Health Survey 2016). Subsequently, ordinal logistic regression analyses were conducted to examine general mental health differences across various age and gender groups of transgender people.

5.2 Results and Discussion of General Mental Health

Table 2 outlines comparisons between transgender participants and the Aotearoa/New Zealand general population (using estimates of the 2016 New Zealand Mental Health Survey) for general mental health outcomes: life satisfaction, life worthwhileness, and ability to cope with stress. Transgender people were found to fare worse across all general mental health measures relative to the Aotearoa/New Zealand general population, with effect size differences of almost one standard deviation for the overall sample. This finding was similar to overseas studies (Anderssen et al., 2020; Jones et al., 2019) that reported lower life satisfaction and quality of life among transgender people compared to cisgender people. However, no studies were noted to have explored the extent of inequities of general mental health outcomes of transgender people relative to cisgender people across different age groups. Similar to the psychological distress and mental health diagnosis findings—reported above in the published paper—this study found larger effect sizes for younger age groups than older age groups (but still statistically significant), across all general mental health measures.

Table 3 presents the differences in odd ratios from the respective gender groups (trans men and non-binary people) to the reference category (trans women). Ordinal regression analyses revealed there were no statistically significant main effects for gender for general mental health outcomes in the age-adjusted model. This finding echoed a United Kingdom study (Jones et al., 2019) that found binary transgender people (trans women and trans men) were no more likely than people with non-binary genders to have better quality of life when the effect of age is controlled.

Exploratory analyses of interaction effects of age and gender, however, found statistically significant differences for all general mental health outcomes between trans men and trans women across age groups. Figures 2, 3, and 4 illustrate the interaction effect of age

and gender for life satisfaction, life worthwhileness, and ability to cope with stress, respectively. For each general health measure, there was a more steeply negative regression line for trans men which indicated a more rapid decrease in general mental health scores from younger to older ages for trans men relative to trans women. This trend suggested that younger trans men were more likely to report poorer general mental health than younger trans women; however, older trans men were more likely to report better general mental health than older trans women. This statistically significant interaction finding for general mental health was similar to the reported findings for psychological distress in the published paper. There are a few explanations that can be made for gender differences across age groups such as aging effect, maturation effect, and maturation effect (see the published paper for more details).

Table 2

General Mental Health Outcomes Across Age Groups and Comparisons with New Zealand Mental Health Survey 2016 (Age 15+)

	Counting Ourselves		NZMHS 2016		
	n	**% / M (SD)**	**% / M (SD)**	**t-test statistics**	**Effect size**
Life satisfaction (1-5)	869	2.78 (1.22)	1.85 (0.78)	35.14**	*d* = 0.91
15-19	170	3.46 (1.15)	1.96 (0.75)	26.10**	*d* = 1.54
20-24	204	2.93 (1.15)	2.00 (0.85)	15.60**	*d* = 0.92
25-34	266	2.69 (1.14)	1.79 (0.73)	20.09**	*d* = 0.94
35-44	100	2.30 (1.15)	1.84 (0.82)	5.64**	*d* = 0.46
45-54	63	2.49 (1.26)	1.88 (0.80)	6.06**	*d* = 0.58
55+	65	1.98 (0.99)	1.72 (0.75)	2.79*	*d* = 0.30
Life worthwhileness (1-5)	869	2.62 (1.19)	1.83 (0.72)	32.24**	*d* = 0.80
15-19	169	3.42 (1.20)	1.99 (0.79)	23.65**	*d* = 1.41
20-24	201	2.67 (1.10)	2.03 (0.80)	11.29**	*d* = 0.66
25-34	269	2.49 (1.13)	1.73 (0.69)	18.10**	*d* = 0.81
35-44	100	2.21 (1.08)	1.77 (0.68)	6.44**	*d* = 0.49
45-54	64	2.19 (1.10)	1.77 (0.64)	5.25**	*d* = 0.47
55+	66	1.92 (0.85)	1.71 (0.66)	2.60*	*d* = 0.28
Cope with stress (1-5)	871	2.82 (1.20)	1.91 (0.74)	36.43**	*d* = 0.91
15-19	171	3.48 (1.17)	2.10 (0.79)	22.55**	*d* = 1.38
20-24	202	3.04 (1.16)	2.00 (0.80)	20.18**	*d* = 1.08
25-34	268	2.60 (1.12)	1.86 (0.69)	19.10**	*d* = 0.86
35-44	101	2.46 (1.11)	1.96 (0.68)	6.13**	*d* = 0.51
45-54	63	2.49 (1.13)	1.86 (0.64)	7.66**	*d* = 0.68
55+	65	1.98 (0.95)	1.74 (0.66)	2.90*	*d* = 0.29

Note. Response options ranged from 1 (very satisfied) to 5 (very dissatisfied) for life satisfaction; 1 (very worthwhile) to 5 (not at all worthwhile) for life worthwhileness; 1 (strongly agree) to 5 (strongly disagree). Significant difference *p < 0.05 **p < 0.01

Table 3

Ordinal Logistic Regression of Gender and Age on General Mental Health Variables Among Counting Ourselves Age 14+ Participants.

	Life satisfaction				Life worthwhileness			
	Age-adj Model		Age-int Model		Age-adj Model		Age-int Model	
Variables	**Wald statistics**	**OR (95% CI)**	**Wald statistics**	**OR (95% CI)**	**Wald statistics**	**OR (95% CI)**	**Wald statistics**	**OR (95% CI)**
Age	90.06**	0.95 (0.94-0.96)	33.25**	0.96 (0.95-0.97)	80.86**	0.96 (0.95-0.97)	24.78**	0.97 (0.95-0.98)
Gender	8.93*		5.28		0.62		14.86**	
Trans women		1.00 (ref)		1.00 (ref)		1.00 (ref)		1.00 (ref)
Trans men	0.67	0.87 (0.62-1.22)	5.22*	2.71 (1.15-6.37)	0.00	1.00 (0.71-1.40)	13.93**	5.17 (2.18-12.25)
Non-binary	3.29	1.33 (0.98-1.79)	1.79	1.66 (0.79-3.50)	0.39	1.10 (0.82-1.49)	0.93	1.44 (0.69-3.01)
Gender x Age	-	-	8.56*		-	-	17.63**	
Trans women	-	-		1.00 (ref)	-	-	-	1.00 (ref)
Trans men	-	-	8.37**	0.96 (0.93-0.99)	-	-	17.03**	0.94 (0.92-0.97)
Non-binary	-	-	0.23	1.00 (0.97-1.02)	-	-	0.26	1.00 (0.97-1.02)

Table 4

Ordinal Logistic Regression of Gender and Age on General Mental Health Variables Among Counting Ourselves Age 14+ Participants (continued)

	Cope with stress			
	Age-adj Model		**Age-int Model**	
Variables	**Wald statistics**	**OR (95% CI)**	**Wald statistics**	**OR (95% CI)**
Age	87.16**	0.95 (0.94-0.96)	35.08**	0.96 (0.95-0.97)
Gender	3.57		7.19*	
Trans women		1.00 (ref)		1.00 (ref)
Trans men	0.40	1.12 (0.80-1.56)	6.11*	2.91 (1.25-6.77)
Non-binary	3.26	1.32 (0.98-1.78)	0.72	1.38 (0.66-2.90)
Gender x Age	-	-	6.30*	
Trans women	-	-		1.00 (ref)
Trans men	-	-	6.40*	0.97 (0.94-0.99)
Non-binary	-	-	0.00	1.00 (0.98-1.02)

Figure 3

The Interaction Effect of Age and Gender on Life Satisfaction of Counting Ourselves Participants (Age 14+)

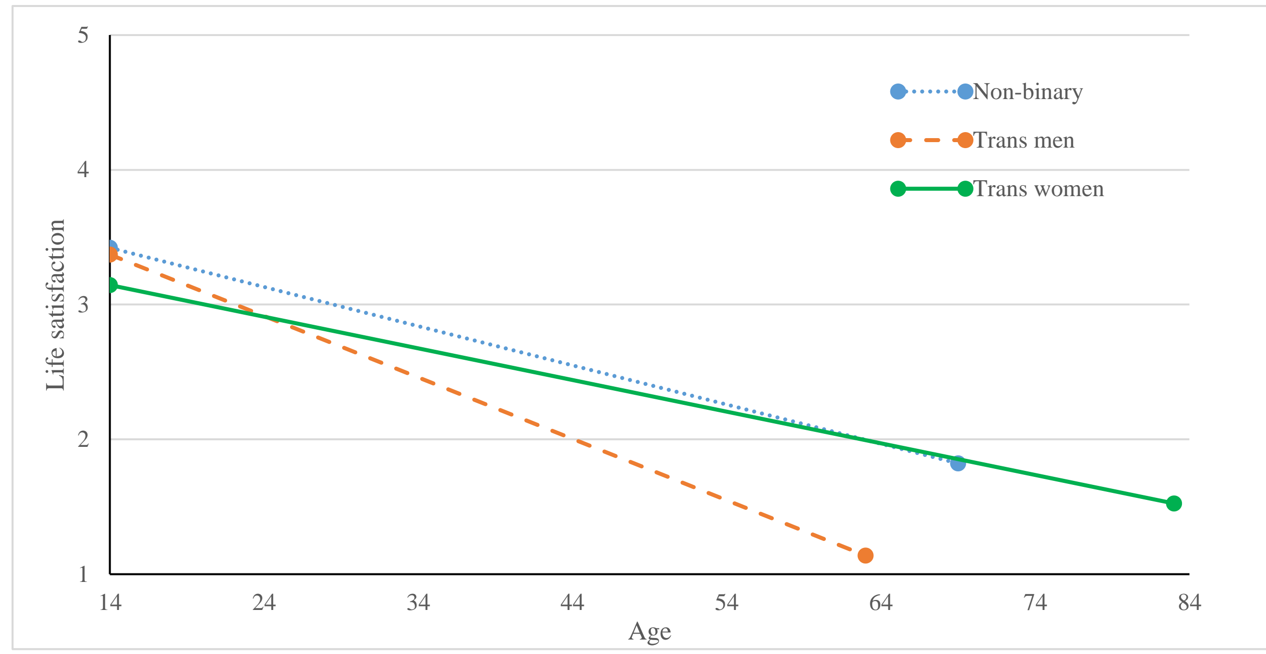


Figure 2

The Interaction Effect of Age and Gender on Life Worthwhileness of Counting Ourselves Participants (Age 14+)

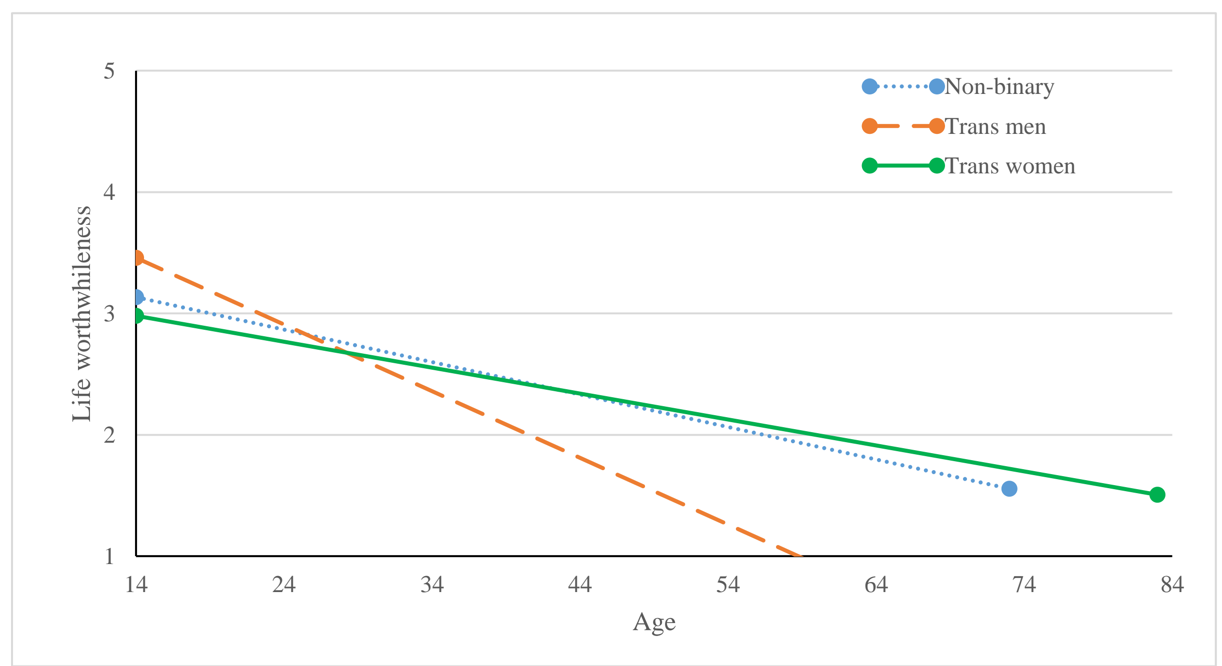
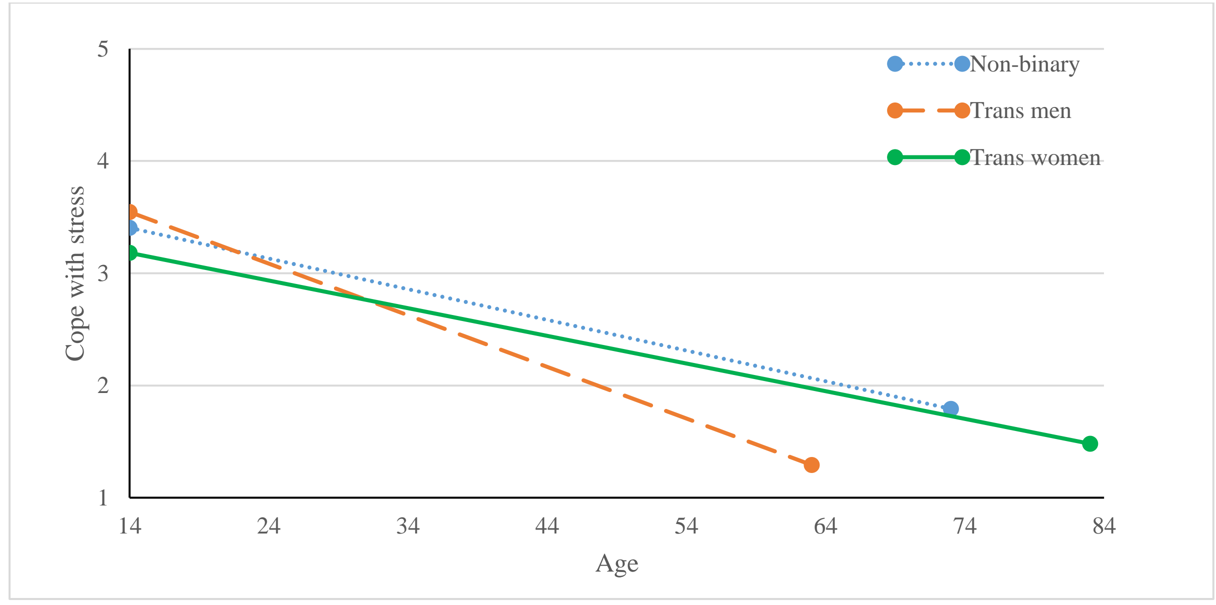


Figure 4

The Interaction Effect of Age and Gender on Ability to Cope with Stress of Counting Ourselves Participants (Age 14+)



Chapter 6: Enacted Stigma Experiences and Protective Factors are Strongly Associated with Mental Health Outcomes of Transgender People in Aotearoa/New Zealand

6.1 Preface

Informed by gender minority stress theory, which was outlined in Chapter 2, this study assessed the associations of enacted stigma and protective factors with transgender people's mental health: psychological distress, NSSI, suicidal ideation, and suicide attempts. The most recent systematic review on transgender mental health (comprising 77 studies published from 1997 to 2017; Valentine & Shipherd, 2018) noted that only about two-fifths (39%) of the reviewed studies had examined the prevalence and/or mental health influences of enacted stigma due to transgender identities; although more studies have researched this topic since 2017 (e.g., Kuper et al., 2018). Furthermore, Valentine and Shipherd (2018) noted that an even lower number of studies have examined protective factors at the interpersonal level and that existing transgender studies have mainly researched mental health benefits of primary social ties (i.e., friends and family members; 26%).

To contribute to the further understanding of the growing field, this current study collated a broad range of enacted stigma or overt gender minority stress events across various settings (e.g., public places, online, and religious communities) that occurred due to people being transgender. This operational definition of enacted stigma allowed the investigation of gender minority stress hypothesis that cisgenderism negatively influences the mental health of transgender people. This study expanded on overseas research on protective factors by also looking at associations of secondary social ties (i.e., neighbourhood and transgender community) with the mental health of transgender people. Specifically, the use of probability profiling allowed this study to identify if the protective factors of secondary social ties could

provide additional mental health benefits (beyond primary social ties) for transgender people who were exposed to enacted stigma. Overall, this study has contributed to the state of knowledge of enacted stigma and protective factors—in both Aotearoa/New Zealand and internationally—by focusing on factors specific to transgender people that are amenable to change through public and healthcare interventions.

Declaration: I developed the outline of the paper after discussing with my supervisors. I wrote the first full draft of the paper and was the main person responsible for conducting data analysis. I also held the leading role in making revisions of the paper based on the feedback from other co-authors and journal reviewers. Overall, I contributed 80% to this paper, and the other co-authors contributed the remaining 20%.

Acknowledgement: Publisher permits the right to include the article in a thesis or dissertation that is not to be published commercially, provided that acknowledgement to prior publication in the Journal is given. This section < Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand > is derived in part from an article published in <International Journal of Transgender Health> <12th October 2020> < Taylor & Francis>, available online: < 10.1080/15532739.2020.1819504>

Publication status: Published – Citation: Tan, K. K. H., Treharne, G.J., Ellis, S. J., Schmidt., J. M., & Veale, J. F. (2020). Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand. *International Journal of Transgender Health.* Advance online publication. doi:10.1080/15532739.2020.1819504

An earlier version of this paper was presented at the following conference:

Tan, K. K. H & Bentham, R. M. (2019, August). *Mental Health Risk and Protective Factors Among Trans and Non-Binary People in Aotearoa New Zealand*. Trans and Non-

Binary Mental Health Mini-Symposium, New Zealand Psychology Society Annual

Conference, Rotorua, New Zealand.

INTERNATIONAL JOURNAL OF TRANSGENDERISM
https://doi.org/10.1080/15532739.2020.1819504

Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand

Kyle K. H. Tan[a], Gareth J. Treharne[b], Sonja J. Ellis[c], Johanna M. Schmidt[d], and Jaimie F. Veale[a]

[a]School of Psychology, University of Waikato, Hamilton, New Zealand; [b]Department of Psychology, University of Otago, Dunedin, New Zealand; [c]School of Education, University of Waikato, Hamilton, New Zealand; [d]School of Social Sciences, University of Waikato, Hamilton, New Zealand

ABSTRACT

Introduction: International evidence has found large mental health inequities among transgender people and demonstrates that mental health outcomes are associated with enacted stigma experiences and protective factors. This study aimed to examine the extent of associations of enacted stigma experiences specific to transgender people alongside protective factors with mental health of transgender people in Aotearoa/New Zealand.

Methods: The 2018 Counting Ourselves survey was a nationwide community-based study of transgender people ($N = 1178$, $Mage = 29.5$) living in Aotearoa/New Zealand. The survey assessed a wide range of gender minority stress experiences and protective factors that comprised primary (support from friends and family) and secondary social ties (neighborhood and transgender community belongingness). We calculated the predicted probabilities that transgender people exhibit very high psychological distress level, non-suicidal self-injury, and suicidal risks with different combinations and exposure profiles of enacted stigma and protective factors.

Results: Our findings demonstrated that enacted stigma was associated with negative mental health, and support of friends and family was linked to better outcomes across all mental health measures. Beyond primary social ties, sense of belongingness to neighborhood and transgender communities were linked to reduced odds of psychological distress and suicidal ideation. For those scoring high on enacted stigma and low on protective factors, our model revealed a 25% probability of attempting suicide in the last year compared to 3% for those scoring low on enacted stigma and high on protective factors.

Conclusions: Echoing previous findings, this study demonstrates that transgender people across Aotearoa/New Zealand are less likely to manifest life-threatening mental health outcomes if they experience low levels of enacted stigma and high levels of access to protective factors. Our findings suggest a need to address the enacted stigma that transgender people face across interpersonal and structural settings, and also to enhance social supports that are gender affirmative for this population.

KEYWORDS
Transgender; minority stress; enacted stigma; protective factors; mental health

Introduction

Transgender is an umbrella term that refers to people whose gender identity does not correspond with their sex assigned at birth. This term includes trans men, trans women, and people with non-binary genders, as well as the various gender diverse identities of non-Western cultural backgrounds. For example, in Aotearoa/New Zealand, the transgender population includes indigenous Māori tangata ira tane and whakawahine and people with Pasifika genders such as Samoan fa'afāfine and Tongan fakaleiti (Tan et al., 2019). Not all transgender people seek medical care, such as hormones or surgery to affirm their gender (Schulz, 2018), but all transgender people have a right to the highest standard of gender-affirming care (O'Flaherty & Fisher, 2008; The Yogyakarta Principles, 2007).

Mental health inequities, risk factors, and minority stress

International studies have identified significant health inequities affecting transgender people,

CONTACT Kyle K. H. Tan kht5@students.waikato.ac.nz School of Psychology, University of Waikato, Private Bag 3105, Hamilton, 3240, New Zealand.

© 2020 Taylor & Francis Group, LLC

with this population consistently found to have an increased prevalence of mental health difficulties, including psychological distress symptoms and suicidality (James et al., 2016; Veale, Watson, et al., 2017; see Valentine & Shipherd (2018) for a review). An example of such studies is the Youth'12 study, a population-based health survey of high school students in Aotearoa/New Zealand, which found a stark contrast in the prevalence of current significant depressive symptoms (41% vs 12%), and non-suicidal self-injury (NSSI; 46% vs 23%) and suicide attempts (20% vs 4%) in the past year among transgender adolescents compared to their cisgender counterparts (Clark et al., 2014).

In recent years, the focus of research on mental health inequities affecting transgender people has shifted from pathologizing models that conceptualize transgender identities as being mentally disordered to the understanding that it is broader social environment that hinder this population from achieving mental health equities (Schulz, 2018; Tan et al., 2019). An increasing number of studies have employed Gender Minority Stress Theory (Meyer, 2003; Tan et al., 2020; Testa et al., 2015) to delineate the processes in which marginalizing social environments lead to adverse mental health outcomes for transgender people. This theory attributes the disproportionate mental health burdens faced by transgender people to the negative consequences of cisgenderism (Tan et al., 2020), which is a prejudice that delegitimizes transgender people (Riggs et al., 2015) and exposes them to a specific form of stress, gender minority stress (Tan et al., 2020; Testa et al., 2015).

Transgender people have been described as one of the most marginalized populations around the world (O'Flaherty & Fisher, 2008), and even in relatively liberal countries like Aotearoa/New Zealand, transgender people report experiencing a multitude of gender minority stress experiences. To date, the legal framework protecting the human rights of transgender people in this country is limited to the Human Rights Act that prohibits discrimination on the grounds of sex (New Zealand Human Rights Commission, 2020). It is unclear if transgender people are provided legal protection from discrimination due to the lack of explicit acknowledgement of gender identity and expression in the Act. A recent review study that collated existing transgender research in Aotearoa/New Zealand proposed that gender minority stress is prevalent in the everyday lives of transgender people at individual (e.g., internalized transphobia), interpersonal (e.g., discrimination, harassment, and violence), and structural levels (e.g., barriers in changing gender marker on legal documents) (Tan et al., 2019).

In this article, we refer to risk factor experiences specific to transgender people as enacted stigma (actual or overt experiences of gender minority stressors). Empirical studies that have examined the association between enacted stigma experiences and mental health found transgender people who had been discriminated against or victimized on the basis of their gender were more likely to manifest symptoms of psychological distress (e.g., Bockting et al., 2013; Wilson et al., 2016). Studies involving transgender youth have also found those who had experienced bullying and abuse at school were more likely to engage in NSSI and suicidality (Peng et al., 2019; Strauss et al., 2020).

Protective factors for transgender people

Previous studies have identified protective factors that may mitigate the negative effects of enacted stigma experiences by promoting individual resilience (Bockting et al., 2013; Puckett et al., 2019), and are associated with higher levels of mental health and wellbeing (Barr et al., 2016; Pflum et al., 2015; Puckett et al., 2019; Veale, Peter, et al., 2017; Weinhardt et al., 2019; Wilson et al., 2016). For instance, positive connections to family members have been shown as a crucial protective factor for transgender people with benefits such as affirmation of transgender people's identity (Weinhardt et al., 2019) and offsetting the negative mental health impacts of enacted stigma (Veale, Peter, et al., 2017).

Studies have shown that social support at a community level is also important for transgender people. A recent study of transgender people in the United States found that those with high levels of support from family and friends and high levels of connectedness with

transgender community had the lowest levels of depression and anxiety symptoms (Puckett et al., 2019). Another United States study found transgender people who lived in neighborhoods that were tolerant of their gender manifested fewer depressive symptoms (Owen-Smith et al., 2017). These findings are congruent with Gender Minority Stress Theory, which proposes that group and community level protective factors can potentially offer important mental health benefits for transgender people through providing opportunities to socialize, tangible resources that enhance personal coping, and platforms that allow community members with similar experiences to validate and reappraise their enacted stigma encounters (Meyer, 2003; Testa et al., 2015).

Objectives and hypotheses

There has been little research identifying the mental health influences of risk and protective factors specific to transgender people either globally or in Aotearoa/New Zealand. This study seeks to examine the associations of enacted stigma and protective factors with the mental health inequities that transgender people in this country face. As well as testing hypotheses of Gender Minority Stress Theory, it is important to understand the extent to which the manifestation of mental health difficulties is related to different risk and protective factors in different parts of the world. While studies have been conducted to examine the negative impacts of enacted stigma on transgender people's mental health, a recent systematic review found that few of these have focused specifically on gender minority stressors as well as protective factors (Valentine & Shipherd, 2018).

Our study examined the associations of risk (transgender-specific enacted stigma) and protective factors (family and friend support, neighborhood belongingness, and transgender community belongingness), with psychological distress, NSSI, and suicidality in our sample of transgender people in Aotearoa/New Zealand. We hypothesized that enacted stigma experiences will be associated with a greater risk of mental health problems, whereas friend and family support, neighborhood belongingness, and transgender community belongingness will be predictive of a lower occurrence of mental health problems.

Method

Design and consultation

This study used data from Counting Ourselves: the Aotearoa New Zealand Trans and Non-Binary Health Survey, which was open for participation from June to September 2018. The anonymous survey was designed to provide a comprehensive understanding of health of transgender people. It comprised questions related to multiple aspects of health, such as physical and mental health, healthcare access, and experiences of risk and protective factors that could influence health.

General health and mental health questions were taken from Aotearoa/New Zealand population-based health surveys (e.g., the New Zealand Health Survey 2016/17; Ministry of Health, 2017). Questions specific to the lived experiences of transgender people were taken from other transgender studies (e.g., the U.S. Transgender Survey; James et al. (2016)) or developed by the research team. The study structure and content were developed in consultation with a community advisory group of ten transgender people of diverse backgrounds (e.g., ages, ethnic groups, and regions).

The study was advertised on online platforms (e.g., Facebook), billboards in the community, and spread through word of mouth with support from our networks of transgender community organizations, academic researchers, and health professionals working in transgender health. Participants were eligible to take part if they identified as transgender, were at least 14 years of age, and were residing in Aotearoa/New Zealand. Participants were presented with a list of gender options (e.g., trans man, trans woman, and non-binary) and transgender identities were confirmed if their self-identified gender(s) differed from their sex assigned at birth. The study received ethical approval from the New Zealand Health and Disability Ethics Committee (18/NTB/66/AM01).

Participants

There were 1380 initial responses to the survey, but some were removed for being duplicates

Table 1. Demographic details of Counting Ourselves participants ($n = 1178$).

	n (%)/M (SD; range)
Age	29.54 (13.31; 14–83)
Gender groups	
Trans men	324 (27.6)
Trans women	328 (27.9)
Non-binary AFAB	397 (33.8)
Non-binary AMAB	126 (10.7)
Race/ethnicity	
New Zealand European/Pākehā	920 (82.4)
Māori	160 (14.3)
Samoan	21 (1.9)
Chinese	17 (1.5)
Others	211 (18.9)
Regions	
Auckland	368 (31.9)
Wellington	321 (27.7)
Other regions in the North Island	216 (18.6)
Canterbury	121 (10.4)
Other regions in the South Island	132 (11.4)

Note. Participants were allowed to select more than one race/ethnicity group and these were reported using the concept of total response (see Ministry of Health, 2017). AFAB = assigned female at birth; AMAB = assigned male at birth.

($n = 22$), younger than 14 years old ($n = 2$), not residing in Aotearoa/New Zealand ($n = 12$), not responding beyond the survey's questions on gender identity to indicate that they were transgender ($n = 161$), or not genuine (e.g., provided illogical responses such as current age was younger than the age of realizing their transgender identity) ($n = 5$), leaving a final sample of 1178 responses.

Table 1 presents participants' demographic information. The sample had a mean age of just under 30 years. Our sample consisted of a high proportion of younger and Pākehā (White) participants. Almost half of the participants were non-binary, and there was a similar proportion of trans women and trans men. It is not known whether this is representative of all transgender people in Aotearoa/New Zealand. The demographic make-up of participants in the current study, however, is very similar to survey research with transgender people in the same region (Treharne et al., 2020) and overseas (James et al., 2016; Strauss et al., 2020). More details of the sample demographics and survey method are given in the published report based on the survey dataset (Veale et al., 2019).[1]

Measures

All of the measures discussed below had a completion rate of 98% or higher within their respective sections of the survey, indicating the relative acceptability of these questions for our participants.

Enacted stigma

We modeled previous research (Poon et al., 2011; Veale, Peter, et al., 2017) to generate an enacted stigma index that collated a wide range of gender minority stress experiences reported by participants. The index consisted of 11 items and included minority stress events specific to our participants' transgender identities such as discrimination and unfair treatment at various contexts, as well as cyberbullying (see Table 2). Each item was scored 0 (no or don't know) or 1 (yes), and the sum of scores for each participant indicated the sum of enacted stigma experiences that they had encountered.

Mental health

Psychological distress. The Kessler Psychological Distress Scale (K10; Kessler et al., 2003) measured the presence of depression and anxiety symptoms in the past 4 weeks. This scale comprises of 10 items with 5-point response scales from none of the time (0) to all of the time (4). Total scores range from 0 to 40, with a score of 20 or more indicating the presence of very high levels of psychological distress (Ministry of Health, 2017). In the present study, the K10 demonstrated good internal reliability consistency ($\alpha = .94$).

