Mental Distress and Discrimination in Aotearoa New Zealand

Results from 2015-2018 Mental Health Monitor and 2018 Health and Lifestyles Survey

July 2020

health promotion agency
TE HIRINGA HAUORA

Prepared for Te Hiringa Hauora/Health Promotion Agency by:

Jayde Flett, Natalie Lucas, Sydney Kingstone, and Brendan Stevenson

ISBN: 978-0-478-44996-9

Citation: Flett, J. A. M., Lucas, N., Kingstone, S., & Stevenson, B. (2020). Mental distress and discrimination in Aotearoa New Zealand: Results from 2015-2018 Mental Health Monitor and 2018 Health and Lifestyles Survey. Wellington: Te Hiringa Hauora/Health Promotion Agency.

Acknowledgements

Te Hiringa Hauora/Health Promotion Agency would like to thank those who took the time to participate in this research. We would also like to thank Adelaide Wilson for assisting with the data analyses.

Copyright

This document has been externally peer reviewed by Dr. Sarah Gordon, Department of Psychological Medicine, University of Otago (Wellington)

The document is available at: www.hpa.org.nz/our-work/research/publications

Any queries regarding this report should be directed to Te Hiringa Hauora at the following address:
Te Hiringa Hauora/Health Promotion Agency
PO Box 2142
Wellington 6140
New Zealand
www.hpa.org.nz
enquiries@hpa.org.nz

NZBN 9429041905333
July 2020

KEY FINDINGS

Mental distress-related discrimination impacts peoples' ability to contribute and participate in society. To do something about mental distress-related discrimination, we need to know more about it – how common is it, who is experiencing it, and where does it occur?

This report highlights key findings related to mental distress-related discrimination using a pooled dataset comprising the 2015, 2016, and 2018 New Zealand Mental Health Monitors (NZMHM) and a separate analysis of the 2018 New Zealand Health and Lifestyles Survey (HLS). We found that:

Personal experience of mental distress was common but self-reported rates differ in some demographics[1]:

- Almost one-third of people have a personal experience of mental distress (31%).
- Rainbow people are almost twice as likely to have a personal experience of mental distress (57%).
- Māori and young adults (aged 18-24 years) also experience higher rates of mental distress (38% and 36%, respectively).
- Pasifika and Asian people report lower rates of mental distress (20% and 14%, respectively).

Mental distress-related discrimination can impact peoples' ability to contribute and participate in society:

- Over one-third of people who were currently experiencing high mental distress (36%) and almost one-fifth of people who had experienced mental distress during their lifetime (19%) report being discriminated against because of their mental distress.
- Mental distress-related discrimination was most commonly experienced in the workplace and among family/whānau or friends.
- One in five people who had experienced mental distress avoided doing something or were afraid to do something because they anticipated being discriminated against.
- Discrimination-related fear and avoidance is three to five times higher for those who are currently experiencing high mental distress and for those who have previously been discriminated against.

Most people know someone who has experienced mental distress. Familiarity with mental distress is related to willingness for social inclusion:

- Most people know someone (77%) who experiences mental distress.
- Most people are willing to be friends with, work with and live nearby those experiencing mental distress, but fewer are willing to live with those with experience of mental distress.
- Familiarity with mental distress— through personal experience or through knowing someone who experiences mental distress— is associated with higher willingness to live with, work with, and live nearby those who experienced mental distress.

[1] Māori compared to non-Māori, non-Pasifika; Pasifika compared to non-Māori, non-Pasifika; Asian compared to non-Asian, New Zealand Europeans compared to non-New Zealand Europeans; Rainbow compared to non-Rainbow; young adults (18-24) compared to adults (25+).

BACKGROUND

AIM AND SCOPE

Mental distress-related discrimination negatively impacts peoples' ability to contribute and participate in society. It is disproportionately experienced by users of mental health services and those with a history of mental illness or mental distress (Thornicroft et al., 2014).[2] For some, it can be more harmful than the experience of mental distress itself (Thornicroft et al., 2007). Workplace discrimination may be particularly damaging and common for those who experience mental distress. For example, only 38% of people disagree with a hypothetical employer's decision to hire a less experienced candidate over a more experienced candidate, when the more experienced candidate has a history of mental distress (Puthipiroj & Holland, 2015).

To do something about mental distress-related discrimination, we need to know more about it – how common is it, who is experiencing it, and where it occurs? Here, we highlight the key findings relating to mental distress-related discrimination using data from nationally representative population surveys: the New Zealand Mental Health Monitor (NZMHM; pooled from 2015, 2016, and 2018) and the Health and Lifestyle Survey (HLS, 2018).

Previous research indicates that mental distress and mental distress-related discrimination is more commonly experienced by people from certain demographic groups (Meyer, 2003; Ng, 1997; Subica et al., 2019; Thomas et al., 2010) and in mental health service users (Thornicroft et al., 2014). With that in mind, in this report we prioritise reporting the experiences of Māori, Pasifika, Asian, Rainbow[3], and young people (15 to 24-years-old).[4] We do not have mental health service-use data in this report.

KEY CONCEPTS: MENTAL DISTRESS, DISCRIMINATION, AND INCLUSION

Language of mental distress

The established scales used in the NZMHM and HLS use language such as 'mentally ill' and 'people with mental illness/es'. More recent work by Te Hiringa Hauora demonstrated that people experience a far broader range of distress than is captured by these and related terms (Kvalsvig, 2018).

In this report we use the term 'mental distress'[5] to broadly refer to: those who have had an experience of mental illness and those whose scores on psychometrically validated questionnaires indicate some level of current psychological or mental distress. By using the term mental distress, we better capture the broader range of peoples' experiences, demonstrate respect for the

[2] Hereafter mental illness is referred to as mental distress.
[3] We use the term Rainbow as an inclusive term to refer to people who have a diverse sex, gender identity and/or sexual orientation.
[4] Where statistically appropriate we have categorised young people (15 to 24 years) as: youth (15 to 17 years; consistent with: Te Hiringa Hauora Health Promotion Agency, 2019) and young adults (18 to 24 years).
[5] Except where necessary to differentiate the specific survey items that used the term 'mental illness'.

preferences of those with lived experience, and better reflect Māori and Pasifika views of health and wellbeing (Ataera-Minster & Trowland, 2019; Russell, 2018).

Discrimination: concepts and settings

Discrimination concepts

Discrimination is when unfair treatment results in social exclusion (in terms of avoidance and withdrawal, segregation, and/or coercion: Corrigan & Watson, 2002). It can be conceptualised as experienced, anticipated, and internalised[6] (Fox et al., 2018). In this report we focus on experienced and anticipated discrimination.

Experienced discrimination refers to the previously or presently occurring discrimination faced by a person who experiences mental distress (Bos et al., 2013; Quinn & Chaudoir, 2009). Experienced discrimination can range from day-to-day unfair treatment such as micro aggressions, to major events such as redundancy.

Anticipated discrimination refers to the expectation and/or fear a person holds of being subject to discrimination sometime in the future (eg,. being denied work opportunities based on their experience) (Bos et al., 2013; Quinn & Chaudoir, 2009).

Discrimination settings

Discrimination against people who experience mental distress occurs in a number of settings. Within health-care settings, people experiencing mental distress and their family members can face ineffective or disrespectful treatment and experience poorer quality health care (Thornicroft et al., 2016). In the workplace, people experiencing mental distress can be turned down for roles, or stop themselves from looking for work due to anticipated discrimination (Brohan & Thornicroft, 2010).

Educational settings are also places where people face mental distress-related discrimination. Youth in Aotearoa New Zealand have identified peer discrimination around mental distress and discriminatory treatment from school staff based on mental distress (Mental Health Foundation of New Zealand, 2014). University students go to considerable lengths to hide their mental distress from staff due to anticipated discrimination (Martin, 2010).

