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Editor's Introduction

The editorial to the previous issue (December, 2019) opened thus: "This issue of the *New Zealand Journal of Psychology* marks something of a return to business as usual". The current times, as we are all aware, does not represent a continuation of 'business as usual' however. This delayed April issue sees New Zealand wrestling with an ongoing global pandemic that has seen us 'locked down' for weeks on end, that has resulted in upheaval of our usual activities, and has also impacted on the lives of a group of New Zealanders that is, by global standards, relatively small yet no less poignant and tragic.

Among those activities affected have been numerous international conferences, workshops, and get-togethers for teachers, researchers and practitioners, including our own national conference. And this issue. During this time, the Society has bid farewell to Pam Hyde from her long-time role as Executive Director. I'd like to take this opportunity to thank Pam for her service to the Society, and specifically for her support to the Journal. Among other things, Pam was the sounding board for the initial suggestion to theme our first issue of 2019 around a rapid response to the Christchurch terror attacks.

This issue includes six empirical articles, again representing a mix of high-quality qualitative and quantitative research on such diverse topics as shared housing ('flatting'), youth mental health, migrant experiences of domestic violence, wellbeing and political protest among Māori, and a final manuscript that was originally written to be part of the April 2019 rapid response issue. Though it was not submitted for that issue, rumours of the existence of an evidence-based commentary on New Zealanders' attitudes to Muslims meant that it became part of the discussion among governmental and non-governmental agencies about the response to the events in Christchurch. Here we present it for a wider audience, following the usual obstacle course of international peer review, and in an issue dated almost one year exactly after that initial rapid response.

Looking into the future, readers, researchers and practitioners can anticipate an imminent call for contributions to two thematic sections relating to (a) what we have learned and may need to learn from Covid-19, and (b) to the psychology of environment and climate change. More information will be forthcoming through the Society.

Marc Wilson

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Managing Conflict in Shared Housing for Young Adults

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Due to housing unaffordability shared residence among young adults is an increasingly popular lifestyle in the Western world and an established cultural institution in New Zealand. Surprisingly, research on the topic is limited. While flatting is economically and socially attractive, navigating inevitable tension in interpersonal relationships in the intimacy of domesticity can present challenges. Applying discourse analysis, the current study examines how New Zealanders, aged 20 to 35, talk about the experience of shared domestic living and conflict. Patterns in talk centered on sources, management and consequences of interpersonal conflict. Young adults actively endeavour to avoid or resolve problems amicably. The study provides insight into the complex social dynamics of these non-kin household relationships.

Keywords: Shared housing, conflict, interpersonal relationships.

Introduction

Globally, contemporary youth are experiencing growing housing difficulties. Shared housing, or flatting, among young adults is a socio-economic contract in which householders split costs and housework (Mause, 2008). Rather than a short stopgap before romantic co-habitation, peer co-residence now features as a way of life from late teens to the early thirties and beyond (Day, 2016). Despite the financially pragmatic popularity of the lifestyle, documented in much of the Western world, literature on the topic is modest. A closer inspection of interpersonal relationships among sharers is overdue (Heath & Cleaver, 2003; Mykyta, 2012). While relationships can evolve into strong social bonds of companionship, trust and mutual support, in close domestic confines the potential for disagreement and offence can be magnified (Toegel & Barsoux, 2016). Conflict can be defined as perceived incompatible differences between people resulting from continuous inconsistencies and disagreements in opinions and interests (Curseu, Boros & Oerlemans, 2012). In flatting there are no institutionalised guiding principles: this uncertainty may contribute to tensions (Natalier, 2003). The current study on the social dynamics of flatting among young New Zealanders investigated how the sources, management and consequences of conflict are discursively constructed.

Shared living involves communal areas, such as lounge, kitchen and bathroom with bedrooms remaining private. Rent, electricity, broadband and necessities, such as cleaning product costs are shared. Food can be communal or individually purchased. Characteristically, households comprise unmarried, childless non-family, geographically mobile individuals (Williamson, 2005). Growth in the demographic has been recorded in the UK (Carlsson & Eriksson, 2015), Europe (Schwanitz & Mulder, 2015) and the United States (Mykyta, 2012). In Australia and New Zealand, sharing has become a rite of passage for young adults and a social institution (Wolfe & Barnett, 2001; Murphy, 2011).

Despite the apparent freedom of contemporary young adults, there are diverse options available. While young adults are considered agents of their own destiny, the impact of broader social, economic and political structures must be taken into account (Mortimer & Larson, 2002). Life choices are not always personal: they are frequently dictated by those available in the particular social strata, culture and historical period in which people live. Consequently, housing pathways differ (Clapham, Mackie, Thomas, Orford, & Buckley, 2014). For example, in the UK, Heath and Cleaver (2003) found that people of colour were less likely to live in non-kin households. Similarly, in New Zealand, Williamson (2006) reported that Māori or Pacific Island young adults are significantly less likely to share households with unrelated individuals because of the strong cultural importance placed on family or whānau. Relying on family networks for accommodation in urban areas, where work may be found, still figures in youth relocation among Pākehā but it is still far more common among Māori and Pacific Islanders.

The relevance of this topic derives from concerns that psychology routinely overlooks research into human interaction in the home and workplace (Potter, 1996a). Hence, the study of intimate relationships among young adult house sharers seeks to address this lacuna. Further, this study seeks to explore the common assumption that sharing is dysfunctional and problematic, and to look into the possible benefits of sharing. There is an obvious contrast with familial living arrangements often falling short of being ideal, and yet these are not similarly characterized as problematic (Heath, Davies, Edwards, & Scicluna, 2017). The quintessentially social nature of shared living provides another good reason for the dynamics of shared living to be of interest to social psychologists. Indeed, this offers a rich source for the detailed study of interpersonal relationships, group dynamics, prejudice and discrimination.

Until recently, the most comprehensive study on young peer households is that of Heath and Cleaver

(2003) in Britain. In America Goldscheider and Goldscheider (1993) studied accommodation options on leaving the parental home. In Europe the topic is essentially confined to housing demographers, who focus on why young people share (Steinfuhrer & Haase, 2009; Mulder, 2003). In Australia Baum (1986) sought to isolate factors contributing to successful co-residence across all ages. Natalier (2003) examined gendered division of labour in young shared households, while McNamara and Connell (2007) found that young Australians consider their flat 'home'. In New Zealand Williamson (2005) compiled a snapshot of how seven flats operated with an emphasis on food preparation and communal meals. Clark and Tuffin (Clark & Tuffin, 2015; Tuffin & Clark, 2016) investigated flatmate selection, suggesting young adults prefer to live with others who resemble them closely in age, life stage and ethnicity. While gender was unimportant unemployment, addiction and mental illness were causes for concern.

Research suggests household chores are the primary source of conflict (Baum, 1986; Mause, 2008). Natalier (2003) and Heath and Cleaver (2003) contend that conflict over housework may say more about the unequal allocation of domestic work in traditional households, while also a convenient way of highlighting the dysfunctional nature of shared accommodation. Hierarchical gender role ideologies are not applicable in flatting: In conventional households a domestically indolent husband represents a familiar cultural script but in flatting a loafing housemate can be a target for complaint, if not eviction (Natalier, 2003).

Baum (1986) found motivation to share impacted relationships. Those who felt forced to share by economic necessity, tended to focus on difficulties and were less willing to compromise. Those committed to the lifestyle regarded interpersonal conflict as an inevitable challenge. In addition, problems arose from different standards of cleanliness, tidiness and hygiene. If the status quo is acceptable to all conflict is minimised. Dissatisfaction is virtually unavoidable between the slovenly and the clean and tidy. Surprisingly, there was little concern about bills or rent with these issues anticipated and dealt with early. Income differences can be problematic. This was apparent in Clark and Tuffin's (2015) research, where students and professionals were regarded as incompatible given the latter's greater discretionary income. Rent levels generally ensure similar incomes. Baum (1986) identified two factors that significantly impact successful co-residence. The first was a power imbalance, for example if the house or furniture is owned by one of the inhabitants. Secondly, when there are differences in expectations among housemates about what constitutes cleanliness and the degree of sociability expected. Research also indicates tensions over noise, borrowing housemates' belongings without permission and eating their food without replacing it. Heath and Cleaver (2003) maintain that tensions normally subside without affecting relationships, suggesting the development of tolerance levels and the ability to shrug off difficulties to maintain working relationships.

The rationale for the current research was to increase what is known about flatting among young adults. Since conflict is an inevitable part of human interaction,

examining the sources, management and consequences of conflict in the intimate environment of domesticity is integral to fuller understandings of interpersonal relationships in these households.

RESEARCH PARADIGM AND METHOD

The tenets of critical social psychology underpin this study employing social constructionist discourse analysis (Tuffin, 2005). Critical social psychologists challenge traditional social psychological methods of research. Social life is reconceptualised as the product of interaction, promoting language use over the internal psychological processes (Wetherell, 1996, Parker, 2013). Constructionist epistemology challenges the veracity of absolute truths, highlights the possibility of multiple understandings, and considers knowledge provisional and negotiable. For constructionists, knowledge is not a transparent reflection of reality but historically, culturally and contextually contingent. Consequently, universal assumptions cannot be made. Constructionist enquiry aims to demonstrate how people jointly create a coherent social reality by using shared meanings, with understandings inextricably grounded in, maintained and mediated through language (Coyle, 1995).