NSSI and suicidality. These were assessed using questions from the Aotearoa/New Zealand Youth'12 study (Clark et al., 2012). NSSI was measured using a question asking "During the last 12 months, have you deliberately hurt yourself or done anything you knew might have harmed you (but not kill you)?" with response options from not at all to more than 5 times. Suicidal ideation was measured using a question asking "In the last 12 months, have you seriously thought about killing yourself (attempting suicide)?" and suicide attempt was measured using a question asking "In the last 12 months, have you tried to kill yourself (attempted suicide)?"; with three response options: not at all, once or twice, and three or more times.

Protective factors

Friend and family support. This was measured using a single item, "I can always rely on a friend or family or whānau[2] member for support if I need it," with a 5-point response scale from strongly disagree to strongly agree. This item was used as one of the social connectedness indicators in New Zealand Mental Health Survey (Health Promotion Agency, 2016).

Community belongingness. The relationship between sense of belongingness and mental health has been addressed in past research (e.g., Barr et al., 2016; Hagerty et al., 1992; Van Orden et al., 2010). For this study, we were interested in the experiences of transgender people's involvement within neighborhood and transgender communities that allow them to feel accepted, valued, and to be an integral part of these support systems (Hagerty et al., 1992). Neighborhood belongingness was assessed with a single question from the New Zealand General Social Survey (Statistics New Zealand, 2016), in which participants were asked "On the scale of zero to ten, how would you describe your sense of belonging to neighborhood?". We also created a separate question with the same wording to identify participants' sense of belonging to "trans or non-binary community" on the same scale.

Data analysis

IBM SPSS Statistics version 25 was used for descriptive statistics and imputation of missing values. Questions that were later in the survey had a lower number of participants—this was likely to be due to length (over 330 questions). We imputed missingness due to participant attrition, as we had no reason to believe that these missing data were missing not at random; in other words, not related to specific covariates and outcomes that could not be evaluated (Schlomer et al., 2010). Missing values ranged from 0.2% to 1.1% of responses for the K10 scale and from 1.5% to 9.5% of responses for the enacted stigma index. The high percentage of missingness in the index included items that were not applicable to some participants. Missing values were imputed using the expectation maximization method through the estimation of means and covariances of available data in regression models (Schlomer et al., 2010).

To explore the relation of enacted stigma and protective factors on each mental health outcome among our participants, we used STATA's margins command (MP2 version 16) to carry out probability profiling. This method is used to illustrate the differences in mental health patterns with various combinations of low (10th percentile) and high (90th percentile) levels of gender minority stress-related risk and protective factors. As per the original procedure (Rubenstein et al., 1989), the first step involved conducting bivariate logistic regression models of each of the single risk and protective factors (along with age) predicting each of the binarized mental health variables: very high psychological distress (K10 value of 20 or more) and affirmative responses to NSSI, suicidal ideation, and suicide attempts (see also Poon et al., 2011; Veale, Peter, et al., 2017; Watson et al., 2019 for recent studies employing this method).

Next, we carried forward the risk and protective factors that significantly predicted mental health variables in the bivariate models and entered them into multivariate logistic regression models which included age along with multiple risk and protective factors predicting each mental health variable. Risk and protective factors that were significantly associated with mental health variables in multivariate models were identified, and regression equations which included parameter estimates of these factors were then used to determine probability profiles. The results of these profiles are based on the analysis of all participants, and these can be interpreted as the probability that a transgender person would exhibit a mental health problem based on a specific combination of low and high levels of risk and protective factors.

Results

Table 2 outlines the broad range of gender minority stress experiences that our participants had encountered. While some experiences such as being evicted from home or apartment, and rejected by religious communities for being

Table 2. Prevalence of enacted stigma experiences among Counting Ourselves participants in their lifetime.

	n (%)
Experienced discrimination based on gender	436 (51)
Treated unfairly	254 (33)
Verbally harassed	175 (23)
Physically attacked	23 (3)
Cyberbullying through phone or internet	
Sent nasty or threatening message	325 (39)
Sent unwanted sexual messages	240 (30)
Rejected by religious communities	106 (13)
Housing experiences	
Evicted from home or apartment	34 (4)
Rejected from home or apartment	61 (7)
Homeless because of violence	32 (4)
Prevented from identifying as a transgender person by a health professional	154 (19)
Total ($n = 859$)	Mean = 2.23; Median = 2; $SD = 2.13$

Note. All items on the enacted stigma index asked specifically about the experience due to them being transgender. *n*s may vary for each item due to different number of responses.

Table 3. Prevalence of mental health outcomes and results of bivariate and multivariate logistic regression models.

	Bivariate model Odds ratio (95% CIs)	Multivariate model Odds ratio (95% CIs)
K10 (very high psychological distress) past 4 weeks	Very high $n = 418$; total $n = 904$	
Enacted stigma index	1.30 (1.21–1.40)**	1.26 (1.17–1.37)**
Friend and family support	0.67 (0.58–0.77)**	0.75 (0.65–0.88)**
Neighborhood belongingness	0.84 (0.79–0.88)**	0.88 (0.83–0.94)**
Trans community belongingness	0.94 (0.90–0.99)*	0.99 (0.93–1.04)
Age	0.94 (0.93–0.95)**	0.94 (0.92–0.95)**
Non-suicidal self-injury past year	Yes $n = 377$; total $n = 898$	
Enacted stigma index	1.29 (1.20–1.39)**	1.25 (1.15–1.35)**
Friend and family support	0.78 (0.68–0.90)**	0.85 (0.74–0.99)*
Neighborhood belongingness	0.90 (0.85–0.95)**	0.93 (0.88–0.99)*
Trans community belongingness	0.98 (0.93–1.03)	—[a]
Age	0.93 (0.92–0.94)**	0.92 (0.90–0.94)**
Suicidal ideation past year	Yes $n = 500$; total $n = 891$	
Enacted stigma index	1.22 (1.14–1.31)**	1.19 (1.11–1.29)**
Friend and family support	0.71 (0.62–0.82)**	0.78 (0.67–0.91)**
Neighborhood belongingness	0.89 (0.84–0.94)**	0.93 (0.88–0.99)*
Trans community belongingness	0.93 (0.88–0.97)**	0.95 (0.90–1.00)
Age	0.96 (0.95–0.97)**	0.96 (0.94–0.98)**
Suicide attempts past year	Yes $n = 95$; total $n = 866$	
Enacted stigma index	1.41 (1.28–1.55)**	1.39 (1.25–1.54)**
Friend and family support	0.71 (0.59–0.86)**	0.76 (0.62–0.92)**
Neighborhood belongingness	0.96 (0.89–1.05)	—[a]
Trans community belongingness	1.04 (0.96–1.12)	—[a]
Age	0.95 (0.93–0.97)**	0.94 (0.92–0.96)**

Note. A score of 20 or more on the K10 scale denotes very high psychological distress. Bivariate models included single risk or protective factor. Multivariate models included all risk and protective factors.
[a]Excluded from the multivariate analysis as it was a nonsignificant predictor; * $p < .05$; ** $p < .01$.

transgender were only reported by a small minority of participants, a third had been treated unfairly, victimized through on the phone or the internet, and discriminated against for being transgender.

Table 3 presents the prevalence of mental health outcomes and the results of bivariate and multivariate regression models with risk and protective factors predicting very high levels of psychological distress in the past 4 weeks, or at least one instance of NSSI, suicidal ideation, or suicide attempts in the past year. In the bivariate models, enacted stigma experiences were positively associated with all negative mental health outcomes. The enacted stigma index also demonstrated statistically significant associations with mental health in the multivariate models.

As expected, the protective factors were negatively associated with most mental health variables (see Table 3). Friend and family support was significantly related to every mental health variable, so we included this protective factor in all multivariate models. Other protective factors were excluded from multivariate models when

Table 4. Predicted probabilities of mental health outcomes by low/high enacted stigma and protective factors.

	Low (10th percentile) enacted stigma index % (95% CIs)	High (90th percentile) enacted stigma index % (95% CIs)
K10 (very high psychological distress)		
High on both protective factors	15.3 (10.3–20.4)	36.9 (27.1–46.7)
Low on family and friend support, high neighborhood belongingness	29.9 (19.4–40.5)	58.0 (45.6–70.3)
High on family and friend support, low neighborhood belongingness	33.7 (25.2–42.2)	62.1 (52.8–71.4)
Low on both protective factors	54.5 (44.1–65.0)	79.5 (72.8–86.1)
Non-suicidal self-injury (yes; no)		
High on both protective factors	18.1 (12.5–23.7)	39.8 (30.0–49.6)
Low on family and friend support, high neighborhood belongingness	26.2 (16.5–36.0)	51.6 (39.1–64.1)
High on family and friend support, low neighborhood belongingness	28.2 (20.4–36.0)	54.0 (44.3–63.7)
Low on both protective factors	38.7 (29.0–48.5)	65.4 (56.7–74.1)
Suicidal ideation (yes; no)		
High on both protective factors	32.7 (25.5–39.9)	53.4 (43.8–63.0)
Low on family and friend support, high neighborhood belongingness	51.4 (40.0–63.1)	71.4 (61.3–81.4)
High on family and friend support, low neighborhood belongingness	47.3 (38.3–56.2)	67.9 (59.5–76.4)
Low on both protective factors	66.1 (57.3–75.0)	82.2 (76.3–88.0)
Suicide attempt (yes; no)		
High on family and friend support	2.8 (1.3–4.2)	12.7 (7.9–17.5)
Low on family and friend support	6.1 (2.9–9.4)	25.0 (17.0–33.0)

Note. Enacted stigma index: Range = 0–11, 10th percentile = 0, 90th percentile = 5. Family and friend support: Range = 1–5, 10th percentile = 2, 90th percentile = 5. Neighborhood belongingness: Range = 0–10, 10th percentile = 0, 90th percentile = 8. Trans community belongingness: Range = 0–10, 10th percentile = 2, 90th percentile = 10.

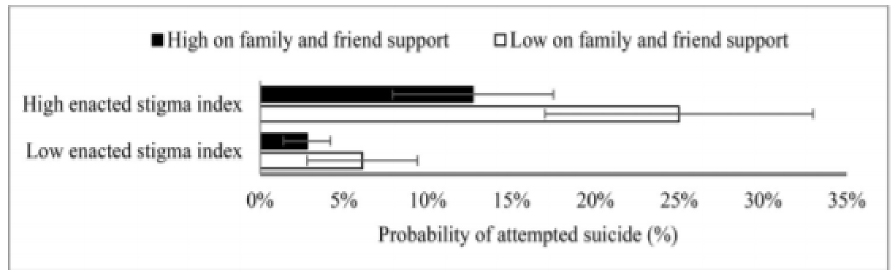


Figure 1. Probability profile of Counting Ourselves participants who tried to kill themselves (attempted suicide) during the last 12 months with different combinations of risk and protective factors. Error bars indicate 95% confidence intervals.

they were not significantly associated with the respective mental health variable.

Table 4 displays predicted probability profiles for each mental health outcome. Probability profiles were calculated based on the regression equations for the multivariate models in Table 3. The models predicted that participants with high (90th percentile) enacted stigma and low (10th percentile) family and friend support had the highest probability of manifesting all of the negative mental health outcomes we assessed. Conversely, when participants had low enacted stigma and high levels of protective factors, the probabilities of having these mental health outcomes were lowest. Predicted probabilities for different combinations of levels of risk and protective factors fell between these extremes. Figure 1 provides a graphical representation of these probabilities for suicide attempt.

Discussion

The present study provides novel insights into both risk and protective factors together and illustrates the extent of these associations on negative mental health outcomes for transgender people using predicted probabilities. Using a large national sample, we found high rates of transgender-specific enacted stigma experiences ranging from discrimination, verbal harassment to cyberbullying, affecting transgender people in Aotearoa/New Zealand. Consistent with findings

from existent national community-based studies such as the Transgender Inquiry (Human Rights Commission, 2008), as well as overseas studies such as the United States Transgender Survey (James et al., 2016), our study evinced how transgender people commonly face discrimination and victimization in everyday life, as well as the lack of inclusive legislative frameworks in place to protect transgender people from enacted stigma.

In line with findings of previous studies (Bockting et al., 2013; Liu & Mustanski, 2012; Strauss et al., 2020; Treharne et al., 2020; Veale, Peter, et al., 2017; Wilson et al., 2016), our findings are consistent with Gender Minority Stress Theory (Tan et al., 2020; Testa et al., 2015) that enacted stigma experiences resulting from marginalizing social environments (i.e., cisgenderism) are acting as drivers of mental health inequities. This study showed that the mental health problems affecting transgender people have strong associations with the gender minority stress that they experience. These findings were illustrated by the predicted probabilities of reporting psychological distress symptoms, NSSI risk, suicidal ideation, and suicide attempts which were statistically significantly higher and clinically meaningfully higher for those reporting high levels of enacted stigma compared with those reporting low enacted stigma.

Our bivariate models indicated that higher degrees of friend and family support, neighborhood belongingness, and transgender community belongingness were related to lower odds of reporting mental health problems. These findings were in accordance with other transgender studies that noted support from family and friends was associated with better mental health and lower suicidal risks (Puckett et al., 2019; Veale, Peter, et al., 2017; Wilson et al., 2016). For example, a study in the United States found that parental closeness (e.g., satisfaction with relationships with parents), and parental acceptance of transgender identities, were associated with lower risks for psychological stress and suicidal ideation among transgender youth (Wilson et al., 2016). Benefits of positive relationships with family and friends also extend to aspects of social wellbeing, with studies showing increased resilience to counteract negative effects of enacted stigma (Puckett et al., 2019) and heightened quality of life (Weinhardt et al., 2019) among transgender people who have adequate access to support from family and friends.

The provision of social support for transgender people, however, has mostly been demonstrated around the context of primary social ties (e.g., connections with close friends and family members), and there is a considerably less attention paid to the mental health benefits of secondary social ties (e.g., neighborhood and transgender communities). Existent finding on the importance of neighborhood environments for transgender people has been limited to one study which examined neighborhood tolerance levels of transgender people (Owen-Smith et al., 2017); our study demonstrated a novel positive association between neighborhood belongingness and mental health outcomes among transgender people. Sense of neighborhood belongingness includes the presence of reciprocally caring relationships with those living in close proximity that are essential in reducing social isolation (Van Orden et al., 2010), and previous studies with cisgender people have proposed that neighborhood belongingness is an important predictor of good mental health and wellbeing (Aminzadeh et al., 2013; Aneshensel & Sucoff, 1996). For example, a study of cisgender youth in Aotearoa/New Zealand found those who were living in neighborhoods of high levels social cohesion (characterized by participants' rating of how much they liked and felt that they belonged to their neighborhood) had better mental health (Aminzadeh et al., 2013). Moreover, our results indicated neighborhood belongingness may provide additional protection for transgender people above primary social ties. Future studies could explore how transgender people develop a sense of community within their neighborhoods and the barriers that hinder them from accessing neighborhood support networks.

Our findings echoed recent studies in the United States which found transgender people with higher degrees of belongingness to transgender communities were less likely to experience mental health difficulties (Barr et al., 2016; Pflum et al., 2015; Puckett et al., 2019). This finding also aligns with Gender Minority Stress Theory which posits that access to social and emotional

support from others with similar identities or experiences could buffer the negative influences of enacted stigma (Meyer, 2003; Testa et al., 2015). Particularly, social ties with secondary group members have been proposed as an alternative form of social support that is especially pertinent for those who have been victimized and rejected by their primary members (Thoits, 2011). The relatively weak associations of transgender community belongingness with specific mental health outcomes in our study were also reported in previous studies (Pflum et al., 2015; Puckett et al., 2019), and could be partly explained by our participants' prime reliance on friends and family members for relevant information and social support. It could also be that many participants had transgender friends and included them when reporting about support from family and friends, meaning that the transgender community belongingness could not add any meaningful prediction above support from family and friends.

While our question on transgender community belongingness did not distinguish between online or in-person connections, a report using the same dataset as the current article found that 74% of participants socialized with other transgender people online (Veale et al., 2019). A study in the United States involving transgender youth found online platforms to be useful in compensating for limitations in accessing offline resources and relationships, especially for those who are "stealth" and do not regularly disclose their transgender history (DeHaan et al., 2013). Although the presence of online-based transgender support groups in Aotearoa/New Zealand facilitates opportunities for transgender people from non-urban regions to connect with each other, many transgender people socialize with each other in other ways, such as friendships, in political activism, and transgender community organizations (Veale et al., 2019). Nonetheless, our findings point to a need to shed light on how online platforms can empower transgender people who had experienced enacted stigma. This empowerment might be achieved by facilitating collective activism to address this stigma, peer support, or through provision of relevant resources.

Strengths and limitations

While a strength of this study is the large sample size, our use of nonprobability sampling means that the generalizability of our results to the wider transgender population in Aotearoa/New Zealand and beyond should be interpreted with caution. Our sample consisted of a high proportion of younger and Pākehā (White) participants. Our survey's promotion was most successful via internet groups and transgender community organizations; those who were less connected to transgender community would have undoubtedly been more difficult to reach.

The cross-sectional nature of our findings means that causality cannot necessarily be inferred. Nonetheless, we expect that the reported gender minority stress events had temporal precedence over the mental health outcomes (Liu & Mustanski, 2012). Lifetime enacted stigma experiences were likely to have occurred before the development of psychological distress in past month, and NSSI and suicidality in past year among our participants, favoring the conclusion that minority stress is a significant contributor to mental health distress (Meyer, 2003; Testa et al., 2015).

Because we conducted a large survey encompassing a broad range of topics (a total of 330 questions), we needed to use single-item measures for many constructs to reduce participants' response burden. It was difficult to ascertain the validity of constructs that were measured using only one item (NSSI, suicidality, family support, belongingness). On the other hand, single-item measures similar to these, with good face validity, are widely used in Aotearoa/New Zealand and overseas population-based surveys, and these constructs—especially NSSI, suicidal ideation, and suicide attempts—do not usually require multiple questions to reliably measure the entirety of the construct.

While the use of probability profiling in the current study was valuable for revealing how various combinations of co-occurring risk and protective factors contribute to mental health outcomes, its usage came with limitations. Probability profiling only allowed us to present results pertaining to those outcomes at low

(10th) and high (90th) percentiles. Finally, there were likely to be within-group differences (e.g., gender, race/ethnicity, religion, and socioeconomic status) among transgender people that were beyond the scope of the current study. Future research should examine potential differences between subgroups of transgender people who may experience risk and protective factors in different manners, and the associations of these demographic variables with mental health outcomes.

Conclusion and implications

The striking prevalence of enacted stigma experiences reported in this study was consistent with those documented in the research available on transgender people in many countries (e.g., James et al., 2016; Strauss et al., 2020; Veale, Peter, et al., 2017) urging numerous agencies to consider immediate actions to diminish the mental health inequities affecting transgender people in Aotearoa/New Zealand and globally. There is a need for clinicians, practitioners, educators, and researchers who work in the field of transgender health to acknowledge the wider context of sociocultural cisgenderism. This includes deepening their understandings on how the impacts of cisgenderism can create a stressful and harmful environment for transgender people, as well as how cisgenderism is linked to the various forms of enacted stigma (e.g., discrimination and sexual violence) that may give rise to gender minority stress with subsequent negative mental health consequences. Specifically, the present findings suggest efforts to address cisgenderism at interpersonal and structural levels, including awareness education, support for community advocacy, and inclusive policy initiatives may help to reduce transgender people's exposure to enacted stigma to reduce the risk of these life-threatening mental health problems.

The finding of Youth'12 study, which has reported that transgender students in Aotearoa/New Zealand were less likely to have family members to care about them, is a serious concern (Clark et al., 2014). Our findings highlight the crucial role that primary social ties play in providing transgender people with not just general support that they need. Transgender-specific support could include expressing affirmation of a transgender person's gender that has been found to be associated with promotion of personal resilience and reduced negative impacts of enacted stigma (Puckett et al., 2019; Weinhardt et al., 2019). In relation to this, comprehensive resources and training for family members about understandings of transgender-specific needs should be made widely available, such as through social media, healthcare providers, and community organizations.

Given the potential role of secondary social ties (including connections to neighborhood and transgender communities) in providing mental health benefits for transgender people, opportunities for fostering positive relationships among transgender people and between trans and wider communities should be expanded by identifying and reducing barriers to neighborhood engagement. Resources should also be provided for the work that transgender community organizations do to allow transgender people to develop a sense of belonging within their communities.

Notes

1. Note that these demographic details may differ slightly from the published findings from the same survey dataset (Veale et al., 2019) which were weighted by ethnic groups to match the Aotearoa/New Zealand general population.
2. The Māori term "whānau" translates as family members, including those from an extended kinship system (Durie, 1985).

Acknowledgment

The first author would like to acknowledge the financial support received through a University of Waikato Doctoral Scholarship. The authors would like to acknowledge the work of Counting Ourselves research team, and give special thanks to the community advisory group members and to the survey participants.

Conflict of interest

The authors have no other conflict of interest to declare.

Funding

This work was supported by the Health Research Council of New Zealand [J.F.V., 17/587], the Rule Foundation; and the University of Waikato.

ORCID

Kyle K. H. Tan http://orcid.org/0000-0001-6831-7045
Gareth J. Treharne http://orcid.org/0000-0002-0065-2995
Sonja J. Ellis http://orcid.org/0000-0003-3502-7724
Johanna M. Schmidt http://orcid.org/0000-0001-7812-8774
Jaimie F. Veale http://orcid.org/0000-0002-9151-7413

References

Aminzadeh, K., Denny, S., Utter, J., Milfont, T. L., Ameratunga, S., Teevale, T., & Clark, T. (2013). Neighbourhood social capital and adolescent self-reported wellbeing in New Zealand: A multilevel analysis. *Social Science & Medicine (1982)*, *84*, 13–21. https://doi.org/10.1016/j.socscimed.2013.02.012

Aneshensel, C. S., & Sucoff, C. A. (1996). The neighborhood context of adolescent mental health. *Journal of Health and Social Behavior*, *37*(4), 293–310. https://doi.org/10.2307/2137258

Barr, S. M., Budge, S. L., & Adelson, J. L. (2016). Transgender community belongingness as a mediator between strength of transgender identity and well-being. *Journal of Counseling Psychology*, *63*(1), 87–97. https://doi.org/10.1037/cou0000127

Bockting, W., Miner, M., Romine, R., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of the US transgender population. *American Journal of Public Health*, *103*(5), 943–951. https://doi.org/10.2105/AJPH.2013.301241

Clark, T. C., Fleming, T., Bullen, P. D. S., Crengle, S., Dyson, B., Fortune, S., Lucassen, M., Peiris-John, R., Robinson, E., Rossen, F., Sheridan, J., Teevale, T., & Utter, J. (2012). *Youth'12 Overview: The health and well-being of New Zealand secondary school students in 2012*. The University of Auckland.

Clark, T. C., Lucassen, M. F. G., Bullen, P., Denny, S. J., Fleming, T. M., Robinson, E. M., & Rossen, F. V. (2014). The health and well-being of transgender high school students: Results from the New Zealand Adolescent Health Survey (Youth'12). *The Journal of Adolescent Health*, *55*(1), 93–99. https://doi.org/10.1016/j.jadohealth.2013.11.008

DeHaan, S., Kuper, L. E., Magee, J. C., Bigelow, L., & Mustanski, B. S. (2013). The interplay between online and offline explorations of identity, relationships, and sex: A mixed-methods study with LGBT youth. *Journal of Sex Research*, *50*(5), 421–434. https://doi.org/10.1080/00224499.2012.661489

Durie, M. H. (1985). A Maori perspective of health. *Social Science & Medicine*, *20*(5), 483–486. https://doi.org/10.1016/0277-9536(85)90363-6

Hagerty, B. M. K., Lynch-Sauer, J., Patusky, K. L., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of Psychiatric Nursing*, *6*(3), 172–177. https://doi.org/10.1016/0883-9417(92)90028-H

Health Promotion Agency. (2016). *2016 New Zealand Mental Health Survey questionnaire*. Health Promotion Agency.

Human Rights Commission. (2008). *To be who I am: Report of the inquiry into discrimination experienced by transgender people*. Human Rights Commission.

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality.

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S.-L T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. &. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry*, *60*(2), 184–189. https://doi.org/10.1001/archpsyc.60.2.184

Liu, R. T., & Mustanski, B. (2012). Suicidal ideation and self-harm in lesbian, gay, bisexual, and transgender youth. *American Journal of Preventive Medicine*, *42*(3), 221–228. https://doi.org/10.1016/j.amepre.2011.10.023

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Ministry of Health. (2017). *Methodology report 2016/17: New Zealand Health Survey*. Ministry of Health.

New Zealand Human Rights Commission. (2020). *Prism: Human rights issues relating to sexual orientation, gender identity and expression, and sex characteristics (SOGIESC) in Aotearoa New Zealand- A report with recommendations*. New Zealand Human Rights Commission.

O'Flaherty, M., & Fisher, J. (2008). Sexual orientation, gender identity and international human rights law: Contextualising the Yogyakarta Principles. *Human Rights Law Review*, *8*(2), 207–248. https://doi.org/10.1093/hrlr/ngn009

Owen-Smith, A. A., Sineath, C., Sanchez, T., Dea, R., Giammattei, S., Gillespie, T., Helms, M. F., Hunkeler, E. M., Quinn, V. P., Roblin, D., Slovis, J., Stephenson, R., Sullivan, P. S., Tangpricha, V., Woodyatt, C., & Goodman, M. (2017). Perception of community tolerance and prevalence of depression among transgender persons. *Journal of Gay & Lesbian Mental Health*, *21*(1), 64–76. https://doi.org/10.1080/19359705.2016.1228553

Peng, K., Zhu, X., Gillespie, A., Wang, Y., Gao, Y., Xin, Y., Qi, J., Ou, J., Zhong, S., Zhao, L., Liu, J., Wang, C., & Chen, R. (2019). Self-reported rates of abuse, neglect, and bullying experienced by transgender and gender-nonbinary adolescents in China. *JAMA Network Open*, *2*(9), e1911058. https://doi.org/10.1001/jamanetworkopen.2019.11058

Pflum, S. R., Testa, R. J., Balsam, K. F., Goldblum, P. B., & Bongar, B. (2015). Social support, trans community connectedness, and mental health symptoms among transgender and gender nonconforming adults. *Psychology of Sexual Orientation and Gender Diversity*, *2*(3), 281–286. https://doi.org/10.1037/sgd0000122

Poon, C., Saewyc, E. M., & Chen, W. (2011). Enacted stigma, problem substance use, and protective factors among Asian sexual minority youth in British Columbia. *Canadian Journal of Community Mental Health*, *30*(2), 47–64. https://doi.org/10.7870/cjcmh-2011-0016

Puckett, J. A., Matsuno, E., Dyar, C., Mustanski, B., & Newcomb, M. E. (2019). Mental health and resilience in transgender individuals: What type of support makes a difference? *Journal of Family Psychology*, *33*(8), 954–964. https://doi.org/10.1037/fam0000561

Riggs, D. W., Ansara, G. Y., & Treharne, G. J. (2015). An evidence-based model for understanding the mental health experiences of transgender Australians. *Australian Psychologist*, *50*(1), 32–39. https://doi.org/10.1111/ap.12088

Rubenstein, J. L., Heeren, T., Housman, D., Rubin, C., & Stechler, G. (1989). Suicidal behavior in "normal" adolescents: Risk and protective factors. *The American Journal of Orthopsychiatry*, *59*(1), 59–71. https://doi.org/10.1111/j.1939-0025.1989.tb01635.x

Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, *57*(1), 1–10. https://doi.org/10.1037/a0018082

Schulz, S. L. (2018). The informed consent model of transgender care: An alternative to the diagnosis of gender dysphoria. *Journal of Humanistic Psychology*, *58*(1), 72–92. https://doi.org/10.1177/0022167817745217

Statistics New Zealand. (2016). *New Zealand General Social Survey 2016*. Statistics New Zealand.

Strauss, P., Cook, A., Winter, S., Watson, V., Wright Toussaint, D., & Lin, A. (2020). Associations between negative life experiences and the mental health of trans and gender diverse young people in Australia: findings from Trans Pathways. *Psychological Medicine*, *50*(5), 808–817. https://doi.org/10.1017/S0033291719000643

Tan, K. K. H., Schmidt, J. M., Ellis, S. J., & Veale, J. F. (2019). Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities. *New Zealand Journal of Psychology*, *48*(2), 64–72.

Tan, K. K. H., Treharne, G. J., Ellis, S. J., Schmidt, J. M., & Veale, J. F. (2020). Gender minority stress: A critical review. *Journal of Homosexuality*, *67*(10), 1471–1489. https://doi.org/10.1080/00918369.2019.1591789

Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity*, *2*(1), 65–77. https://doi.org/10.1037/sgd0000081

The Yogyakarta Principles. (2007). Principles on the application of international human rights law in relation to sexual orientation and gender identity. http://yogyakartaprinciples.org/wp-content/uploads/2016/08/principles_en.pdf

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior*, *52*(2), 145–161. https://doi.org/10.1177/0022146510395592

Treharne, G. J., Riggs, D. W., Ellis, S. J., Flett, J. A. M., & Bartholomaeus, C. (2020). Suicidality, self-harm, and their correlates among transgender and cisgender people living in Aotearoa/New Zealand or Australia. *International Journal of Transgender Health*, In Press. https://doi.org/10.1080/26895269.2020.1795959

Valentine, S. E., & Shipherd, J. C. (2018). A systematic review of social stress and mental health among transgender and gender non-conforming people in the United States. *Clinical Psychology Review*, *66*, 24–38. https://doi.org/10.1016/j.cpr.2018.03.003

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. Jr, (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575–600. https://doi.org/10.1037/a0018697

Veale, J. F., Byrne, J., Tan, K. K. H., Guy, S., Yee, A., Nopera, T., & Bentham, R. (2019). *Counting Ourselves: The health and wellbeing of trans and non-binary people in Aotearoa New Zealand*. Transgender Health Research Lab, University of Waikato.