Family members, whānau and friends are other significant sources of discrimination for people experiencing mental distress. Youth in Aotearoa New Zealand reported facing bullying, family violence, neglect, and rejection in relation to their experience with mental distress (Mental Health Foundation of New Zealand, 2014). Users of mental health services in Aotearoa New Zealand identified discrimination and unfair treatment from family as being the most prevalent they

[6] As with the language of mental distress, the language around stigma and discrimination is changing (Peterson, Barnes, & Duncan, 2008). Although the references cited here use the terms experienced, anticipated, and internalised stigma, we use the term discrimination instead (Peterson, Barnes, & Duncan, 2008). This choice of language is consistent with the *Like Minds, Like Mine* ethos and is the expressed preference of those with lived experience of mental distress (Gordon & Reinsborough, 2019). For a definition and thorough review of internalised or self-stigma, see Peterson, Barnes, & Duncan (2008).

experienced, and mentioned difficulty in establishing friendships and relationships due to mental distress-related discrimination (Wyllie & Brown, 2011).

Social proximity as an indicator of social inclusion

One method of investigating mental distress-related discrimination is by measuring the degree of social contact people have and/or are willing to have with those who experience mental distress (Holland, 2015).[7] For instance, when presented with a hypothetical scenario about the location of a new community mental health centre, people are most comfortable when the new location was further away from them (eg, in their suburb) and least comfortable when it was closest to them (eg, next door; Holland, 2015). This social proximity gradient has also been demonstrated in the evaluation of the Like Minds, Like Mine campaign (Wyllie & Lauder, 2012). Here, we use willingness for social proximity as a proxy for social inclusion, as opposed to preference for social distance as a proxy for social exclusion.

Intervention-related research has demonstrated that having increased contact with people with serious mental distress is associated with reductions in negative attitudes about mental distress and less desire for social distance from people experiencing mental distress (Morgan et al., 2018). But, it is unclear how familiarity with mental distress outside of interventions and campaigns is related to the degree of social contact people have and are willing to have with people who experience mental distress.

KEY FOCUS OF THIS REPORT

In this report we focus on the following topics:

- **Knowing people experiencing mental distress**
    - **Experiences of mental distress - self and others:** Identifying how many people have personal experience of mental distress, how many know someone who has experienced mental distress, and the settings they know them in.
    - **Willingness for social proximity:** Identifying willingness for social proximity with people who experience mental distress and how willingness for social proximity differs on the basis of previous experience with mental distress (self or exposure to others).
- **Discrimination**
    - **Experienced discrimination:** Identifying the prevalence of discrimination against those who are currently or have experienced mental distress in their lifetime.
    - **Settings of discrimination:** Identifying the settings where those who are currently or have experienced mental distress in their lifetime have been discriminated against.
    - **Anticipated discrimination:** Identifying the prevalence of anticipated discrimination in those who are currently or have experienced mental distress in their lifetime.

[7] In many academic settings, this is termed 'social distance' and is framed in the opposite direction (i.e., the degree to which someone wants to avoid contact with–or socially exclude–a group of people; Jorm & Oh, 2009) whereby less desire for social distance is the preferred outcome. Consistent with a strengths-based approach, here we use the terms social contact and social proximity (the closeness of that social contact) as indicators of social inclusion.

- **And finally, how do the previous questions vary:**
    - for Māori, Pasifika, Asian, Rainbow, and young people
    - based on personal experience of mental distress, where applicable
    - based on severity of current mental distress.

Data for this report were drawn from the pooled New Zealand Mental Health Monitor (NZMHM). This consists of three survey waves: 2015 NZMHS, 2016 NZMHS, and 2018 NZMHWS (total n = 4272).[8,9] Data were also drawn from the 2018 Health and Lifestyles Survey (HLS; n = 2725). Additional details on data sources, methodology, measures, and sample characteristics are provided in Appendix 1.

[8] Some measures have previously been used in the reports: 2015 New Zealand Mental Health Monitor: Attitudes of adults towards people with experience of mental distress; Wellbeing and Mental Distress in Aotearoa New Zealand: Snapshot 2016; Te Kaveinga - Mental health and wellbeing of Pacific peoples; and Te Oranga Hinengaro - Māori Mental Wellbeing. These can be found under publications at www.hpa.org.nz.

[9] We adhere to pooling procedures outlined by Statistics Canada (Wendt, 2007). Using a pooled dataset means we have more statistical power to explore discrimination in smaller populations (eg, Rainbow people). Consistent with good pooling practices, we only used outcome data that were consistent over time (ie, when there are unexplained response discrepancies, we selectively pooled data). The sample size varies for each survey item, and some results are more precise than others. For more on this approach, see our earlier report discussing the pooling of the 2015 and 2016 NZMHS and the 2016 HLS datasets (Health Promotion Agency, 2017). Survey sources for each measure are included in Appendix Table 2.

FINDINGS

EXPERIENCES OF MENTAL DISTRESS - SELF AND OTHERS

Most people have personal experience of mental distress or know someone who does

Almost one-third of people reported experiencing mental distress (ie, self-defined or diagnosis of mental illness) in their lifetime (31%). Experience of mental distress differed across demographic groups.[10] Almost 40% of Māori, New Zealand Europeans, and young adults (18 to 24-year-olds) reported experiencing mental distress in their lifetime (38%, 36%, and 36%, respectively). Almost 60% of Rainbow people reported experiencing mental distress (57%) and were 75% more likely to report experiencing mental distress in their lifetime than non-Rainbow people. By contrast, Pasifika and Asian people reported lower rates of mental distress (20% and 14%, respectively) than non-Pasifika/non-Māori and non-Asian people, respectively.

Knowing someone who experiences mental distress was very common (77%) and once again, differed across demographic groups. Asian people were less likely to report knowing someone who experiences mental distress than non-Asian people. The opposite was true for Rainbow and New Zealand European people, where they were more likely to know someone who experiences mental distress than non-Rainbow people and non-New Zealand European people, respectively.[11]

Half of Aotearoa New Zealanders (aged 15+) stated that they were close friends with someone who experiences mental distress (50%), and approximately one-third have previously lived with (34%) and/or worked with (36%) someone experiencing mental distress. One-fifth (19%) reported that they have lived nearby someone experiencing mental distress.

Knowing those who experience mental distress	**50%** Close friend	**36%** Worked with
34% Lived with	**31%** Self	**19%** Neighbour

Figure 1. Experiences of mental distress in self and others using 2016 and 2018 NZMHM (n = 2938). Participants were able to select more than one response.

[10] See Appendix Table 3 for further analyses by priority populations including proportions and RR.
[11] See Appendix Table 4 for further analyses by priority populations including proportions and RR.

FAMILIARITY WITH MENTAL DISTRESS AND WILLINGNESS FOR SOCIAL PROXIMITY

Most people are willing to live with, be friends with, work with, and live nearby people experiencing mental distress

Over half of people reported that they would be willing to live with someone who is experiencing mental distress (55%). Most people reported that they would continue a friendship with a person who developed mental distress (92%), and approximately three-quarters of people reported that they would be willing to work with (72%) or live nearby (77%) someone who is experiencing mental distress.

Familiarity with mental distress is associated with higher willingness to work with, live with, or live nearby people experiencing mental distress

Willingness for social proximity differed based on familiarity with mental distress. People who had personal experience of mental distress in their lifetime were more willing to include people with mental distress as a housemate, friend, colleague, or neighbour than those who had not experienced mental distress. Personal experience of mental distress was not the only factor related to higher social proximity scores; previous contact (and the closeness of that social contact) predicted willingness for social proximity and the closeness of that social proximity (Figure 2).[12]