Discourse analysis involves close scrutiny of language and incorporates a range of methods applied to understanding social practice. Discourse analysis looks at the structure, content, function and effect of language to provide insight (Parker, 2013). Through language actions are accomplished. These include explaining, blaming, excusing, justifying, complimenting or warding off actual or potential counter-arguments. Using various rhetorical devices individuals draw on remarkably similar discourses to construct versions of events, with taken for granted assumptions shaped by prevailing social, moral and political ideologies (Edwards & Potter, 1992). Discourse analysis foregrounds participants' lived experiences and affords the opportunity to delve deep into details (Starks & Trinidad, 2007).

Participants were aged 20 and 35, currently flatting, fluent in English, and purposefully recruited by word of mouth. In total 37 people were interviewed, 14 in individual interviews, and 23 in seven flat groups. Participants were Pākehā (of European descent) apart from two Māori and two identifying as Māori/Pākehā. Fifteen were males and 22 females, with a mean age of 24. Apart from 14 students all were employed full-time. To increase heterogeneity three flat group interviews were conducted in a large New Zealand city and four in a smaller town. Semi-structured, interviews were conducted using predetermined questions, such as, "How do you deal with conflict?". Interviews were audio recorded with group interviews videoed to enable identification of speakers for transcription purposes. An annotated version of Jeffersonian notation was used for transcribing (Wooffitt, 1992). All principles of the Massey University Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants (2013) were adhered to.

ANALYSIS

The analytic process was inductive and data driven, whereby key patterns were discerned in the data. Analysis requires multiple readings of the transcripts to identify recurring discourses, which intertwine, overlap and contradict each other in complex ways (Fairclough, 2015). Analysis of the current data is organised into three subsections dealing with the sources, management and consequences of interpersonal conflict. Extracts employed are those most representative of each discourse.

Sources of conflict

Divergent expectations of cleanliness and tidiness, and freeloading and miserliness were discourses drawn on to explain how conflicts arise between flatmates.

Convergent notions of what constitutes acceptable standards are important. Whereas the necessity for flatmates to be reasonably clean and tidy was frequently expressed, flatmates who were too meticulous, demanding virtual perfection were regarded as sources of tension. Unrealistic expectations often resulted in untenable conditions.

310 Lucy: so I (.) I like living in a clean and tidy space
 311 but I wouldn't consider myself to be like::
 312 obsessive about it
 313 I like places spaces that are lived in
 314 and she:: came across more and more (.) like that
 315 um (.) we >you know< like we had to (.) uh
 316 I:: had had dinner one night
 317 cleaned my dishes
 318 and left them (.) in the drying rack
 319 just to dry while I was watching TV
 320 and (.) I:: went to bed and::
 321 left them there to dry
 322 and then I got (.) told pretty quickly that::
 323 actually in this house? they::
 324 you dry the dishes and put them away

Beginning with a disclaimer of liking “a clean and tidy space” (310) without being obsessive (312), Lucy deflects any presumption of questionable personal sanitation standards. Disclaimers are impression management strategies designed to pre-empt potential assignment of negative attributes to the speaker (Pomerantz, 1986). A “lived in” domestic space (313) is preferable to pathological tidiness (312). The flatmate is constructed as increasingly obsessive (314). Lucy uses an example of dishes left to dry overnight (318-321), which provokes a negative reaction (322-325). “Actually in this house” (323) conveys patronising admonition while positioning Lucy as someone unfamiliar with house rules. The expectation of what is done in the house is framed as the flat ethos, making challenge difficult. While feeling comfortable with flatmates was a dominant discourse in constructing desirable flatmates (Clark, Tuffin, Frewin & Bowker, 2017), this level of comfort was not achievable for Lucy, and she subsequently moved out.

Phoebe also spoke of clashes resulting from different standards.

43 Phoebe: it's:: (.) you just might clash
 44 or have a very different idea of
 45 you know (.) what clean means

46 or ((laughs)) um (.) yeah
 47 or also (.) some people are::
 48 much more easy going than others (.) so
 49 some people get very um angry and frustrated
 50 if you (.) don't just put away a teacup
 57 you need to be OK (.) with the occasional
 58 teacup or glass being left out
 59 cause otherwise you will end up
 60 being really stressed out °all the time° yeah

Having “a different idea about what clean means” (44-45) is euphemistically utilised to denigrate either those with questionable standards or the overly zealous. Easy going people are positioned as less likely to get “very angry and frustrated” (49) with negative implications. In articulating the necessity to accept minor infractions Phoebe positions herself as easy-going (48) and qualifies this by identifying that doing so maintains one's own wellbeing (57-60). Not putting away a teacup (50) is hyperbole, representing a minimal breach, employed more for rhetorical effect than accuracy (Edwards & Potter, 1992). This serves to underscore unreasonable reactions. The extreme case formulation “all the time” is an overstatement to legitimise claims (Potter, 1996b). That unrealistic expectations can lead to disagreement and potential conflict is evident in both the above examples.

For Jody minor violations have the potential to become contagious.

96 Jody: Um (0.2) personally I don't mind if
 97 people um (.) like messy
 98 but I suppose in the communal space
 99 like the kitchen and the lounge
 100 that's where I you know
 101 like if I leave a mess there
 102 then it's kind of the broken window effect
 103 so one person leaves their glass
 104 and then the next thing you know
 105 the next day there's now a plate and a glass
 106 and a knife and a fork
 107 and another glass (.) so yeah

“Personally I don't mind if people [are] like messy” informs us that Jody herself is not obsessively tidy. This is followed by the ubiquitous “but” (98) of the classic disclaimer (Pomerantz, 1986). “So one person leaves out their glass” (103) is strikingly similar to the above examples (318, 58). The infectious aspect of how this can escalate is cleverly explained (104-107) by invoking Wilson and Kelling's (1982) Broken Window theory, which suggests that norm violation and disarray potentially spread disorder. In contrast, early prevention averts further violations and untidiness spreading.

The plight of a person appreciating a clean environment but having little control over the laxness of others is equally likely to cause distress.

227 Pia: I:: (.) so there was about six of us
 228 six or seven of us? um in the same flat?
 229 and like it was (.) like it
 230 just got absolutely disgusting (.) like
 231 and I just hated it just because like
 232 I don't know I just like things clean
 233 because it's their spaces and I can't like

234 it was not my place to mother them
235 to tell them to clean up after themselves

If numbers are stacked against a fastidious flatmate, effectively dealing with the problem is unlikely as the influence of one flatmate is limited. “Absolutely disgusting” (230) is an extreme case formulation, a potent rhetorical resource used to influence listeners’ conclusions (Pomerantz, 1986). “It was not my place” (234) acknowledges that it is not the duty of a tidy person to adopt a parental role. “Mother them” reflects powerful cultural ideologies. One of the benefits of flatting is to escape the demands of parents and power hierarchies (Heath & Cleaver, 2003; Natalier, 2003), hence no one would be keen to be cast in the role of mother. The message is that flatmates are responsible for cleaning up their mess with the need to respect the rights of others who share those spaces.

Freeloaders taking advantage of others by failing to share costs and responsibilities contribute to conflict.

59 Donna: We had a (.) pretty crap (.) flatmate that
60 moved in that we didn’t really know::
61 and so (.) um (.) there was a bit of conflict with him
62 but (.) he ended up moving out?
63 because (.) he was just very immature
64 and so (.) we were paying for the food
65 because he was doing his own grocery shop
66 and he would keep eating our food (.)
67 and using our stuff
68 and so we said, (.) “Look
69 you either buy the groceries? (.)
70 or you stop eating our food”
71 >and he said, “Well then I’ll just move out”<

The negativity associated with this flatmate is partly attributed to not knowing him beforehand (60). The “bit of conflict” (61) is an understatement considering the consequence (62, 71). Understatements are rhetorical devices designed to have the opposite effect (Harris, 2013). The flatmate’s behaviour is ascribed to immaturity (63). Although the ultimatum was to stop consuming others’ food (70), the freeloading flatmate moved out when challenged (71). Active voicing (68-71) serves to authenticate the account (Edwards & Potter, 1992).

Flatmates’ freeloading partners are a further source of conflict.

237 Julie: When (.) you know (.) you’re a student
238 and money’s such an *iss::ue* and people
239 are showering at your house
240 and you are paying for it
241 and they’re not
242 and he would also eat our food

Impecunious students are particularly susceptible to depletion of scarce resources (237-238). Two abuses of others’ resources, showering and food are mentioned with issues of injustice and costs involved. Whereas consumable resources in co-residence may be easily accessed, money tends to be less collectively available but is of vital importance to successful shared living.