Veale, J. F., Peter, T., Travers, R., & Saewyc, E. M. (2017). Enacted stigma, mental health, and protective factors among transgender youth in Canada. *Transgender Health*, *2*(1), 207–216. https://doi.org/10.1089/trgh.2017.0031

Veale, J. F., Watson, R. J., Peter, T., & Saewyc, E. M. (2017). Mental health disparities among Canadian transgender youth. *The Journal of Adolescent Health*, *60*(1), 44–49. https://doi.org/10.1016/j.jadohealth.2016.09.014

Watson, R. J., Veale, J. F., Gordon, A. R., Clark, B. A., & Saewyc, E. M. (2019). Risk and protective factors for transgender youths' substance use. *Preventive Medicine Reports*, *15*, 100905. https://doi.org/10.1016/j.pmedr.2019.100905

Weinhardt, L. S., Xie, H., Wesp, L. M., Murray, J. R., Apchemengich, I., Kioko, D., Weinhardt, C. B., & Cook-Daniels, L. (2019). The role of family, friend, and significant other support in well-being among transgender and non-binary youth. *Journal of GLBT Family Studies*, *15*(4), 311–325. https://doi.org/10.1080/1550428X.2018.1522606

Wilson, E. C., Chen, Y. H., Arayasirikul, S., Raymond, H. F., & McFarland, W. (2016). The impact of discrimination on the mental health of trans*female youth and the protective effect of parental support. *AIDS and Behavior*, *20*(10), 2203–2211. https://doi.org/10.1007/s10461-016-1409-7

As the journal limited the number of included tables and figures, a decision was made to only include the figure of the probability profile for suicide attempt in the published study. Drawing from Table 4 of the published paper of Chapter 6, these additional figures (Figures 5–7) present findings of probability profiles for psychological distress, NSSI, and suicidal ideation with different combinations of risk and protective factors. Error bars indicate 95% confidence intervals.

Figure 5

Probability Profile of Counting Ourselves Participants Manifesting Very High Psychological Distress With Different Combinations of Risk and Protective Factors

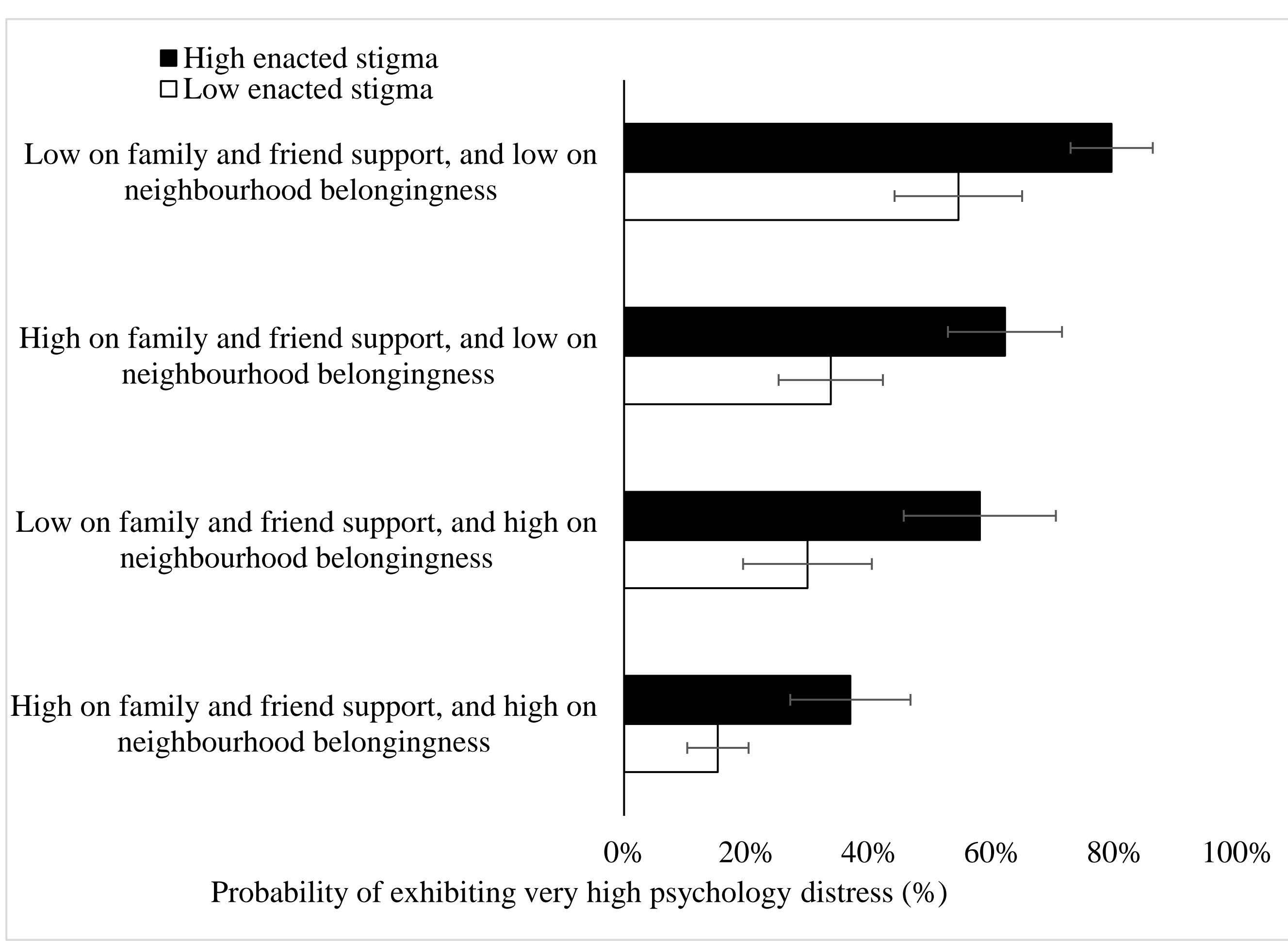


Figure 6

Probability Profile of Counting Ourselves Participants Engaging in NSSI in the Last 12 Months With Different Combinations of Risk and Protective Factors

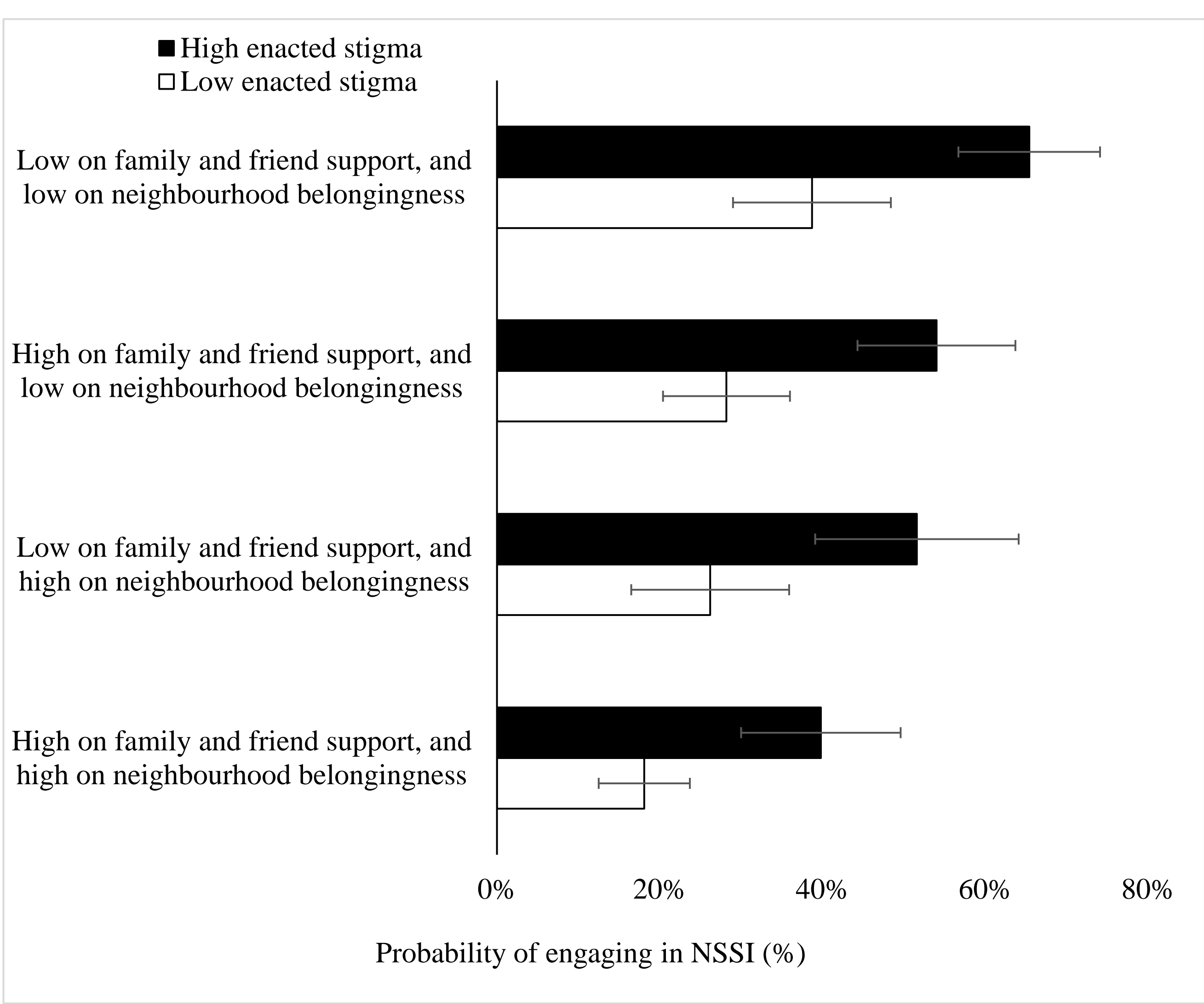
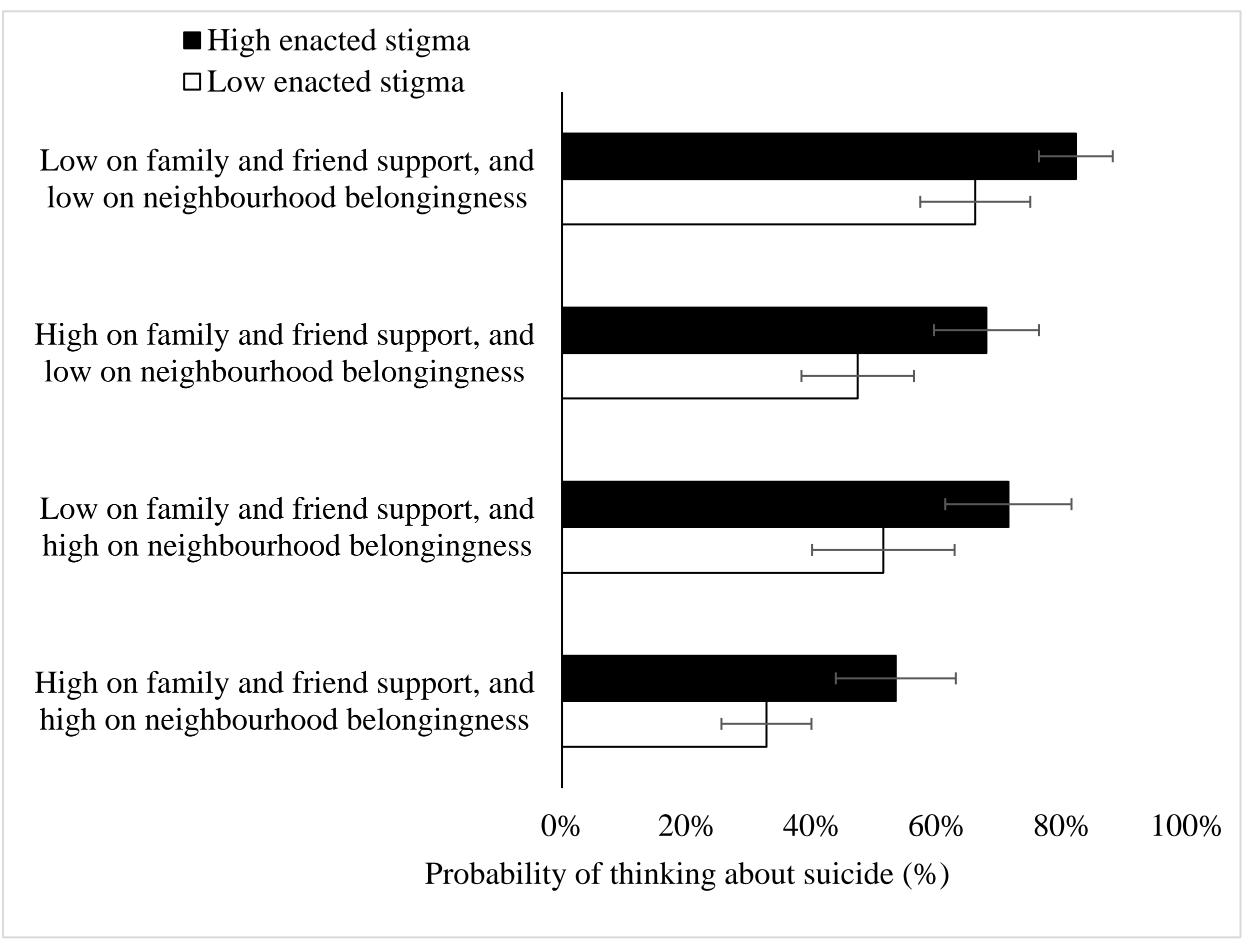


Figure 7

Probability Profile of Counting Ourselves Participants Thinking About Suicide in the Last 12 Months With Different Combinations of Risk and Protective Factors



These figures illustrate how multivariate logistic regression (adjusted for age and enacted stigma) indicated that protective factors such as family and friend support, and neighbourhood belongingness, were associated with higher level of psychological distress, NSSI, and suicidal ideation. For example, the probability profile in Figure 5 shows that the probability of participants exhibiting very high psychological distress was highest when they were exposed to high level of enacted stigma and they had low levels of protective factors. Similar findings are noted in Figures 6 and 7, which show high exposures of enacted stigma and low levels of protective factors had the highest probabilities of NSSI and suicidal ideation.

Chapter 7: "It's How the World Around You Treats You for Being Trans": Mental Health and Wellbeing of Transgender People in Aotearoa New Zealand

7.1 Preface

There is a scarcity of qualitative studies that explore transgender people's own accounts of mental health experiences in Aotearoa/New Zealand. This study aimed to provide novel findings on this topic by assessing open-text comments from the mental health section of the Counting Ourselves survey. Internationally, qualitative studies on transgender people have confined their findings to specific determinants such as healthcare access (e.g., Alpert et al., 2017; Halliday & Caltabiano, 2020), and gender minority stress and protective factors (e.g., Howell & Allen, 2020; Singh et al., 2014) without specifically investigating the relationships of these determinants to mental health outcomes.

This study employed an inductive thematic analysis that treated transgender participants as the chief informants of their own experiences to guide the creation of themes on the determinants that were essential for their mental health. This study analysed the themes by drawing connections with the health equity perspective in Chapter 3 to delineate the influences of cisgenderism alongside the full range of determinants from biological, psychological to social, which played crucial roles in promoting mental health equity among transgender people. This chapter built on Chapter 5 which examined the mental health inequities among transgender people and Chapter 6 that explored the associations between enacted stigma and mental health for transgender people by examining mental health determinants that were not covered in the quantitative findings in these chapters.

Declaration: Both Johanna (second author) and I initiated the coding process and I received guidance during this process to revise the codes and draw the thematic map. Any

discrepancies in coding decisions were discussed with Sonja (third author) and I was responsible for refining the codes and amalgamating the codes into themes. All authors involved in the discussion of finalising the themes. I also wrote the first full draft of the paper and made subsequent revisions based on feedback from the other co-authors. Overall, I contributed 80% to this paper, and the other co-authors contributed the remaining 20%.

Publication status: Accepted for publication in the special issue: Critical Psychology Perspectives on LGBTQ+ Mental Health: Current Issues and Interventions of the Psychology and Sexuality journal.

Abstract

Globally, transgender people have been described as a highly marginalised population due to cisgenderism that delegitimises their gender identities and expressions. Despite robust evidence from many countries noting the association of discrimination and stigma for being transgender with heightened mental health risks, qualitative research that examines the nuances of mental health indicators using health equity frameworks has been scant both in Aotearoa/New Zealand and overseas. Using an inductive thematic approach, this paper analysed 222 open-text responses in the mental health section of the 2018 Counting Ourselves: Aotearoa New Zealand Trans and Non-binary Health Survey. Our findings showed four overarching themes: gender-affirming healthcare, mental healthcare services and accessibility, gender minority stress, and self-affirmation and social support. Participants' narratives described pervasive gender minority stress experiences in gender-affirming and mental healthcare services, including unmet healthcare needs, lack of competency in healthcare delivery, and pathologisation of their genders. In social settings, our participants commonly reported discrimination and violence, although they also reported that self-affirmation strategies and social support offset the impacts of gender minority stress on their mental health. The current findings indicate the importance of exploring mental health outcomes for transgender people in relation to cisgenderism and resultant gender minority stress.

Keywords: transgender, cisgenderism, gender minority stress, mental health, healthcare services

Introduction

The term *transgender* commonly refers to people whose gender differs from their sex assigned at birth. It is used as an umbrella term to encompass trans men (people assigned female at birth who identify as/are men), trans women (people assigned male at birth who

identify as/are women), and people with non-binary genders (those who identify as/are other genders, across a spectrum of gender diversity; American Psychological Association, 2015). In Aotearoa/New Zealand, there are many ways of understanding gender diversity, including those specific to Pākehā (New Zealand European), Māori, Pacific, and Asian cultures (Tan et al., 2019). Gender diverse identities within Māori and Pacific cultures may carry historical, political, and social connotations that are not directly translatable to western concepts, and these are reflected in a range of identifications such as Māori takātapui, whakawahine, and tangata ira tāne, and Pacific identities including Sāmoan fa'afafine and Cook Islands Māori akava'ine (Tan et al., 2019). In an attempt to minimise the limitations associated with the usage of the umbrella term "transgender" to cover this broad range of diversity, we will be giving specific attention to race/ethnicity, gender, and age group differences in our analyses.

Cisgenderism and Gender Minority Stress. Cisgenderism refers to the systemic attitudes, policies, and practices that discriminate transgender people due to cisnormativity that identifies cisgender people as dominant, normal, and superior (Ansara, 2010; Tan et al., 2020a). The privileging of cisgender identities through cisgenderism and cisnormativity is an example of the injustice of exclusionary social norms, as it exposes people who do not conform to the cisnormative expectations of being a cisgender man or a cisgender woman to gender minority stressors (e.g., prejudice, discrimination, and violence). Gender minority stress theory postulates that transgender people face a continuum of stressors, ranging from distal to proximal (Tan et al., 2020a; Testa et al., 2015). Distal stressors are external events, such as discrimination and victimisation, that occur at interpersonal (e.g., peer rejection and cyberbullying) and structural (e.g., barriers in obtaining legal gender recognition) levels (Testa et al., 2015). Proximal stressors refer to subjective experiences such as the internalisation of cisgenderism, the development of expectations related to distal stressors, and the concealment of one's gender identity (Tan et al., 2020a; Testa et al., 2015).

Testa et al. (2015) found evidence that proximal stressors partially mediate the effect of distal stressors on mental health. This suggests that mental health concerns (e.g., psychological distress and suicidality) among transgender people originate from distal stressors and may be influenced by individuals' proximal appraisal systems or evaluation of minority stress experiences (Tan et al., 2020a). The negative consequences of minority stress, however, can be mitigated when transgender people have adequate access to protective factors. Some of the most crucial domains of social support with known protective influences on transgender people's mental health are family and peer support (Fuller & Riggs, 2018; Olson et al., 2016; Singh et al., 2014; Veale et al., 2017) and a sense of connection to a transgender community (Brennan et al., 2017; Singh et al., 2014; Testa et al., 2015). Individual-level protective factors such as identity pride are also important aspects of resilience among transgender people to buffer against gender minority stress (Testa et al., 2015) and can be fostered, as necessary, with support from mental health professionals and social support networks (Singh et al., 2014).

Mental Healthcare Access. Access to mental healthcare is undoubtedly of major importance for transgender people, given the high prevalence of mental health difficulties due to gender minority stress (Ellis et al., 2015; James et al., 2016; Tan et al., 2020b). Despite transgender people's higher mental health needs, transgender people face difficulties in accessing equitable mental healthcare services due to cisgenderism. The 2012 United Kingdom Trans Mental Health Study reported one-third (34%) of participants were dissatisfied with their mental healthcare experiences and approximately half (51%) expressed concerns about discussing their gender with a healthcare provider (Ellis et al., 2015). Other studies also showed that transgender people were likely to delay accessing mental healthcare services and terminate mental healthcare services prematurely due to unhelpful healthcare

providers who for example, misgendered their clients or appeared to lack trans-specific knowledge (Alpert et al., 2017; Halliday & Caltabiano, 2020; Pitts et al., 2009).

Gender-affirming Healthcare Access. Provision of mental healthcare services and gender-affirming medical interventions are not always mutually exclusive in Aotearoa/New Zealand. At the time of writing, hormone therapy can be accessed through service providers such as primary healthcare team and sexual health services, and gender-affirming surgeries such as breast augmentation and chest reconstruction are provided by specialists in some local District Health Board (DHB) areas (Ministry of Health, 2020). Referrals to publicly funded gender-affirming (genital) surgery service requires transgender people to have a readiness assessment from a health professional (e.g, mental health professional, endocrinologist, or sexual health physician) who has expertise in gender-affirming care (Ministry of Health, 2020). Transgender people might also consult mental health professionals for assistance with the informed consent process while accessing other gender-affirming interventions such as hormone prescriptions (Oliphant et al., 2018) though this is not always required.

There is a rising demand for gender-affirming medical interventions with substantial growth in the number of transgender people seeking such services across different countries (Delahunt et al., 2016; Telfer et al., 2018). Studies have demonstrated the positive associations between access to gender-affirming interventions and the mental health of transgender people, as these interventions help align transgender people's physical characteristics with their affirmed gender and to alleviate bodily gender dysphoria for many transgender people (Brennan et al., 2017; Tomita et al., 2019). For transgender people who were actively seeking gender-affirming surgery but could not access it, a study with a transgender sample in China found that they were at greater odds of developing suicidal thoughts (Chen et al., 2019). In spite of the negative mental health effects associated with the

inability to fully affirm their gender, transgender people often have to wait for a long duration before being able to access gender-affirming care (Ellis et al., 2015).

Objectives. International research has consistently demonstrated stark mental health inequities affecting transgender people compared to their cisgender counterparts (James et al., 2016; Pitts et al., 2009). Research that describes the nuances of mental health indicators affecting transgender people in Aotearoa/New Zealand has been limited, however. While there are numerous qualitative studies that have researched transgender people's experiences of healthcare access (e.g., Alpert et al., 2017; Halliday & Caltabiano, 2020), and gender minority stress and protective factors (e.g., Singh et al., 2014), these studies have not specifically investigated the relationships of these determinants to mental health outcomes. This qualitative paper is the first, to our knowledge, to exclusively analyse open-text survey responses from a large nonprobability sample of transgender people, with the objective of exploring the mental health needs of transgender people. Building on gender minority stress theory (Tan et al., 2020a; Testa et al., 2015), we analysed participants responses by accounting for the influences of structural and environmental contexts alongside the full range of determinants from biological, psychological, to social, that play crucial roles in promoting mental health equity among transgender people (Fredriksen-Goldsen et al., 2014).

Method

The data presented here was obtained as part of the 2018 Counting Ourselves: Aotearoa New Zealand Trans and Non-Binary Health Survey, which recruited 1,178 transgender people aged 14 or older who lived in Aotearoa/New Zealand. This comprehensive study collected data on transgender people's physical and mental health, experiences in general and gender-affirming healthcare services, gender minority stress experiences, and levels of support from friends, family, and the wider community. The survey received ethical approval from the New Zealand Health and Disability Ethics

Committee (18/NTB/66/AM01) and was open for participation between June and September 2018. In order to maximise the diversity and representativeness of our sample of transgender people, our recruitment strategy involved reaching out to potential participants via social media (e.g., Facebook), community newsletters and notice boards, and word of mouth by collaborating with community advisory group members, academic researchers, and health professionals working with transgender people.

There were 1,380 initial responses, with 1,178 of these meeting the inclusion criteria. These excluded responses that were duplicates, participants not from Aotearoa/New Zealand, and participants who did not complete the demographic section to indicate that they were transgender (see Veale et al. (2019), for more details). As this was a lengthy survey, attrition led to some partial completions; however, more than three quarters of participants (n = 905) completed the mental health section of the survey.

A general open-text question was placed at the end of each topic section of the survey, with the aim to identify additional issues that were not covered by the closed questions. In this paper, we analysed the open-ended question in the mental health section "Is there anything further about your mental health that you would like to share with us?". Responses such as "no" and "no, all good" (n = 7) were treated as non-responses and excluded from analysis, leaving 222 responses to this specific question that were included in this analysis. Each response was classified by the participant's gender (i.e., trans man, trans woman or non-binary), age group (Youth: 14-24; Adult: 25-54; Older adults: 55 and above), and ethnicity.

Analysis

A thematic analysis was employed to analyse qualitative comments from the open-text question and identify patterned codes and themes (Clarke et al., 2015). Specifically, we chose the inductive approach of thematic analysis that positions participants as the chief informants of their own experiences. Critical realism recognises the existence of reality as

socially determined and proposes that there is a need to provide contextual analyses by bridging the disjuncture between human beings and social context (Cruickshank, 2012; Danermark et al., 2002). Critical realism treats the social world as theory-laden (Cruickshank, 2012; Danermark et al., 2002), and this study drew on gender minority stress theory (Testa et al., 2015; Tan et al., 2020) to explore how transgender people make sense of their mental health in relation to wider social environments and associated norms (e.g., cisgenderism). The coding process began with the first and second author (KT and JS) familiarising themselves with the data and then systematically reading all of the responses to generate initial codes. Any discrepancies in coding decisions were reviewed by the third author (SE) and the three authors worked together to compare and refine codes before grouping the responses into a set of mutual categories. Suggestions were also made to amalgamate codes into themes during this process. All coding themes were jointly discussed and a consensus was reached among all authors. An individual response could contribute to more than one code or theme if the comments touched on several issues.

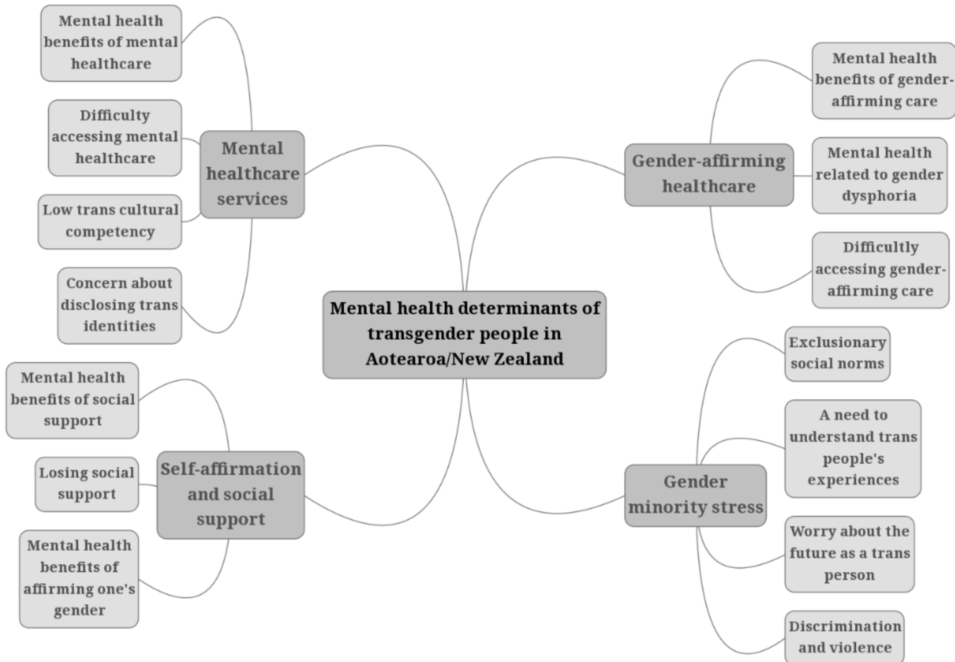
Given that only 19% of those who undertook the survey, and 25% of those who completed the mental health section, elected to provide a response to this open-ended question, we were interested to see if there were any demographic differences among this group compared to the overall sample. IBM SPSS Statistics version 25 was used to conduct this quantitative analysis. Differences in the proportion of participants who left a qualitative comment by demographics (gender, age, and ethnicity/race) were determined with chi-square goodness-of-fit (χ^2) tests. Standardised adjusted residuals were used to identify statistically significant differences between the number of cases observed and the number expected in a cell. Residual values that exceed ± 1.96 indicate the proportion of participants who left a comment versus those who did not to differ significantly for a demographic group. These results showed that only youth participants were less likely, and older adults more likely, to

respond to this question; the statistical findings are outlined in online supplementary file (Table S1).

Results and discussion

Our qualitative analysis resulted in four overarching themes to summarise the contents across participants. While each theme is distinct, they needed to be considered alongside each other to paint a coherent picture of the determinants of mental health for transgender people. Figure 1 presents the thematic map of four determinants that our participants described as essential to their mental health.

Figure 1. Thematic map of mental health determinants of transgender people in Aotearoa/New Zealand



Gender-affirming Healthcare. Unmet need for gender-affirming healthcare is a prevalent issue for transgender people in Aotearoa/New Zealand. In the Counting Ourselves report, unmet need was defined as those who wanted but could not access specific medical interventions (Veale et al., 2019). For instance, there was a high percentage of Counting

Ourselves participants who had an unmet need for hormone treatment (19%), breast augmentation surgery[8] (35%), and chest reconstruction surgery[9] (48%; Veale et al., 2019). Many participants reported that not being able to access gender-affirming medical interventions impacted negatively on their mental health, for example:

> Any depression I experience is due to the fact that my exterior physical image does not match the psychological image I wish to be that could be corrected by surgeries that I can neither afford or could see happening through the NZ health system anytime within my lifetime (NZ European/Pākehā, Trans woman, Adult).

Consistent with previous studies (Brennan et al., 2017; Ellis et al., 2015; Tomita et al., 2019), our participants who had undertaken medical procedures to affirm their gender had better mental health and wellbeing because of this, for example: “I used to have serious clinical depression, from my early teens. When I started taking cross-hormones all that disappeared within a couple of weeks. Turns out in my case it's largely a matter of hormonal balance” (Māori, Trans man, Adult).

In 2018, a multidisciplinary group of health professionals developed a guideline document for the provision of gender-affirming care that are culturally relevant to Aotearoa/New Zealand context (Oliphant et al., 2018). The document recognised the high unmet needs for gender-affirming medical interventions and the current pathologising practices by some health professionals that have presented challenges for transgender people to access medically necessary healthcare (Oliphant et al., 2018). An example of this is the reliance on the Diagnostic Statistical Manual (DSM; American Psychiatric Association,

---

[8]Among trans women and non-binary participants assigned male at birth
[9]Among trans men and non-binary participants assigned female at birth

2013) to assess eligibility for gender affirming care. One participant demonstrated their dissatisfaction with the pathologisation of transgender identity through the DSM.