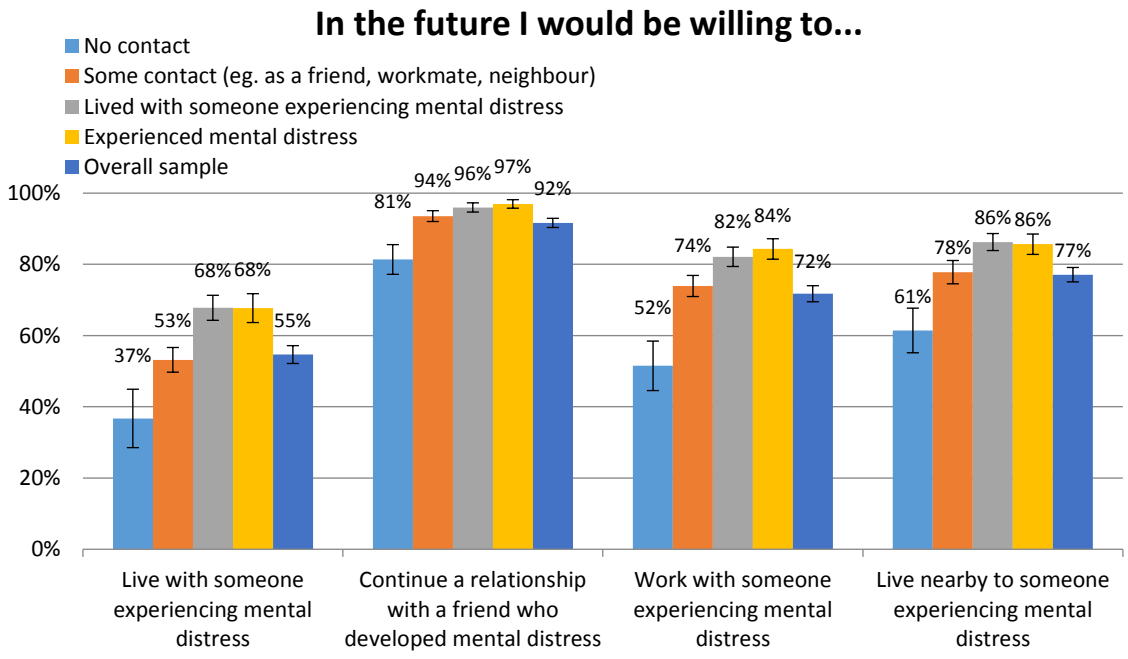

Figure 2. Percentages of peoples' willingness for social proximity on the basis of previous experiences with mental distress in self and others.

Those who had lived with people who experience mental distress were 1.5 times more likely to be willing to work with and 1.7 times more likely to be willing to live with people who experience

[12] See Appendix Tables 5 and 6 for detail, including RR.

mental distress compared to those with no prior contact.[13] Those with some contact (as a friend, workmate, or neighbour) were 1.4 times more likely to be willing to work with and live with people who experience mental distress compared to those with no prior contact.[14] The relationship between previous contact and willingness for social proximity was generally consistent *within* specific populations (eg, Māori, Pasifika, Asian, and youth).[15]

People who had lived with someone with mental distress were 5.6 times more likely to have experienced mental distress themselves than those who had no contact with people who experience mental distress.[16] Those who knew, worked with, lived nearby, or were friends with someone who had experienced mental distress were 3.5 times more likely to have experienced mental distress themselves. In part, these findings may reflect that those with personal experience of mental distress are more open to others who experience mental distress; this is consistent with the earlier finding presented in Figure 2.

Willingness to live with, work with, and live nearby people with mental distress also differed across some demographic groups (Figure 3). Rainbow people were more likely to be willing to live with, work with, and live nearby someone with a mental illness than non-Rainbow people. On the other hand, Asian people were less willing to live with, work with, and live nearby someone with a mental illness than non-Asian people. Details of these analyses are provided in Appendix Table 7.

[13] Willing to work with: Lived with vs. no contact: RR=1.52, 95%CI= 1.32 to 1.75, t=5.76, p<.001, adjusted for age, gender, and ethnicity. Willing to live with: Lived with vs. no contact: RR=1.71, 95%CI= 1.34 to 2.18, t=4.38, p<.001, adjusted for age, gender, and ethnicity.

[14] Willing to work with: Some contact vs. no contact: RR=1.39, 95%CI= 1.21 to 1.60, t=4.69, p<.001, adjusted for age, gender, and ethnicity. Willing to live with: Some contact vs. no contact: RR=1.39, 95%CI= 1.09 to 1.76, t=2.66, p = .008, adjusted for age, gender, and ethnicity.

[15] This association did not hold in Rainbow participants, although this may reflect that Rainbow people were already highly willing for social proximity to those who experience mental distress (as demonstrated in Figure 5). See Appendix Tables 8 – 11 for RR, 95% CI, t, and p.

[16] Personal experience of mental distress in those with Some contact vs. no contact: RR=3.51, 95%CI= 2.40 to 5.14, t=6.51, p<.001, adjusted for age, gender, and ethnicity. Personal experience of mental distress in those who had Lived with vs. no contact: =5.62, 95%CI= 3.87 to 8.17, t=9.09, p<.001, adjusted for age, gender, and ethnicity.

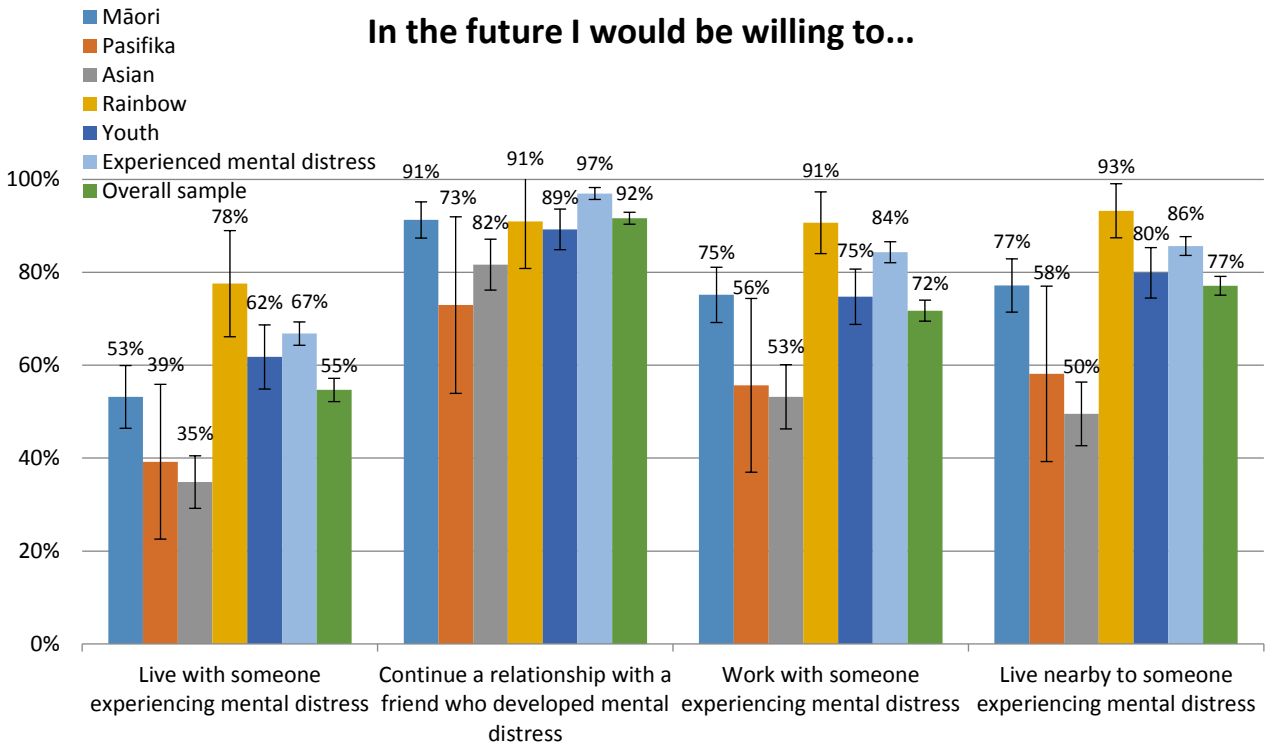

Figure 3. Willingness for social proximity in priority sub-populations.

EXPERIENCED AND ANTICIPATED DISCRIMINATION

Experienced discrimination was highest in those currently experiencing high mental distress

This section uses data from the 2018 HLS (*n* = 2,725), a survey that draws a sample from the general adult population (15 years and older) of Aotearoa New Zealand. Of the 26% of respondents from the HLS who said that they had experienced mental distress in their lifetime, almost one-fifth (19%) reported being discriminated against because of their mental distress. The rate of experienced discrimination rose to just over one-third (36%) for those who were also *currently* experiencing high mental distress within the last four weeks (as indicated by K10 scores greater than 21). Those who were currently experiencing high mental distress were 2.4 times more likely than those experiencing low mental distress to report being discriminated against because of their mental distress.[17] Rates of discrimination due to mental distress were generally consistent *within* Māori, Pasifika, Asian, Rainbow, and young people after adjusting for demographics, although this may reflect the small sample sizes in these groups.