84 Chloe: I don’t know why
85 but some people you know when they

86 money comes into it
87 they don’t want to pay a bill
88 or you know (.) not on time or (.) um
89 not not prepared to (.) put their
90 their share into the (.) the cleaning or something
91 you know (.) they don’t want to do their part
92 but it’s definitely been the breakdown of it

Ostensibly Chloe finds it hard to comprehend why some housemates freeload by not being prepared to meet their communal obligations (84). Potter (1996b) notes it would be erroneous to view “I don’t know why” (84) as disinterest but rather as a mask of stake inoculation in which the speaker attends to the possibility of a counter explanation. Chloe suggests that relationship breakdowns (92) are due to unwillingness to contribute to combined expenses (87) or agreed timing of payments (88). Violation of expectations threatens the cohesion and ultimately the viability of shared living as does failure to participate in household chores (90-91).

This research endorses findings that freeloading by failing to contribute equally to housework is as a prime cause of conflict (Baum, 1986; Heath & Cleaver, 2003; Mause, 2008).

124 Lucy: not everyone’s as considerate (.) as:: others so::
125 there can be conflict (.) because (.) you know
126 someone doesn’t (.) pull their weight ((laughs))
127 VC: Yeah
128 Lucy: doesn’t contribute to the house so::
129 um there (.) it can be challenging to::
130 uh try and get that person on board and
131 along::side the other (.) folks
132 >and sometimes it doesn’t work<

Consideration for others (124) was a prominent discourse regarding desirable flatmates (Clark et al, 2017). A person failing to “pull their weight” (126) and hence doing their fair share was a commonly cited idiom when discussing conflict. Idioms are formulaic expressions in language use and useful rhetorical devices, which convey an extensive range of information in few words to those proficient in the language. In addition, without specific information their content is difficult to challenge (Drew & Holt, 1989). “Try and get that person on board” (130) in the colloquial sense evokes the necessity for participation and reinforced with “along::side the other folks” (131). The challenge in trying to get some people to co-operate (130) is not always successful.

While limited budgets foster economic prudence, penny pinching is not appreciated, as reflected in Mary’s extract below. Protecting resources as a consequence of potential misuse from freeloaders may be necessary, but tolerance for dealing with minor infringements of food ownership is necessary for sustained interpersonal relationships.

248 Mary: um I’m not worried (.) if someone
249 eats my apples or uses my butter
250 and that sort of thing
251 I’ve never been one of those
252 VC: Ah yes
253 Mary: I’ve never been one of those flatmates

254 who draws a line on the olive oil ((laughter))

Mary is unperturbed (248) about flatmates using her supplies. Humour is employed to stress her relaxed attitude, with the example of “drawing a line on the olive oil” (254). While humour can be entertaining it plays an important role in creating identity, comradery, unity and social consensus (Rose, 2007). Through humour Mary presents a self-identity as easy-going, tolerant, generous and not given to pettiness while skilfully criticising those who resort to such measures. Frugality may be necessary but miserliness is unattractive. Next we consider how conflict is dealt with.

Managing conflict

Two competing aspects dominated when discussing dealing with conflict. Whereas most participants agreed that communication and talking over problems at flat meetings was the best means of resolution, many preferred to avoid conflict.

In the following all-male flat interview occupants maintained that they were competent at dealing with conflict by talking about problems:

45 Miles: Just no really (.) secrets
 46 we sort of all just sit down
 47 and talk about it
 48 Noah: We're real good with conflict
 49 like if (.) if we ever (.) like our flat meeting
 50 if we ever need to bring something up
 51 we just do it round dinner
 52 'nd (.) we haven't had any fights
 53 or anything (.) so no it's fine

“No secrets” (45) implies openness. “If you need to bring something up” suggests the policy of transparency is accepted, expected and provides a mechanism for dealing with issues. Discussing challenges over dinner (51) or other flat gatherings is less confrontational than convening a specific meeting (50). Noah concludes that no altercations have evolved (52) indicating that the policy of open communication is successful.

Flat meetings can be effective but resolution is not guaranteed.

106 Sam: communication is good (.) like
 107 you know (.) like hold flat meetings
 108 and uh: I've been in flats where things have (.) been
 109 a bit unsteady (.) and (.) yeah so (.) if everyone
 110 gathers around the kitchen table and puts
 111 kind of as much as they want to out there
 112 and say “I don't like that this is happening”
 113 or “I would like this to change” (.) um
 114 that is (.) your kind of (.) best case scenario
 115 um (.) which has worked in the past
 116 other times that hasn't

Like most participants, Sam stresses the need for communication (106). He refers to past experiences where “things have been a bit unsteady” (109) suggesting possible tensions. In this way problems can be alluded to without specific allocation of blame. Contrastively, “the kitchen table” (110) is specific, adding plausibility to statements as does the use of active voice (112-113)

(Edwards & Potter, 1992). If “everyone gathers around” (109-110) working through issues is possible (115). Such qualified action speaks to the collective will to participate in the process. Nevertheless, while some outcomes, “best case scenario”, (114) are ideal, others are not (116). While directly addressing issues through communication and group meetings was the dominant discourse, the opposite discourse of avoiding problems was also raised.

The avoidance discourse takes two forms. The first is pre-emption of problems by consideration, tolerance and sensitivity to flatmates' moods: knowing when to be particularly circumspect in interaction or defer contentious or adversarial discussions. In the following flat interview housemates agreed that awareness of what may annoy or upset others is important.

132 Annie: =I think we try to avoid conflict
 133 a lot of the time mmm ((general sounds of agreement))
 134 I think we're forgiving about
 135 each other's um (.) personalities as well
 136 Meg: Yeah (.) we know what each person does
 137 and what (.) you know what (.) their things are
 138 that gets them annoyed
 139 or stuff like that
 140 so we kind of (.) I don't know
 141 like make allowances or:
 142 Claire: =Yeah yeah you kind of know
 143 yeah like that would annoy Annie
 144 or whatever (.) so yeah
 145 Tamsin: You just become
 146 a little more considerate you know (.) like (0.3)

This all-female flat considered themselves good friends, which may account for the level of consideration for each other. Annie's statement that they endeavour to avoid conflict (132) is qualified by “a lot of the time” (133) suggesting that there are occasional unavoidable tensions. Being sensitive to housemates' idiosyncrasies and moods (135-137) was commonly raised in talk about problem prevention. Personal pet peeves were frequently acknowledged, suggesting that a minor irritation to one person can be a major source of annoyance to another and potential cause for conflict. Being aware of what disruntles others is important. Meg and Claire encapsulate this by talking about making allowances (141) for others and abstaining from acting in a way that is vexatious (143-146). Tamsin adds the ubiquitously pervasive term “consideration” to the complex nexus of negotiating everyday interactions in the intense arena of domesticity (145). Pre-emptory consideration and skilful decoding of emotions promotes accord, reducing the likelihood of conflict.

A second part of the avoidance discourse in managing conflict is to gloss over problems by circumventing issues. Many find confrontation, even in a most congenial way, too stressful. In the interest of maintaining harmony some preferred to avoid dealing with issues. Maree justified not directly addressing problems.

197 Maree: I'm: more likely to just try and
 198 skirt around (.) skirt around them
 199 um (.) than address them directly
 200 which (.) can sometimes they resolve themselves
 201 because people move out

202 because flatting is a (.) not always a permanent
203 situation so it (.) sometimes (.) you might put up with
204 things because it's only going to last
205 X (.) number of months more
206 or (.) you know someone's on their way out
207 so might (.) just let some things slide

240 Sam: and I guess that's one advantage of flatting
241 is that (.) if things do get too bad
242 you'll just say "Well I'll move out"
243 and you can (.) you can walk away from
244 whatever arrangement you have

The idiom "skirt around" conveys avoidance (198). "Sometimes they resolve themselves" (200) is explained by the possibility of someone moving out but could also refer to tension dissipating with time. Maree maintains that given the transience of most flats (202) the odds of the source of the problem moving out are good. The inclination to "let some things slide" (207) or "put up with things" (203) is increased if you know someone is leaving (206). Arguably, a person who knows they are departing is less likely to be collaborative if confronted. This passive approach to managing conflict carries with it a rationalisation that many sources of conflict resolve themselves if one is patient and adopts a long term perspective. Both talking through and avoidance of problems as a means of managing conflict recognise the consequences of escalating tension for group well-being and long-term household survival.

An advantage of flatting (240) is the capacity to move out (242,) when conflict becomes unbearable (241). "You can walk away" (243) "and you just call it a day" (246) suggests that such action is unproblematic. "Arrangements" (244) could refer to length of notice specified by flat rules, finding replacement flatmates or tenancy conditions. However, relocating can be costly, financially and emotionally: alternative accommodation needs to be found with no assurance that it will be any better. In addition, extra money is required for rent in advance, bond money and moving costs. These costs speak to the importance of managing conflict before it escalates into the untenable.

Consequences of conflict

Two commonly occurring discourses arose when discussing conflict consequences: negative psychological states and moving out. Conflict avoidance can have negative psychological implications.

DISCUSSION

In discussing conflict it is important to note that in shared housing there are few guiding ideological templates. Certainly, there are fundamental rules, such as, 'Do not steal' and respect for the privacy of flatmates but the default hetero-normative system of men being breadwinners and women being responsible for housework do not apply in this egalitarian way of life (Natalier, 2003). Nevertheless, Natalier found gendered attitudes to division of labour in these establishments persisted. In nuclear families, well-established expectations of interactions between family members are generally accepted and provide some sense of stability in interrelationships. These roles can prevent potential conflicts and disagreements, making relationships easier to maintain. Natalier argues that shared householders create their own meanings with counter cultural discourses, which are used to understand and manage relationships. Flatting rules are almost never written or prescribed but rather evolve organically and differ from one household to another. If everyone is in accordance with how the household should be run, harmony is possible. Practices are shaped by flatmates and driven by the crucial value of having a workable living arrangement (Clark, Tuffin, Bowker & Frewin, 2018).