> I don't put much value in the DSM and think it is absurd. It's been historically used to police gender normative behaviour and I am very uncomfortable with the way we are now trying to get the psychiatric discipline onside in our quest for gender rights. Master's house with the master's tools and all that. I'm not on board (NZ European/Pākehā, Non-binary, Adult).

The perception that gender diversity is an indicator of mental disorder has been institutionalised since the listing of “transvestism” in DSM-I (American Psychiatric Association, 1952) and “transsexualism” in the International Classification of Disease (ICD-9; World Health Organization, 1975). The continued listing of transgender people’s experiences as a diagnostic category, including “gender dysphoria” in DSM-5 has been critiqued for reinforcing the pathologisation of transgender identities and the normalisation of cisgender identities, as well as implying that medical intervention is a mandatory trajectory for transgender people to affirm their genders (Castro-Peraza et al., 2019; Tan et al., 2019). Transgender scholars and advocates have celebrated the World Health Organisation’s recent depathologisation of transgender identities (Castro-Peraza et al., 2019), signalling that they will move the diagnosis for transgender people from the Mental and Behavioural Disorders chapter to the new chapter of Conditions Related to Sexual Health in the 11th edition of the ICD (World Health Organization, 2020). This depathologising movement implies that being transgender should no longer be considered a mental illness. The findings discussed here also reflect that being gender diverse is not the cause of the distress that many transgender people experience – rather, this distress is related to societal reactions to gender diversity and transgender people’s inability to access services many need to affirm their genders.

Mental Healthcare Service and Accessibility. Published findings using the same study as this paper showed transgender people in Aotearoa/New Zealand were experiencing disproportionate mental health burdens with approximately nine times higher psychological distress for transgender people (72%) compared to the general population (8%; Tan et al., 2020b). The Counting Ourselves report also revealed a high prevalence of transgender people engaging in suicidal thoughts (56%) and suicide attempts (12%) in the past year, findings which have been found to be associated with gender minority stress experiences (Veale et al., 2019). Given the high prevalence of mental health concerns that transgender people face, it is no surprise that they are more likely to seek mental healthcare services for support related to the consequences of gender minority stress or concerns regarding their mental health.

The benefits of mental healthcare services (e.g., counselling or medication) in providing support in the face of discrimination or rejection, relief from distress, coping skills to manage emotional vulnerabilities, or gender affirming strategies were mentioned by our participants.

> One of the hardest periods of my life was when I started transitioning and lost most of friends and the dyke community I lived in at that time. It was very important for me to have access to a psychotherapist to deal with that stress, and the discrimination and exclusion I experienced–either intentionally or because the community at that time did not know how to respond. I was lucky I could afford to pay to see a psychotherapist, especially as there was very little peer support available for trans men (NZ European/Pākehā, Trans man, Older adult).

Our findings supported previous studies that have documented high unmet needs for mental healthcare services among transgender people (Ellis et al., 2015; James et al., 2016). The lack of allocated funding to expand the provision of mental healthcare services for

minority populations in Aotearoa/New Zealand has led to a long waiting time for transgender people to access much needed healthcare services (Clunie, 2018; Delahunt et al., 2016). Participants with mental health conditions reported that their conditions were exacerbated by these delays.

> I don't think my mental health is bad enough that I need to urgently see anyone, but I definitely think I could use some help–if only seeing mental health professionals wasn't so expensive and I didn't have to wait for months and months just to get an appointment. I don't want to die or self-harm, but I don't know how else to explain my constant low mood, lack of motivation, awful sleep schedule, constant tiredness, negative self-talk, sensitivity–among many other symptoms–other than as some kinds of depression? Talking about it and figuring it out with somebody would be nice, but here I am, anonymously typing into a box because I can't get help elsewhere (NZ European/Pākehā, Non-binary, Youth).

In addition to the high cost of private services and the low availability of publicly provided mental healthcare provision in Aotearoa/New Zealand, even in areas where services were available, many participants reported that having to navigate through a system that largely did not recognise or accept their genders deterred them from visiting mental healthcare professionals. For example, one participant did not think that mental healthcare services would be helpful as "Most treatments offered comprise of 4 or 5 appointments with counsellors who know nothing about trans issues. Waste of time and resources" (NZ European/Pākehā, Non-binary, Adult). While the inclusion of such knowledge in the training of medical professions has been deemed essential in promoting inclusivity towards transgender healthcare, a recent study surveying academic staff at Aotearoa/New Zealand medical schools found that little to no content relating to gender diversity was introduced in

the preclinical curriculum for medical health professionals such as psychiatrists (Taylor et al., 2018). Overseas studies have found that when mental healthcare service providers possessed sufficient knowledge about transgender issues, they were more likely to respect transgender people by using their preferred name and pronouns, and to have a solid understanding of the gender minority stress that their clients encounter (Ellis et al., 2015; Halliday & Caltabiano, 2020).

Cisgenderist prejudices were also evident in mental healthcare services. As one participant said:

> I’ve often had my mental health conflated with my “trans” status. I’ve had countless times where assumptions have been made that my mental health is poor due to being apparently “part way” through transitioning or implying that because I haven’t had chest surgery for example, that’s why I’m in a bad space (Māori, Non-binary, Adult).

The lack of transgender-competency on the part of mental healthcare professionals, sometimes coupled with judgmental attitudes, can lead transgender people to question the ability of the provider to effectively render care. One participant shared an experience that could be interpreted as a gender identity conversion effort (GICE; Turban et al., 2020), “I have had a psychiatrist tell me she could “fix” my gender and sexuality as it was caused by trauma. She said this in front of my queer, trans partner” (NZ European/Pākehā, Non-binary, Youth). It is notable that in the Counting Ourselves quantitative data, about one-sixth (17%) of participants reported attempts at gender identity conversion in their lifetimes (Veale et al., 2019). A recent United States survey found that transgender people who were exposed to GICE in their lifetime had higher prevalence of psychological distress and suicidality (Turban et al., 2020). Practices that impede transgender people from affirming their gender are an example of cisnormative indoctrination, and have been deemed as unethical and harmful by

the New Zealand Psychologists Board (2019). Previous transgender-affirmative research urges mental healthcare providers for transgender people to go beyond clinical competency (i.e., having knowledge of clinical issues related to gender-affirming care) and to include cultural competency (i.e., acknowledge the social context of health inequities affecting transgender people and being inclusive of gender diversity in the content and processes of healthcare delivery; Alpert et al., 2017; American Psychological Association, 2015; Ellis et al., 2015).

Gender Minority Stress. In their comments, survey participants talked about how their mental health was negatively affected by cisgenderism and gender minority stress. Cisgenderism describes marginalisation and prejudice against transgender people, which often results in pathologising people who do not conform to the conventional cisgender norms (Tan et al., 2020a). The marginalisation of transgender identities in society may lead to the social isolation of transgender people, an effect that has much negative influences on mental health, as one participant shared:

> While I don’t agree with these specific assumptions and diagnoses [gender identity disorder], I do agree that gender variance has influenced my mental health and will continue to. Not because it is an issue for me so much as dealing and navigating in a world that often does it’s best to make me alienated, alone, less than (Māori, Non-binary, Adult).

Another participant criticised the notion that transgender identity is pathological, “Being trans isn't something that in itself causes mental distress or harm. It's how the world around you treats you for being trans that does the harm” (NZ European/Pākehā, Trans man, Adult). The pathologising perspective that transgender identity is a cause of distress has been widely taken for granted without much consideration of the consequences of the specific form of stress that transgender people face due to cisgenderism – gender minority stress

(Schulz, 2018; Tan et al., 2020a). Many participants conveyed how cisgenderism manifested in their daily lives, including one participant who noted not being acknowledged appropriately for his affirmed gender: “All the time struggling daily with being misgendered - not seen and read correctly” (NZ European/Pākehā, Trans man, Adult). Other examples of cisgenderism that participants brought up ranged from experiences of violence (e.g., sexual abuse and workplace bullying) and lack of understanding from the society about transgender issues, to the need to advocate for basic human rights to lead a life without being stigmatised. Cisgenderism has specific impacts on those with non-binary identities, which one participant described as being “non-binary in a binary world” (Māori, Non-binary, Adult), and the need to resist pressure to identify as one of two normative gender categories.

Self-affirmation and Social Support. Emerging evidence suggests that affirmative family environments can mitigate the high prevalence of mental health concerns among transgender people (Fuller & Riggs, 2018; Veale et al., 2017). One United States study found that socially transitioned transgender youth who were supported by family members in affirming their gender were no more likely than their cisgender counterparts to exhibit depression and anxiety symptoms (Olson et al., 2016). Our participants’ responses corroborated these findings, for example, “Being accepted and affirmed by my family and whānau (extended family) in my preferred gender improved my mental health” (Māori, Trans men, Adult). Conversely, transgender people who were estranged from family members may feel that challenging cisgenderism without support makes them vulnerable, as one participant (Middle Eastern, Trans men, Youth) noted “There is little to no understanding in society, and often people like myself are told it's our fault that we're miserable. To be ‘more positive.’ It is hard, when I don't have family connections.”

In a society where transgender people may often feel socially ostracised, the presence of trans-affirming friends, family, and community members can be crucial in ensuring that

transgender people are equipped with support systems to enable them to cope with the effects of gender minority stress (Singh et al., 2014; Testa et al., 2015). Studies found peer support may provide additional mental health benefits on top of support from the family of origin for transgender people, suggesting that they may benefit from extending their networks to form "families of choice" and peer support groups that comprise members who are supportive of their gender-affirming routes (Fuller & Riggs, 2018; Veale et al., 2017). A comment from our participants echoed these previous findings.

> The only other time I have considered it [suicide] was during the process of realising I was trans, because it took me a long time to come to terms with it and I was scared of what I might have to deal with, but that improved with time and with support from friends and family. (Asian, Trans man, Youth)

Pathways of gender affirmation are not necessarily limited to medical interventions, but also include process that are social (e.g., changing presentation through clothing) and legal (e.g., name change on formal documents; Oliphant et al., 2018; Olson et al., 2016). Some participants mentioned that coming to terms with their transgender identity improved their mental health: for example, one participant noted "Forty years of depression cleared in two days after realising (or admitting to myself) that I am transgender. I had secretly cross dressed all my life since about 3-4 years old. I couldn't connect the depression with being transgender" (NZ European/Pākehā, Trans women, Older adult). Others noted the mental health benefits of embracing their transgender identity through gender affirmation: for example, "Coming out and transitioning has allowed me to get in touch with my body and emotions and achieve a more holistic wellbeing" (NZ European/Pākehā, Trans women, Adult). Our findings supported a previous qualitative study with transgender youth that suggested being able to come out or self-define one's gender identity was an integral factor

for transgender people in promoting personal resilience to mitigate the effects of gender minority stress (Singh et al., 2014).

Strengths and Limitations

The Counting Ourselves study is the largest survey of transgender people in Aotearoa/New Zealand to date with recruitment of diverse range of subgroups (gender identity, age, and ethnicity) across various geographical locations in this country. The majority of participants responded to the survey online and while a recruitment strategy was employed to reach wider audiences via internet groups and transgender community organisations, our sample may over-represent those who were younger and more connected to transgender communities. When identifying if there is a risk of bias in the open-text responses used for this specific paper (when compared to the overall sample for Counting Ourselves), we only found the proportion of people who responded to the open-text responses to differ by age group, with younger participants being less likely to leave a qualitative comment and older participants (aged 55 and above) being more likely to respond (see Table S1). Higher response rate among older participants aligns with another study that analysed free-text comments embedded within large quantitative surveys (Cunningham & Wells, 2017). There were no statistically significant differences for other demographic characteristics (i.e., gender, ethnicity, and region), suggesting that there was minimal bias among participants who self-selected to provide a qualitative comment based on these other demographic factors.

Studies have shown that the use of “any other comments” question in surveys could help to redress research power imbalances because participants can express their opinions or concerns without the constraints inherent in closed questions (O'Cathain & Thomas, 2004). Researchers’ interpretation may be restricted, however, because respondents may provide only a few words or sentences, resulting in a lack of context and conceptual richness

(O'Cathain & Thomas, 2004). However, in our study many participants provided often lengthy details about their perceptions of their mental health. We judged the open-ended comments in the mental health section to be very useful, given high numbers of participants (222) responded, providing valuable information to complement the quantitative findings published elsewhere (Tan et al., 2020; Veale et al., 2019).

A strength of this paper is its ability in capturing the broad range of issues related to mental health such as gender minority stress and mental healthcare access. However, the space constraint does not allow us to go more in-depth on each inductive theme. There are many other open-ended comments that can be assessed from other sections of the survey to further consolidate our findings; but this is beyond the scope of this paper.

Conclusion and Implications

This paper extends beyond the pathological perspective that positions transgender identity as the primary cause of internal distress among transgender people. Using indicators from health equity frameworks (e.g., Fredriksen-Goldsen et al., 2014), our findings affirm the need to understand the social determinants that result in mental health inequities among transgender people. Participants in our study reported individual and collective experiences of cisgenderism across a range of social settings. These included gender minority stress experiences (e.g., discrimination and misgendering), social exclusion, and loss of social support from friends and family members. The high rates of gender minority stress and violence among our participants endorse the recent Human Rights Commission’s call to explicitly mention transgender people as a population whose human rights need to be safeguarded under the Human Rights Act 1993 in Aotearoa/New Zealand (Human Rights Commission, 2020).

Transgender people have greater healthcare needs due to gender minority stress experiences and their need for gender affirming medical interventions, and yet our findings

suggest that they experience inequities and gaps in accessing both gender-affirming and mental health services. It is very concerning that healthcare services, which should be supporting transgender people during some of the most difficult times of their lives, may present obstacles to accessing medically necessary healthcare, may exacerbate mental health symptoms through gender minority stress and pathologising practices, or may be avoided for fear of unhelpful and non-inclusive treatments.

The lack of transgender-specific training among mental health professionals in Aotearoa/New Zealand is likely to contribute to the gaps in trans clinical and cultural competency in healthcare provision for transgender people (Taylor et al., 2018). Being knowledgeable about the latest guideline for gender affirming healthcare is crucial as the guideline situates transgender people at the core of decision-making processes and recognises their right to bodily autonomy and self-determination (American Psychological Association, 2015; Oliphant et al., 2018; Schulz, 2018). Health professionals should consider the informed consent model as an alternative to the DSM, as the former acknowledges transgender people as the experts of their own lives and that mental health assessment is an *option* rather than a *prerequisite* for access to gender-affirming procedures. Instead of relying on a diagnosis to gatekeep transgender people’s access to gender-affirming care, health professionals can work alongside transgender patients by presenting them with information about the risks and benefits of undertaking gender-affirming medical interventions and ensuring that they are informed in authorising their own treatment (Schulz, 2018). Our findings echo a recent submission to the government’s mental health and addictions inquiry for the need to implementing informed consent model in healthcare settings, as well as, to urge policy makers to identify transgender people as a named priority in mental health policies (Clunie, 2018). When transgender people are feeling socially included in healthcare settings and are

living in social environments that are supportive of their identities, our findings propose that they can achieve mental health equity and are able to participate fully in society.

Reference

Alpert, A. B., CichoskiKelly, E. M., & Fox, A. D. (2017). What lesbian, gay, bisexual, transgender, queer, and intersex patients say doctors should know and do: A qualitative study. *Journal of Homosexuality, 64*(10), 1368-1389. https://doi.org/10.1080/00918369.2017.1321376

American Psychiatric Association. (1952). *Diagnostic and statistical manual of mental disorders*. American Psychiatric Publishing.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. American Psychiatric Publishing.

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist, 70*(9), 832-864. https://doi.org/10.1037/a0039906

Ansara, Y. G. (2010). Beyond cisgenderism: Counselling people with non-assigned gender identities. In L. Moon (Ed.), *Counselling ideologies: Queer challenges to heteronormativity* (pp. 167-200). Ashgate

Brennan, S. L., Irwin, J., Drincic, A., Amoura, N. J., Randall, A., & Smith-Sallans, M. (2017). Relationship among gender-related stress, resilience factors, and mental health in a Midwestern U.S. transgender and gender-nonconforming population. *International Journal of Transgenderism, 18*(4), 433-445. https://doi.org/10.1080/15532739.2017.1365034

Castro-Peraza, M. E., García-Acosta, J. M., Delgado, N., Perdomo-Hernández, A. M., Sosa-Alvarez, M. I., Llabrés-Solé, R., & Lorenzo-Rocha, N. D. (2019). Gender identity:

The human right of depathologization. *International Journal of Environmental Research and Public Health*, *16*(6), 978. https://doi.org/10.3390/ijerph16060978

Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (3rd ed.). Sage.

Clunie, M. (2018). *Rainbow communities, mental health and addiction: A submission to the Government Inquiry into Mental Health and Addiction – Oranga Tāngata, Oranga Whānau*. https://www.mentalhealth.org.nz/assets/Our-Work/policy-advocacy/Rainbow-communities-and-mental-health-submission-to-the-Inquiry-into-Mental-Health-and-Addiction-08062018.pdf

Cruickshank, J. (2012). Positioning positivism, critical realism and social constructionism in the health sciences: A philosophical orientation. *Nursing Inquiry*, *19*(1), 71-82. https://doi.org/10.1111/j.1440-1800.2011.00558.x

Cunningham, M., & Wells, M. (2017). Qualitative analysis of 6961 free-text comments from the first National Cancer Patient Experience Survey in Scotland. *BMJ Open, 7*(6), e015726. https://doi.org/10.1136/bmjopen-2016-015726

Danermark, B., Ekstrom, M., Jakobsen, L., Karlsson, J. C., & Bhaskar, P. R. (2002). *Explaining society: An introduction to critical realism in the social sciences*. Routledge.

Delahunt, J. W., Denison, H. J., Kennedy, J., Hilton, J., Young, H., Chaudhri, O. B., & Elston, M. S. (2016). Specialist services for management of individuals identifying as transgender in New Zealand. *New Zealand Medical Journal, 129*(1434), 49-58.

Ellis, S. J., Bailey, L., & McNeil, J. (2015). Trans people's experiences of mental health and gender identity services: A UK study. *Journal of Gay & Lesbian Mental Health, 19*(1), 4-20. https://doi.org/10.1080/19359705.2014.960990

Fredriksen-Goldsen, K. I., Simoni, J. M., Kim, H.-J., Lehavot, K., Walters, K. L., Yang, J., Hoy-Ellis, C. P., & Muraco, A. (2014). The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *American Journal of Orthopsychiatry, 84*(6), 653-663. https://doi.org/10.1037/ort0000030

Fuller, K. A., & Riggs, D. W. (2018). Family support and discrimination and their relationship to psychological distress and resilience amongst transgender people. *International Journal of Transgenderism, 19*(4), 379-388. https://doi.org/10.1080/15532739.2018.1500966

Halliday, L. M., & Caltabiano, N. J. (2020). Transgender experience of mental healthcare in Australia. *Psychology, 11*(1), 157-172. https://doi.org/10.4236/psych.2020.111011

Human Rights Commission. (2020). *Prism: Human rights issues relating to sexual orientation, gender identity and expression, and sex characteristics (SOGIESC) in Aotearoa New Zealand- A report with recommendations*. https://www.hrc.co.nz/files/9215/9253/7296/HRC_PRISM_SOGIESC_Report_June_2020_FINAL.pdf

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality.

Ministry of Health. (2017). *Methodology report 2016/17: New Zealand Health Survey*. Ministry of Health, New Zealand.

Ministry of Health. (2020). *Delivering health services to transgender people*. https://www.health.govt.nz/our-work/preventative-health-wellness/delivering-health-services-transgender-people

New Zealand Psychologists Board. (2019). *Best practice guideline: Working with sex, sexuality, and gender diverse clients*. http://www.psychologistsboard.org.nz/cms_show_download.php?id=594

O'Cathain, A., & Thomas, K. J. (2004). "Any other comments?" Open questions on questionnaires – a bane or a bonus to research? *BMC Medical Research Methodology, 4*(1), 25. https://doi.org/10.1186/1471-2288-4-25

Oliphant, J., Veale, J., Macdonald, J., Carroll, R., Johnson, R., Harte, M., Stephenson, C., & Bullock, J. (2018). *Guidelines for gender affirming healthcare for gender diverse and transgender children, young people and adults in Aotearoa New Zealand*. Transgender Health Research Lab, University of Waikato.

Olson, K. R., Durwood, L., DeMeules, M., & McLaughlin, K. A. (2016). Mental health of transgender children who are supported in their identities. *Pediatrics, 137*(3), e20153223. https://doi.org/10.1542/peds.2015-3223

Pitts, M. K., Couch, M., Hunter, M., Croy, S., & Mitchell, A. (2009). Transgender people in Australia and New Zealand: Health, well-being and access to health services. *Feminism & Psychology, 19*(4), 475-495. https://doi.org/10.1177/0959353509342771

Schulz, S. L. (2018). The informed consent model of transgender care: An alternative to the diagnosis of gender dysphoria. *Journal of Humanistic Psychology, 58*(1), 72-92. https://doi.org/10.1177/0022167817745217

Singh, A. A., Meng, S. E., & Hansen, A. W. (2014). “I am my own gender”: Resilience strategies of trans youth. *Journal of Counseling & Development, 92*(2), 208-218. https://doi.org/10.1002/j.1556-6676.2014.00150.x

Tan, K. K. H., Ellis, S. J., Schmidt, J. M., Byrne, J. L., & Veale, J. F. (2020b). Mental health inequities among transgender people in Aotearoa New Zealand: Findings from the

Counting Ourselves survey. *International Journal of Environmental Research and Public Health, 17*(8), 2862. https://doi.org/10.3390/ijerph17082862

Tan, K. K. H., Schmidt, J. M., Ellis, S. J., & Veale, J. F. (2019). Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities. *New Zealand Journal of Psychology, 48*(2), 64-72.

Tan, K. K. H., Treharne, G. J., Ellis, S. J., Schmidt, J. M., & Veale, J. F. (2020a). Gender minority stress: A critical review. *Journal of Homosexuality*, *67*(10). https://doi.org/10.1080/00918369.2019.1591789

Taylor, O., Rapsey, C. M., & Treharne, G. J. (2018). Sexuality and gender identity teaching within preclinical medical training in New Zealand: Content, attitudes and barriers. *New Zealand Medical Journal, 131*(1477), 35-44.

Telfer, M. M., Tollit, M. A., Pace, C. C., & Pang, K. C. (2018). Australian standards of care and treatment guidelines for transgender and gender diverse children and adolescents. *Medical Journal of Australia, 209*(3), 132-136. https://doi.org/10.5694/mja17.01044

Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity, 2*(1), 65-77. https://doi.org/10.1037/sgd0000081

Tomita, K. K., Testa, R. J., & Balsam, K. F. (2019). Gender-affirming medical interventions and mental health in transgender adults. *Psychology of Sexual Orientation and Gender Diversity, 6*(2), 182-193. https://doi.org/10.1037/sgd0000316

Turban, J. L., Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry, 77*(1), 68-76. https://doi.org/10.1001/jamapsychiatry.2019.2285

Veale, J. F., Byrne, J., Tan, K. K. H., Guy, S., Yee, A., Nopera, T., & Bentham, R. (2019). *Counting Ourselves: The health and wellbeing of trans and non-binary people in Aotearoa New Zealand*. Transgender Health Research Lab, University of Waikato.

Veale, J. F., Peter, T., Travers, R., & Saewyc, E. M. (2017). Enacted stigma, mental health, and protective factors among transgender youth in Canada. *Transgender Health, 2*(1), 207-216. https://doi.org/10.1089/trgh.2017.0031

World Health Organization. (1975). *International classification of diseases and related health problems*. 9th revision.

World Health Organization. (n.d.,). *WHO/Europe brief – Transgender health in the context of ICD-11*. http://www.euro.who.int/en/health-topics/health-determinants/gender/gender-definitions/whoeurope-brief-transgender-health-in-the-context-of-icd-11

Table S1.
Demographic details of participants who provided a response in the open-text box

	Respond n (%)	Adj Std Residuals
Age Groups		
14-24	80 (20.1)	-2.7
25-34	65 (24.8)	0.1
35-44	32 (31.4)	1.7
45-54	14 (20.0)	-0.9
55-100	31 (41.9)	3.6
	$\chi2$ (4) = 19.648, p = .001	
Gender		
Trans women	71 (26.3)	0.8
Trans men	55 (21.3)	-1.4
Non-binary AFAB	78 (26.6)	1.0
Non-binary AMAB	18 (21.4)	-0.7
	$\chi2$ (3) = 3.021, p = .388	
Ethnicity		
Māori	27 (23.7)	-0.2
Pākehā/NZ European	180 (25.2)	1.0
Others[a]	15 (19.0)	-1.2
	$\chi2$ (2) = 1.553, p = .460	
Regions		
Auckland	60 (22.1)	-1.2
Wellington	67 (26.2)	0.7
Other north island	41 (26.3)	0.5
Other south island	52 (25.0)	0.1
	$\chi2$ (3) = 1.539, p = .673	

[a]Due to the low number of respondents for Pasifika, Asian, and others, responses of these ethnic groups were merged.

Chapter 8: Conclusion

8.1 Chapter Overview

This chapter summarises the findings in relation to respective research questions by making reference to the review studies (Chapters 2 and 3) and empirical studies (Chapters 5, 6, and 7). Next, this chapter discusses the significance of the current thesis in terms of its contribution to theory and practices of public health and healthcare settings. Chapter 8 concludes with limitations of the current study and recommendations for future research.

8.2 Summary of Research

This thesis comprises a series of quantitative and qualitative studies aimed at understanding the mental health of transgender people in Aotearoa/New Zealand.

A major gap found in the Aotearoa/New Zealand literature was the absence of research regarding the prevalence of mental health difficulties among transgender people other than those at high school, and the relationship between gender minority stress resulting from cisgenderism and elevated rates of mental health difficulties experienced by the transgender population. Overseas research has increasingly employed gender minority stress theory to explain the associations among enacted stigma, protective factors, and mental health of transgender people. However, few studies have provided an explanation for the social origins of gender minority tress in relation to cisgenderism or the prejudice that normalises and privileges cisgender people. The primary aim of this thesis was, therefore, to provide an insight into the inequities of mental health between transgender participants and the Aotearoa/New Zealand general populations across all age groups—a subject not previously explored in New Zealand-based nationally representative surveys. This thesis used a health equity perspective to explore the possible influences of enacted stigma experiences as social determinants of mental health inequities and the benefits of protective factors for transgender people's mental health. The use of the health equity perspective extended to qualitative

findings to examine the determinants that were perceived by transgender people in Aotearoa/New Zealand as crucial in promoting their mental health.

The following sections (from 8.3 to 8.6) describe how the results of the analyses address the research questions outlined for this thesis in Chapter 1. The results are discussed in relation to previous literature, as well as the quantitative findings from Chapters 5 and 6, and qualitative findings from Chapter 7.

8.3 Research Question 1

What are the mental health inequities faced by the transgender population relative to the general population in Aotearoa/New Zealand? Are there differences in mental health outcomes across transgender people of different age and gender groups (i.e., trans men, trans women, and non-binary)?

Using data from the Counting Ourselves survey, the study in Chapter 5 found that out of 904 transgender participants, 42% had engaged in non-suicidal self-injury (NSSI), 56% had thought about suicide, and 11% had attempted suicide in the past 12 months. When comparing the prevalence of depression and anxiety of the Counting Ourselves participants to the general population in Aotearoa/New Zealand, the inequities were stark: three-quarters (72%) of participants met the Kessler Psychological Distress Scale (K10) criteria for high or very high levels of psychological distress, and more than half had been told by a doctor that they had depression (65%) or anxiety (56%). The national prevalence for the Aotearoa/New Zealand general population of high or very high levels of psychological distress is 8%, and diagnoses of depression or anxiety are 17% and 10%, respectively. Transgender participants also fared worse across all OECD general mental health measures, with higher rates of life dissatisfaction (31% vs 3%), not feeling life to be worthwhile (24% vs 2%), and low ability to cope with stress (32% vs 4%) compared to the general population. Higher rates of mental health difficulties among transgender people relative to the general population have also been

documented in large-scale overseas community-based studies that recruited transgender people of all age groups (e.g., Hyde et al., 2013; James et al., 2016) and population-based studies with nationally representative samples (e.g., Crissman et al., 2019; Ross-Redd et al., 2019).

Relatively few previous studies of transgender health inequities have treated transgender people as a heterogenous population and explored mental health differences across different demographic groups of transgender people; those that did produced mixed findings that required closer scrutiny. Chapter 5's study examined the nuances of mental health outcomes across various age and gender groups of transgender people in Aotearoa/New Zealand. When looking at mental health differences across different age groups, findings from Chapter 5 revealed that younger transgender participants were more likely to manifest mental health difficulties than those of older ages. The inequities in mental health were also greater for younger transgender participants when compared to the general population of the same age. When stratified by gender, while controlling for the effect of age, in this study there was a higher prevalence of mental health difficulties among trans men and non-binary participants compared to trans women. The mental health differences between trans men and trans women were especially prominent. The findings of the higher prevalence of mental health difficulties among trans men and those of younger age groups were also reflected in research from other countries (e.g., Aparicio-García et al., 2018; Crissman et al., 2019; Jackman et al., 2018; James et al., 2016; Rimes et al., 2019; Veale, Watson, et al., 2017).

The study in Chapter 5 also examined the interaction effect of age and gender on mental health. The exploratory finding of the interaction effect of age and gender suggested that trans men were not the most vulnerable gender group across all age groups, as older trans

women (i.e., aged 55 years and above) had higher prevalence of psychological distress than trans men and non-binary in the same age group.

Overall, despite the various mental health outcomes observed across age and gender groups within the transgender populations, there were serious mental health inequities faced by all transgender participants.

8.4 Research Question 2

To what degree is cisgenderism, in the form of enacted stigma, associated with mental health difficulties for transgender people? Can gender minority stress theory explain the negative effect of enacted stigma on the mental health outcomes of transgender people in Aotearoa/New Zealand?