Discrimination was most commonly experienced in the workplace and among family/whānau or friends

Of those who have been discriminated against because of their mental distress (*n* = 138), discrimination was most commonly experienced in the workplace (50%) and among family/whānau or friends (33%), including for those who were currently experiencing high mental distress (Table 1). This finding of workplace as the setting where discrimination was most experienced differs from

[17] Lifetime experience of mental distress and currently highly distressed (vs. Lifetime experience of mental distress and current low distress): RR = 2.39, 95%CI = 1.37 to 4.16, t = 3.09, *p* = .002, adjusted for age, gender, and ethnicity.

Wyllie and Brown (2011), which identified family as the setting for most discrimination. This difference may reflect the very small sample size or may be explained due to the nature of survey populations: the Ministry of Health's *2010 Mental Health Survey* only selected those who had used mental health services in the past 12 months, while the 2018 HLS was a nationally representative sample population.

Over one-third of people who have been discriminated against because of their mental distress reported discrimination in more than one setting (38%); over one-quarter of those with low or no current distress (27%) and over half of those with high current distress (52%) reported discrimination in more than one setting.

Table 1. Settings where mental distress-related discrimination is experienced.

Settings where discrimination is experienced (multiple responses possible)	**Those with a lifetime experience of mental distress who have been discriminated against because of their mental distress (*n* = 138)**		
	Overall	Current low or no distress	Current high distress
Workplace	50%	46%	55%
Family/whānau or friends	32%	27%	40%
Education, training	19%	12%	28%
Health services	16%	12%	21%
Insurance	16%	21%	9%
Sports clubs, community clubs / groups	13%	15%	11%
Government agencies	10%	5%	17%
Housing	3%	1%	6%
Other	0.1%	1%	0%
Multiple settings	38%	27%	52%

Note. 2% of respondent who have experienced mental distress and report being discriminated against did not mention any of these settings.

Anticipated discrimination is highest for those who are currently highly distressed and for those who have previously been discriminated against

One in five people (21%) who experienced mental distress reported they had avoided doing something or were afraid to do something because they anticipated being discriminated against. Those who had previously experienced discrimination were 5.3 times more likely to avoid doing something because of anticipated discrimination than those who had not experienced discrimination.[18]

Those who were currently highly distressed were 2.9 times more likely than those with current low distress to avoid doing something because they anticipated being discriminated against.[19] Avoidance due to fear of discrimination was generally consistent *within* Māori, Pasifika, Asian, Rainbow, and young People after adjusting for demographics, although this may reflect small sample sizes.

[18] Previous experience of discrimination (vs. no previous experience of discrimination): RR = 5.27, 95%CI = 3.61 to 7.70, t = 8.64, $p \leq .001$, adjusted for age, gender, and ethnicity.
[19] Lifetime experience of mental distress and currently highly distressed (vs. Lifetime experience of mental distress and current low distress): RR = 2.88, 95%CI = 1.90 to 4.36, t = 5.01, $p \leq .001$, adjusted for age, gender, and ethnicity.

DISCUSSION

Some reflections

Consistent with previous research in both Aotearoa New Zealand (Kvalsig, 2018; Wyllie & Lauder, 2012) and internationally (Corrigan et al., 2012), our findings demonstrate that mental distress is common in Aotearoa New Zealand, whether through personal experience or knowing someone who experiences mental distress. Mental distress was often associated with both experienced and anticipated discrimination, especially in those who were currently experiencing high mental distress. The settings where we often spend large amounts of time with people we are close to—the workplace and among family, whānau or friends—are also the settings where mental distress-related discrimination is most likely to occur.

Importantly, we found that the more contact a person has had with someone with mental distress, the more willing they would be to live with, work with, live nearby, and retain friendships with people who experience mental distress. This finding supports the intention of the *Like Minds, Like Mine* public awareness programme which aims to increase social inclusion and reduce stigma and discrimination for people with experience of mental distress. Although willingness for social proximity is not a direct indicator of social inclusion, more broadly, our findings provide further justification for exploring the role between social exposure and inclusion for people who experience mental distress through mental health promotion campaigns.[20]

Previous experiences of mental distress-related discrimination were associated with high rates of fear and avoidance. Coupled with the settings of discrimination, our findings echo the call for workplace anti-discrimination mental health policies (WHO, 2013; Thornicroft et al., 2016). Mental health promotion programmes such as mental health first aid courses have successfully led to positive attitudinal change toward mental distress internationally (Jorm et al., 2010). Our current findings indicate a need to further address workplace and family and whānau mental distress-related discrimination in future mental health promotion campaigns as well.

To address the needs of particular communities, future work should seek to address the inequitably high levels of mental distress experienced by Rainbow people, as well as the elevated levels of mental distress experienced by Māori and young People. Although Pasifika and Asian people reported lower rates of mental distress in these surveys, it is unclear whether these lower rates reflect lower prevalence or cultural differences relating to the disclosure of mental distress. Previous studies have found Pasifika and Asian communities to underestimate the prevalence of mental distress (Ng, 1997; Subica et al., 2019). Consideration should also be given to intersectional experiences too—that is, how does being a member of more than one priority group (eg, being young and rainbow) relate to experiences of discrimination.

Future work could also examine the specific experiences of mental health service users. Previous research demonstrates that mental health service users reported experiencing discrimination across many areas of their everyday life that they attributed to their mental distress (89%; eg, work,

[20] Although the cross-sectional design of this research means we are unable to establish cause and effect relationships, our results are consistent with causal models and longitudinal analyses found in relevant peer-reviewed literature (Corrigan et al., 2011; Feldman & Crandall, 2007; Link et al., 2004; Quinn & Earnshaw, 2011; C. Thornicroft et al., 2014).

marriage, parenting, housing, leisure, or religious activities; Thornicroft et al., 2014). This rate of discrimination is more than double the rate reported here which may reflect that the question we used draws on a broader experience of mental distress by asking about experience that is self-defined or diagnosed rather than diagnosised-only or service use.

More broadly, increasing familiarity of mental distress may be particularly important given that familiarity with mental distress—whether through personal experience or through knowing someone who experiences mental distress—was related to increased reported willingness for social proximity with those who experience mental distress. This finding may be inflated due to social desirability biases which are a limitation we are unable to address using the current data. Future research should consider the role of social desirability in addition to how willingness for social proximity may differ depending on severity of mental distress. Our findings also demonstrate the need to explore how cultural identity, gender identity, sexual orientation, and age relate to mental distress and related discrimination. Doing so will enable the continued development of innovative approaches to reduce discrimination in culturally inclusive and accessible ways.

Ultimately, we demonstrate that increased social proximity with people who experience mental distress appears to be associated with a reduction of discrimination and prejudice towards people experiencing mental distress. These findings are consistent with previously conducted research in the area of discrimination against mental distress (see Thornicroft et al., 2016) and support the ongoing work of *Like Minds, Like Mine* and other contact-based programmes promoting social inclusion.

REFERENCES

Ataera-Minster, J., & Trowland, H. (2019). *Te Kaveinga: Mental health and wellbeing of Pacific peoples. Results from the New Zealand Mental Health Monitor & the Health and Lifestyles Survey*. https://www.hpa.org.nz/research-library/research-publications/te-kaveinga-mental-health-and-wellbeing-of-pacific-peoples

Bos, A. E. R., Pryor, J. B., Reeder, G. D., & Stutterheim, S. E. (2013). Stigma: Advances in Theory and Research. *Basic and Applied Social Psychology*, *35*(1), 1–9. https://doi.org/10.1080/01973533.2012.746147

Brohan, E., & Thornicroft G. (2010). Stigma and discrimination of mental health problems: workplace implications, *Occupational Medicine, 60*(6), 414–415, https://doi.org/10.1093/occmed/kqq048

Corrigan, P.W., Morris, S.B., Michaels, P.J., Rafacz, J.D., & Rusch, N. (2012). Challenging the public stigma of mental illness: a meta-analysis of outcome studies. *Psychiatric Services, 63*, 963-973.