265 Justin: =If there's something (.) that (.) like
266 really frustrates you about living with people
267 and it's never brought up
268 and you don't communicate properly
269 it can be really bad
270 it can be like you're always in a bad mood
271 um (.) and that sort of thing
272 but then as soon as (.) the conflict is resolved
273 it like (.) levels out (.) so just it's sort of
274 it's sort of another layer of things
275 to keep on top of (.) um
276 to keep yourself like (.) yeah feeling good
277 Mathew: Yeah
278 Justin: Yeah like if you don't like
279 if you don't like where you're living
280 it's bad (.) then it's not (.) it's not good

Failure to communicate (268) problems increases frustration and negatively affects moods (270). Again, effective communication is stressed as paramount in effectively solving problems. "It can be really bad" (269) clearly indicates the destructive impact of unresolved issues. Once conflict is settled equilibrium returns (273). The toll household tension takes, in addition to everyday stressors, is evident in Justin's frank admission of trying to keep on top of things. "To keep yourself like (.) feeling good" (276) indicates that unresolved issues can undermine a positive outlook, especially since homes should be an important refuge from everyday stress (Mallett, 2004; Clark et al, 2017). Tense households are often an incentive to move out.

Sources of conflict

Divergent expectations regarding cleanliness can be difficult to resolve. Participants spoke of the stress of living with an obsessively clean and tidy housemate. The counter aspect to this was living with slothful housemates but also the necessity not to let a flatmate get away with being lazy. The Broken Window effect (Wilson & Kelling, 1982) was evoked to explain that overlooking a violation of expectations can be used as an excuse for non-co-operation of others or the flat deteriorating to the point where no-one cares or takes responsibility for housework.

The predominant consequences of unresolved or on-going conflict are to ask the offending person to move out, or depart oneself.

Whereas the extant literature does discuss different understandings of cleanliness and hygiene (Baum, 1986; Heath & Cleaver, 2003), this research provides insight into the difficulty of living with flatmates with excessively high standards. One reason for obsessiveness being a recurring complaint is that no one willingly takes

on the judgement of being dirty or lazy, so one response is to position others as overly fastidious, effectively downplaying responsibility for one's own implied imperfections. This is achieved through various rhetorical devices such as exaggeration or extreme case formulation. A prerequisite of a desirable flatmate is that they do not make others uncomfortable (Clark et al, 2017). Unrealistic, unsustainable demands can be perceived as interpersonal rejection (Spitzberg & Cupach, 2007). Flattering is a context in which the desire for warm social relationships can be satisfied. The extent to which this desire is met influences behaviour and attitudes towards others and shapes the complex interpersonal dynamics of the group.

The necessity for flatmates to have similar expectations in a number of spheres was commonly drawn on when constructing desirable flatmates (Clark et al, 2017). The tension and stress that can arise from an imbalance is evident. This was part of a pervasive and broader discourse of a fine balance necessary in many aspects of flattening. Treading a delicate path between acceptable and objectionable behaviour requires discerning interpersonal skills and sensitivities crucial for successful shared living.

A second source of conflict involves freeloading and miserliness. Freeloading focused on areas where flatmates demonstrated lack of consideration for equal sharing of communal commodities, such as food, hot water, electricity and household responsibilities. A particular source of conflict arose in flats not sharing food, where an individual consistently consumed others' food without replacement. In most student and many professional flats financially challenged residents, of necessity, practise economic austerity. Conflict over scarce resources is well documented (Deutsch, 2014). Visiting partners or friends' use of meagre supplies can create tension. Whereas students can be particularly cash strapped, young professionals aspire to better standards but can still resent others taking advantage of them. Conversely, miserliness, such as drawing lines on containers is not appreciated. The subtle nuance between frugality and meanness again demonstrates the careful equilibrium required for successful co-residence. There is a need to feel confidence and trust that housemates will meet their financial obligations and remittance deadlines. Failure to do so causes stress and anxiety for those who do comply. Penalties for late payment, such as electricity being cut off can affect all.

The current study endorses extant research that failure to contribute fairly to household chores is a major source of tension leading to conflict in communal living (Baum, 1986; Heath & Cleaver, 2003; Kemp & Rugg, 1998; Mause, 2008; Natalier, 2003). Increased tension has the potential to undermine the fragile basis on which shared living operates, through frayed interpersonal relationships and compromised trust. How are these threats to relational harmony managed?

Managing conflict

Two discourses arose regarding conflict management. The first involved communal meetings to openly discuss remedying discontent, and the second avoidance. While conflict avoidance may be regarded as a negative coping

strategy it may serve as an important stress reduction function (Cohen, 2004). Reducing the possibility of tension by pre-emptive means, such as sensitivity to moods and avoiding ways of communicating that create unnecessary, unresolvable conflicts is highly positive, providing the exercise is reciprocal. Avoidance and delay, such as skirting around issues, motivated by aversion to confrontation and/or the transitional nature of shared households, is not always maladaptive and can preserve relationships (Afifi, Coughlin & Afifi, 2007). Clearly if a troublesome flatmate is leaving it's best to simply wait it out. Nevertheless, extensive avoidance by neglecting to deal with problems can be counterproductive. Unresolved conflict can increase stress and distrust and become increasingly malignant if the source of dissatisfaction is recurring (Spitzberg & Cupach, 2007). Withholding complaints can erode relationship satisfaction and ultimately result in withdrawal from household socialising. Since communal interaction is the glue that holds households together (Heath & Cleaver, 2003), prognosis for continued co-residence under these circumstances is not positive.

Meta-analysis of 118 group studies identified three types of group conflict (de Wit, Greer & Jehn, 2012). *Relationship conflict* involving perceived incompatibility in personality, norms and values are destructive through threats to individual self-concepts, increased anxiety, negative emotions, hostility and lack of trust, particularly if persistent for a significant time (Toegel & Barsoux, 2016). Such conflict has a relatively low probability of resolution since it is emotion driven and very often includes personal attacks, thus negatively impacting the communication process. Prognosis for dealing with conflict is more positive if the group has similar values, with high levels of trust and respect (Jehn & Mannix, 2001). This speaks to the importance of similarity of flatmates, which has been identified. In constructing ideal flatmates participants spoke of the desire to live with people who resembled themselves in a variety of ways, such as similar age, values, morals and backgrounds (Clark et al, 2017). In participants' talk of conflict, it became clear that young people develop an acute awareness of what might compromise domestic harmony and actively seek to prevent potential problems by careful selection of flatmates.

The second type of group conflict, *task conflict* (de Wit, Greer & Jehn, 2012), refers to problems with tasks. This tension is more easily managed by focusing on overcoming differences to achieve a common objective. Unfortunately, task driven conflict, such as failing to contribute to housework, frequently becomes emotion based exacerbating tension and making problem solving more difficult. A third conflict type, *process conflict*, produces a consistently negative effect and can sabotage group viability. For example, a group member may consider s/he is not respected or consider certain tasks beneath his/her dignity (de Wit, Greer & Jehn, 2012).

All social actions are subject to moral evaluation (Goffman, 1971). Whether behaviour is considered appropriate, bad or ill-judged is a subjective judgement, depending on culture and pre-established values (Chiu & Hackett, 2017). Very often conflict is rooted in issues of fairness (Jones, 2000) with some form of atonement or

penance demanded by the offended (Drew, Hepburn, Margutti & Galatolo, 2016). Failure of flatmates to contribute to housework or eating others' food is hard to justify, and ultimately paid for by moving out. However, what is considered acceptable in one flat may not be so in another.

Flating entails individuals living in a shared living space as a collective, where inevitable conflict can be positive and productive. Collaborative resolution with respectful, honest debate and mutually agreed solutions enhance group cohesion and relating to others (Deutsch, 2014). For young adults negotiation skills learned through constructive collaboration and co-operative strategies to deal with problems in shared households have positive implications for interpersonal interactions in the workplace and relationships in general (La Valle, O'Regan & Jackson, 2000). Strong positive connections can enhance human well-being and deepen relationships while too much negative interaction can be alienating, reduce morale and undermine team work (Chun & Choi, 2014; Curseu et al 2012).

The two discourses on managing conflict seem somewhat contradictory. Openly discussing problems is active, direct and confronting, while avoidance is the opposite. The similarity lies in both being aimed at managing stress that can be destructive to the ongoing nature of relationships of a group of folk living together. In essence, effective conflict management requires the ability to paradoxically be confrontational and avoidant (Roloff & Ifert, 2000), with sensitivity to the context and when it's best to adopt different strategies.

Consequences of conflict

Two discourses regarding the consequences of conflict were identified. The first involved the negative psychological implications of unresolved conflict. Young adulthood is an exciting period of possibilities but also a turbulent life stage with multiple challenges, such as resisting risky peer pressure, gaining qualifications, career choice and forming early sexual relationships (Arnett, 2000). Although conflict can be reversed through effective resolution, non-resolution can produce negative outcomes, with detrimental psychological and physiological ramifications (Cohen, 2004).