Drawing from gender minority stress theory (Testa et al., 2015; see also Chapter 2), the study in Chapter 6 conceptualises the enacted stigma experiences (or the overt experiences of gender minority stress) of transgender people as the consequence of stigmatising social structures (i.e., cisgenderism) that delegitimise people who do not conform to cisnormative expectations of being a cisgender man or a cisgender woman

In this study, participants reported encountering a range of enacted stigma experiences because of the social non-acceptance of their genders, ranging from discrimination, unfair treatment, verbal harassment, cyberbullying, rejection by religious communities, and negative housing experiences, to being stopped from identifying as a transgender person by a health professional. Out of the 11 enacted stigma experiences that Chapter 6 investigated, a transgender person was likely to report being exposed to at least two of the enacted stigma experiences in their lifetime on average, with the most common experiences being discrimination based on gender (51%), being sent threatening messages through a phone or the internet (39%), and unfair treatment across various public settings such as public transport and retail stores (33%). The high rates of enacted stigma experiences that transgender

participants face in their daily lives have been documented in other New Zealand-based studies (Dickson, 2017; Human Rights Commission, 2008) and overseas (e.g., James et al., 2016; Rimes et al., 2019; Strauss et al., 2020a). A published report using the same empirical data (Veale et al., 2019) as the studies in Chapters 5, 6, and 7 found that transgender participants faced a heightened rate of a broad range of discrimination when compared to the Aotearoa/New Zealand general population (44% vs 17%), pointing toward a need to identify the impacts of these minority stressors on transgender people's mental health.

Findings from Chapter 6 suggested that enacted stigma experiences were strongly associated with all forms of mental health difficulties (i.e., psychological distress, NSSI, and suicidality) for transgender people in Aotearoa/New Zealand. A comparison of mental health outcomes for transgender participants with low and high levels of enacted stigma experiences revealed a substantially higher prevalence of mental health difficulties in the latter group. Specifically, participants who reported experiencing a high level of enacted stigma (at least five instances) had approximately 1.5 times increased likelihood of reporting very high levels of psychological distress (80% vs 55%), NSSI (65% vs 39%), and suicidal ideation (82% vs 66%), and most severely, a more than 4 times increased likelihood of attempting suicide (25% vs 6%) than those experiencing a low level of enacted stigma. These findings corroborated previous overseas studies that indicated that mental health difficulties experienced by transgender people were likely be due to the exposures to enacted stigma (e.g., Chen et al., 2019; Kuper et al., 2018; Strauss et al., 2020a; Treharne et al., 2020; Veale, Peter, et al., 2017).

8.5 Research Question 3

What are the protective factors that are important for the mental health of transgender people in Aotearoa/New Zealand? To what degree might protective factors mitigate against the negative effects of minority stress?

Given the high rates of mental health difficulties among transgender people in Aotearoa/New Zealand, the study in Chapter 6 also identified factors that could protect this population from mental health difficulties. Results from this study indicated that friend and family support, and neighbourhood belongingness, were associated with lower levels of psychological distress, and lower engagement in NSSI, suicidal ideation, and suicide attempts among transgender participants. Transgender community belongingness only appeared as a significant protective factor for psychological distress and suicidal ideation. Across all mental health variables, participants who had at least one high-level (90th percentile) protective factor were less likely to report mental health difficulties than those with low-level (10th percentile) protective factors. For example, Chapter 6's study found that rates of reporting very high levels of psychological distress were less than half for participants with high levels of friend and family support, and neighbourhood belongingness (37%) compared with those with low levels of these two protective factors (80%) when they were exposed to a high level of enacted stigma; this suggests that transgender people are less likely to experience psychological distress when they can rely on their friends, family members, and neighbours for social support.

When all protective factors were considered together, friend and family support appeared to show the greatest mental health benefits. Friend and family support was the strongest protective factor for suicide attempts, with the rate of suicide attempts almost half depending on whether participants had high or low levels of support from friends and family members (13% vs 25%). The beneficial role of friends and family members for transgender

people has also been demonstrated in previous overseas research (e.g., Fuller & Riggs, 2018; Puckett et al., 2019; Veale, Peter, et al., 2017; Weinhardt et al., 2019). Particularly, the finding of the relatively weak protective effect of the transgender community in this study aligned with a recent study in the United States that found transgender people had lower levels of depression and anxiety when they had access to friend and family support compared to those who only relied on their transgender peers for mental health support (Puckett et al., 2019).

8.6 Research Question 4

What do transgender people in Aotearoa/New Zealand describe as the most important determinants of their mental health?

The final study (Chapter 7) incorporated qualitative data with the aim of contextualising transgender people's experiences of mental health in Aotearoa/New Zealand. Using a critical realist framework, the qualitative analysis of responses to the open-text question: "Is there anything further about your mental health that you would like to share with us here?" focused on gaining a more nuanced understanding of the determinants that underpinned the mental health status of transgender people. An inductive thematic analysis of 222 open-text responses resulted in four themes: gender-affirming healthcare, mental healthcare services and accessibility, gender minority stress, and self-affirmation and social support. The following paragraphs describe the main findings of each theme

The first theme of this study pointed toward a need to consider the transgender experience of gender dysphoria as resulting from an inability to access gender-affirming healthcare, rather than from transgender people's own internal distress about their gender incongruence. Participants talked about the pathologising effect of the DSM that has been used to police gender normative behaviours and gatekeep transgender people's access to gender-affirming care. Cisgenderism was also prevalent in mental healthcare services, as

participants reported having to navigate through a system that has little knowledge about transgender issues and perpetuates practices that prevent them from affirming their genders. Other evidence of cisgenderism included enacted stigma experiences such as misgendering, sexual abuse, and bullying that participants experienced in public settings. Some also attributed their mental health to how people in their surroundings treated them as a transgender person, signalling that gender minority stress was the primary cause of their mental health issues.

It was apparent that participants could possess the ability to resist negative effects of enacted stigma when they had adequate access to social support systems such as friends and family members. Furthermore, participants who had undertaken paths (e.g., social, legal, or medical) to affirm their gender reported that they had enhanced mental health. Previous qualitative studies with transgender people noted the mental health benefits of embracing one's transgender identity as this would allow for the development of resilience strategies to manage enacted stigma (Singh et al., 2011; Singh et al., 2014). During the process of affirming one's gender, Singh et al. (2014) suggested that transgender people needed to have supportive networks such as mental healthcare professionals, community, and family members so that they could have specific conversations about how to define and embrace their gender in a positive way.

8.7 Significance of the Current Thesis

Results from the set of studies within this thesis have reinforced previous studies that adopt transgender-affirmative research approaches and have also produced new areas of insight. This section discusses the important theoretical and practical implications from the findings of these studies.

8.7.1 Contribution to Literature and Theory

The results of these empirical studies addressed a major gap in the literature which has not provided a comprehensive understanding of the mental health status of transgender people in Aotearoa/New Zealand. Compared to the Aotearoa/New Zealand general population, findings from Chapter 5 revealed large mental health inequities among transgender participants across all age groups, with the largest inequities reported for those of younger age groups. In concordance with the then-novel finding of age differences in the United States Transgender Survey (James et al., 2016), this study also showed that transgender youth had increased vulnerabilities to mental health difficulties compared to their adult and older adult counterparts. To the best of knowledge, only a few existing transgender studies controlled for the effect of age to understand mental health differences for various gender groups and there were no studies exploring gender differences across age groups. The significant finding of the interaction term between age and gender in Chapter 5's study highlighted a need to explore the effect of age when examining mental health differences for various gender groups of transgender people.

Increasing numbers of overseas studies (e.g., Brennan et al., 2017; Peng et al., 2019; Veale, Peter, et al., 2017) have employed gender minority stress theory to explain mental health inequities faced by transgender people, but Aotearoa/New Zealand-based studies exploring associations of enacted stigma and mental health among transgender people remain limited. The higher prevalence of poor general mental health, psychological distress, and diagnoses of depression and anxiety among transgender participants (compared to the Aotearoa/New Zealand general population) reported in Chapter 5 suggest a pressing need to employ an evidence-based model that seeks to advance understandings of transgender people's mental health in Aotearoa/New Zealand. While some overseas studies explored the negative mental health effects of gender minority stress (e.g., Lee et al., 2020; Mizock &

Mueser, 2014), they took an individualised approach and did not make reference to cisgenderism as the source of the marginalising climate for transgender people. In line with the recent critiques of minority stress theory (Riggs & Treharne, 2017; Treharne & Adams, 2017), the study in Chapter 2 moved away from the individualised approach of understanding transgender people's mental health by considering the additional social stressor that transgender people face resulting from institutionalised ideologies and social norms that stigmatise and marginalise this population. In doing this, Chapter 2 proposed a linkage of the notion of gender minority stress to cisgenderism (Ansara & Hegarty, 2012): the prejudice that marginalises people whose genders do not conform to cisnormative expectations (and privileges those who do) through the exposures of enacted stigma.

Because this thesis used enacted stigma measures specifically related to the experiences of being a transgender person, these experiences can be interpreted as the minority stressors related to cisgenderism (i.e., gender minority stress). The negative mental health effects of enacted stigma demonstrated in Chapter 6's study offered support for a transgender application of minority stress theory, as there were strong associations found between enacted stigma experiences and compromised mental health outcomes of transgender participants.

In line with gender minority stress theory (Testa et al., 2015), the study in Chapter 6 identified protective or stress-ameliorating factors that could confer protective effects for transgender people against the adverse mental health effects of enacted stigma. Quantitative analyses showed that protective factors at the interpersonal level (i.e., friend and family support, neighbourhood belongingness, and transgender community belongingness) were associated with lower levels of mental health difficulties. Notably, this study may be the first to explore the association between neighbourhood belongingness and transgender people's mental health. Neighbourhood belongingness appeared to show evidence for additional

mental health benefits on top of primary social ties (i.e., friends and family members), asserting the importance of providing opportunities for transgender people to foster positive interactions with their wider social circles.

The differences in mental health outcomes for the different protective factors discussed in Chapter 6 suggest a need to consider the nuances in the types of support that friends and family (primary social ties) and transgender communities (secondary social ties) offer (Thoits, 2011). Findings from this study support the postulation of gender minority stress theory (Meyer, 2003; Testa et al., 2015) that when transgender people connect with other transgender peers who have a history of similar experiences, a sense of unity and collective identity can be fostered which helps them to feel empowered against enacted stigma. On the other hand, friends and family members are people with whom transgender people can form emotional bonds (Thoits, 2011), and they play crucial roles in affirming transgender people's genders and instilling personal resilience to mitigate the negative mental health effects of enacted stigma (Bockting et al., 2013; Weinhardt et al., 2019).

While previous qualitative studies have researched transgender people's experiences with specific social determinants of health such as healthcare access (e.g., Alpert et al., 2017; Halliday & Caltabiano, 2020), and gender minority stress and protective factors (e.g., Howell & Allen, 2020; Singh et al., 2014), these studies have not specifically investigated the relationships between these determinants and mental health. Chapter 7 involved one of the largest qualitative studies in this area, analysing 222 open-text responses related to transgender people's reported mental health experiences. As part of these experiences, participants described a full range of determinants from biological, psychological, to structural and environmental contexts. Qualitative findings helped to illuminate the determinants that played key roles in influencing transgender people's mental health (i.e., gender-affirming care and mental healthcare access, cisgenderism and gender minority stress,

and social support) and these findings helped to uncover important practical implications (see Section 8.7.2).

8.7.2 Contribution to Applied Settings

In recent years, there have been a number of positive changes at structural level aimed at addressing inclusivity of transgender people in various social contexts of Aotearoa/New Zealand. This can be seen in specific settings such as:

1) education, acknowledging the need to support transgender youth in the guidelines for relationships and sexuality education (Ministry of Education, 2020);

2) healthcare, recognising a need to minimise barriers for transgender people to access gender-affirming care (Ministry of Health, 2020a);

3) legal, allowing transgender people to change their gender marker on passport and birth certificates[10] (Human Rights Commission, 2020).

These changes are important milestones that reflect increasing transgender inclusivity in Aotearoa/New Zealand; but these could not have been achieved without ongoing community activism at grassroots level (Clunie, 2018; Human Rights Commission, 2008; Treharne & Adams, 2017). Overseas studies have shown that inclusive changes at structural level (e.g., policies that allow easier access to change gender marker and name on identity documents) can act as a social determinant to improve the mental health of transgender people (Restar et al., 2020; White Hughto et al., 2015). However, there is still much work to be done to foster positive mental health outcomes for transgender people in Aotearoa/New Zealand. The next section discusses how the findings of this thesis will contribute to the

[10]At the time of writing, the Births, Deaths, Marriages, and Relationships Registration Act required people who wished to change their gender marker on their birth certificate to present medical evidence and apply to the Family Court for a declaration. Changing gender marker on passports, however, only required a simple statutory declaration.

development of both public and healthcare interventions for transgender people in Aotearoa/New Zealand.

Public Interventions. The findings of a high prevalence of poor general mental health, psychological distress, NSSI, and suicidality among transgender people, in Chapters 5 and 6, indicate an urgent need to name transgender people as a priority in all national and regional mental health policies in Aotearoa/New Zealand, as others have suggested (Clunie, 2018; Veale et al., 2019). A recent submission to the Government Inquiry into Mental Health and Addiction reported that very few national strategies have identified transgender people as a population with specific mental health needs; moreover, agencies that have recognised these issues have yet to develop plans to address mental health inequities for this population (Clunie, 2018). With the mounting empirical evidence related to gender minority stress and social determinants of transgender people from community-based studies in Aotearoa/New Zealand (Dickson, 2017; Fraser, 2020; Treharne et al., 2020; Veale et al., 2019; including this thesis), it is timely for targeted responses to be made to promote the mental health and wellbeing of this population.

Findings from Chapter 6 suggested both overt and covert forms of cisgenderist prejudices were common experiences for transgender participants with more than half (51%) reporting ever being discriminated because of their gender and the Counting Ourselves report showed that 44% had experienced a broad range of discrimination in the last 12 months (Veale et al., 2019). To date, there are no national-level policies that provide explicit legal protection from discrimination with regard to gender identity and expression (Human Rights Commission, 2020). Although the current prohibition of discrimination on the grounds of sex under the Human Rights Act 1993 is thought to be applicable for transgender people, this has not been tested in New Zealand courts (Employment New Zealand, n.d.). The high rates of enacted stigma experiences, including discrimination, reported in Chapter 6's study point

toward an urgent need to implement inclusive national legislation to safeguard the human rights of transgender people in Aotearoa/New Zealand. Previous research examining transgender people's experiences with the inclusion of non-discriminatory practices in national legislation suggested that legal protection could do more than preventing transgender people from experiencing enacted stigma, but also provide recognition and legitimacy of their lived experiences to further enhance mental health and wellbeing (Gleason et al., 2016; White Hughto et al., 2015). For instance, a study in the United States found that transgender people residing in states with specific non-discrimination laws on the basis of transgender identities had lower rates of suicide attempts than those who did not (Gleason et al., 2016).

Chapter 6 also highlighted the importance of protective factors (friends, family members, neighbours, and transgender communities) in promoting the mental health of transgender people. Given the potential mental health benefits of protective factors for transgender people, efforts to provide educational information to those in the primary and secondary social ties of transgender people about how to be supportive of this population are warranted. Overseas studies have also found that transgender people who were supported by peers, family members, and communities were less likely to be affected by the negative effects of enacted stigma (Barr et al., 2016; Puckett et al., 2019). However, existing training and resources on the provision of trans-specific support outside school settings continue to be limited in Aotearoa/New Zealand, as these resources are mostly managed by rainbow and transgender community organisations centred around youth. As suggested by Clunie (2018), there is a need to provide a sustainable funding source to support the work of the transgender community organisations, and, in this case, expand the availability of resources and training about understandings of transgender-specific needs to universities, workplaces, and healthcare settings.

Healthcare Intervention. Due to the large mental health inequities that transgender participants experience, as demonstrated in the findings of Chapter 5, it is not surprising that this population is more likely to require access to mental healthcare services. However, the qualitative study in Chapter 7 revealed that participants experience a range of barriers with respect to accessing public mental healthcare services and transgender-led wellbeing initiatives, supporting the call of other Aotearoa/New Zealand studies (Clunie, 2018; Fraser, 2020) to increase funding to improve accessibility to these services. In the Budget 2019, the government announced the allocation of approximately $3 million over 4 years to improve the capability of health sectors in delivering gender-affirming surgeries (Ministry of Health, 2020b). This additional funding to improve access to gender-affirming surgeries has been celebrated by transgender communities in Aotearoa/New Zealand, and especially by transgender people who have been in the waiting list to access these surgeries for years (Daly, 2019). Through qualitative findings in Chapter 7, it was apparent that participants perceived access to gender-affirming care as a social determinant of mental health, as those who wished to undertake gender-affirming surgeries and had the opportunity to do so, reported better mental health and wellbeing.

Echoing findings from a recent Aotearoa/New Zealand study (Fraser, 2020), as well as overseas studies (e.g., Alpert et al., 2017; Ellis et al., 2015; Halliday & Caltabiano, 2020) that surveyed transgender people on their experiences with healthcare services, the study in Chapter 7 also reported low trans-cultural competency among healthcare professionals. Indeed, the Counting Ourselves report (Veale et al., 2019) showed that 42% of transgender participants thought that their healthcare provider knew very little or only knew about some aspects of transgender healthcare. Likewise, when staff at two Aotearoa/New Zealand-based medical schools were surveyed, the majority (87%) had concerns that very little to no content relating to sexuality or gender diversity was incorporated into the curriculum (Taylor et al.,

2018). Insufficient education on transgender healthcare may translate into a lack of knowledge of the unique experiences related to gender minority stress that transgender people encounter and how these experiences influence mental health vulnerability, as well as their ability to access and engage in healthcare effectively.

It is also important for health professionals to be prudent when considering the health needs of transgender clients and not assume that the reasons for consultation are distress surrounding gender incongruences (APA, 2013), as noted in the diagnosis of gender dysphoria in DSM-5 (APA, 2013). The DSM has long served as a gatekeeping model to permit access to gender-affirming services in Aotearoa/New Zealand (Counties Manukau District Health Board, 2011) and overseas (Ellis et al., 2015; Schulz, 2018). As indicated in Chapter 7's study, participants found the listing of gender dysphoria as a diagnostic category in the DSM problematic. Overseas studies also reported that a reliance on the DSM among health professionals when interacting with transgender people in healthcare settings risks pathologising their genders and reinforcing a binary gender framework (Ellis et al., 2015; Halliday & Caltabiano, 2020). In 2018, Oliphant et al., a multidisciplinary group of health professionals developed a guideline document for the provision of gender-affirming care in Aotearoa/New Zealand, and they recommended the informed consent model as an alternative to the DSM , with health professionals working alongside transgender people to present them with information about the risks and benefits of undertaking gender-affirming medical procedures. Self-determination for transgender people is prioritised in the informed consent model, and mental health assessment is considered an *option* rather than a *prerequisite* for access to gender-affirming procedures (Oliphant et al., 2018; Schulz, 2018).

Exposures to gender identity conversion efforts (GICE) that discourage transgender people from affirming their gender were noted in the qualitative findings of Chapter 7; about one-sixth (17%) of Counting Ourselves participants reported experiencing GICE at healthcare

settings (Veale et al., 2019). A recent report looking into the legal status of GICE and sexual orientation conversation efforts found that only four countries had fully banned such practices (e.g., Brazil, Taiwan, Malta, and Ecuador), 10 countries had policies or a partial ban in place (including the United States and Canada), and 10 countries had movements towards a ban (e.g., Australia and the United Kingdom; OutRight Action International, 2019). Although a movement that included petitions and bill drafting to outlaw GICE practices in Aotearoa/New Zealand began in 2019 (Conversion Therapy Action, n.d.), these practices are still legal at present. Nonetheless, GICE efforts targeted towards transgender people in Aotearoa/New Zealand have been publicly denounced by professional organisations such as the New Zealand Psychological Society (2019) and Professional Association for Transgender Health Aotearoa (2020), as well as being reflected in the ethos and public positions of these organisations.

The transgender-affirmative stance demonstrated in this thesis is also shared by the recently developed Aotearoa/New Zealand-based mental health and gender-affirming resources for health professionals (see Fraser, 2019; Oliphant et al., 2018). Particularly, empirical findings from this thesis supported the recommendations made by a community-based study, undertaken in collaboration with community organisations such as RainbowYOUTH and Gender Minorities Aotearoa (Fraser, 2020), to upskill health professionals in the area of trans-cultural competence in responding to the increasing health needs of the transgender population in Aotearoa/New Zealand. Recommendations to ensure health professionals are sensitive and inclusive to the health needs of transgender people are not unique to Aotearoa/New Zealand, as similar suggestions have also been made in overseas research on transgender people's experiences with healthcare settings (e.g., Ellis et al., 2015; Halliday & Caltabiano, 2020; Zwickl et al., 2019).

8.8 Strengths and Limitations

This thesis provides a range of useful and interesting insights into mental health experiences of transgender people in Aotearoa/New Zealand. However, there are some limitations that need to be borne in mind. To date, the Counting Ourselves survey represents the largest community-based nationwide survey (*n* = 1,178) that investigates various health statuses and social determinants of transgender people in Aotearoa/New Zealand. Counting Ourselves had a convenience sample that was made up of participants who chose to complete the paper survey and link to the study website to complete the study instruments. Sampling through online platforms allows easier access to a large number of transgender people, including those who are in stealth or not "out" (Miner et al., 2012), and this sampling method has allowed the recruitment of transgender samples large enough for examinations of mental health differences and essential mental health determinants for transgender people across age, gender and ethnic groups in this thesis. This type of sampling, however, risks excluding transgender people without reliable internet access, and those who do not have connections with transgender communities. Compared to probability sampling, the Counting Ourselves survey is unlikely to have recruited a nationally representative sample that is generalisable to the wider population in Aotearoa/New Zealand.

Although multiple recruitment strategies were employed to garner more responses from transgender people in older age groups, rural regions, and Pasifika and Asian ethnic groups, the Counting Ourselves survey had relatively higher numbers of participants who were younger, living in urban regions like Auckland and Wellington, and of Pākehā/New Zealand European descent. The degree of representativeness of the Counting Ourselves sample to the transgender population in Aotearoa/New Zealand is uncertain as there are no existing population-based studies that collect data on transgender identities in this country. However, clinical-based research in Aotearoa/New Zealand found a relatively lower

proportion of older transgender people accessing gender-affirming care (Delahunt et al., 2016), and the younger demographic profile of transgender people was also reported in a recent population-based study in the United States (Crissman et al., 2019).

Another limitation is the use of single items in measuring participants' access to protective factors in Chapter 6 which restricts the assessment of psychometric properties of these items. Multiple-item measures are generally considered superior to single-item measures for two reasons: 1) theoretical, they allow measurements of various facets underlying a construct; and 2) statistical, more items will allow the random error of the measurement to be cancelled out and therefore result in more reliable scores (see de Boer et al., 2004; Wilkerson et al., 2016). Participants dropping out of the survey can be an issue with studies that primarily recruit participants via online platforms (Miner et al., 2012), especially for large surveys with 330 questions, like the Counting Ourselves survey. Therefore, the use of single-item measures in various sections of the survey was necessary to achieve a high rate of completed responses as they are easier to administer and less burdensome for participants; this meant that 70% of those who provided valid responses in the initial demographics section of Counting Ourselves completed the final section of the survey. Furthermore, an assessment on the use of single-item measures in Chapter 6 to identify participants' level of social support and degree of belongingness judged these items to have a good face validity (i.e., the items are valid for conveying the content on the surface level). These single-item measures were also likely to have good content validity as these items were used by researchers of Aotearoa/New Zealand population-based surveys such as New Zealand General Social Survey (Statistics New Zealand, 2016) and New Zealand Mental Health Survey (Health Promotion Agency, 2016). The additional items that were created as part of the Counting Ourselves survey had also benefited from inputs from experts in survey research and the transgender community advisory group (see Chapter 4). Given the differences in mental

health outcomes for these protective factors for transgender participants (see Chapter 6), future research could benefit from including measures that investigate the mental health benefits of specific primary and secondary social ties.

The cross-sectional design of the Counting Ourselves survey limits the ability to explore mental health effects of enacted stigma over time; a longitudinal design is required to establish such temporal precedence. While the correlational findings of the study in Chapter 6 do not offer the possibility of determining a definitive causal link between enacted stigma and mental health outcomes, they indicate strong and clear correlations. In this study, analyses were carried out to measure the associations between *lifetime* enacted stigma experiences and *recent* occurrences of mental health problems (i.e., psychological distress in the past month, and NSSI and suicidality in the past year). Therefore, the reported enacted stigma experiences have temporal precedence, meaning that they are likely to have occurred before participants' experiences of mental health difficulties; this favours the gender minority stress explanation as the cause of poor mental health outcomes of transgender people rather than the alternative explanation of mental health difficulties leading to experiences of enacted stigma.

8.9 Future Directions

Future research could broaden the findings of this study by considering the following points. The study in Chapter 5 provided essential findings on age as an important demographic factor in determining mental health outcomes of transgender people. Future transgender research should consider employing a life-course perspective (Fredriksen-Goldsen et al., 2014) to identify the degree of aging effects (changes in mental health as people age), maturation effects (development of resilience and coping skills to counteract gender minority stress), and cohort effects (historical and social contexts that are relevant to specific age groups) in explaining mental health differences across age groups (Fredriksen-Goldsen et al., 2014; Nuttbrock et al., 2012). Specifically, the analyses of different

components of life-course perspectives can be achieved by using repeated measure to follow transgender participants over a prolonged period of time in a longitudinal survey.

A decision was made to only explore age and gender differences in participants' mental health in Chapter 5 as there were no statistically significant differences found for other demographic variables (i.e., ethnicity or regions) in the preliminary analyses (see Veale et al., 2019). As indicated in Chapter 3, it is important to keep in mind that the transgender population in Aotearoa/New Zealand includes a diverse array of people who are also members of other oppressed or marginalised groups with varying levels of social power and influence (e.g., transgender people who are Māori or from other indigenous or other non-Pākehā groups, and/or with a disability). Chapter 2 and 3 also noted that the intersectionality of multiple minority (and privileged) identities has been largely unaddressed in the existing transgender research, which may be due to quantitative methods being limited in their abilities to encapsulate the complexities of lived experiences for those subjected to various axes of marginalisation (Bauer & Scheim, 2019). The general dearth of empirical research on the mental health experiences of transgender people with intersecting identities, as well as the contradictory findings from research using additive approaches to understand the mental health of transgender people of various ethnic groups (e.g., Chiang et al., 2017; Lytle et al., 2016), indicate the need for more research on this topic that is contextually relevant to Aotearoa/New Zealand.

A recent qualitative study on fa'afafine and fakaleiti students in Aotearoa/New Zealand (Howell & Allen, 2020) highlighted that these students share unique Samoan and Tongan cultural experiences that are often not represented in studies with a predominant Pākehā sample (e.g., Youth'12; Clark et al., 2014). To expand on the quantitative findings of the present research, future studies can model Jefferson and colleagues' (2013) research in the United States to examine the combined experiences of racism and cisgenderism on the

mental health of non-Pākehā transgender people. Specifically, Jefferson and colleagues created a combined measure of racism and cisgenderism based on two separate scales (13-item Schedule of Racist Events and 13-item Schedule of Transphobic Events) that asked these respective experiences among ethnic minority transgender people. When compared mental health outcomes across different exposures of racism and cisgenderism, this United States study found participants who experienced both forms of prejudices had higher level of depression than those experiencing only one form of prejudices. Findings from Jefferson and colleagues point toward a need to examine how multiple (and intersecting) prejudices affect the mental health of transgender people with various minority identities; this is pertinent in the multicultural context of Aotearoa/New Zealand as such fundings can be used to inform designing of mental health interventions that is culturally appropriate for each minority group.

The use of gender minority stress theory in Chapter 6 has primarily focused on minority stressors at a distal level. To create a comprehensive model that delineates the path from enacted stigma to elevated rates of mental health difficulties among transgender people, future research could expand on the work of gender minority stress theory to examine the mediating role of proximal stressors (e.g., negative expectations of enacted stigma and internalised transphobia) and general psychological processes (e.g., appraisals, coping, and emotional regulation; Hatzenbuehler, 2009; Testa et al., 2015). Previous studies that looked at transgender people's experience of gender minority stress at an individual level have provided useful evidence to inform clinical practice and interventions in alleviating the negative effects of proximal stressors (e.g., Lee et al., 2020; Scandurra et al., 2018). Gender minority stress should not be considered as purely resulting from personal internalisation of stigma, however. It is important to employ the framework of gender minority stress theory (see Chapter 2) that recognises the environmental circumstances within which transgender

people are embedded and that cisgenderism is the source of proximal stressors among transgender people.

Findings from Chapter 7 found evidence for healthcare access as an important social determinant of mental health for transgender people in Aotearoa/New Zealand. While there are extensive overseas transgender studies documenting issues related to access to gender-affirming healthcare and mental healthcare services such as high unmet need (e.g., Giblon & Bauer, 2017; White Hughto et al., 2017), lack of transgender-competent healthcare services (e.g., Ellis et al., 2015; Halliday & Caltabiano, 2020) and enacted stigma at healthcare services (e.g., Ellis et al., 2015; Kattari & Hasche, 2016), most of these studies have not specifically examined the implications of these barriers for the mental health of transgender people. Only one US transgender study was noted to explore the mental health benefits of having a positive interaction with healthcare providers (see Kattari et al., 2020). Aotearoa/New Zealand research on healthcare access of transgender people remains scant. Similar to findings in Chapter 7, a qualitative study of 4 transgender people in Wellington (Ker et al., 2020) reported the importance for the provision of gender-affirming care to be accessible, timely, and friendly to clients. Keeping in mind that transgender people in Aotearoa/New Zealand commonly reported unmet need for gender-affirming care and low trans competency of healthcare providers (Veale et al., 2019), there is a need for future research to fill in the critical gaps in quantitative findings on the relationship between the provision of trans-competent healthcare services and transgender people's mental health.

The Youth'12 study (Clark et al., 2014) was the first national study to examine the mental health of transgender people in this country; however, this population-based study only recruited adolescents who were attending high schools. Another study that recruited transgender people via probability sampling was the New Zealand Mental Health Monitor (NZMHM; Health Promotion Agency, 2019). While the NZMHM expanded from the

Youth'12 study by also recruiting transgender adults and older adults, this study only reported mental health findings based on a sample of rainbow people (including lesbian, gay, bisexual, transgender, and takatāpui) due to the small sample size (Health Promotion Agency, 2019). The small sample size of transgender people in the NZMHM could be due to the usage of a single-item measure "What gender do you identify with?" to determine transgender identities (see Chapter 3 for an elaboration of the limitations). The large mental health inequities reported for transgender people in Chapter 5 suggest that there is an urgent need for government agencies (e.g., Statistics New Zealand) to develop inclusive measures to identify transgender people and monitor the mental health status of this population in large-scale population-based studies such as the Census and New Zealand Health Survey. The two-step method (i.e., asking participants' sex assigned at birth and current gender identification) has been used in the 2019/2020 Household Economic Survey (Statistics New Zealand, 2020c) and recommended as part of the consultation process for the latest proposed Statistics New Zealand's Sex and Gender Standards (Statistics New Zealand, 2020c) to identify the number of transgender people; however, the latest proposed standard has noted a need to improve the clarity and specificity of the concepts used when asking these questions (Statistics New Zealand, 2020c).[11] Transgender status needs to be routinely and consistently assessed in population-based surveys to provide precise population estimates of the demography of transgender people in Aotearoa/New Zealand. Findings from this research, as well as the Counting Ourselves study (Veale et al., 2019) have provided crucial empirical data on health inequities, enacted stigma, and barriers to access social determinants (e.g., employment, healthcare services, and social support) for transgender people in Aotearoa/New

[11]During July and August 2020, Statistics New Zealand conducted a public consultation for the review of the statistical standards for sex and gender identity, with the aim to develop the best practice guidance for collecting information on these topics across government agencies. At the time of writing, the findings of the review have yet been released.