Corrigan, P. W., Rafacz, J., & Rüsch, N. (2011). Examining a progressive model of self-stigma and its impact on people with serious mental illness. *Psychiatry Research*, *189*(3), 339–343. https://doi.org/10.1016/j.psychres.2011.05.024

Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The self–stigma of mental illness: implications for self–esteem and self–efficacy. *Journal of Social and Clinical Psychology*, *25*(9), 875–884.

Deverick., Z, Russell., L., Hudson., S (2017). *Attitudes of adults towards people with experience of mental distress: Results from the 2015 New Zealand Mental Health Monitor.* Wellington: Health Promotion Agency.

Evans-Lacko, S., Corker, E., Williams, P., Henderson, C, & Thornicroft, G. (2014). Effect of the Time to Change anti-stigma campaign on trends in mental-illness-related public stigma among the English population in 2003-13: an analysis of survey data. *Lancet Psychiatry, 1*(2), 121-128. https://doi.org/10.1016/S2215-0366(14)70243-3

Evans-Lacko, S., Rose, D., Little, K., Flach, C., Rhydderch, D., Henderson, C., & Thornicroft, G. (2011). Development and psychometric properties of the Reported and Intended Behaviour Scale (RIBS): A stigma-related behaviour measure. *Epidemiology and Psychiatric Sciences*, *20*(3), 263–271. https://doi.org/10.1017/S2045796011000308

Feldman, D. B., & Crandall, C. S. (2007). Dimensions of mental illness stigma: What about mental illness causes social rejection? *Journal of Social and Clinical Psychology*, *26*(2), 137–154. https://doi.org/10.1521/jscp.2007.26.2.137

Fox, A. B., Earnshaw, V. A., Taverna, E. C., & Vogt, D. (2018). Conceptualizing and measuring mental illness stigma: The mental illness stigma framework and critical review of measures. *Stigma and Health*, *3*(4), 348–376. https://doi.org/10.1037/sah0000104

Gordon, S., & Reinsborough, L. (2019). *Anti-stigma initiatives in Asia-Pacific.* Key-note presentation at the International Together Against Stigma conference.

Health Promotion Agency (2017). *New Zealand Mental Health Survey and Health and Lifestyles Survey: Methods report for the combination of three survey datasets.* Wellington: Health Promotion Agency.

Holland, K. (2015). Measuring stigma: Attitudes towards social inclusion of people with mental illness within the community. In *[In Fact].* (Vol. 4, Issue 12). Health Promotion Agency Research and Evaluation Unit. http://ci.nii.ac.jp/naid/120000992205/

Jorm, A.F, Kitchener, B.A, Sawyer, M.G, Scales, H., & Cvetkovski, S. (2010). Mental health first aid training

for high school teachers: a cluster randomized trial. *BMC Psychiatry 10,* 51. https://doi.org/10.1186/1471-244X-10-51

Jorm, A. F., & Oh, E. (2009). Desire for social distance from people with mental disorders: A review. In *Australian and New Zealand Journal of Psychiatry* (Vol. 43, Issue 3, pp. 183–200). https://doi.org/10.1080/00048670802653349

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, *32*, 959–976. https://doi.org/10.1017/S0033291702006074

Kvalsvig, A. (2018). *Wellbeing and Mental Distress in Aotearoa New Zealand: Snapshot 2016*. https://www.hpa.org.nz/research-library/research-publications/wellbeing-and-mental-distress-in-aotearoa-new-zealand-snapshot-2016

Link, B. G., Yang, L. H., Phelan, J. C., & Collins, P. Y. (2004). Measuring Mental Illness Stigma. *Schizophrenia Bulletin*, *30*(3), 511–541. https://doi.org/10.1093/oxfordjournals.schbul.a007098

Martin, J.M. (2010). Stigma and student mental health in higher education. *Higher Education Research & Development, 29*(3), 259-274. https://doi.org/10.1080/07294360903470969

Ministry of Health. 2019. *Content Guide 2018/19: New Zealand Health Survey*. Wellington: Ministry of Health.

Mental Health Foundation of New Zealand. (2014). *Young people's experience of discrimination in relation to mental health issues in Aotearoa New Zealand: Remove the barriers for our young people from yesterday, today and tomorrow.* Auckland, New Zealand: Mental Health Foundation of New Zealand.

Meyer, I. H. (2003). Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. In *Psychological Bulletin* (Vol. 129, Issue 5, pp. 674–697). NIH Public Access. https://doi.org/10.1037/0033-2909.129.5.674

Morgan, A. J., Reavley, N. J., Ross, A., Too, L. S., & Jorm, A. F. (2018). Interventions to reduce stigma towards people with severe mental illness: Systematic review and meta-analysis. In *Journal of Psychiatric Research* (Vol. 103, pp. 120–133). Elsevier Ltd. https://doi.org/10.1016/j.jpsychires.2018.05.017

Ng, C. H. (1997). The stigma of mental illness in Asian cultures. *Australian and New Zealand Journal of Psychiatry*, *31*(3), 382–390. https://doi.org/10.3109/00048679709073848

Pescosolido, B. A., & Martin, J. K. (2015). The Stigma Complex. *Annual Review of Sociology*, *41*(1), 87–116. https://doi.org/10.1146/annurev-soc-071312-145702

Peterson, D., Barnes, A., & Duncan, C. (2008). *Fighting shadows: Self-stigma and mental illness: Whawhai atu te whakamā hihira.* Auckland: Mental Health Foundation of New Zealand.

Puthipiroj, P., & Holland, K. (2015). Attitudes towards hiring an employee with experience of mental illness. *[In Fact].*, *4*(21). https://www.hpa.org.nz/research-library/research-publications/attitudes-towards-hiring-an-employee-with-experience-of-mental-illness%0Ahttps://www.hpa.org.nz/research-library/research-publications/attitudes-towards-hiring-an-employee-with-experience-of-me

Quinn, D. M., & Chaudoir, S. R. (2009). Living With a Concealable Stigmatized Identity: The Impact of Anticipated Stigma, Centrality, Salience, and Cultural Stigma on Psychological Distress and Health. *Journal of Personality and Social Psychology*, *97*(4), 634–651. https://doi.org/10.1037/a0015815

Quinn, D. M., & Earnshaw, V. A. (2011). Understanding Concealable Stigmatized Identities: The Role of Identity in Psychological, Physical, and Behavioral Outcomes. In *Social Issues and Policy Review* (Vol. 5, Issue 1, pp. 160–190). https://doi.org/10.1111/j.1751-2409.2011.01029.x

Russell, L. (2018). *Te Oranga Hinengaro: Report on Māori Mental Wellbeing Results from the New Zealand Mental Health Monitor & the Health and Lifestyles Survey*. https://www.hpa.org.nz/research-library/research-publications/te-oranga-hinengaro-māori-mental-wellbeing

Subica, A. M., Aitaoto, N., Sullivan, J. G., Henwood, B. F., Yamada, A. M., & Link, B. G. (2019). Mental illness stigma among Pacific Islanders. *Psychiatry Research*, *273*, 578–585. https://doi.org/10.1016/j.psychres.2019.01.077

Te Hiringa Hauora Health Promotion Agency. (2019). *Māori aged 15 to 17 less isolated than their peers - Findings from Mental Health and Wellbeing Survey*. https://www.hpa.org.nz/research-library/research-publications/māori-aged-15-to-17-less-isolated-than-their-peers-findings-from-mental-health-and-wellbeing-survey

Thomas, D. R., Arlidge, B., Arroll, B., & Elder, H. (2010). General practitioners' views about diagnosing and treating depression in Maori and non-Maori patients. *Journal of Primary Health Care*, *2*(3), 208–216. https://doi.org/10.1071/hc10208

Thornicroft, C., Mehta, N., Clement, S., Evans-Lacko, S., Doherty, M., Rose, D., Koschorke, M., Shidhaye, R., O'Reilly, C., & Henderson, C. (2016). Evidence for effective interventions to reduce mental-health-related stigma and discrimination. *Lancet, 387*, 1123-1132. https://doi.org/10.1016/S0140-6736(15)00298-6

Thornicroft, C., Wyllie, A., Thornicroft, G., & Mehta, N. (2014). Impact of the "Like Minds, Like Mine" anti-stigma and discrimination campaign in New Zealand on anticipated and experienced discrimination. *The Australian and New Zealand Journal of Psychiatry*, *48*(4), 360–370. https://doi.org/10.1177/0004867413512687

Thornicroft, G., Rose, D., Kassam, A., & Sartorius, N. (2007). Stigma: ignorance, prejudice or discrimination? *British Journal of Psychiatry*, *190*(3), 192–193. https://doi.org/1 0 .11 9 2 / bjp. bp.1 0 6 . 0 2 5 7 91

Wendt, M. (2007). Considerations before pooling data from two different cycles of the general social survey. *Report for Statistics Canada.* https://doi.org/10.1.1.607.1003

WHO. (2013). *Global Mental Health Action Plan 2013–2020*. Geneva: World Health Organization.