The second discourse is to move out in the face of intractable conflict. This can take the form of a decision to move out or request that someone move out. Others regroup as a household in a new location without the perceived problematic agent. However, exits can be costly: economically, there are moving expenses, bonds and rent to be paid in advance. The complexity becomes more involved if the person leaving has the lease on the property. Emotionally there is the loss of social capital and anxiety. In a competitive rental market finding new accommodation can be difficult with no guarantee that the new household will be more satisfactory. However, the negative psychological consequences of remaining in an unhappy situation frequently make moving out an attractive option.

Careful selection of flatmates by way of similarities and expectations can reduce possibilities for tension but

can be subverted by the necessity of finding someone promptly to cover expenses and the simple fact that it is difficult to predict how relationships will work when sharing a household. The seemingly healthy mechanism for dealing with tension is to manage this by mature discussion and resolution, rather than moving to another flat. Very often leaving a tense or uncomfortable household is regarded as the only solution to a problem.

The current study is not without limitations. For example, in promoting a positive self-image, participants would seldom admit to responsibility for initiating tension. In addition, more in-depth research is needed into the negative psychological aspects of co-residence. Traumatic experiences are likely to result in individuals seeking alternative types of accommodation. By interviewing only those currently flatting those most adversely affected were excluded. Based on this limitation future research could concentrate on those who prefer not to share households.

While sharing can be challenging, focusing on tensions does not draw a complete picture. Current research indicates that house sharers are typically happy and content (Heath et al, 2017). Flats are not merely regarded as a room to rent, but homes in which to unwind, while appreciating the support and ready-made social life available (Clark et al, 2018). By carefully navigating the hazards of shared living, which have few traditional markers, young adults demonstrate an acute understanding of the domestic dynamics, which mutually impact the quality of their lives (Clark et al, 2018).

Conclusion

While many positive advantages, both economic and social, can be gained from residing with peers, interpersonal relationships can be challenging. Clearly, participants were familiar with household conflict but managed to ensure it was minimally disruptive to their generally successful construction of shared living. However, sometimes the decision to move out is seen as the only solution. And this highlights the fact that the management of conflict takes place against a background where arrangements are often loose and transitory: with no ideological blueprints for co-residence, rules evolve organically. This adds to the uncertainty and ambiguity involved in dealing with conflict.

The current study strengthens the literature on shared housing among young adults by adding a deeper relational understanding of the sources, management and consequences of conflict. Understanding this intimate way of life is particularly important in New Zealand as flatting is an established way of life. By providing insights into the complexity of shared households, it offers a window into contemporary life of young adults as well as group processes. The unique contribution lies in analysing how participants construct their experiences, the active and passive ways of navigating conflict in flatting relationships and how the negative effects on well-being can be circumvented. It also affords a more sophisticated appreciation of the structure and complex social dynamics of these domestic microsystems.

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Mental Health Literacy: New Zealand Adolescents' Knowledge of Depression, Schizophrenia and Help-Seeking

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Mental health literacy is defined as knowledge and beliefs of mental disorders and of appropriate treatments. The aim of this study was to assess mental health literacy in New Zealand adolescents ($N = 114$, $M = 16.72$). Participants read two vignettes; the first presented an adolescent meeting DSM-5 diagnostic criteria for depression and the second presented an adolescent meeting DSM-5 diagnostic criteria schizophrenia. The majority of participants (73.7%) correctly recognised depression and 51.8% recognised schizophrenia. Almost half the participants recommended professional help for both depression and schizophrenia, whereas the majority also suggested a non-professional form of help, including talking to the patient, providing reassurance and seeking adult support. Even though these first data are promising, there is still potential for further improving the mental health literacy levels of adolescents. This will ensure early recognition of mental illnesses, leading to appropriate and timely help-seeking behaviours and greater quality of life.

Keywords: Depression, schizophrenia, adolescents, mental health literacy, help-seeking

Introduction

Mental health problems account for a large proportion of the disease burden in young people worldwide (World Health Organization [WHO], 2012). New Zealand has the highest rate of completed youth suicides in the developed world for those aged 15-19 years (WHO, 2017) and mental health issues are particularly salient for many New Zealand adolescents (Feehan, McGee, Raja, & Williams, 1994; Fergusson & Horwood, 2001; Fleming et al., 2014). Most mental disorders emerge during adolescence (10–19 years of age) (Sawyer et al., 2012), although these are often first detected later in life with serious impacts for young people (Kessler et al., 2005). This high susceptibility in adolescents to developing a mental illness is coupled with a strong reluctance to seek professional help (Rickwood, Deane & Wilson, 2007). To date, numerous factors have been identified as help-seeking influences, including the nature of past help-seeking experiences (Wilson & Deane, 2001), gender (Rickwood, Deane, Wilson, & Ciarrochi, 2005) and the optimism bias—that is, believing one is less susceptible to negative events than others (Spendelov, & Jose, 2010). In addition, the lack of knowledge about mental health issues, sources of help and treatment options (Jorm et al., 1997) have been associated with help-seeking behaviours. Such knowledge, which is well encapsulated by the concept of mental health literacy, was of particular interest in the current study.

Mental health literacy (Jorm et al., 1997) is defined as the “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (Jorm et al., 1997, p. 182). Mental health literacy was further conceptualized in 2012 to include five basic components: a) knowledge of mental illness prevention strategies, b) symptom recognition during onset of mental disorder, c) knowledge of appropriate help-seeking responses and treatment options, d) knowledge of valuable self-help techniques in milder cases and e) mental health first aid

knowledge of how to effectively support individuals developing mental illness or experiencing a mental health crisis (Jorm, 2012). Jorm and colleagues (1997, 2012) argued that poor mental health literacy may contribute to poor recognition of mental illness, making it less likely to facilitate professional help-seeking and thus, lead to the exacerbation or maintenance of symptoms. This is consistent with a systematic review on the barriers and facilitators of help-seeking for mental illness (Gulliver, Griffiths, & Christensen, 2010), which identified poor mental health literacy, namely, poor recognition of mental illness and poor knowledge of mental health services, as a key barrier to early and appropriate help-seeking responses among adolescents. Understanding mental health literacy and how to improve it may be an important target for ensuring adolescents recognise mental illnesses early and access appropriate help.

Since the inception of the concept of mental health literacy, many studies have examined mental health literacy among youth around the world, including Australia (Burns & Rapee, 2006; Marshall & Dunstan, 2013; Reavley & Jorm, 2011; Wright et al., 2005), the United States (Coles et al., 2016), Sweden (Melas, Tartani, Forsner, Edhborg, & Forsell, 2013), Ireland (Byrne, Swords, & Nixon, 2015), Portugal (Loureiro et al., 2013; Loureiro et al., 2015), China (Lam, 2014), Japan (Yoshioka, Reavley, Hart, & Jorm, 2015), Iran (Essau, Olaya, Pasha, Pauli, & Bray, 2013), and Nigeria (Aluh, Anyachebelu, Anosike, & Anizoba, 2018). The majority of these studies focused on recognition of specific disorders, mainly depression and schizophrenia, and knowledge of appropriate sources of help. In one of the earlier studies among Australian youth, Wright and colleagues (2005) found that almost 50% identified depression correctly. Since then, mental health literacy studies in most countries show that, among young people, rates of depression recognition range between 30%–70% (Burns & Rapee, 2006; Byrne et al., 2017; Coles et al.,

2016; Essau et al., 2013; Loureiro et al., 2013; Melas et al., 2013; Marshall & Dunstan, 2013; Reavly & Jorm, 2011). In contrast, very low rates of recognition have been reported among youth in Nigeria (Aluh et al., 2018), Japan (Yoshioka et al., 2015) and China (Lam, 2014), with only 4.8%, 14.3% and 23.4% of adolescents respectively, correctly identifying depression. However, these low rates could be related to the use of a vignette-based questionnaire, which required participants to generate their thoughts and beliefs, rather than selecting answers from a pool as in the case of Aluh et al.'s (2018) study. Further, there is also the possibility that there may be lack of mental health awareness designed to target youth in these countries (Lam, 2014).

In studies investigating both depression and another mental health disorder, participants were more accurate at recognising depression. Rates of schizophrenia recognition were low, with between 8.3%– < 50% of young people able to identify schizophrenia (Loureiro et al., 2015; Melas et al., 2013; Reavly & Jorm, 2011; Yoshioka et al., 2015). In addition, gender differences in adolescent mental health literacy have been observed, with rates of recognition being much lower in young men than young women (Burns & Rapee, 2006; Cotton, Wright, Harris, Jorm & McGorry, 2006; Melas et al., 2013).