Zealand. These data can help to provide information to population-based surveys (e.g., New Zealand Health Survey) to consider the use of similar questions to measure the extent of inequities across a range of health outcomes affecting transgender people in this country.

The cross-sectional results from this thesis and the wider Counting Ourselves project (Veale et al., 2019) provide important preliminary findings to inform future longitudinal studies. With the aspiration to become a longitudinal survey series, the Counting Ourselves survey collected identifying information that is well-known to participants—their day of birth and first two initials of their first pet—to generate of a set of unique codes for each participant. These self-generated identification codes allow survey responses to be identified and compared between separate timeframes. By following up transgender participants over time, statistical analyses can be carried out to provide further evidence of the causal relationship between enacted stigma and mental health outcomes, as well as to identify the ameliorating effects of protective factors on negative mental health outcomes.

8.10 Final Conclusion

The broad aim of this research was to uncover the extent of mental health inequities among transgender people in Aotearoa/New Zealand, examine the degree of associations of enacted stigma as gender minority stressors, and protective factors with mental health outcomes, and identify mental health determinants that are salient for this population. Drawing on data from the largest community-based study of transgender people in Aotearoa/New Zealand to date—the 2018 Counting Ourselves survey—this research showed that transgender people experienced significant mental health inequities across all age groups, with the largest inequities found among youth.

Informed by gender minority stress theory, empirical studies of this thesis established a number of determinants that contributed to the mental health outcomes of transgender people in Aotearoa/New Zealand. For instance, participants reported a wide range of

experiences of enacted stigma due to being transgender, such as discrimination, unfair treatment, harassment, and violence, and quantitative analyses revealed those with high exposure to enacted stigma experiences had a higher prevalence of psychological distress, NSSI, and suicidality. Factors that predicted a lower prevalence of mental health difficulties for participants were social support from friends, family members, neighbours, and transgender communities. In particular, friend and family support appeared to show the greatest association with better mental health in both contexts of high and low enacted stigma exposures, and was the only factor found to be essential in reducing the risk of attempting suicide. Participants' qualitative responses also illuminated important mental health determinants for transgender people in Aotearoa/New Zealand such as the ability to affirm their gender, equitable access to gender-affirming care and mental healthcare services, and support from family and the wider community. However, participants reported that their access to the social determinants of mental health were restricted by cisgenderism, which discredited their lived experiences, and by health professionals in mental healthcare and gender-affirming care settings who had little knowledge about transgender issues.

Both quantitative and qualitative findings in this thesis evinced gender minority stress theory to be a crucial explanatory framework in explaining the high prevalence of mental health difficulties among transgender people in Aotearoa/New Zealand. Based on a transgender-affirmative approach, this research supports the application of gender minority stress theory, which has an emphasis on the negative mental health consequences of enacted stigma exposures. The health equity perspective is crucial to the empowerment of transgender people as it recognises cisgenderism as the root cause of mental health inequities among transgender people, rather than associating transgender people's elevated rate of mental health problems with mental distress resulting from gender dysphoria.

The results of this research have highlighted important social determinants for transgender people in Aotearoa/New Zealand to achieve mental health equities. Targeting these determinants at interpersonal (e.g., family, community, and public settings) and structural (e.g., school, healthcare, and policies) levels is of particular importance to reduce the risk of transgender people manifesting poor mental health outcomes. Findings of this thesis have contributed to the growing field of transgender-affirmative health research, both nationally and internationally. With the increasing literature that utilises a health equity perspective to examine social determinants for transgender people, it is anticipated that there will be an increased awareness of the ways in which the mental health inequities affecting transgender people are related to marginalising social environments, and that policy makers across different countries will take action to address this issue.

References (Chapters 1, 4, and 8)

Adams, N., Pearce, R., Veale, J., Radix, A., Castro, D., Sarkar, A., & Thom, K. C. (2017). Guidance and ethical considerations for undertaking transgender health research and institutional review boards adjudicating this research. *Transgender Health, 2*(1), 165–175. https://doi.org/10.1089/trgh.2017.0012

Alexeyeff, K., & Besnier, N. (2014). Gender on the edge: Identities, politics, transformations. In N. Besnier & K. Alexeyeff (Eds.), *Gender on the edge: Transgender, gay, and other Pacific Islanders* (pp. 1–30). University of Hawai'i Press.

Alpert, A. B., CichoskiKelly, E. M., & Fox, A. D. (2017). What lesbian, gay, bisexual, transgender, queer, and intersex patients say doctors should know and do: A qualitative study. *Journal of Homosexuality, 64*(10), 1368–1389. https://doi.org/10.1080/00918369.2017.1321376

American Psychiatric Association. (1952). *Diagnostic and statistical manual of mental disorders*. American Psychiatric Publishing.

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). American Psychiatric Publishing.

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed.). American Psychiatric Publishing.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). American Psychiatric Publishing.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). American Psychiatric Publishing.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist, 70*(9), 832–864. https://doi.org/10.1037/a0039906

Anderssen, N., Sivertsen, B., Lønning, K. J., & Malterud, K. (2020). Life satisfaction and mental health among transgender students in Norway. *BMC Public Health, 20*(1), 138. https://doi.org/10.1186/s12889-020-8228-5

Ansara, Y. G. (2010). Beyond cisgenderism: Counselling people with non-assigned gender identities. In L. Moon (Ed.), *Counselling ideologies: Queer challenges to heteronormativity* (pp. 167–200). Ashgate.

Ansara, Y. G., & Hegarty, P. (2012). Cisgenderism in psychology: Pathologising and misgendering children from 1999 to 2008. *Psychology & Sexuality, 3*(2), 137–160. https://doi.org/10.1080/19419899.2011.576696

Aparicio-García, M. E., Díaz-Ramiro, E. M., Rubio-Valdehita, S., López-Núñez, M. I., & García-Nieto, I. (2018). Health and well-being of cisgender, transgender and non-binary young people. *International Journal of Environmental Research & Public Health, 15*(10), 2133–2144. https://doi.org/10.3390/ijerph15102133

Ashley, F. (2019). The misuse of gender dysphoria: Toward greater conceptual clarity in transgender health. *Perspectives on Psychological Science*. Advance online publication. https://doi.org/10.1177/1745691619872987

Australian Human Rights Commission. (n.d.). *Transgender*. https://humanrights.gov.au/quick-guide/12104

Baker, D., Durr, P., & Scott, P. (2016). *Youth chances: Integrated report*. Metro Charity.

Bariola, E., Lyons, A., Leonard, W., Pitts, M., Badcock, P., & Couch, M. (2015). Demographic and psychosocial factors associated with psychological distress and

resilience among transgender individuals. *American Journal of Public Health, 105*(10), 2108–2116. https://doi.org/10.2105/AJPH.2015.302763

Barr, S. M., Budge, S. L., & Adelson, J. L. (2016). Transgender community belongingness as a mediator between strength of transgender identity and well-being. *Journal of Counseling Psychology, 63*(1), 87–97. https://doi.org/10.1037/cou0000127

Bauer, G., Pyne, J., Francino, M., & Hammond, R. (2013). Suicidality among trans people in Ontario: Implications for social work and social justice. *Service Social, 59*(1), 35–62. https://doi.org/https://doi.org/10.7202/1017478ar

Bauer, G. R., & Scheim, A. I. (2019). Advancing quantitative intersectionality research methods: Intracategorical and intercategorical approaches to shared and differential constructs. *Social Science & Medicine, 226*, 260–262. https://doi.org/https://doi.org/10.1016/j.socscimed.2019.03.018

Bennett, S. T., & Liu, J. H. (2018). Historical trajectories for reclaiming an indigenous identity in mental health interventions for Aotearoa/New Zealand—Māori values, biculturalism, and multiculturalism. *International Journal of Intercultural Relations, 62*, 93–102. https://doi.org/https://doi.org/10.1016/j.ijintrel.2017.05.005

Bhaskar, R. (1997). *A realist theory of science* (2nd ed.). Verso.

Bockting, W., Miner, M., Romine, R., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of the US transgender population. *American Journal of Public Health, 103*(5), 943–951. https://doi.org/10.2105/AJPH.2013.301241

Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2020). The online survey as a qualitative research tool. *International Journal of Social Research Methodology*. Advance online publication. https://doi.org/10.1080/13645579.2020.1805550

Breen, L. J., & Darlaston-Jones, D. (2010). Moving beyond the enduring dominance of positivism in psychological research: Implications for psychology in Australia. *Australian Psychologist, 45*(1), 67–76. https://doi.org/10.1080/00050060903127481

Brown-Acton, P. (2014). *Strengthening solutions for Pasefika Rainbow.* Keynote speech presented at GPS 2.0 Growing Pacific Solutions for our communities national Pacific conference, Auckland, New Zealand. https://www.leva.co.nz/uploads/files/resources/strengthening-solutions-for-pasefika-rainbow.pdf

Castro-Peraza, M. E., García-Acosta, J. M., Delgado, N., Perdomo-Hernández, A. M., Sosa-Alvarez, M. I., Llabrés-Solé, R., & Lorenzo-Rocha, N. D. (2019). Gender identity: The human right of depathologization. *International Journal of Environmental Research and Public Health, 16*(6), 978. https://doi.org/10.3390/ijerph16060978

Chen, R., Zhu, X., Wright, L., Drescher, J., Gao, Y., Wu, L., Ying, X., Qi, J., Chen, C., Xi, Y., Ji, L., Zhao, H., Ou, J., & Broome, M. R. (2019). Suicidal ideation and attempted suicide amongst Chinese transgender persons: National population study. *Journal of Affective Disorders, 245*, 1126–1134. https://doi.org/10.1016/j.jad.2018.12.011

Clark, T. C., Fleming, T., Bullen, P., Denny, S., Crengle, S., Dyson, B., Fortune, S., Lucassen, M., Peiris-John, R., Robinson, E., Rossen, F., Sheridan, J., Teevale, T., & Utter, J. (2012). *Youth'12 Overview: The health and wellbeing of New Zealand secondary school students in 2012*. University of Auckland.

Clark, T. C., Lucassen, M. F. G., Bullen, P., Denny, S. J., Fleming, T. M., Robinson, E. M., & Rossen, F. V. (2014). The health and well-being of transgender high school students: Results from the New Zealand Adolescent Health Survey (Youth'12). *Journal of Adolescent Health, 55*(1), 93–99. https://doi.org/10.1016/j.jadohealth.2013.11.008

Clunie, M. (2018). *Rainbow communities, mental health and addiction: A submission to the Government Inquiry into Mental Health and Addiction – Oranga Tāngata, Oranga Whānau*. https://www.mentalhealth.org.nz/assets/Our-Work/policy-advocacy/Rainbow-communities-and-mental-health-submission-to-the-Inquiry-into-Mental-Health-and-Addiction-08062018.pdf

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.

Coleman, E., Bockting, W., Botzer, M., Cohen-Kettenis, P., DeCuypere, G., Feldman, J., Fraser, L., Green, J., Knudson, G., Meyer, W. J., Monstrey, S., Adler, R. K., Brown, G. R., Devor, A. H., Ehrbar, R., Ettner, R., Eyler, E., Garofalo, R., Karasic, D. H., . . . Zucker, K. (2012). Standards of care for the health of transsexual, transgender, and gender-nonconforming people, Version 7. *International Journal of Transgenderism, 13*(4), 165–232. https://doi.org/10.1080/15532739.2011.700873

Collins, S. (2012, December 5). X marks the spot on passport for transgender travellers. *New Zealand Herald.* https://www.nzherald.co.nz/nz/news/article .cfm?c_id=1&objectid=10852012

Conversion Therapy Action. (n.d.). *End conversion therapy in Aotearoa/New Zealand*. https://www.facebook.com/conversiontherapyaction

Couch, M., Pitts, M., Mulcare, H., Croy, S., Mitchell, A., & Patel, S. (2007). *TranZnation: A report on the health and wellbeing of transgender people in Australia and New Zealand*. Australian Research Centre in Sex, Health & Society.

Counties Manukau District Health Board. (2011). *Gender reassignment health services for trans people within New Zealand*. Ministry of Health.

Crissman, H. P., Stroumsa, D., Kobernik, E. K., & Berger, M. B. (2019). Gender and frequent mental distress: Comparing transgender and non-transgender individuals' self-rated

mental health. *Journal of Women's Health, 28*(2), 143–151. https://doi.org/10.1089/jwh.2018.7411

Cruickshank, J. (2012). Positioning positivism, critical realism and social constructionism in the health sciences: a philosophical orientation. *Nursing Inquiry, 19*(1), 71–82. https://doi.org/10.1111/j.1440-1800.2011.00558.x

Daly, M. (2019, May 31). Rainbow Youth welcome Government funding for gender affirming surgery. *Stuff.* https://www.stuff.co.nz/national/politics/113159788 /rainbow-youth-welcome-government-funding-for-gender-affirming-surgery

Danermark, B., Ekstrom, M., Jakobsen, L., Karlsson, J. C., & Bhaskar, P. R. (2002). *Explaining society: An introduction to critical realism in the social sciences*. Routledge.

Davy, Z. (2015). The DSM-5 and the politics of diagnosing transpeople. *Archives of Sexual Behavior, 44*(5), 1165–1176. https://doi.org/10.1007/s10508-015-0573-6

Davy, Z., & Toze, M. (2018). What is gender dysphoria? A critical systematic narrative review. *Transgender Health, 3*(1), 159–169. https://doi.org/10.1089/trgh.2018.0014

de Boer, A., van Lanschot, J., Stalmeier, P., van Sandick, J., Hulscher, J., de Haes, J., & Sprangers, M. (2004). Is a single-item visual analogue scale as valid, reliable and responsive as multi-item scales in measuring quality of life? *Quality of Life Research, 13*(2), 311–320. https://doi.org/10.1023/B:QURE.0000018499.64574.1f

Decorte, T., Malm, A., Sznitman, S. R., Hakkarainen, P., Barratt, M. J., Potter, G. R., Werse, B., Kamphausen, G., Lenton, S., & Asmussen Frank, V. (2019). The challenges and benefits of analyzing feedback comments in surveys: Lessons from a cross-national online survey of small-scale cannabis growers. *Methodological Innovations, 12*(1), 1–16. https://doi.org/10.1177/2059799119825606

Delahunt, J. W., Denison, H. J., Kennedy, J., Hilton, J., Young, H., Chaudhri, O. B., & Elston, M. S. (2016). Specialist services for management of individuals identifying as transgender in New Zealand. *New Zealand Medical Journal, 129*(1434), 49–58.

dickey, l. m., & Budge, S. L. (2020). Suicide and the transgender experience: A public health crisis. *American Psychologist, 75*(3), 380–390. https://doi.org/10.1037/amp0000619

Dickson, S. (2017). *Trans and gender diverse responses: Building Rainbow communities free of partner and sexual violence*. Hohou Te Rongo Kahukura: Outing Violence.

Durie, M. (1999). Te Pae Mahutonga: A model for Māori health promotion. *Health Promotion Forum of New Zealand Newsletter, 49*.

Durie, M. (2004). An Indigenous model of health promotion. *Health Promotion Journal of Australia, 15*(3), 181–185. https://doi.org/10.1071/HE04181

Durie, M. H. (1985). A Maori perspective of health. *Social Science & Medicine, 20*(5), 483–486. https://doi.org/10.1016/0277-9536(85)90363-6

Eisenberg, M. E., Gower, A. L., McMorris, B. J., Rider, G. N., Shea, G., & Coleman, E. (2017). Risk and protective factors in the lives of transgender/gender nonconforming adolescents. *Journal of Adolescent Health, 61*(4), 521–526. https://doi.org/https://doi.org/10.1016/j.jadohealth.2017.04.014

Ellis, S. J., Bailey, L., & McNeil, J. (2015). Trans people's experiences of mental health and gender identity services: A UK study. *Journal of Gay & Lesbian Mental Health, 19*(1), 4–20. https://doi.org/10.1080/19359705.2014.960990

Ellis, S. J., Bailey, L., & McNeil, J. (2016). Transphobic victimisation and perceptions of future risk: a large-scale study of the experiences of trans people in the UK. *Psychology & Sexuality, 7*(3), 211–224. https://doi.org/10.1080/19419899.2016.1181669

Ellis, S. J., Riggs, D. W., & Peel, E. (2020). *Lesbian, Gay, Bisexual, Trans, Intersex, and Queer Psychology: An introduction (second edition)*. Cambridge University Press.

Employment New Zealand. (n.d.). *Discrimination against transgender people*. https://www.employment.govt.nz/resolving-problems/types-of-problems/bullying-harassment-and-discrimination/discrimination-against-transgender-people/

Enders, C. K. (2003). Using the expectation maximization algorithm to estimate coefficient alpha for scales with item-level missing data. *Psychological Methods, 8*(3), 322–337. https://doi.org/10.1037/1082-989X.8.3.322

Farran, S. (2010). Pacific perspectives: Fa'afafine and Fakaleiti in Samoa and Tonga: People between worlds. *Liverpool Law Review, 31*(1), 13–28. https://doi.org/10.1007/s10991-010-9070-0

Fenaughty, J. J., Fleming, T., Ker, A., Greaves, L., Lucassen, M. C., Archer, D., & Clark, T. C. (in press). *Initial findings: Sexuality and gender diversity*. The University of Auckland and Victoria University of Wellington.

Feu'u, P. J. (2017). A comparative study of the fa'afafine of Samoa and the whakawahine of Aotearoa New Zealand. In E. Hazenberg & M. Meyeroff (Eds.), *Representing trans: Linguistic, legal and everyday perspectives* (pp. 171–203). Victoria University Press.

Flores, A. R., Herman, J. L., Gates, G. J., & Brown, T. N. T. (2016). *How many adults identify as transgender in the United States?* The Williams Institute.

Fraser, G., Shields, J. K., Brady, A., & Wilson, M. S. (2018). The postcode lottery: Gender-affirming healthcare provision across New Zealand's District Health Boards. *OSF Preprints*. https://osf.io/f2qkr

Fraser, G. (2019). *Supporting Aotearoa's rainbow people: A practical guide for mental health professionals*. Youth Wellbeing Study and RainbowYOUTH.

Fraser, G. (2020). *Rainbow experiences of accessing mental health support in Aotearoa New Zealand: A community-based mixed methods study* [Unpublished doctoral thesis]. Victoria University of Wellington.

Fredriksen-Goldsen, K. I., Simoni, J. M., Kim, H.-J., Lehavot, K., Walters, K. L., Yang, J., Hoy-Ellis, C. P., & Muraco, A. (2014). The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *American Journal of Orthopsychiatry, 84*(6), 653–663. https://doi.org/10.1037/ort0000030

Giblon, R., & Bauer, G. R. (2017). Health care availability, quality, and unmet need: A comparison of transgender and cisgender residents of Ontario, Canada. *BMC Health Services Research, 17*(1), 283. https://doi.org/10.1186/s12913-017-2226-z

Gleason, H. A., Livingston, N. A., Peters, M. M., Oost, K. M., Reely, E., & Cochran, B. N. (2016). Effects of state nondiscrimination laws on transgender and gender-nonconforming individuals' perceived community stigma and mental health. *Journal of Gay & Lesbian Mental Health, 20*(4), 350–362. https://doi.org/10.1080/19359705.2016.1207582

Grant, J. M., Mottet, L. A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). *Injustice at every turn: A report of the National Transgender Discrimination Survey*. National Center for Transgender Equality and National Gay and Lesbian Task Force.

Green, J., Denny, D., & Cromwell, J. (2018). “What do you want us to call you?" Respectful language. *Transgender Studies Quarterly, 5*(1), 100–110. https://doi.org/10.1215/23289252-4291812

Halliday, L. M., & Caltabiano, N. J. (2020). Transgender experience of mental healthcare in Australia. *Psychology, 11*(1), 157–172. https://doi.org/10.4236/psych.2020.111011

Harper, G. W., & Schneider, M. (2003). Oppression and discrimination among lesbian, gay, bisexual, and transgendered people and communities: A challenge for community psychology. *American Journal of Community Psychology, 31*(3–4), 243–252. https://doi.org/10.1023/a:1023906620085

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "Get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135*(5), 707-730. https://doi.org/10.1037/a0016441

Hazenberg, E., & Meyeroff, M. (2017). *Representing trans: Linguistic, legal and everyday perspectives*. Victoria University Press.

Health Promotion Agency. (2016). *2016 New Zealand Mental Health Survey methodology report*. https://www.hpa.org.nz/research-library/research-publications/methodology-report-2016-new-zealand-mental-health-survey

Health Promotion Agency. (2019). *Wellbeing and mental health among rainbow New Zealanders: Results from the New Zealand Mental Health Monitor*. https://www.hpa.org.nz/research-library/research-publications/wellbeing-and-mental-health-among-rainbow-new-zealanders-infographic#:~:text=Results%20from%20the%20New%20Zealand,higher%20rates%20of%20social%20exclusion.

Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model. *Professional Psychology: Research and Practice, 43*(5), 460–467. https://doi.org/10.1037/a0029597

Herdt, G. (1996). *Third sex, third gender: Beyond sexual dimorphism in culture and history*. Zone.

Howell, T., & Allen, L. (2020). 'Good morning boys': Fa'afāfine and Fakaleiti experiences of cisgenderism at an all-boys secondary school. *Sex Education*. Advance online publication. https://doi.org/10.1080/14681811.2020.1813701

Human Rights Commission. (2008). *To be who I am: Report of the inquiry into discrimination experienced by transgender people*. https://www.hrc.co.nz/files/5714/2378/7661/15-Jan-2008_14-56-48_HRC_Transgender_FINAL.pdf

Human Rights Commission. (2020). *Prism: Human rights issues relating to sexual orientation, gender identity and expression, and sex characteristics (SOGIESC) in Aotearoa New Zealand*. https://www.hrc.co.nz/files/9215/9253/7296/HRC_PRISM_SOGIESC_Report_June_2020_FINAL.pdf

Hyde, Z., Doherty, M., Tilley, P. J. M., McCaul, K. A., Rooney, R., & Jancey, J. (2013). *The First Australian Trans Mental Health Study: Summary of results*. Curtin University.

Jackman, K. B., Dolezal, C., & Bockting, W. O. (2018). Generational differences in internalized transnegativity and psychological distress among feminine spectrum transgender people. *LGBT Health, 5*(1), 54–60. https://doi.org/10.1089/lgbt.2017.0034

Jaffray, B. (2020, September 9). *Experiences of violent victimization and unwanted sexual behaviours among gay, lesbian, bisexual and other sexual minority people, and the transgender population, in Canada, 2018*. https://www150.statcan.gc.ca/n1/pub/85-002-x/2020001/article/00009-eng.htm

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The report of the 2015 U.S. Transgender Survey*. National Center for Transgender Equality.

Jefferson, K., Neilands, T. B., & Sevelius, J. (2013). Transgender women of color: Discrimination and depression symptoms. *Ethnicity and Inequalities in Health and Social Care, 6*(4), 121-136. https://doi.org/10.1108/EIHSC-08-2013-0013

Jones, B. A., Bouman, W. P., Haycraft, E., & Arcelus, J. (2019). Mental health and quality of life in non-binary transgender adults: A case control study. *International Journal of Transgenderism, 20*(2–3), 251–262. https://doi.org/10.1080/15532739.2019.1630346

Kattari, S. K., Bakko, M., Hecht, H. K., & Kattari, L. (2020). Correlations between healthcare provider interactions and mental health among transgender and nonbinary adults. *SSM —Population Health, 10*, 100525. https://doi.org/https://doi.org/10.1016/j.ssmph.2019.100525

Kattari, S. K., & Hasche, L. (2016). Differences across age groups in transgender and gender non-conforming people's experiences of health care discrimination, harassment, and victimization. *Journal of Aging and Health, 28*(2), 285–306. https://doi.org/10.1177/0898264315590228

Ker, A., Fraser, G., Lyons, A., Stephenson, C., & Fleming, T. (2020). Providing gender-affirming hormone therapy through primary care: Service users' and health professionals' experiences of a pilot clinic. *Journal of Primary Health Care, 12*(1), 72-78. https://doi.org/10.1071/HC19040

Kerekere, E. (2017). *Part of the whānau: The emergence of takatāpui identity He Whāriki Takatāpui* [Unpublished doctoral thesis]. Victoria University of Wellington

Kerry, S. C. (2014). Sistergirls/brotherboys: The status of indigenous transgender Australians. *International Journal of Transgenderism, 15*(3–4), 173–186. https://doi.org/10.1080/15532739.2014.995262

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S.-L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M.

(2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184–189. https://doi.org/10.1001/archpsyc.60.2.184

Kuper, L. E., Adams, N., & Mustanski, B. S. (2018). Exploring cross-sectional predictors of suicide ideation, attempt, and risk in a large online sample of transgender and gender nonconforming youth and young adults. *LGBT Health, 5*(7), 391–400. https://doi.org/10.1089/lgbt.2017.0259

Lee, H., Tomita, K. K., Habarth, J. M., Operario, D., Yi, H., Choo, S., & Kim, S.-S. (2020). Internalized transphobia and mental health among transgender adults: A nationwide cross-sectional survey in South Korea. *International Journal of Transgender Health, 21*(2), 182–193. https://doi.org/10.1080/26895269.2020.1745113

Lipshie-Williams, M. (2020). The peculiar case of the standards of care: Ethical ramifications of deviating from informed consent in transgender-specific healthcare. *Journal of Gay & Lesbian Mental Health, 24*(4), 392–405. https://doi.org/10.1080/19359705.2020.1798691

Lyons, A. C., & Chamberlain, K. (2017). Critical health psychology. In B. Gough (Ed.), *The Palgrave Handbook of Critical Social Psychology* (pp. 533–555). Palgrave.

Māori dictionary (n.d.). *Mana* https://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=mana

Marino, F. (2020). Māori gender non-conforming identity: Analysing the ‘Takatāpui’ discourse. *Multimodal Communication, 9*(1), 20190010. https://doi.org/https://doi.org/10.1515/mc-2019-0010

McEvoy, P., & Richards, D. (2006). A critical realist rationale for using a combination of quantitative and qualitative methods. *Journal of Research in Nursing, 11*(1), 66–78. https://doi.org/10.1177/1744987106060192

McNeil, J., Bailey, L., Ellis, S. J., Morton, J., & Regan, M. (2012). *Trans Mental Health Study 2012*. The Scottish Transgender Alliance.

McNeil, J., Ellis, S. J., & Eccles, F. J. (2017). Suicide in trans populations: A systematic review of prevalence and correlates. *Psychology of Sexual Orientation and Gender Diversity*, *4*(3), 341–353. https://doi.org/10.1037/sgd0000235

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*(1), 38–56. https://doi.org/10.2307/2137286

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Millet, N., Longworth, J., & Arcelus, J. (2017). Prevalence of anxiety symptoms and disorders in the transgender population: A systematic review of the literature. *International Journal of Transgenderism, 18*(1), 27–38. https://doi.org/10.1080/15532739.2016.1258353

Miner, M. H., Bockting, W. O., Romine, R. S., & Raman, S. (2012). Conducting internet research with the transgender population: Reaching broad samples and collecting valid data. *Social Science Computer Review, 30*(2), 202–211. https://doi.org/10.1177/0894439311404795

Ministry of Education. (2020). *Relationships and sexuality education: A guide for teachers, leaders, and boards of trustees*. https://health.tki.org.nz/Teaching-in-HPE/Policy-Guidelines/Relationships-and-Sexuality-Education

Ministry of Health. (2017a, May 18). *Māori health models – Te Pae Mahutonga*. https://www.health.govt.nz/our-work/populations/maori-health/maori-health-models/maori-health-models-te-pae-mahutonga

Ministry of Health. (2017b). *Methodology report 2016/17: New Zealand Health Survey*. https://www.health.govt.nz/publication/methodology-report-2016-17-new-zealand-health-survey

Ministry of Health. (2020a, October 8). *Health care for transgender New Zealanders*. https://www.health.govt.nz/your-health/healthy-living/transgender-new-zealanders/health-care-transgender-new-zealanders

Ministry of Health. (2020b, October 12). Updates from the gender affirming (genital) surgery service. https://www.health.govt.nz/our-work/preventative-health-wellness/delivering-health-services-transgender-people/updates-gender-affirming-genital-surgery-service

Ministry of Internal Affairs. (2020, May 18). *Changing your gender identity on your passport*. https://www.passports.govt.nz/what-you-need-to-renew-or-apply-for-a-passport/information/

Mizock, L., & Mueser, K. T. (2014). Employment, mental health, internalized stigma, and coping with transphobia among transgender individuals. *Psychology of Sexual Orientation and Gender Diversity, 1*(2), 146–158. https://doi.org/10.1037/sgd0000029

Nelson, G., & Prilleltensky, I. (2010). *Community psychology: In pursuit of liberation and well-being (2nd edition)*. Palgrave Macmillan.

Nemoto, T., Teh, Y. K., Troki, K., Guzman, R. d., & Iwamoto, M. (2018). Sociocultural context of sex work among mak nyah (transgender women) in Kuala Lumpur, Malaysia. In L. Nuttbrock (Ed.), *Transgender sex work and society* (pp. 288–315). Harrington Park Press

New Zealand Psychologists Board. (2019). *Best practice guideline: Working with sex, sexuality, and gender diverse clients*. http://www.psychologistsboard.org.nz/cms_show_download.php?id=594

Nic Giolla Easpaig, B., Fox, R., & Bowman, S. (2018). The status of diverse sexualities and genders in community psychology research and practice: Reflections from the Trans-Tasman context. *The Australian Community Psychologist, 29*(1), 108–120.