Wyllie, A. & Brown R. (2011). *Discirmination reported by users of mental health services: 2010 survey. Research Report for Ministry of Health*. Auckland, New Zealand. Ministry of Health.

Wyllie, A., & Lauder, J. (2012). Impacts of national media campaign to counter stigma and discrimination associated with mental illness survey. In *Proceedings of the 20th USENIX Security Symposium*.

APPENDICES

DATA SOURCES & METHODOLOGY

Data were drawn from the pooled NZMHM which consists of three survey waves: 2015, 2016, and 2018 NZMHWS (total *n* = 4,272) [21]. Data were also drawn from the 2018 HLS (*n* = 2,725). These data sets were analysed separately. These surveys were approved by the New Zealand Ethics Committee.

All respondents (NZMHM; n = 4272; HLS; n = 2725) were aged 15 years and older and were residents of Aotearoa New Zealand.[22] The NZMHM and HLS are weighted to better represent the full Aotearoa New Zealand population. Sample sizes and weighting by socio-demographic characteristics are provided in Appendix Table 1. Where indicated, we have adjusted for known confounding variables such as age, gender, and ethnicity. Methodology reports and questionnaires for the NZMHM and HLS are available online.[23]

Appendix Table 1. Sample characteristics

	Pooled NZMHM (2015, 2016, 2018)		**HLS (2018)**	
Socio-demographic characteristics	**Sample size**	**Weighted %**	**Sample size**	**Weighted %**
Gender				
Female	2439	51.3%	1675	51.2%
Male	1833	48.7%	1050	48.8%
Age group[a]				
Youth (15-17)	363	11.6%	41	3.9%
Young adults (18-24)	659	13.1%	209	17.0%
Adults (25+)	3248	82.2%	2475	83.0%
Ethnicity[b]				
Māori	868	13.3%	563	13.1%
Pasifika	865	6.5%	507	6.7%
Asian	401	13.2%	263	15.4%
NZ European	2480	68.8%	1550	66.0%
Rainbow[c]	93	3.5%	67	2.3%
Total	4272	100%	2725	100%

a. Two respondents in MHM did not provide age data; *n* = 4270.
b. Total response ethnicity: Respondents can be counted twice (eg. Māori and NZ European).
c. The respondent indicates they are gay or lesbian, or bisexual. Rainbow not available for 2015 MHM.[24]

The collected data are cross-sectional (i.e., the data are sampled from each representative subset of the population at a single point in time); this means that we are unable to make causal claims about associations between the variables we measure.

We primarily present simple descriptive statistics. The figures include error bars representing the 95% confidence intervals (95% CI). Where appropriate, logistic regression was used to indicate the likelihood of the measures of interest (eg, mental distress-related discrimination) occurring in one demographic group as

[21] Using a pooled dataset means the sample size varies for each survey item, and some results are more precise than others.
[22] The NZMHM and HLS were conducted in people's homes using Computer Assisted Personal Interviews (CAPI). Interviews took place from June to September each year for the NZMHM, and from May to December for the HLS.
[23] https://www.hpa.org.nz/our-work/research/publications
[24] In future research we will include gender diverse peoples under Rainbow status, however, these data were not collected in the current surveys.

compared to another (ie, relative risks/risk ratios: RR).[25] Only significant differences (p<.05) between groups are reported.

WHAT WE MEASURED

The following measures were self-reported and are used in this report. Some questions were not asked in NZMHM 2015 and others were not included due to unexplained response discrepancies. For these measures, results are reported out of 2016 and 2018 respondents. Further detail on all measures is provided in the Appendices, including scoring information for the psychometrically-validated scales: Reported and Intended Behaviour Scale (RIBS: Evans-Lacko et al., 2011) and the Kessler Psychological Distress Scale (more commonly known as the K10: Kessler et al., 2002).

Pooled NZMHM and 2018 HLS: Demographics

Demographic characteristics including: Age, Ethnicity, Rainbow-status (i.e., the respondent indicates they are gay or lesbian, or bisexual[26]).

Pooled NZMHM and 2018 HLS: Current mental distress

K10 scores ≥ 22 as an indicator of current mental distress over the past month (Kessler et al., 2002).

Pooled NZMHM: Experiences of mental distress

Lifetime "Have you ever personally had an experience of mental illness?"

Exposure to others' mental distress "Do you know someone who has been diagnosed with a mental illness, not including yourself?"

Social proximity to people who experience mental distress Current or previous experience living with, working with, living nearby (neighbour), or being close friends with a person with a mental illness? (RIBS - Reported behaviour subscale: Evans-Lacko et al., 2011)[27]

Willingness for social proximity (as an indicator of intention for inclusion) to people who experience mental distress Willing to live with, work with, live nearby (neighbour), or continue a friendship with a person with a mental illness? (RIBS - Intended behaviour subscale Evans-Lacko et al., 2011)

2018 HLS: Experiences of discrimination

Experienced "Do you believe you have ever been treated unfairly, or been discriminated against, because of your mental illness?"

Settings of discrimination "Can you please identify the settings where you were treated unfairly, or were discriminated against"

Anticipated "Have you ever not done something because you were afraid of being discriminated against because of your experience with mental illness?"

---

[25] To remain consistent with Statistics NZ, we have used Total Ethnicity counts when summarising findings for Māori, Pasifika, Asian, and NZ European/other; this means respondents can be counted twice (eg. Māori and NZ European/other). For equity or strength-based purposes, when comparing populations, we compare Māori to Non-Māori and Non-Pasifika and we compare we compare Pasifika to Non-Māori and Non-Pasifika. For adjustment in regression models, we used prioritised ethnicity in the following order: Māori, Pasifika, Asian, Other.

[26] In future research we will include gender diverse peoples under Rainbow status, however, these data were not collected in the current surveys.

[27] The Reported behaviour subscale was used in conjunction with other questions to create an indicator of the degree of social proximity. Degree of contact from most to least social proximity was: No contact, Some contact (know someone or friends, neighbour, co-worker of someone who has experienced mental distress), Lived with, or Personal experience. See appendix for further details.