Adolescents have also been found to have very different ideas about what treatments are most helpful for mental illnesses. For example, in Australia, Reavly and Jorm (2011) showed that participants gave the highest helpfulness rating to GPs, counsellors, medications and lifestyle interventions, such as exercise, and relaxation; in another study (Burns & Rapee, 2006), 58% of adolescents endorsed counsellors as being helpful for depression, followed by friends (42%), and family (41%), whereas few recommended seeking help from a psychologist (6%), psychiatrist (4%), or another type of doctor (1.5%). In sharp contrast, Loureiro et al. (2013) found high endorsement for the helpfulness of appropriate health professionals, such as psychologists (89%), GPs (74.6%) and psychiatrists (55.1%) among Portuguese young people. In the same study and consistent with others from other countries (e.g., Aluh et al., 2018; Wright et al., 2005; Yoshioka et al., 2015), friends or family were also reported as common sources of recommended help. Finally, approximate one-third of American youth did not recommend any sources of help for depression or social anxiety (Coles et al., 2016). However, this may have been due to lack of knowledge of the help available, efficacy of treatment, and/or fear of stigmatisation (Kelly, Jorm & Rodgers, 2006; Rickwood et al., 2007).

The previous studies discussed above have yielded mixed findings. One plausible explanation could be that, even though most studies assess mental health literacy with case studies or vignettes describing the target mental health disorder, there is variation with regard to different response formats that may have influenced participants' ability to recognise the disorders and recommend appropriate treatment. The problem is that adopting a fixed response style, with answers already presented to participants, may not as accurately assess young people's knowledge of mental health disorders and help-seeking responses compared to open-ended answers, which

require participants to generate their thoughts and beliefs (Sai & Furnham, 2013).

Melas et al. (2013) examined the knowledge of depression, schizophrenia and associated help-seeking behaviours in a sample ($n=426$) of Swedish adolescents. These researchers addressed the above methodological limitation by including only open-ended questions to prevent participants from potentially guessing the correct answers. This study partially replicates the work of Melas et al. (2013). Replication occurs through the use of two identical written vignettes, and an open-ended question methodology. The aim of this study was to examine the mental health literacy of a sample of New Zealand adolescents, specifically in relation to (a) disorder recognition/symptom knowledge and (b) knowledge of appropriate help-seeking for major depressive disorder and schizophrenia. Although this investigation is exploratory, based on the results of previous studies we anticipated that males and females will differ in their knowledge about mental illness, with females demonstrating higher mental health literacy. We also hypothesised that respondents will report lower levels of recognition of schizophrenia compared to depression.

METHODS

Participants

A total of 114 students (27 males, 87 females) aged between 16 and 18 years ($M = 16.72$, $SD = .56$) were recruited from five secondary schools (two co-educational schools $n = 53$; and three single-sex girls' schools: $n = 61$) in Wellington, New Zealand. The majority of participants (76%) were female because three of the participating schools were single-sex girls' schools. Most participants identified their ethnicity as New Zealand European (63%); the remaining were Māori, the indigenous people of New Zealand (4.5%), Asian (20%), Pasifika (8%), and 4.5% of European background.

Measures

Participants completed a pen-and-paper survey that consisted of a few demographic questions (i.e., gender; age; ethnicity) and two pre-established vignettes originally developed by Jorm et al. (1997) and later adapted by Melas et al. (2013) to be self-administered and age-appropriate. The vignettes were slightly modified to ensure suitability for New Zealand adolescents (see Table 1 for the description of the two vignettes). Each vignette presented a 17 year-old person who met DSM-5 (American Psychiatric Association, 2013) diagnostic criteria for either major depression or schizophrenia. Two versions of the survey were administered; the first version was administered to male participants where both diagnostic conditions presented a hypothetical adolescent named "John" and the second version was administered to female participants where both diagnostic conditions presented a hypothetical adolescent named "Jane". This was to avoid possible gender-based biases influencing participant responses. Following the vignettes, participants were asked the following two open-ended questions "Is everything fine with John/Jane? If not, what would you say is wrong with him/her?" and "Imagine John/Jane was a friend of yours that you cared about. You want to help him/her. What would you do?" These

Table 1. Depression and schizophrenia vignettes used in the survey

<p>Depression John (Jane) is 17 years old. He (she) has been feeling unusually sad and miserable for the last few weeks. Nothing unusual has happened the weeks before so he (she) does not understand why. Even though he (she) is tired all the time, he (she) has trouble sleeping nearly every night. John (Jane) doesn't feel like eating and has lost weight. He (she) has difficulties in concentrating in school and his (her) test results haven't been as good as usual.</p> <p>Schizophrenia John (Jane) is 17 and lives at home with his (her) parents. Over the last months he (she) has stopped seeing his (her) friends and going to school. He (she) spends most of his (her) time in his (her) room. His (her) parents also hear him (her) walking around his (her) bedroom at night while they are in bed. Even though they know he (she) is alone, they have heard him (her) talking as if someone else is there. When they try to encourage him (her) to do more things outdoors, he (she) whispers that he (she) won't leave home because the neighbour is spying upon him (her). They know he (she) is not taking drugs because he (she) never sees anyone or goes anywhere.</p>
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$N = 114) = 0.20, p = .654,$ or schizophrenia $\chi^2 (1, N = 114) = 0.00, p = .991.$

Responses were categorised under *other labels* if participants did not recognise the disorder and attributed symptoms to be a consequence of another problem. These responses were further qualitatively analysed into subcategories. Results are summarised in Table 3 along with representative citations. Overall, for the

questions were identical to those used by Melas et al. (2013).

Data Analysis

Participants' responses were transcribed verbatim on an excel file. Data were qualitatively analysed using a content analysis method according to Burnard (1991), and then sought agreement on the generated categories and subcategories. Following the qualitative data analysis, data were quantitatively processed to generate the percentages of respondents belonging to each of the generated categories. The category percentages did not always add up to 100% as some respondents gave more than one answer belonging to different categories.

RESULTS

Disorder Recognition

The first question of the depression and the schizophrenia vignette assessed the adolescents' ability to recognise the presented mental disorder. Qualitative analyses of responses yielded three main categories, (a) Recognition, (b) Other labels and (c) No problem recognised. Responses that mentioned depression and/or "depressed" were categorised under *recognition* for depression. For schizophrenia, recognition was confirmed if schizophrenia or symptoms of psychosis, including delusions, hallucinations or paranoia were mentioned.

depression vignette, 25.4% of participants did not identify depression and commonly attributed the symptoms to be a consequence of stress or preoccupation with excessive thoughts. Some participants suggested a mental health issue without specifying a mental disorder, while others responded that the symptoms were due to physical health problems. Other mental disorders mentioned included anxiety and eating disorders, while other conditions included changes typical of puberty (e.g., 'hormones'), nutritional deficiency, and interpersonal problems. One participant did not recognise any problem at all in the depression vignette.

For the schizophrenia vignette, 43.9% of participants did not correctly label schizophrenia and most explained psychotic symptoms to be a consequence of either another mental disorder, mainly depression, anxiety or an unspecified mental illness. Other responses less frequently mentioned included being stalked, traumatic experience, interpersonal and/or school problems, being bullied, loneliness, paranormal activity and unspecified difficulties. Six participants (5.3%) exhibited stigmatizing attitudes toward schizophrenia conveyed through the use of derogatory words such as "crazy" or "mad", while five participants (4.4%) did not recognise any problem at all in the schizophrenia vignette.

Help-Seeking Recommendations

The second question assessed adolescents' help-seeking responses for the presented mental disorders. Qualitative analyses of responses yielded three main categories, (a) Professional help, (b) Non-professional help and (c) No help. Responses that mentioned healthcare professionals, including GPs, psychiatrists, psychologists and school counsellors, terms like "medicine" and "medication", including reference to specific medications, such antidepressants

Table 2. Adolescents' recognition of the mental disorder in the vignette

	N	%
(a) Recognition of depression		
Total	84	73.7
Gender		
Females	65	74.7
Males	19	70.4
(b) Recognition of schizophrenia		
Total	59	51.8
Gender		
Females	45	51.7
Males	14	51.9

N denotes number of participants who recognised the presented mental disorder; % denotes percentage of participants.

Results are presented in Table 2 and show that, consistent with our prediction, the majority of participants (73.7%) correctly identified depression in the first vignette, while approximately half correctly recognised schizophrenia in the second vignette. No gender differences were found on adolescents' ability to recognise either depression, $\chi^2 (1,$

were categorised under professional help. Approximately half of the participants (55.3%) recommended professional help for depression and similarly 53.5% recommended professional help for schizophrenia.

Table 3. Other labels for mental disorders: Subcategories and representative citations

Subcategories	Representative citations
Other labels for depression	
Stress	'She may be under a lot of stress...'
Preoccupied with thoughts	'He's obviously thinking about something a lot...'
Mental health illness not specified	'She might have a mental illness.'
Physical health problems	'...perhaps a brain tumour? Or some disease... for example, meningitis.'
Pubertal changes	'It could be normal teenage hormones...'
Nutritional deficiency	'She may be low on iron/magnesium...'
Interpersonal problems	'She could be sad and miserable because of relationships, for example, friendship or family matters or relationships...'
Anxiety	'He could be experiencing a vast amount of anxiety'
Eating disorder	'Jane may be developing an eating disorder.'
Other labels for schizophrenia	
Other mental disorders	'He has social anxiety.'
Mental health illness not specified	'My best guess is that she has a psychological illness.'
Stress	'She is just stressed out about school and life, full stop.'
Being stalked	'...I think she is being stalked by her next door neighbour...'
Traumatic experience	'...some sort of traumatic experience she doesn't want to talk about.'
Interpersonal problems	'...I think there might be some issue with friends in school...'
School problems	'...things could be wrong at school.'
Being bullied	'John may have been bullied at school.'
Loneliness	'She could be feeling lonely...'
Paranormal activity	'...maybe there's an entity with her.'
Unspecified difficulties	'John is not okay and could have problems that caused this.'