Nuttbrock, L., Bockting, W., Rosenblum, A., Mason, M., Macri, M., & Becker, J. (2012). Gender identity conflict/affirmation and major depression across the life course of transgender women. *International Journal of Transgenderism, 13*(3), 91–103. https://doi.org/10.1080/15532739.2011.657979

O'Cathain, A., & Thomas, K. J. (2004). "Any other comments?" Open questions on questionnaires – a bane or a bonus to research? *BMC Medical Research Methodology, 4*(1), 25. https://doi.org/10.1186/1471-2288-4-25

Oakley Browne, M. A., Wells, J. E., Scott, K. M., & McGee, M. A. (2010). The Kessler Psychological Distress Scale in Te Rau Hinengaro: The New Zealand Mental Health Survey. *Australian & New Zealand Journal of Psychiatry, 44*(4), 314–322. https://doi.org/10.3109/00048670903279820

Oliphant, J., Veale, J., Macdonald, J., Carroll, R., Johnson, R., Harte, M., Stephenson, C., & Bullock, J. (2018). *Guidelines for gender affirming healthcare for gender diverse and transgender children, young people and adults in Aotearoa New Zealand*. Transgender Health Research Lab.

OutRight Action International. (2019). *Harmful treatment: The global reach of so-called conversion therapy*. https://outrightinternational.org/sites/default/files/ConversionFINAL_1.pdf

Professional Association for Transgender Health Aotearoa. (2019, December 6). *Gender affirming healthcare is essential healthcare*. https://patha.nz/News/8191189

Professional Association for Transgender Health Aotearoa. (2020, March 12). *AusPATH and PATHA Welcome RACP Advice to Australian Minister Greg Hunt*. https://patha.nz/News/8822288

Pega, F., Reisner, S. L., Sell, R. L., & Veale, J. F. (2017). Transgender health: New Zealand's innovative statistical standard for gender identity. *American Journal of Public Health, 107*(2), 217–221. https://doi.org/http://dx.doi.org/10.2105/AJPH.2016.303465

Pega, F., & Veale, J. F. (2015). The case for the World Health Organization's commission on social determinants of health to address gender identity. *American Journal of Public Health, 105*(3), 58–62. https://doi.org/10.2105/AJPH.2014.302373

Peng, K., Zhu, X., Gillespie, A., Wang, Y., Gao, Y., Xin, Y., Qi, J., Ou, J., Zhong, S., Zhao, L., Liu, J., Wang, C., & Chen, R. (2019). Self-reported rates of abuse, neglect, and bullying experienced by transgender and gender-nonbinary adolescents in China. *JAMA Network Open, 2*(9), e1911058. https://doi.org/10.1001/jamanetworkopen.2019.11058

Pitts, M., Smith, A., Mitchell, A., & Patel, S. (2006). *Private Lives: A report on the health and wellbeing of GLBTI Australians*. Gay and Lesbian Health Victoria and The Australian Research Centre in Sex, Health & Society.

Pitts, M. K., Couch, M., Hunter, M., Croy, S., & Mitchell, A. (2009). Transgender people in Australia and New Zealand: Health, well-being and access to health services. *Feminism & Psychology, 19*(4), 475–495. https://doi.org/10.1177/0959353509342771

Poon, C., Saewyc, E. M., & Chen, W. (2011). Enacted stigma, problem substance use, and protective factors among Asian sexual minority youth in British Columbia. *Canadian Journal of Community Mental Health, 30*(2), 47–64.

Poteat, T. C., Celentano, D. D., Mayer, K. H., Beyrer, C., Mimiaga, M. J., Friedman, R. K., Srithanaviboonchai, K., & Safren, S. A. (2020). Depression, sexual behavior, and HIV

treatment outcomes among transgender women, cisgender women and men who have sex with men living with HIV in Brazil and Thailand: a short report. *AIDS Care, 32*(3), 310–315. https://doi.org/10.1080/09540121.2019.1668526

Puckett, J. A., Matsuno, E., Dyar, C., Mustanski, B., & Newcomb, M. E. (2019). Mental health and resilience in transgender individuals: What type of support makes a difference? *Journal of Family Psychology, 33*(8), 954–964. https://doi.org/10.1037/fam0000561

Restar, A., Jin, H., Breslow, A., Reisner, S. L., Mimiaga, M., Cahill, S., & Hughto, J. M. W. (2020). Legal gender marker and name change is associated with lower negative emotional response to gender-based mistreatment and improve mental health outcomes among trans populations. *SSM—Population Health, 11*, 100595. https://doi.org/https://doi.org/10.1016/j.ssmph.2020.100595

Riggs, D. W., Ansara, G. Y., & Treharne, G. J. (2015). An evidence-based model for understanding the mental health experiences of transgender Australians. *Australian Psychologist, 50*(1), 32–39. https://doi.org/10.1111/ap.12088

Riggs, D. W., Pearce, R., Pfeffer, C. A., Hines, S., White, F., & Ruspini, E. (2019). Transnormativity in the psy disciplines: Constructing pathology in the Diagnostic and Statistical Manual of Mental Disorders and Standards of Care. *American Psychologist, 74*(8), 912–924. https://doi.org/10.1037/amp0000545

Riggs, D. W., & Treharne, G. J. (2017). Decompensation: A novel approach to accounting for stress arising from the effects of ideology and social norms. *Journal of Homosexuality, 64*(5), 592–605. https://doi.org/10.1080/00918369.2016.1194116

Rimes, K. A., Goodship, N., Ussher, G., Baker, D., & West, E. (2019). Non-binary and binary transgender youth: Comparison of mental health, self-harm, suicidality,

substance use and victimization experiences. *International Journal of Transgenderism, 20*(2–3), 230–240. https://doi.org/10.1080/15532739.2017.1370627

Rivera, J. D. (2019). When attaining the best sample is out of reach: Nonprobability alternatives when engaging in public administration research. *Journal of Public Affairs Education, 25*(3), 314-342. https://doi.org/10.1080/15236803.2018.1429821

Ross-Reed, D. E., Reno, J., Peñaloza, L., Green, D., & FitzGerald, C. (2019). Family, school, and peer support are associated with rates of violence victimization and self-harm among gender minority and cisgender youth. *Journal of Adolescent Health, 65*(6), 776–783. https://doi.org/10.1016/j.jadohealth.2019.07.013

Rotondi, N. K., Bauer, G. R., Scanlon, K., Kaay, M., Travers, R., & Travers, A. (2011). Prevalence of and risk and protective factors for depression in female-to-male transgender Ontarians: Results from the Trans PULSE Project. *Canadian Journal of Community Mental Health, 30*(2), 135–155. https://doi.org/10.7870/cjcmh-2011-0021

Rotondi, N. K., Bauer, G. R., Travers, R., Travers, A., Scanlon, K., & Kaay, M. (2011). Depression in male-to-female transgender Ontarians: Results from the Trans PULSE Project. *Canadian Journal of Community Mental Health, 30*(2), 113–133. https://doi.org/10.7870/cjcmh-2011-0020

Sandil, R., & Henise, S. (2017). Making psychology trans-inclusive and trans-affirmative: Recommendations for research and practice. In R. Ruth & E. Santacruz (Eds.), *LGBT psychology and mental health: Emerging research and advances* (pp. 47–68). ABC-CLIO, LLC.

Scandurra, C., Bochicchio, V., Amodeo, A. L., Esposito, C., Valerio, P., Maldonato, N. M., Bacchini, D., & Vitelli, R. (2018). Internalized transphobia, resilience, and mental health: Applying the Psychological Mediation Framework to Italian transgender

individuals. *International Journal of Environmental Research and Public Health, 15*(3), 508. https://doi.org/10.3390/ijerph15030508

Scheim, A. I., Jackson, R., James, L., Sharp Dopler, T., Pyne, J., & R. Bauer, G. (2013). Barriers to well-being for aboriginal gender-diverse people: Results from the Trans PULSE Project in Ontario, Canada. *Ethnicity and Inequalities in Health and Social Care, 6*(4), 108–120. https://doi.org/10.1108/EIHSC-08-2013-0010

Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology, 57*(1), 1–10. https://doi.org/10.1037/a0018082

Schmidt, J. M. (2017). Translating transgender: Using western discourses to understand Samoan fa'afāfine. *Sociology Compass, 11*(5), 1–17. https://doi.org/10.1111/soc4.12485

Schulz, S. L. (2018). The informed consent model of transgender care: An alternative to the diagnosis of gender dysphoria. *Journal of Humanistic Psychology, 58*(1), 72–92. https://doi.org/10.1177/0022167817745217

Sheridan, N. F., Kenealy, T. W., Connolly, M. J., Mahony, F., Barber, P. A., Boyd, M. A., Carswell, P., Clinton, J., Devlin, G., Doughty, R., Dyall, L., Kerse, N., Kolbe, J., Lawrenson, R., & Moffitt, A. (2011). Health equity in the New Zealand health care system: A national survey. *International Journal for Equity in Health, 10*(1), 45. https://doi.org/10.1186/1475-9276-10-45

Singh, A. A., Hays, D. G., & Watson, L. S. (2011). Strength in the face of adversity: Resilience strategies of transgender individuals. *Journal of Counseling and Development, 89*(1), 20–27. https://doi.org/10.1002/j.1556-6678.2011.tb00057.x

Singh, A. A., Meng, S. E., & Hansen, A. W. (2014). “I am my own gender”: Resilience strategies of trans youth. *Journal of Counseling & Development, 92*(2), 208–218. https://doi.org/10.1002/j.1556-6676.2014.00150.x

Smith, L. T. (2013). *Decolonizing methodologies: Research and indigenous peoples* (2nd edition). Zed Books.

Sobrun-Maharaj, A., & Wong, A. S. K. (2010). *Building evidence for better practice in support of Asian mental wellbeing: An exploratory study*. https://www.tepou.co.nz/uploads/files/resource-assets/Building-Evidence-for-Better-Practice-in-Support-of-Asian-Mental-Wellbeing.pdf

Solar, O., & Irwin, A. (2010). *A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and practice).* World Health Organization.

Statistics Canada. (2020). *Sex at birth and gender: Technical report on changes for the 2021 Census*. https://www12.statcan.gc.ca/census-recensement/2021/ref/98-20-0002/982000022020002-eng.cfm

Statistics New Zealand. (2016). *New Zealand General Social Survey 2016*. https://cdm20045.contentdm.oclc.org/digital/collection/p20045coll2/id/527

Statistics New Zealand. (2019). *Sex, gender, and sexual orientation*. https://www.stats.govt.nz/reports/sex-gender-and-sexual-orientation

Statistics New Zealand. (2020a). *2018 Census*. https://www.stats.govt.nz/2018-census#methods

Statistics New Zealand (2020b) *Ethnic group summaries reveal New Zealand's multicultural make-up*. https://www.stats.govt.nz/news/ethnic-group-summaries-reveal-new-zealands-multicultural-make-up

Statistics New Zealand. (2020c). *Sex and gender identity statistical standards: Consultation*. https://www.stats.govt.nz/consultations/sex-and-gender-identity-statistical-standards-consultation

Strauss, P., Cook, A., Winter, S., Watson, V., Wright Toussaint, D., & Lin, A. (2017). *Trans Pathways: The mental health experiences and care pathways of trans young people. Summary of results.* Telethon Kids Institute.

Strauss, P., Cook, A., Winter, S., Watson, V., Wright Toussaint, D., & Lin, A. (2020a). Associations between negative life experiences and the mental health of trans and gender diverse young people in Australia: Findings from Trans Pathways. *Psychological Medicine, 50*(5), 808–817. https://doi.org/10.1017/S0033291719000643

Strauss, P., Cook, A., Winter, S., Watson, V., Wright Toussaint, D., & Lin, A. (2020b). Mental health issues and complex experiences of abuse among trans and gender diverse young people: Findings from Trans Pathways. *LGBT Health*. https://doi.org/10.1089/lgbt.2019.0232

Stuart, E. A., Azur, M., Frangakis, C., & Leaf, P. (2009). Multiple imputation with large data sets: A case study of the Children's Mental Health Initiative. *American journal of epidemiology, 169*(9), 1133–1139. https://doi.org/10.1093/aje/kwp026

Suess, A., Espineira, K., & Walters, P. C. (2014). Depathologization. *TSQ: Transgender Studies Quarterly, 1*(1–2), 73–77. https://doi.org/10.1215/23289252-2399650

Tabachnick, B. G. (2013). *Using multivariate statistics* (6th ed.). Pearson Education.

Taliaferro, L. A., McMorris, B. J., Rider, G. N., & Eisenberg, M. E. (2019). Risk and protective factors for self-harm in a population-based sample of transgender youth. *Archives of Suicide Research*, 23(2), 203–221. https://doi.org/10.1080/13811118.2018.1430639

Tamasese, K., Peteru, C., Waldegrave, C., & Bush, A. (2005). Ole Taeao Afua, the New Morning: A qualitative investigation into Samoan perspectives on mental health and culturally appropriate services. *Australian & New Zealand Journal of Psychiatry, 39*(4), 300-309. https://doi.org/10.1080/j.1440-1614.2005.01572.x

Tan, K. K (2018). LGBTQ psychology in Aotearoa. *Psychology Aotearoa, 10*(1), 36–39. https://www.psychology.org.nz/journal-archive/Psychology-Aotearoa-May-18-for-email.pdf

Tan, K. K., Ellis, S. J., Schmidt, J. M., Byrne, J. L., & Veale, J. F. (2020). Mental health inequities among transgender people in Aotearoa New Zealand: Findings from the Counting Ourselves survey. *International Journal of Environmental Research and Public Health, 17*(8), 2862. https://doi.org/10.3390/ijerph17082862

Tan, K. K., Schmidt, J. M., Ellis, S. J., & Veale, J. F. (2019). Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities. *New Zealand Journal of Psychology, 48*(2), 64–72.

Tan, K. K., Treharne, G. J., Ellis, S. J., Schmidt, J. M., & Veale, J. F. (2020a). Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand. *International Journal of Transgender Health*. Advance online publication. https://doi.org/10.1080/15532739.2020.1819504

Tan, K. K. H., Treharne, G. J., Ellis, S. J., Schmidt, J. M., & Veale, J. F. (2020b). Gender minority stress: A critical review. *Journal of Homosexuality, 67*(10), 1471–1489. https://doi.org/10.1080/00918369.2019.1591789

Taylor, A. B., Chan, A., Hall, S. L., Saewyc, E. M., & the Canadian Trans & Non-binary Youth Health Survey Research Group. (2020). *Being Safe, Being Me 2019: Results of*

the Canadian Trans and Non-binary Youth Health Survey. University of British Columbia.

Taylor, O., Rapsey, C. M., & Treharne, G. J. (2018). Sexuality and gender identity teaching within preclinical medical training in New Zealand: Content, attitudes and barriers. *New Zealand Medical Journal, 131*(1477), 35–44.

Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity, 2*(1), 65–77. https://doi.org/10.1037/sgd0000081

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*(2), 145–161. https://doi.org/10.1177%2F0022146510395592

The Trans PULSE Canada Team. (2020, March 10). *Health and health care access for trans and non-binary people in Canada*. https://transpulsecanada.ca/research-type/reports

Treharne, G. J., & Adams, J. (2017). Critical perspectives on the diversity of research into sexualities and health in Aotearoa/New Zealand: Thinking outside the boxes. *Psychology of Sexualities Review, 8*(1), 53–70.

Treharne, G. J., Riggs, D. W., Ellis, S. J., Flett, J. A., & Bartholomaeus, C. (2020). Suicidality, self-harm, and their correlates among transgender and cisgender people living in Aotearoa/New Zealand or Australia. *International Journal of Transgender Health*. Advance online publication. https://doi.org/10.1080/26895269.2020.1795959

Turban, J. L., Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry, 77*(1), 68–76. https://doi.org/10.1001/jamapsychiatry.2019.2285

Valentine, S. E., & Shipherd, J. C. (2018). A systematic review of social stress and mental health among transgender and gender non-conforming people in the United States. *Clinical Psychology Review*, *66*, 24–38. https://doi.org/10.1016/j.cpr.2018.03.003

Veale, J. F. (2008). Prevalence of transsexualism among New Zealand passport holders. *Australian and New Zealand Journal of Psychiatry, 42*(10), 887–889. https://doi.org/10.1080/00048670802345490

Veale, J. F., Byrne, J., Tan, K. K. H., Guy, S., Yee, A., Nopera, T., & Bentham, R. (2019). *Counting Ourselves: The health and wellbeing of trans and non-binary people in Aotearoa New Zealand*. Transgender Health Research Lab.

Veale, J. F., Peter, T., Travers, R., & Saewyc, E. M. (2017). Enacted stigma, mental health, and protective factors among transgender youth in Canada. *Transgender Health, 2*(1), 207–216. https://doi.org/10.1089/trgh.2017.0031

Veale, J. F., Saewyc, E. M., Frohard-Dourlent, H., Dobson, S., & Clark, B. (2015). *Being safe, being me: Results of the Canadian Trans Youth Health Survey*. University of British Columbia.

Veale, J. F., Watson, R. J., Peter, T., & Saewyc, E. M. (2017). Mental health disparities among Canadian transgender youth. *Journal of Adolescent Health, 60*(1), 44–49. https://doi.org/10.1016/j.jadohealth.2016.09.014

Watson, R. J., Allen, A., Pollitt, A. M., & Eaton, L. A. (2019). Risk and protective factors for sexual health outcomes among black bisexual men in the U.S.: Internalized heterosexism, sexual orientation disclosure, and religiosity. *Archives of Sexual Behavior, 48*(1), 243–253. https://doi.org/10.1007/s10508-018-1216-5

Watson, R. J., Veale, J. F., Gordon, A. R., Clark, B. A., & Saewyc, E. M. (2019). Risk and protective factors for transgender youths' substance use. *Preventive Medicine Reports, 15*, 100905. https://doi.org/10.1016/j.pmedr.2019.100905

Weinhardt, L. S., Xie, H., Wesp, L. M., Murray, J. R., Apchemengich, I., Kioko, D., Weinhardt, C. B., & Cook-Daniels, L. (2019). The role of family, friend, and significant other support in well-being among transgender and non-binary youth. *Journal of GLBT Family Studies, 15*(4), 311–325. https://doi.org/10.1080/1550428X.2018.1522606

White Hughto, J. M., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social Science & Medicine, 147*, 222–231. https://doi.org/10.1016/j.socscimed.2015.11.010

White Hughto, J. M., Rose, A. J., Pachankis, J. E., & Reisner, S. L. (2017). Barriers to gender transition-related healthcare: Identifying underserved transgender adults in Massachusetts. *Transgender Health, 2*(1), 107–118. https://doi.org/10.1089/trgh.2017.0014

Wilkerson, J. M., Noor, S. W., Galos, D. L., & Rosser, B. R. S. (2016). Correlates of a single-item indicator versus a multi-item scale of outness about same-sex attraction. *Archives of Sexual Behavior, 45*(5), 1269–1277. https://doi.org/10.1007/s10508-015-0605-2

World Health Organization. (1975). *International classification of diseases and related health problems. 9th revision*.

World Health Organization. (2004). *Promoting mental health: Concepts, emerging evidence, practice (Summary Report).* World Health Organization, Victorian Health Promotion Foundation (VicHealth), and the University of Melbourne.

World Health Organization. (2020). *WHO/Europe brief—Transgender health in the context of ICD-11*. http://www.euro.who.int/en/health-topics/health-determinants/gender/gender-definitions/whoeurope-brief-transgender-health-in-the-context-of-icd-11

Zwickl, S., Wong, A., Bretherton, I., Rainier, M., Chetcuti, D., Zajac, J. D., & Cheung, A. S. (2019). Health needs of trans and gender diverse adults in Australia: A qualitative analysis of a national community survey. *International Journal of Environmental Research and Public Health, 16*(24), 5088. https://doi.org/10.3390/ijerph16245088

Appendices

Appendix 1. Data Analysis

Quantitative analyses incorporated standard measures (e.g., the K10 scale) and statistical techniques to summarise findings and estimate the extent to which they are generalisable to a wider population (Breen & Darlaston-Jones, 2010). In this thesis, the observed patterns and associations from quantitative findings are explained through a critical realist framework to reflect the reality of reported experiences of transgender people living in cisnormative environments.

The key strength of qualitative findings, from a critical realist perspective, is that they can illuminate complex concepts and relationships that are unlikely to be captured by predetermined response categories or standardised quantitative measures (McEvoy & Richards, 2006). The interpretation of qualitative findings in Chapter 7 acknowledges the subjectivity of transgender people's mental health experiences as well as the influence of the social context on their experiences.

This section presents more specific details on the analytic methods that are not covered in the published findings of Chapters 5, 6, and 7.

Mental Health Inequities Among Transgender People (Chapter 5). The percentage of missing data for K10 items ranged from 0.2% to 1.1%. Rather than using listwise deletion method to omit participants' missing responses, missing values of K10 were imputed using the expectation maximisation method, where values are estimated by regression methods based on means and covariances of available data in the scale (Enders, 2003). This method allows imputation of missing data in an unbiased manner (Schlomer et al., 2010). The K10 was selected as the primary measure of mental health outcomes in this study because it was used in the New Zealand Health Survey to provide estimates of the Aotearoa/New Zealand general population (Ministry of Health, 2017). There has also been

demonstration of K10's strong specificity in screening for cases of mood and anxiety disorders among the Aotearoa/New Zealand general population (Oakley Browne et al., 2010). In line with previous studies that used the K10 to measure the level of psychological distress among transgender people (Bariola et al., 2015; Jackman et al., 2018), the internal consistency of the K10 in the current dataset was high ($\alpha = 0.94$).

The extent of K10 differences between the two populations were depicted with Cohen's *d* which was calculated from an online calculator (www.socscistatistics.com). As a measure of effect size, Cohen's *d* refers to the standardised mean differences between two groups of independent observations that are obtained via a formula with a pooled standard deviation (Cohen, 1988). A *d* of 1 indicates the two populations (i.e., transgender participants and the Aotearoa/New Zealand general population) differ by 1 standard deviation, and the general rule of thumb of interpreting Cohen's *d* is 0.2 for small effect size, 0.5 for medium effect size, and 0.8 for large effect size (Cohen, 1988).

The multivariate relationships among mental health, gender, and age were explored by employing the linear and logistic regression analyses with gender and age predicting mental health diagnoses and K10 psychological distress. An interaction term of gender and age was entered in the subsequent regression models to identify if mental health outcomes differed for trans men, trans women, and non-binary participants across age groups. The omnibus test with *p* value of $< .01$ in each regression model indicated that gender, age, and the interaction term of age and gender as predictors significantly improved the overall model. Cook's distance value was used as a guide to identify presence of outliers that may influence the results of the regression models. According to Tabachnick (2013, p. 75), cases with Cook's distance values that are larger than 1 indicate problematic outliers and should be considered for removal, but no action needs to be taken as the maximum value for the regression model with age and gender predictors is 0.023.

Associations of Enacted Stigma, Protective Factors, and Transgender Mental Health (Chapter 6). To identify the association between cisgenderism and transgender people's mental health, an enacted stigma index was created with a wide range of overt negative experiences targeted at transgender people. This index included 11 items comprising various enacted stigma experiences such as discrimination, cyberbullying, and homelessness that occurred because of being transgender. Missing values for the enacted stigma index ranged from 1.5% to 9.5%. Higher missingness in some items in the index was due to some items being not applicable to some participants. For example, the enacted stigma index included three items on transgender people's experiences of homelessness due to their gender and those who had not experienced homelessness were not questioned on reasons of why they were homeless (i.e., evicted from home, rejected from home and violence experiences). This study employed the expectation maximisation method to impute missing data based on means and covariances of existing items in the index. Imputing was a superior method of handling missing data than listwise deletion as items' missingness in the index was not dependent on each other (Schlomer et al., 2010). Stuart et al. (2009) suggested that imputed data may be problematic when the absolute difference in means between the observed and imputed values is greater than 2 standard deviations. In this instance, a numeric diagnostic confirmed that there was no significant mean difference between observed and imputed data (M_{diff} = 0.03, t = 0.28, *p* = .78), indicating that the imputed data in enacted stigma index did not present biased results that needed to be flagged.

The relationships among enacted stigma, protective factors, and mental health outcomes were analysed using logistic regression analyses and illustrated using probability profiling methodology. Probability profiling has gained increased recognition (see Poon et al., 2011; Veale, Peter, et al., 2017; Watson, Allen, et al., 2019; Watson, Veale, et al., 2019) for its utility in producing estimates about how different combinations of risk and protective

factors are related to health outcomes. Using the margins command in STATA (MP2 version 16), probability profiles were calculated based on the predetermined regression equation below.

Probability = 1/(1 + e(- [βintercept + βage*Mage + βESI*(10th or 90th percentile ESI) + βprotective1 (10th or 90th percentile protective 1) + βprotective2 (10th or 90th percentile protective 2)]

β represents the beta coefficient from the multivariate logistic regression model and M represents the mean, and 10th or 90th percentile represents the high and low levels of the enacted stigma index and protective factors.

Open-Text Responses for Transgender Peoples' Experiences of Mental Health and Wellbeing (Chapter 7). This section elaborates on the rationale to analyse the responses from the general open-ended question "Is there anything further about your mental health that you would like to share with us?" at the end of mental health sections of the Counting Ourselves survey. A detailed discussion of the methods utilised to analyse the qualitative responses via inductive thematic analysis can be found in Chapter 7.

The qualitative finding from the open-text responses helped to provide a "wide-angle lens" to cast light on a diversity of perspectives regarding the mental health experiences of transgender people in Aotearoa/New Zealand. Because participants responded by sharing their experiences in their own words, rather than selecting from predetermined responses, the qualitative responses could produce rich and nuanced findings that contribute to a more comprehensive understanding of transgender mental health. The rationale of analysing these qualitative findings was not to corroborate quantitative findings in forming a robust conclusion, but rather to provide complementary findings that were not covered by the quantitative analyses.

While there are a number of methodological concerns with the analysis of non-directive qualitative responses from a survey (e.g., short responses and lack of clarity around the context of the responses), previous survey studies have found potential benefits in qualitative responses of this nature (Braun et al., 2020; Decorte et al., 2019; O'Cathain & Thomas, 2004). For instance, a survey with open-ended questions can facilitate easier access to a larger number of participants and guarantee anonymity when it is distributed online (Braun et al., 2020). Furthermore, various studies have suggested that the use of open-ended questions can redress the power imbalance between researchers and participants as participants are able to exert control over aspects of their research participation by voicing any concerns about the assumptions that researchers have built into their surveys (Braun et al., 2020; O'Cathain & Thomas, 2004). Decorte et al. (2019) also reported that open-ended questions at the end of a survey can help researchers to identify issues which might require clarification or that were not covered in the close-ended questions, so that these limitations could be addressed when designing future surveys.

Appendix 2: Counting Ourselves Survey Items[12]

Kia ora, mālō e lelei, talofa lava, namaste, kia orana, nisa bula vinaka, nǐ hǎo, welcome.
Thank you for your interest in taking part in the Aotearoa New Zealand Trans and Non-binary Health Survey. It is important you read this information so you can decide whether you want to participate in our survey.

Who are we? We are a research team based at the University of Waikato who want to improve the health and wellbeing of trans and non-binary people. Dr Jaimie Veale is the project's Principal Investigator and Jack Byrne is the Research Officer. Both Jack and Jaimie are trans and they have experience conducting trans health and human rights research. Our core research team also includes Kyle Tan, a PhD student, Sam Guy, a Master's student, and Dr Tāwhanga Nopera, a cultural advisor. We have received funding from the Health Research Council and Rule Foundation to do this research.
If you have any questions about any aspect of this survey, you can contact the research team by emailing trans-survey@waikato.ac.nz or by phoning us on 021 048 1557. You may also contact us if you want a paper copy of the survey to fill out, instead of doing this online.

What is this survey about? This is an anonymous survey about the health of trans and non-binary people living in Aotearoa New Zealand. We hope that this survey can collect information that will improve the lives of people in our communities, by showing us:

- how well trans and non-binary people are doing in our mental health and physical health compared to the rest of the population
- our experiences of stigma, discrimination, and violence
- our experiences in doctor's clinics, hospitals, and other healthcare settings. This could be for gender affirming care such as hormones or surgeries, or when we see someone about our general health
- how support from our friends, family, whānau, or others might protect us against the negative impacts of stigma, discrimination, and violence that many trans and non-binary people face

We developed the survey by working with a trans and non-binary Community Advisory Group which includes a diverse range of people from across the country. We also asked for feedback from community organisations, academic researchers, health professionals, and researchers from government agencies.

Who can take part? This survey is for all trans and non-binary people. This mean anyone whose gender is different from their sex assigned at birth, whatever term you use to describe your identity. You can take part in this survey if you are:

- trans or non-binary
- aged 14 years or older
- currently living in Aotearoa New Zealand

It does not matter whether you use the specific terms 'trans' or 'non-binary' to describe yourself, whether you have transitioned, or even plan to transition. There are many other terms that people

[12] Note that only questions relevant to the studies of this thesis were included here. The full survey questionnaire can be located on the survey's webpage: https://countingourselves.nz/

in our communities use. These include transgender, transsexual, whakawahine, tāhine, tangata ira tāne, takatāpui, fa'afafine, fa'afatama, fakaleiti, fakafifine, akava'ine, aikāne, vakasalewalewa, genderqueer, gender diverse, bi-gender, cross-dresser, pangender, demi-gender, agender, trans woman, trans feminine, trans man, or trans masculine. Trans people filling out the survey might also identify as simply a woman or as a man. We want to hear from all of you.

How long will it take? Based on our testing, we think it will take about 50 minutes to complete the survey. Some people will take longer if they decide to write more about their experiences. The survey is this long because there is so little information available about our communities. We hope you will keep going to the end of the survey so that our communities have this important data about our health needs. If you want to take a break, you can exit the survey and come back and complete it over the next month. This option works if you have 'cookies' enabled in your browser. When you come back to complete the survey, our survey software will anonymously remember which response matches your browser.

What are your rights?

- You only have to answer the first questions, to check you are trans or non-binary, live in Aotearoa and are at least 14 years old. After that, you can skip any other questions, for any reason.
- You can withdraw from the survey at any time. If you start the survey and then wish to withdraw, you can return to this page at any time using the "Previous" button and submit the option asking for all your responses to be erased.
- The information you provide in this survey is anonymous. We do not collect anyone's names or any other information that might be able to identify someone. We will collect your IP address, which is a unique number based on your internet connection. It does not identify you or your current address. We will only use IP addresses to double check for multiple responses from the same person, and then will delete all IP addresses.
- We will not publish any information where the number of responses is so small or the comments made are so specific that someone could possibly guess who's made them.
- If you contact us asking for a printed copy of the survey, we will delete your contact details once we have posted you the survey. If you fill out the paper copy of the survey, we will put your answers into the computer and shred your paper survey.
- Everyone's online responses will be stored on password-protected University of Waikato accounts and computers. Only the research team will have access to these.