Appendix Table 2. Measures and survey sources of these measures

Data source				Domain	Measure	Specific measure or response options
2015 NZMHM	2016 NZMHM	2018 NZMHM	2018 HLS			
✓	✓	✓	✓	Demographic	ethnicity	New Zealand European, Māori, Samoan, Cook Island Maori, Tongan, Niuean, Tokelauan, Fijian, Tuvaluan, Chinese, Indian, Other (please specify) Don't know, Refused
✓	✓	✓	✓	Demographic	age	15–17 years, 18–19 years, 20–24 years, 25–34 years, 35–44 years, 45–54 years, 55–64 years, 65–69 years, 70–74 years, 75+ years ., Refused
X	✓	✓	✓	Demographic	rainbow	If gay or lesbian, or bisexual
X	✓	✓	X	Mental distress	lifetime	"Have you ever personally had an experience of mental illness?" (including self-defined and diagnosed)"
✓	✓	✓	✓	Mental distress	current	K10 (Kessler et al., 2002); presented overleaf
✓	✓	✓	✓	Mental distress	social proximity	"Do you know someone who has been diagnosed with a mental illness, not including yourself?" (NZMHM) OR "Has anyone you know ever told you that they have experienced mental illness?" (HLS)
X	✓	✓	X	Mental distress	social proximity	RIBS – Reported behaviour subscale (Evans-Lacko et al., 2011); presented overleaf
✓	✓	✓	X		willingness for social proximity	RIBS – Intended behaviour subscale (Evans-Lacko et al., 2011); presented overleaf
X	X	X	✓	Discrimination	experienced	"Do you believe you have ever been treated unfairly, or been discriminated against, because of your mental illness?"
X	X	X	✓		experienced	IF: discriminated against = YES: Can you please identify the settings where you were treated unfairly, or were discriminated against: Multiple responses allowed: • Workplace • Education, training • Housing • Health services • Government agencies (eg, Police, Courts, Work and Income, Oranga Tamariki—Ministry for Children, CYF) • Insurance • Sports clubs, community clubs / groups • Family / whānau or friends • Other – please specify • Don't know • Refused
X	X	X	✓	Discrimination	anticipated	"Have you ever not done something because you were afraid of being discriminated against because of your experience with mental illness?"

Reported and Intended Behaviour Scale (RIBS) (Evans-Lacko et al., 2011)

The Reported and Intended Behaviour Scale (RIBS; Evans-Lacko et al., 2011) assesses past, current, and intended interaction with people who experience mental distress. It comprises two subscales: **reported behaviour subscale**, which assesses past or present interaction with people with experience of mental distress and the **intended behaviour subscale**, which assesses willingness to interact with people with experience of mental distress.

Questions:

Reported behaviour *Data were recoded during scoring

Answer options (score): Yes (1), No (0), Don't know (0*), refused (0*).
Do you currently, or have you ever, lived with someone with a mental illness?
Do you currently, or have you ever, worked with someone with a mental illness?
Do you currently, or have you ever, had a neighbour with a mental illness?
Do you currently, or have you ever, had a close friend with a mental illness?

Intended behaviour
Answer options (score): Strongly agree (1), Agree (2), Neither agree nor disagree (3), Disagree (4), Strongly disagree (5), Don't know, Refused
In the future, I would be willing to live with someone with a mental illness
In the future, I would be willing to work with someone with a mental illness
In the future, I would be willing to live nearby to someone with a mental illness
In the future, I would be willing to continue a relationship with a friend who developed a mental illness

Scoring: Given that individuals may or may not have had the opportunity to engage in the behaviours of the reported behaviour subscale, these data are used to assess prevalence only and are not included in the final RIBS score. For individual items, answering *Agree* or *Strongly agree* was considered agreement of willingness; all other answers were recoded to *Disagree/Don't know/Refused*.

Traditionally, the RIBS score is the sum of the (reversed) score of each of the four questions in the intended behaviour subscale. Possible RIBS scores range from 4 to 20, with higher scores being associated with greater intention to interact with people with mental distress. We present the 2015 RIBS data using the traditional scoring method in the report: Attitudes of adults towards people with experience of mental distress: Results from the 2015 New Zealand Mental Health Monitor (Deverick, Russell, & Hudson, 2017). In the current report, we present these questions as individual items in order to better explore the gradient of social distance and the willingness for social proximity.

Indicator of the Degree of Personal and Social Proximity

The reported behaviour subscale of the RIBS (Evans-Lacko et al., 2011), was also used in conjunction with the following questions to create an indicator of social proximity: "Have you ever personally had an experience of mental illness?" and "Do you know someone who has been diagnosed with a mental illness, not including yourself?" (NZMHM). Degree of contact from most to least proximity was: *No contact*, *Some contact* (know someone or friends, neighbour, co-worker of someone who has experienced mental distress), *Lived with*, or *Personal experience* (ie personal proximity).

The Kessler Psychological Distress Scale (K10; Kessler et al., 2002)

Current mental distress was measured using the Kessler Psychological Distress Scale (K10), a 10-item questionnaire that is used in clinical practice to screen for distress; it is also commonly used in population surveys as an overall measure of mental distress in the population.

Questions:

In the past four weeks, about how often did you feel:

- K10a: tired out for no good reason?
- K10b: Nervous
    - K10c: if K10b ≥ none of the time: So nervous that nothing could calm you down?
- K10d: Hopeless
- K10e: Restless or fidgety
    - K10f: if K10e ≥ none of the time: so restless you could not sit still?
- K10g: depressed
- K10h: that everything was an effort
- K10i: So sad that nothing could cheer you up
- K10j: worthless

Answers (score): None of the time (1), A little of the time (2), Some of the time (3), Most of the time (4), All of the time (5), Don't know (9; recoded missing), Refused (8; recoded missing)

Scores range from 10 to 50 with higher scores indicating higher levels of current distress. Consistent with the *New Zealand Health Survey* (Ministry of Health, 2019), in this report we used a score of greater than 22 as a cut off score to indicate high to very high current mental or psychological distress.

SUPPLEMENTARY ANALYSES

Appendix Table 3. Rates of personal experiences of mental distress in priority populations and overall

Group	Proportion who experience mental distress	Comparison group	RR	95% CI	t	p
Māori[a]	38.1%	non-Māori, non-Pasifika	1.23	1.06 – 1.43	2.75	.006
Pasifika[a]	20.1%	non-Māori, non-Pasifika	.67	.49 – .91	-2.56	.011
Asian[a]	13.8%	non-Asian	.41	.29 – .59	-4.88	<.001
New Zealand Europeans	36.1%	non-NZ European	1.74	1.47 – 2.06	6.36	<.001
Rainbow[b]	57.3%	non-Rainbow	1.75	1.36 – 2.26	4.38	<.001
Youth (15-17)[c]	23.2%	Adults (18+)	.74	.54 – 1.02	-1.84	.067
Young adults (18-24)[c]	36.0%	Adults 25+	1.25	1.06 – 1.47	2.70	.007
Young people (15-24)[c]	31.6%	Adults 25+	1.07	.91 – 1.26	.86	.390
Overall	30.9%	-	-	-	-	-

a. Adjusted for age and gender; b. Adjusted for age, gender, and ethnicity; c. Adjusted for gender and ethnicity.

Appendix Table 4. Rates of knowing someone[a] who experiences mental distress in priority populations and overall

Group	Proportion who know someone who experiences mental distress	Comparison group	RR	95% CI	t	p
Māori[b]	83.0%	non-Māori, non-Pasifika	1.09	1.02 – 1.15	2.82	.005
Pasifika[b]	62.9%	non-Māori, non-Pasifika	.86	.77 – .96	-2.65	.009
Asian[b]	52.3%	non-Asian	.65	.57 – .74	-6.53	<.001
New Zealand Europeans[b]	83.4%	non-NZ European	1.31	1.22 – 1.40	7.54	<.001
Rainbow[c]	93.3%	non-Rainbow	1.21	1.14 – 1.29	5.96	<.001
Youth (15-17)[d]	66.5%	Adults (18+)	.86	.77 – .96	-2.70	.007
Young adults (18-24)[d]	73.9%	Adults 25+	.97	.91 – 1.04	-.74	.460
Young people (15-24)[d]	71.3%	Adults 25+	.93	.88 – .99	-.217	.031
Overall	76.7%	-	-	-	-	-

a. Knowing someone is a combination of the following questions: "Do you know someone who has been diagnosed with a mental illness, not including yourself?" and RIBS reported behaviour scale (Evans-Lacko et al., 2011). b. Adjusted for age and gender. c. Adjusted for age, gender, and ethnicity. d. Adjusted for gender and ethnicity.