Responses were categorised as *non-professional* when participants mentioned forms of help not related to the health care system. These responses were further qualitatively analysed into subcategories and are presented in Table 4 along with representative citations. For the depression vignette, the vast majority of participants (93.9%) also suggested a non-professional

Similar to depression, 74.6% of participants recommended a non-professional form of help for schizophrenia. Talking to John/Jane, spending time with him/her, seeking support from adults and providing support/reassurance were commonly mentioned as appropriate help-seeking responses. Some participants recommended help without specifying the type, while

Table 4. Non-professional sources of help: Subcategories and representative citations

Subcategories	Representative citations
Non-professional help for depression	
Communication	'I would talk to her and try to console her...'
Provide support/Reassurance	'I would just let her know that I am there for her...'
Help not specified	'...I would point him towards help.'
Adult support	'...If she doesn't improve maybe talk to someone e.g., a parent and work out what to do with her.'
Company	'...make sure she's okay/keep her company.'
Entertainment	'Play some video games ...Hang out with him doing fun stuff.'
Distraction	'Try and go do some fun stuff to take her mind off whatever is upsetting her.'
Lifestyle improvement	'Make sure that she eats her lunch every day at school...'
Keep in contact	'I would check on her from time to time...'
Seek peer support	'I'd talk to other good friends of John...'
Non-professional help for schizophrenia	
Communication	'...I'd reach out and try talk it out...'
Company	'Go over and just keep her company...'
Adult support	'...I would talk to Jane's parents about Jane's situation.'
Provide support/Reassurance	'Well I would reassure her that I am there for her...'
Help not specified	'Tell someone who will help.'
Distraction	'Just keep his mind occupied at all times...'
Police	'I would advise Jane or the parents to receive help. If either of them are unwilling to co-operate, I would then notify police or CYFs if I felt she was at risk.'

form of help. The most frequently mentioned response was "talk to patient" coded as communication, followed by "provide support/reassurance", help not specified and seeking support from an adult, including parents and teachers.

other less frequently mentioned responses included distraction, and notifying the police. Finally, four participants did not suggest any type of help for schizophrenia. These participants reported that they would not know what to do or expressed suspicion about

the presented symptoms (e.g., "...how do I know she is doing that?") and therefore, gave no help-seeking recommendation. For the depression vignette, all respondents suggested some form of help either professional or non-professional.

Finally, chi-square analyses were performed to examine whether adolescents who accurately labelled the diagnostic categories also suggested more professional help-seeking recommendations than adolescents who did not correctly label these problems. Accurate labelling of depression was not associated with increased professional help-seeking recommendations, $\chi^2(1, N = 114) = 0.46, p = .499$. On the contrary, the relation between these variables for schizophrenia was significant $\chi^2(1, N = 114) = 5.84, p = .016$. Adolescents who correctly labelled schizophrenia were more likely to recommend professional help-seeking than were those who did not recognise the disorder and attributed symptoms to be a consequence of another problem.

DISCUSSION

Recognition of the Disorders

This investigation adds to the literature by being the first study to examine levels of mental health literacy in a sample of New Zealand adolescents. Our results indicated that rates of recognition of depression were relatively high, with nearly 75% of adolescents correctly labelling depression. This is in agreement with some studies, which showed similarly high rates of depression recognition (Burns & Rapee, 2006; Marshall & Dunstan, 2013; Sai & Furnham, 2013; Reavley & Jorm, 2011). With regards to the schizophrenia vignette, approximately half of respondents used the correct label. Only one study, which was conducted in Portugal, showed that 42% of participants aged 14-24 years recognised schizophrenia (Loureiro et al., 2015). Overall, most previous studies indicated that less than 50% of young people were able to identify depression correctly (Byrne et al., 2015; Coles et al., 2016; Essau et al., 2013; Lam, 2014) and only about one third were able to identify schizophrenia (Melas et al., 2013; Reavley & Jorm, 2011). As expected and consistent with previous studies, adolescents in our study were better at recognising depression than they were with schizophrenia (Cotton et al., 2006; Melas et al., 2013; Reavley & Jorm, 2011). Overall, adolescent depression is a highly prevalent mental disorder, much more frequent than schizophrenia, which may explain the higher levels of literacy regarding depression. Further, in New Zealand, depression has a high prevalence among youth (Oakley Browne, Wells, Scott, & McGee, 2006), which may have increased the likelihood of exposure to depressive symptoms. Likewise, the *Like Minds Like Mine* television campaign and the National Depression Initiative (Ministry of Health, 2017; Ministry of Health and Health Promotion Agency, 2014), aimed at increasing awareness of mental illness, may further explain the observed high rates. Another plausible explanation on the high recognition rates relates to the fact that most young people studied herein were females in late adolescence. Indeed, in line with findings from earlier studies (e.g., Burns & Rapee, 2016; Coles et al., 2016; Cotton et al., 2006; Marshall & Dunstan, 2013), females consistently demonstrate higher mental health literacy than males.

Such findings have been attributed to girls having greater personal experience with depression in both themselves and their peers as by late adolescence depression is approximately twice as prevalent among women as it is among men (Lewinsohn, Rohde, & Seeley, 1998; Nolen-Hoeksema & Girgus, 1994).

Further, we found that young people, who did not recognise the disorders, used more general terms to label the disorders such as stress, anxiety, or psychological/mental illness, demonstrating their ability to identify a mental health problem, even though they could not provide the correct psychiatric label. This was also in line with many of adolescents' responses including terms like 'could/might be' and 'not sure', indicating some uncertainty and showing appropriate caution as expected. Similarly, depression was also commonly used to describe schizophrenia, a finding consistent with other studies, which showed that depression was commonly used to describe other disorders in the vignettes, including schizophrenia (Loureiro et al., 2015; Melas et al., 2013), social phobia and PTSD (Reavley & Jorm, 2011).

Help-Seeking Recommendations

It is promising that approximately half the sample considered both problems described in the vignettes serious to require help offered by health care professionals or medication. In response to open-ended questions regarding the most appropriate form of treatment, similar findings have been reported among young people in Australia, where GPs were considered as the best source of help for depression and GPs and psychiatrists for schizophrenia (Reavley & Jorm, 2011). In another study among Irish adolescents, mental health professionals were the most frequently recommended source of help for depression (Byrne et al., 2015). In contrast only 22.5% and 32.6% of Swedish adolescents identified professional help for depression and schizophrenia respectively (Melas et al., 2013). It is possible that New Zealand adolescents may have an increased awareness of the value of seeking professional help when dealing with mental illnesses as a result of the National Depression Initiative and the *Like Minds Like Mine* television campaign (Ministry of Health, 2017; Ministry of Health and Health Promotion Agency, 2014). However, the fact that New Zealand adolescents recommended a variety of professional labels may also reflect their lack of knowledge of the specialisation of different professions. It will be important in future research to further assess adolescents' knowledge about differences between non-specific health services and specialist mental health services.

It has been posited that recognising that a problem exists while lacking the ability to correctly label it, may still be sufficient to promote appropriate help-seeking responses (Leighton, 2009). Our findings indicated that accurately labelling depression as a mental health illness was not associated with increased responses about sources of help. A plausible explanation may be that the mere detection of abnormality may be adequate to prompt adolescents to recommend or seek professional help. Hence, it may be considered good practice to encourage adolescents to check unusual behaviours or experiences affecting functioning rather than to assert diagnostic categories based on limited information. On the other hand, accurate labelling of schizophrenia or identification

of symptoms of psychosis, including delusions, hallucinations or paranoia was significantly associated with adolescents' recommending seeking help from specialist mental health services, consistent with the notion that seeking professional help appears to be influenced by the ability to correctly label a mental disorder and an individual's perception of the severity of symptoms (Clement et al., 2015; Gulliver et al., 2010; Hannah et al., 2015).

The association between stigma and the use of psychiatric terms by the public to label mental disorders has been the subject of continuing debate (Jorm & Griffiths, 2008; Read et al., 2006, 2009). Many researchers have argued that the use of diagnostic labels by the public (Penn & Nowlin-Drummond, 2001; Angermeyer & Matschinger, 2005; Rose & Thornicroft, 2010), including youth (Rose et al., 2007) can have a stigmatising impact, which, in turn can have a deterrent effect on help-seeking (Clement et al., 2015; Gulliver et al., 2010). On the other hand, there is evidence that accurate psychiatric label use may have potential to counter various aspects of stigma, particularly the belief that mental illness is a weakness (Yap, Reavley, & Jorm, 2014; Yap, Reavley, Mackinnon, & Jorm, 2013). In a large national survey, Yap and colleagues (2013) examined the associations between unprompted label use and stigma in young people. Results indicated that accurate psychiatric labelling of the mental illness presented in the vignette and community awareness campaigns were the best predictors of less stigmatizing attitudes, followed closely by exposure to family or friends with mental health problems. These findings reinforce that accurate psychiatric label use may have potential to counter various aspects of stigma, particularly the belief that mental illness is a weakness. Therefore, promoting recognition of mental disorders by youth and their conceptualization as treatable illnesses may decrease the delay in treatment seeking by young people, and increase the chances of accurate diagnosis and appropriate treatment when young people do present to health services (Haller et al., 2009; Jorm & Griffiths, 2008).