What types of questions will you be asked? Many of these questions have been taken from large New Zealand surveys, so we can compare our experiences against the wider New Zealand population. For most questions, you just need to tick boxes. Some allow you to write in more details. Some of the questions are about difficult topics that might be hard for you to answer. There are questions about hurting yourself, suicide, and experiences of being treated badly by other people, including emotional, physical, and sexual violence. We only ask questions about things that are important for our communities to know. Remember, it is your choice whether you answer any of these questions.

Contact details for support services

If you want to talk to someone about some of the sensitive issues raised in the survey, you can text or call Jack Byrne or Jaimie Veale at 021 048 1557. You can also text or call 1737 to reach a counsellor 24 hours a day through the National Telehealth Service. You can also contact OUTLineNZ's confidential Rainbow helpline (Phone: 0800 688 5643; Email: info@outline.org.nz).

The Health and Disability Ethics Committees have granted us ethics approval for this survey (Approval no: 18/NTB/66). If you have any ethical concerns about this research you may phone them on 0800 4 ETHICS or send an email to hdecs@moh.govt.nz.

1.1 What is your age in years?

We only have approval to ask people who are 14 or older to complete the survey. If you are aged less than 14, thank you for your interest in the survey, but unfortunately we will not be able to include your response.

1.2 Do you live in Aotearoa/New Zealand?

O Yes	O No

1.3 What is your postcode?

We are collecting postcodes to understand how representative the responses are of people across Aotearoa New Zealand. If you don't have a current New Zealand postcode or you are not comfortable giving this, you can leave this question blank. If you are not sure about your postcode you can look it up through New Zealand Post by going here: https://www.nzpost.co.nz/tools/address-postcode-finder

1.6 What gender or what genders do you currently identify with? *Mark all that apply.*

☐ Woman/Girl/Wahine	☐ Gender fluid	☐ Agender	☐ Fa'afatama
☐ Man/Boy/Tāne	☐ Gender diverse	☐ Tāhine	☐ Fakaleiti
☐ Trans woman	☐ Non-binary	☐ Whakawahine	☐ Fakafifine
☐ Trans man	☐ Bi-gender	☐ Tangata ira wahine	☐ Akava'ine
☐ Transsexual	☐ Cross-dresser	☐ Tangata ira tāne	☐ Vakasalewalewa
☐ Transgender	☐ Pangender	☐ Takatāpui	☐ My gender(s) are not listed above *(Please specify)*:
☐ Genderqueer	☐ Demi-gender	☐ Fa'afafine	

1.10 What sex were you assigned at birth?

O Male	O Female

Answer question 1.14 below if you selected *Man/Boy/Tāne* or *Trans man* as a gender you identify with, in question 1.6.

1.14 Do you currently live full-time as a man/boy/tāne?

O Yes, I started living full-time as a man at age: ______________
O No

Answer question 1.15 below if you selected *Woman/Girl/Wahine* or *Trans woman* as a gender you identify with, in question 1.6.

1.15 Do you currently live full-time as a woman/girl/wahine?

O Yes, I started living full-time as a woman at age: ______________
O No

1.25 These are some more questions that tell us about the diversity of people answering this survey. Which ethnic group or groups do you belong to?
Mark all that apply.

☐ New Zealand European/Pākehā	☐ Niuean
☐ Māori	☐ Chinese
☐ Samoan	☐ Indian
☐ Cook Island Māori	☐ Other, e.g., Dutch, Japanese, Tokelauan *(Please specify):*
☐ Tongan	☐ Don't know

4.5 Has any professional (such as a psychiatrist, psychologist, or counselor) ever tried to make you identify only with your sex assigned at birth (in other words, tried to stop you being trans or non-binary)?

O Yes	O No	O Don't know

Section 6: *The next sections of the survey are about your current state of mental health. These questions are from the New Zealand Mental Health Survey and the New Zealand Health Survey. This will allow us to compare trans and non-binary people's health to the total New Zealand population on these specific measures.*

Some people may find these questions to be sensitive or stressful to answer. If you need someone to talk to, you may call or text 1737 any time for support from a trained counsellor from the Mental Health Foundation. You may also contact OUTLine which has a confidential info-line and counselling service. You can reach them on 0800 OUTLINE (688 5463). Their website lists other services too: http://countingourselves.nz/ *The Counting Ourselves team can be contacted on 021 048 1557*

6.1 Overall, how satisfied are you with life as a whole these days?

O Very satisfied	O Dissatisfied
O Satisfied	O Very dissatisfied
O Neither satisfied nor dissatisfied	O Don't know

6.2 Overall, to what extent do you feel the things you do in your life are worthwhile?

O Very worthwhile	O Not worthwhile
O Worthwhile	O Not at all worthwhile
O Neutral	O Don't know

6.3 How much you agree or disagree with the following statement: I am able to cope with everyday stresses of life.

O Strongly agree	O Disagree
O Agree	O Strongly disagree
O Neither agree nor disagree	O Don't know

6.4 The next questions are again about how you have been feeling during the last 4 weeks.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
How often did you feel tired out for no good reason?	O	O	O	O	O
How often did you feel nervous?	O	O	O	O	O
How often did you feel hopeless?	O	O	O	O	O
How often did you feel restless or fidgety?	O	O	O	O	O
How often did you feel depressed?	O	O	O	O	O
How often did you feel that everything was an effort?	O	O	O	O	O
How often did you feel worthless?	O	O	O	O	O
How often did you feel lonely?	O	O	O	O	O

Answer question 6.5 below if you have felt nervous in the last 4 weeks. Otherwise, go to 6.6

6.5 How often did you feel so nervous that nothing could calm you down?

O All of the time	O A little of the time
O Most of the time	O None of the time
O Some of the time	

Answer question 6.6 below if you have felt restless or fidgety in the last 4 weeks. Otherwise, go to 6.7

6.6 How often did you feel so restless you could not sit still?

O All of the time	O A little of the time
O Most of the time	O None of the time
O Some of the time	

Answer question 6.7 below if you have felt depressed?" in in the last 4 weeks. Otherwise, go to 6.8

6.7 How often did you feel so depressed that nothing could cheer you up?

O All of the time	O A little of the time
O Most of the time	O None of the time
O Some of the time	

The next few questions are about long-term mental health conditions that have lasted, or are expected to last, for more than 6 months. The symptoms may come and go, or be present all the time.

6.8 Have you ever been told by a doctor that you have depression?

O Yes	O No **> Go to 6.10**	O Don't know **> Go to 6.10**

6.9 What treatments do you now have for depression? *Mark all that apply.*

☐ No treatment	☐ Exercise
☐ Medicines, tablets or pills	☐ Other treatment *(Please specify)*:
☐ Counselling	☐ Don't know

6.12 Have you ever been told by a doctor that you have anxiety disorder? This includes panic attacks, phobia, post-traumatic stress disorder, and obsessive compulsive disorder?

O Yes	O No **> Go to 6.14**	O Don't know **> Go to 6.14**

6.13 What treatments do you now have for anxiety disorder? *Mark all that apply.*

☐ No treatment	☐ Exercise
☐ Medicines, tablets or pills	☐ Other treatment *(Please specify)*:
☐ Counselling	☐ Don't know

These next questions ask about self-harm and suicide.

6.16 During the last 12 months, have you deliberately hurt yourself or done anything you knew might have harmed you *(but not kill you)*?

O Not at all	O Yes - 3-5 times
O Yes - once	O More than 5 times
O Yes - 2 times	

6.17 Have you ever . . . .

	Yes	No
Seriously thought about killing yourself *(attempting suicide)*?	O	O
Tried to kill yourself *(attempted suicide)*?	O	O

Answer question 6.18 below if you selected "*Yes*" for one of the options in question 6.17 above.

6.18 In the last 12 months, have you . . .

	Not at all	Once or twice	Three or more times
Seriously thought about killing yourself *(attempting suicide)*?	O	O	O
Tried to kill yourself *(attempted suicide)*?	O	O	O

6.20 Is there anything further about your mental health that you would like to share with us here?

Section 12: *These questions are about housing difficulties you may have had, including being homeless or needing to stay in an emergency shelter or refuge.*

12.1 Have you ever experienced *homelessness?*

O Yes	O No > **Go to 12.3**

12.3 Have any of the following housing situations ever happened to you, and was it because you are trans or non-binary? *Please provide an answer in each row.*

	Yes, this happened to me because of my gender	This happened to me but not because of my gender	This has never happened to me	This does not apply to me
I was evicted from my home/apartment	O	O	O	O
I was denied a home/apartment	O	O	O	O
I had to move back in with family members or friends	O	O	O	O
I had to move into a less expensive home/apartment.	O	O	O	O
I was homeless because of violence from a partner or family member	O	O	O	O

13.8 Have any of these things ever happened to you because you are trans or non-binary when you visited or used services at these places? *Mark all that apply.*

	Treated unfairly	Verbally harassed	Physically attacked	Treated fairly as a trans or non-binary person	None of these things happened to you at this place	You have not used this service or place
Drug or alcohol treatment program	☐	☐	☐	☐	☐	☐
Driver licensing services	☐	☐	☐	☐	☐	☐
Work and Income (including StudyLink, Senior Services, and Heartland Services)	☐	☐	☐	☐	☐	☐
Gym/pool	☐	☐	☐	☐	☐	☐
Legal services from a lawyer, clinic, or legal professional	☐	☐	☐	☐	☐	☐
Court/courthouse	☐	☐	☐	☐	☐	☐
A bank	☐	☐	☐	☐	☐	☐
Aged care (e.g. rest home, retirement village, or home care services)	☐	☐	☐	☐	☐	☐
Public transport (such as bus, train, taxi, Uber)	☐	☐	☐	☐	☐	☐
Retail store	☐	☐	☐	☐	☐	☐
Restaurant, hotel, theatre	☐	☐	☐	☐	☐	☐

***Section 13**: Some of the earlier questions have asked if you were treated unfairly because you are trans or non-binary. We have a few more questions about discrimination you may have faced in Aotearoa New Zealand. Some are about other reasons you have been treated unfairly, not just because you are trans or non-binary. We also ask questions about trans and non-binary people's experiences in different places including public bathrooms, airports, or aged care services.*

13.1 Have you ever experienced *discrimination*?
By *discrimination* we mean being treated unfairly or differently compared to other people. Some reasons for discrimination include: age, skin colour, way of dress or appearance, race or ethnic group, accent or language spoken, gender, sexual orientation, religious beliefs, disability or health issues.

O Yes	O No **> Go to 13.6**	O Don't know **> Go to 13.6**

13.2 In the last 12 months have you been discriminated against?

O Yes	O No **> Go to 13.6**	O Don't know **> Go to 13.6**

13.3 What situation or situations were you in when you were ever discriminated against? *Mark all that apply.*

☐ In a shop or restaurant	☐ Trying to get a job or at work
☐ On the street or in a public place	☐ Trying to rent housing
☐ Seeking medical care	☐ At school
☐ Dealing with the police	
☐ Other *(Please specify)*:	

Answer this question if you selected one or more options in 13.3. Otherwise go to question 13.6.

13.4 Were you discriminated against in any of these situations in the last 12 months? *Mark all that apply.*

☐ In a shop or restaurant	☐ Trying to get a job or at work
☐ On the street or in a public place	☐ Trying to rent housing
☐ Seeking medical care	☐ At school
☐ Dealing with the police	
☐ Other *(Please specify)*:	

13.5 Why do you think you were discriminated against in the last 12 months?

☐ Age	☐ Gender
☐ Skin colour	☐ Sexual orientation
☐ The way I dress or my appearance	☐ Religious beliefs
☐ Race or ethnic group	☐ Disability or health issues
☐ My accent or the language I speak	☐ Don't know
☐ Other *(Please specify)*:	

The next few questions are about sexual violence in Aotearoa New Zealand. If you would like to talk to someone about sexual violence you have experienced, free call or text 1737 any time for support from a trained counsellor, or contact QUTLine, a confidential rainbow community phone helpline: 0800 OUTLINE 688 5463 or http://www.outline.org.nz/ *The Counting Ourselves team can be contacted at 021 048 1557 Remember all of your answers are completely anonymous and confidential.*

14.4 Have any of the following things ever happened to you because you are trans or non-binary?
Mark all that apply.

	On a mobile phone	On the Internet	By letters or notes	This has not happened to me
I was sent nasty or threatening messages	☐	☐	☐	☐
I was sent unwanted sexual messages, designed to harm or upset me (such as pornographic pictures, videos, or words)	☐	☐	☐	☐

The next questions are about sexual violence. They are taken from the New Zealand General Social Survey.

14.5 Since the age of 13, has anyone *tried* to make you have sex with them, against your will?

O Yes	O No **> Go to 14.9**	O Don't know

14.6 Since the age of 13, has anyone actually made you have sex with them, against your will?

O Yes	O No **> Go to 14.9**	O Don't know **> Go to 14.9**

Section 15: *The next two questions are about your sense of connection to different communities, including other trans and non-binary people.*

15.1 On the scale of zero to ten, how would you describe your sense of belonging to:

	0 No sense of belonging	1	2	3	4	5	6	7	8	9	10 Very strong sense of belonging
My neighbourhood	O	O	O	O	O	O	O	O	O	O	O
The company or organisation I work the most hours for	O	O	O	O	O	O	O	O	O	O	O
My ethnic group	O	O	O	O	O	O	O	O	O	O	O
The trans or non-binary community	O	O	O	O	O	O	O	O	O	O	O
The LGBTIAQ+ / rainbow or takatāpui community	O	O	O	O	O	O	O	O	O	O	O

18.6 Have you ever left a spiritual/religious community because they did reject you because you are trans or non-binary?

O Yes	O No

Section 19: *These questions are about your relationships with whānau / family and friends.*

19.13 How much do you agree with these statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	I don't know
I can always rely on a friend or family or whānau member for support if I need it.	O	O	O	O	O	O

Appendix 3. Ethics Approval Letter

Health and Disability Ethics Committees
Ministry of Health
133 Molesworth Street
PO Box 5013
Wellington
6011

0800 4 ETHICS
hdecs@moh.govt.nz

08 May 2018

Dr Jaimie Veale
University of Waikato
PB 3105
Hamilton 3240

Dear Dr Veale

Re:	**Ethics ref:**	**18/NTB/66**
	Study title:	Aotearoa New Zealand Trans and Non-Binary Health Survey

I am pleased to advise that this application has been *approved* by the Northern B Health and Disability Ethics Committee. This decision was made through the HDEC-Expedited Review pathway.

Conditions of HDEC approval

HDEC approval for this study is subject to the following conditions being met prior to the commencement of the study in New Zealand. It is your responsibility, and that of the study's sponsor, to ensure that these conditions are met. No further review by the Northern B Health and Disability Ethics Committee is required.

Standard conditions:

1. Before the study commences at *any* locality in New Zealand, all relevant regulatory approvals must be obtained.

2. Before the study commences at *each given* locality in New Zealand, it must be authorised by that locality in Online Forms. Locality authorisation confirms that the locality is suitable for the safe and effective conduct of the study, and that local research governance issues have been addressed.

Non-standard conditions:

3. Please place the support services in the Participant Information Sheet and Consent Form (PICF) under a clear heading so they are easily identifiable. Also repeating the support services contact details at the end of the survey.
4. Please include University logo on recruitment advertisements.
5. As there will be a contract for funding held by the University Research Office, it may be appropriate to invite them to act as the study sponsor (management and financing). Alternatively, identify the University as the study locality, and ensure that all local governance requirements are met.

Non-standard conditions must be completed before commencing your study, however, they do not need to be submitted to or reviewed by HDEC.

If you would like an acknowledgement of completion of your non-standard conditions you may submit a post approval form amendment through Online Forms. Please clearly identify in the amendment form that the changes relate to non-standard conditions and ensure that supporting documents (if requested) are tracked/highlighted with changes.

For information on non-standard conditions please see section 128 and 129 of the *Standard Operating Procedures for Health and Disability Ethics Committees* (available on www.ethics.health.govt.nz)

After HDEC review

Please refer to the *Standard Operating Procedures for Health and Disability Ethics Committees* (available on www.ethics.health.govt.nz) for HDEC requirements relating to amendments and other post-approval processes.

Your next progress report is due by 8 May 2019.

Participant access to ACC

The Northern B Health and Disability Ethics Committee is satisfied that your study is not a clinical trial that is to be conducted principally for the benefit of the manufacturer or distributor of the medicine or item being trialled. Participants injured as a result of treatment received as part of your study may therefore be eligible for publicly-funded compensation through the Accident Compensation Corporation (ACC).

Please don't hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,

Mrs Kate O'Connor
Chairperson
Northern B Health and Disability Ethics Committee

Encl: appendix A: documents submitted
appendix B: statement of compliance and list of members

Appendix 4. Examples of Illustrated Images alongside Quotes Used to Recruit Participants

"WE can no longer be left behind, being counted is OUR collective responsibility. Being counted will no longer give anyone an excuse to make US invisible."
- Phylesha

Images were drawn by Huriana Kopeke-Te Aho

Appendix 5. A Flyer Used to Promote the Counting Ourselves Survey

Aotearoa New Zealand Trans and Non-binary Health Survey

WHAT: This is a comprehensive, anonymous survey on the health and wellbeing of trans and non-binary people living in Aotearoa / New Zealand.

WHO: This survey is for all trans and non-binary people aged 14 years or older and currently living in Aotearoa New Zealand.
It does not matter whether you use the specific terms 'trans' or 'non-binary' to describe yourself, whether you have transitioned, or even plan to transition. There are many other terms that people in our communities use including transgender, transsexual, whakawahine, tāhine, tangata ira tane, takatāpui, fa'afafine, fa'afatama, fakaleiti, fakafifine, akava'ine, aikāne, vakasalewalewa, genderqueer, gender diverse, bi-gender, cross-dresser, pangender, demi-gender, agender, trans woman, trans feminine, trans man, or trans masculine. Trans people filling out the survey might also identify as simply a woman or as a man. We want to hear from all of you.

WHY: We hope this survey will provide information that will improve the health of trans and non-binary people in Aotearoa New Zealand.

WHEN: The survey is live until September 30th.

HOW: The easiest way to complete the survey is online, through our website [http://countingourselves.nz]. If you want to fill it out by hand, send your postal address to trans-survey@waikato.ac.nz. We will send you a print-out of the survey, and a stamped, addressed envelope to return the completed survey to us. Your postal address and email address will be deleted once we have sent you the survey.

Topics in the Survey

a) Emotional and physical health

b) Experiences of stigma, discrimination and violence

c) Experiences of accessing general and gender-affirming healthcare

d) Social support factors (including from peers, family, whānau, cultural or other communities)
This study has been approved by the Health and Disability Ethics Committees (Approval no: 18/NTB/66)

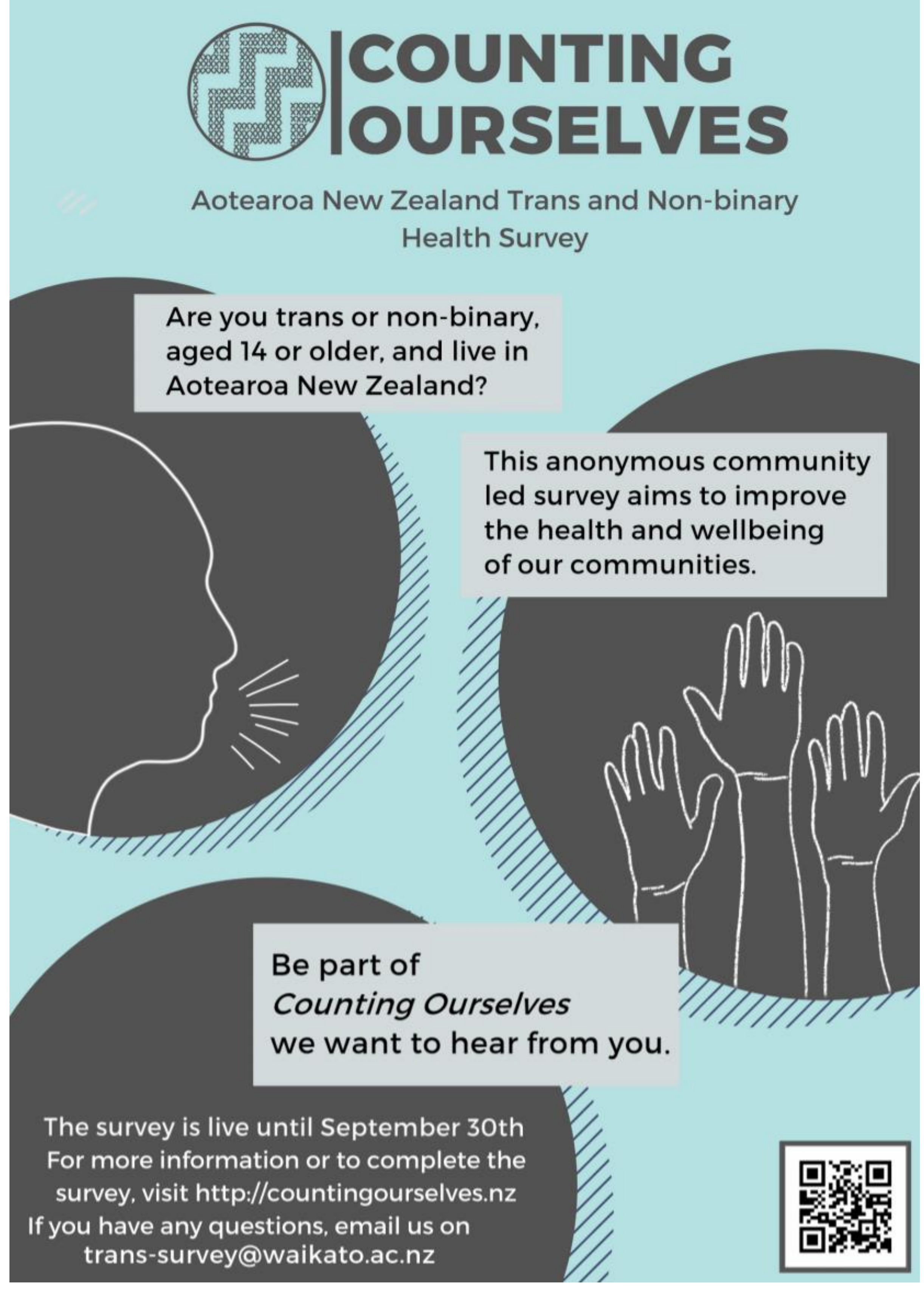
Contact us

Email: trans-survey@waikato.ac.nz

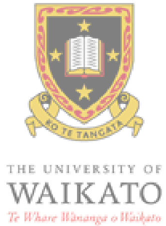
Website:
http://countingourselves.nz

Facebook page:
https://www.facebook.com/NZTransHealthSurvey/

Appendix 6. A Poster used to Promote the Counting Ourselves Survey



Appendix 7. Co-authorship Form (Chapter 2)



THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
Private Bag 3105
Hamilton 3240, New Zealand
Phone +64 7 838 4439
Website: http://www.waikato.ac.nz/sasd/postgraduate/

This form is to accompany the submission of any PhD that contains research reported in published or unpublished co-authored work. **Please include one copy of this form for each co-authored work**. Completed forms should be included in your appendices for all the copies of your thesis submitted for examination and library deposit (including digital deposit).

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Chapter 2 - Gender minority stress: A critical review

Nature of contribution by PhD candidate	After reviewing all relevant literature, I developed the outline of the paper and wrote the first full draft of the paper. I was also the main person responsible for making revisions of the paper based on feedback from the other co-authors and journal reviewers.
Extent of contribution by PhD candidate (%)	75

CO-AUTHORS

Name	Nature of Contribution
Gareth Treharne	Provided feedback on the theoretical aspect of the paper and reviewed it prior to publishing.
Sonja Ellis	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Johanna Schmidt	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Jaimie Veale	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.

Certification by Co-Authors

The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Gareth Treharne	[signature]	15/10/2020
Sonja Ellis	[signature]	14/10/2020.
Johanna Schmidt	[signature]	14.10.2020
Jaimie Veale	[signature]	12/10/2020

Appendix 8. Co-authorship Form (Chapter 3)

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
Private Bag 3105
Hamilton 3240, New Zealand
Phone +64 7 838 4439
Website: http://www.waikato.ac.nz/sasd/postgraduate/

This form is to accompany the submission of any PhD that contains research reported in published or unpublished co-authored work. **Please include one copy of this form for each co-authored work.** Completed forms should be included in your appendices for all the copies of your thesis submitted for examination and library deposit (including digital deposit).

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Chapter 3 - Mental health of trans and gender diverse people in Aotearoa/New Zealand: A review of the social determinants of inequities

Nature of contribution by PhD candidate	After reviewing all relevant literature, I developed the outline of the paper and wrote the first full draft of the paper. I held the leading role in making revisions of the paper based on feedback from the other co-authors and journal reviewers
Extent of contribution by PhD candidate (%)	75

CO-AUTHORS

Name	Nature of Contribution
Johanna Schmidt	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Sonja Ellis	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Jaimie Veale	Supervised the design of the paper, provided feedback on the drafting on the paper and reviewed it prior to publishing.

Certification by Co-Authors

The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Johanna Schmidt	[signature]	14.10.2020
Sonja Ellis	[signature]	14/10/2020.
Jaimie Veale	[signature]	12/10/2020

Appendix 9. Co-authorship Form (Chapter 5)

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
Private Bag 3105
Hamilton 3240, New Zealand
Phone +64 7 838 4439
Website: http://www.waikato.ac.nz/sasd/postgraduate/

This form is to accompany the submission of any PhD that contains research reported in published or unpublished co-authored work. **Please include one copy of this form for each co-authored work.** Completed forms should be included in your appendices for all the copies of your thesis submitted for examination and library deposit (including digital deposit).

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Chapter 5 - Mental health inequities among transgender people in Aotearoa/New Zealand: Findings from the Counting Ourselves survey

Nature of contribution by PhD candidate	I developed the outline of the paper after discussing with my supervisors. I wrote the first full draft of the paper and was the main person responsible for conducting data analysis. I also held the leading role in making revisions of the paper based on feedback from the other co-authors and journal reviewers.
Extent of contribution by PhD candidate (%)	80

CO-AUTHORS

Name	Nature of Contribution
Sonja Ellis	Supervised the research process, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Johanna Schmidt	Supervised the research process, provided feedback on the drafting on the paper and reviewed it prior to publishing.
Jack Byrne	Provided feedback on the drafting on the paper and reviewed it prior to publishing.
Jaimie Veale	Supervised the research process, provided guidance in the conceptualisation of the paper and oversaw the data analysis process. Also provided feedback on the drafting of the paper and reviewed it prior to publishing.

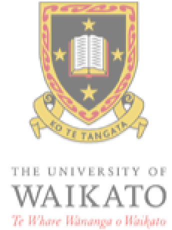
Certification by Co-Authors

The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Sonja Ellis	[signature]	14/10/2020.
Johanna Schmidt	[signature]	14.10.2020
Jack Byrne	[signature]	16/10/2020
Jaimie Veale	[signature]	12/10/2020

Appendix 10. Co-authorship Form (Chapter 6)



THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
Private Bag 3105
Hamilton 3240, New Zealand
Phone +64 7 838 4439
Website: http://www.waikato.ac.nz/sasd/postgraduate/

This form is to accompany the submission of any PhD that contains research reported in published or unpublished co-authored work. **Please include one copy of this form for each co-authored work**. Completed forms should be included in your appendices for all the copies of your thesis submitted for examination and library deposit (including digital deposit).

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Chapter 6 - Enacted stigma experiences and protective factors are strongly associated with mental health outcomes of transgender people in Aotearoa/New Zealand

Nature of contribution by PhD candidate	I developed the outline of the paper after discussing with my supervisors. I wrote the first full draft of the paper and was the main person responsible for conducting data analysis. I also held the leading role in making revisions of the paper based on the feedback from other co-authors and journal reviewers.
Extent of contribution by PhD candidate (%)	80

CO-AUTHORS

Name	Nature of Contribution
Gareth Treharne	Provided feedback on the drafting on the paper and reviewed it prior to publishing.
Sonja Ellis	Supervised the research process, provided feedback on the drafting of the paper and reviewed it prior to publishing.
Johanna Schmidt	Supervised the research process, provided feedback on the drafting of the paper and reviewed it prior to publishing.
Jaimie Veale	Supervised the research process, provided guidance in the conceptualisation of the paper and oversaw the data analysis process. Also provided feedback on the drafting of the paper and reviewed it prior to publishing.

Certification by Co-Authors

The undersigned hereby certify that:
- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Gareth Treharne	G Treharne	15/10/2020
Sonja Ellis	[signature]	14/10/2020.
Johanna Schmidt	[signature]	14.10.2020
Jaimie Veale	[signature]	12/10/2020

Appendix 11. Co-authorship Form (Chapter 7)

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Co-Authorship Form

Postgraduate Studies Office
Student and Academic Services Division
Wahanga Ratonga Matauranga Akonga
The University of Waikato
Private Bag 3105
Hamilton 3240, New Zealand
Phone +64 7 838 4439
Website: http://www.waikato.ac.nz/sasd/postgraduate/

This form is to accompany the submission of any PhD that contains research reported in published or unpublished co-authored work. **Please include one copy of this form for each co-authored work**. Completed forms should be included in your appendices for all the copies of your thesis submitted for examination and library deposit (including digital deposit).

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Chapter 7 - "It's how the world around you treats you for being trans": Mental health and wellbeing of transgender people in Aotearoa New Zealand

Nature of contribution by PhD candidate	I initiated the coding process before consulting with the co-authors. I was responsible for refining the codes when there were discrepancies in coding decisions among co-authors and amalgamating the codes into themes. I also wrote the first full draft of the paper and made subsequent revisions based on the feedback from other co-authors.
Extent of contribution by PhD candidate (%)	80

CO-AUTHORS

Name	Nature of Contribution
Johanna Schmidt	Supervised the research process, provided guidance on the initial coding process and creation of themes, and provided feedback on the drafting of the paper.
Sonja Ellis	Supervised the research process, provided guidance on the coding process and thematic analysis, and provided feedback on the drafting of the paper.
Jaimie Veale	Supervised the research process, participated in the conversation around thematic analysis and provided feedback on the drafting of the paper.
Jack Byrne	Participated in the conversation around thematic analysis and provided feedback on the drafting of the paper.

Certification by Co-Authors

The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and

Name	Signature	Date
Johanna Schmidt	[signature]	14.10.2020
Sonja Ellis	[signature]	14/10/2020.
Jaimie Veale	[signature]	12/10/2020
Jack Byrne	[signature]	16/10/2020