Appendix Table 5. Willingness for social proximity with those who experience mental distress by degree of current social contact

I would be willing to …. someone who experiences mental distress	**Contact (None: Reference)**	**RR**	**95% CI**	**t**	**p**
live with	Some contact	1.39	1.09 - 1.76	2.66	.008
	Lived with	1.71	1.34 - 2.18	4.38	<.001
work with	Some contact	1.39	1.21 - 1.60	4.69	<.001
	Lived with	1.52	1.32 - 1.75	5.76	<.001
live nearby	Some contact	1.20	1.08 - 1.33	3.44	.001
	Lived with	1.28	1.16 - 1.41	4.90	<.001
continue a friendship with	Some contact	1.13	1.07 - 1.19	4.68	<.001
	Lived with	1.15	1.09 - 1.21	5.36	<.001

Adjusted for age, gender, and ethnicity

Appendix Table 6. Willingness for social proximity by ever experienced mental illness

	Lifetime experience of mental distress			
I would be willing to …. someone who experiences mental distress	**RR**	**95%CI**	**t**	**p**
live with	1.32	1.21 - 1.44	6.47	<.001
work with	1.23	1.16 - 1.30	7.31	<.001
live nearby	1.12	1.07 - 1.17	5.12	<.001
continue a friendship with	1.07	1.05 - 1.10	6.26	<.001

Adjusted for age, gender, and ethnicity. No personal experience of mental distress as the comparison.

Appendix Table 7. RR, 95% CI, t-value, and significance for Willingness for social proximity by priority populations

I would be willing to…. **someone who experiences mental distress**	**Rainbow**[a] (vs. non-Rainbow)	**Youth** (15 to 17 years vs 18+)[b]	**Māori**[c] (vs. non-Māori, non-Pasifika)	**Pasifika**[c] (vs. non-Māori, non-Pasifika)	**Asian**[c] (vs. non-Asian)
live with	**RR=1.32, 95%CI= 1.14 - 1.54, t=3.70, p<.001**	**RR=1.16, 95%CI = 1.04 - 1.30, t=2.61, p=.009**	RR=.93, 95%CI=.81 - 1.06, t=-1.07. p=.286	RR=.68, 95%CI=.45 - 1.05, t=-1.76, p=.079	**RR=.60, 95%CI= .50 - .71, t=-5.76, p<.001**
work with	**RR=1.22, 95%CI= 1.14 - 1.31, t=5.56, p<.001**	RR=1.06, 95%CI= .97 - 1.15, t=1.26, p=.209	RR=1.03, 95%CI= .94 - 1.13, t=.70, p=.485	RR=.77, 95%CI=.54 - 1.08, t=-1.51, p=.132	**RR=.71, 95%CI= .62 - .81, t=-5.06, p<.001**
live nearby	**RR=1.16, 95%CI= 1.08 - 1.25, t=4.18, p<.001**	RR=1.06, 95%CI= .98 - 1.14, t=1.44, p=.151	RR=.98, 95%CI= .91 - 1.07, t=-.42. p=.674	RR=.74, 95%CI=.53 - 1.03, t=-1.79, p=.075	**RR=.61, 95%CI= .53 - .70, t=-6.99, p<.001**
continue a friendship with	RR=.98, 95%CI= .89 - 1.09, t=-.30, p=.767	RR=.98, 95%CI= .93 - 1.03, t=-.87, p=.383	RR=.99, 95%CI= .95 - 1.04, t=-.37. p=.709	RR=.79, 95%CI=.61 - 1.03, t=-1.17, p=.088	**RR=.88, 95%CI= .82 - .94, t=-3.81, p<.001**

a. Adjusted for age, gender, and ethnicity; b. Adjusted for gender and ethnicity; c. Adjusted for age and gender. Bolded values represent statistically significant tests.

Appendix Table 8. RR, t-value, and significance for Willingness for social proximity by Contact in Māori

Willingness for social proximity	**Contact (None: Reference)**	**RR (95% CI)**	**t**	**p**
Live with	**Some contact**	**1.71 (1.10 – 2.67)**	**2.38**	**.018**
	Lived with	**2.01 (1.31 – 3.07)**	**3.23**	**.001**
Work with	**Some contact**	**1.40 (1.01 – 1.94)**	**2.04**	**.042**
	Lived with	**1.57 (1.14 – 2.14)**	**2.80**	**.005**
Neighbours with	Some contact	1.25 (.94 – 1.67)	1.53	.128
	Lived with	**1.35 (1.02 – 1.78)**	**2.13**	**.033**
Friends with	Some contact	1.23 (.96 – 1.58)	1.61	.107
	Lived with	1.24 (.97 – 1.59)	1.76	.080

Adjusted for age and gender. Bolded values represent statistically significant tests.

Appendix Table 9. RR, t-value, and significance for Willingness for social proximity by Contact in Pasifika

Willingness for social proximity	**Contact (None: Reference)**	**RR (95% CI)**	**t**	**p**
Live with	Some contact	1.30 (.85 – 1.99)	1.22	.223
	Lived with	**2.04 (1.37 – 3.03)**	**3.52**	**<.001**
Work with	Some contact	**1.97 (1.39 – 2.80)**	**3.83**	**<.001**
	Lived with	**1.90 (1.36 – 2.64)**	**3.78**	**<.001**
Neighbours with	Some contact	**1.64 (1.18 – 2.27)**	**2.96**	**.003**
	Lived with	**1.71 (1.25 – 2.33)**	**3.38**	**.001**
Friends with	Some contact	**1.31 (1.01 – 1.71)**	**2.04**	**.042**
	Lived with	**1.35 (1.04 – 1.75)**	**2.25**	**.025**

Adjusted for age and gender. Bolded values represent statistically significant tests.

Appendix Table 10. RR, t-value, and significance for Willingness for social proximity by Contact in Asian participants

Willingness for social proximity	**Contact (None: Reference)**	**RR (95% CI)**	**t**	**p**
Live with	Some contact	1.36 (.93 – 2.01)	1.57	.116
	Lived with	**2.10 (1.41 – 3.13)**	**3.68**	**<.001**
Work with	Some contact	**1.63 (1.23 – 2.16)**	**3.42**	**.001**
	Lived with	**2.12 (1.62 – 2.79)**	**5.43**	**<.001**
Neighbours with	Some contact	1.19 (.85 – 1.66)	1.01	.315
	Lived with	**1.67 (1.20 – 2.31)**	**3.09**	**.002**
Friends with	Some contact	**1.21 (1.08 – 1.37)**	**3.16**	**.002**
	Lived with	**1.33 (1.18 – 1.49)**	**4.72**	**<.001**

Adjusted for age and gender. Bolded values represent statistically significant tests.

Appendix Table 11. RR, t-value, and significance for Willingness for social proximity by Contact in Rainbow participants

Willingness for social proximity	**Contact (None: Reference)**	**RR (95% CI)**	**t**	**p**
Live with	Some contact	1.42 (.58 – 3.49)	.77	.441
	Lived with	1.56 (.68 – 3.59)	1.05	.294
Work with	Some contact	1.71 (.70 – 4.19)	1.18	.240
	Lived with	1.71 (.70 – 4.19)	1.18	.239
Neighbours with	Some contact	1.40 (.82 – 2.39)	1.23	.218
	Lived with	1.32 (.78 – 2.22)	1.03	.302
Friends with	Some contact	1.39 (.80 – 2.39)	1.18	.239
	Lived with	1.32 (.78 – 2.43)	1.04	.298

Adjusted for age, gender, and ethnicity. Bolded values represent statistically significant tests.

Appendix Table 12. RR, t-value, and significance for Willingness for social proximity by Contact in youth participants (aged 15 to 17 years)

Willingness for social proximity	**Contact (None: Reference)**	**RR (95% CI)**	**t**	**p**
Live with	Some contact	**1.44 (1.07 – 1.95)**	**2.39**	**.017**
	Lived with	**1.61 (1.17 – 2.22)**	**2.94**	**.003**
Work with	Some contact	**1.27 (1.02 – 1.57)**	**2.16**	**.031**
	Lived with	**1.50 (1.21 – 1.84)**	**3.79**	**<.001**
Neighbours with	Some contact	1.06 (.89 – 1.26)	.68	.500
	Lived with	**1.19 (1.02 - 1.40)**	**2.19**	**.029**
Friends with	Some contact	1.13 (.98 – 1.30)	1.65	.100
	Lived with	**1.21 (1.07– 1.36)**	**3.05**	**.002**

Adjusted for gender and ethnicity. Bolded values represent statistically significant tests.