In agreement with previous studies (Melas et al., 2013; Marshall & Dunstan, 2013; Wright et al., 2005), the majority of New Zealand adolescents also recommended non-professional sources of help for both disorders, including talking to the patient, providing support/reassurance, and seeking support from an adult. Although talking to the distressed adolescent and spending time with him/her may be supportive in recovery (Jacob, 2015), it is unlikely to assure positive health outcomes and good management of symptoms for depression or schizophrenia – disorders requiring treatment by trained professionals. Further, the quality of advice given by peers may unintentionally prove detrimental due to their own lack of knowledge of mental health problems and appropriate treatments. Therefore, these findings underline the influence that peers can have on an adolescent's life and the need of related mental health awareness programmes for youth. Consistent with Melas et al. (2013), we also found that adult support, mainly support from parents, was identified as an important source of help. It is promising that most adolescents in our study appeared willing to disclose

mental health worries to caring adults, demonstrating the equal importance of education for parents on adolescent mental health issues. Finally, some participants recommended "help" without identifying a specific form, showing their ability to recognise a need for help even though they were not able to correctly label who or what could be of most assistance. This finding reflects adolescents' ambiguity of appropriate treatment options, pointing to the potential value of mental health education.

Limitations

The findings of this study should be evaluated in light of its limitations. First, the sample was relatively small with an unbalanced ratio of females to males and a narrow age range of adolescents; thus, limiting the interpretation of the results for this subgroup of adolescents. Further, we did not obtain data on socio-economic status, which may have affected rates of mental health literacy. Future research with a larger, gender-balanced, representative sample from diverse locations, including rural areas, is required to ensure the generalisability of results. Third, a convenience sample of students was used, which can lead to the under-representation of particular groups, such as adolescents who are not at school. It is also unclear why some adolescents agreed to take part in the survey while others did not. Since the sample is not chosen at random, the inherent bias in convenience sampling means that any generalisations of findings must be made with caution. Fourth, we used written vignettes to assess mental health literacy and it may be that participants' recognition of mental health disorders and recommendations of sources of help in real-life situations (as depicted in a short film) may have produced very different results, especially as real-life cases may involve subtle cues and non-verbal communication, which require active interpretation. Next, mental health literacy was evaluated using the vignette approach and related only to depression and schizophrenia. However, it has been argued that the entire construct of mental health literacy cannot be assessed by this measurement tool, which includes a small number of disorders and does not consider mental health promotion (Kutcher, Wei, & Coniglio, 2016). Future studies would benefit from considering using other evaluation techniques sufficiently capturing multiple components of the construct, thus allowing a more robust assessment of mental health literacy. Lastly, future research efforts would do well to investigate personal characteristics of youth that predict accurate diagnoses or more useful help-seeking recommendations, such as education, presence of depressive symptoms or other psychiatric disorders.

Despite the above limitations, the current study has demonstrated relative adequate levels of mental health literacy in New Zealand adolescents between the ages of 16 and 18 years. Even though these first data are promising, there is still potential for young New Zealanders to benefit from further education in the areas of recognition and treatment beliefs for mental disorders, particularly, schizophrenia in order to access early intervention and prevent the onset or exacerbation of mental illness. Based on these findings and taking into account the high levels of mental distress among New Zealand adolescents, consideration needs to be given to the implementation of universal school-based programmes designed to enhance mental health literacy of

youth. Additionally, further research to address the effectiveness of such strategies in improving adolescent

well-being in New Zealand is indicated.

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Young New Zealanders' Beliefs About Youth Suicide and How It Can Be Prevented

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New Zealand has the highest suicide rate amongst youth (ages 15-24) in the OECD. We aimed to conduct a conceptual replication of two previous studies, examining the views that youth in New Zealand hold about the causes of youth suicide, possible solutions, and help-seeking. One hundred university students aged 18 to 24 completed a mixed-methods online survey; 89% were female. One of four hypotheses was supported: Students who were personally aware of another student's suicidality were more willing to seek help for others from the university counselling service. Qualitative findings indicated that bullying and stigma were the most commonly perceived causes of youth suicide, and improvement of mental health services was the most frequently recommended solution. The views of youth should be included in the future development of mental health services and policies aimed at reducing suicide rates for this population.

Keywords: help-seeking, mental health services, suicide, university, youth

Introduction

Suicide is a leading cause of death in many countries, with an estimated 800,000 suicide deaths worldwide each year (World Health Organization, 2018). In 2012, New Zealand had the highest suicide rate out of all OECD countries for youth aged 15 to 24 (Ministry of Social Development, 2016). Currently, a young person in New Zealand dies by suicide every sixty-four hours (Coronial Services of New Zealand, 2018). In the year to June 2018, those aged 15 to 19 died by suicide at a rate of 16.88 per 100,000, while those aged 20 to 24 had a suicide rate of 21.21 per 100,000 (Coronial Services of New Zealand, 2018).

Youth aged 15 to 24 consistently report the highest rates of psychological distress compared to other age groups in New Zealand, with 11.8% of youth scoring 12 or higher on the Kessler Psychological Distress Scale-10 in a Ministry of Health (2017) survey. However, those towards the upper end of the youth age range, the 20 to 24 year olds, are the ones who more often die by suicide (Beautrais, 2003). University students aged under 24 are a particularly vulnerable population, reporting higher levels of psychological distress than non-university populations of the same age (Stallman, 2010). Counselling services offered by universities New Zealand-wide are experiencing surges in the number of youths trying to access these services, with an overall increase of nearly 25% between 2015 and 2017 (New Zealand Union of Students' Associations, 2018). These circumstances suggest that suicide prevention services or programmes specifically designed for this population need to be developed.

Why Research Young People's Beliefs About Youth Suicide?

The Mental Health Commission (2012) reports that service users and their families frequently express the need for inclusion in the development of policies and services. This inclusion promotes self-determination, empowering individuals to share the decision-making

process with professionals, and increasing treatment adherence (Corrigan et al., 2012). Self-determination is a crucial factor in whether service use will result in recovery (Mental Health Commission, 2012), and has implications for suicide prevention specifically. Understanding the beliefs young people hold about suicide could impact mental health services targeted towards this population, and in combination with the knowledge of mental health professionals, the content and delivery of such services could be adapted to increase their relevance and effectiveness for youth. This has the potential to save the lives of more young New Zealanders who access these services during times of distress.

The New Zealand Government (2018) Inquiry into Mental Health and Addiction report states that one of the purposes of their inquiry was "to hear the voices of the community, people with lived experience of mental health and addiction problems, people affected by suicide, and people involved in preventing and responding to mental health and addiction problems, on New Zealand's current approach to mental health and addiction and what needs to change" (p. 6). The purpose of the present study was in effect the same—to hear the voices of young people, many of whom have been impacted by suicide. It was not assumed that the views youth hold about the causes of suicide would be accurate. Irrespective of their accuracy, researching their views may have important implications. For example, if there was a disparity between what research suggests is effective in preventing youth suicide and what youth believe to be effective, then it may be the case that more public health promotion is needed to dispel myths and increase accurate knowledge of suicide prevention methods.

At present there are a small number of studies in New Zealand that have attempted to research beliefs about youth suicide among university students. Two of these studies that are of particular relevance to this study are by Heled and Read (2005) and Curtis (2010).

Heled and Read (2005) researched youth perceptions

of suicide and its solutions. Undergraduate students at the University of Auckland were asked for possible reasons for why the youth suicide rate was high and suggestions for how the rate could be reduced, with students providing qualitative responses to these questions. Participants believed the greatest cause of youth suicide to be pressure from adults or peers, followed by financial worries and poor job prospects. A tenth of the participants perceived that insufficient, poorly advertised, and inaccessible support services contributed to the high rate of youth suicide. Participants suggested that to reduce the suicide rate, public awareness was important. Other suggestions included creating support groups and increasing the availability of and access to counselling.

Curtis (2010) examined perceptions of youth at Wellington's Victoria University towards suicide and help-seeking behaviour. Students largely agreed that they would contact a university mental health service for themselves (49.8% strongly agree or agree) and small but significant gender differences were found, with females more likely to seek help for themselves than males were. Students who had their own experience of suicidality were more confident that they could identify an at-risk student, and less likely to believe suicide could be prevented. Groups of students were interviewed in a second phase of Curtis' (2010) study, during which many students said that when concerned about another student they would prefer to be self-reliant or seek help from family and friends, rather than turning to professional services such as those offered by the university.

Research Aims

In light of the findings reported by the two studies above, this study aimed to investigate perceptions of the high youth suicide rate in New Zealand among young university students at Massey University, and to examine help-seeking behaviour of those students.

This study is a conceptual replication of parts of the two studies described earlier, neither of which were preregistered. The strategy of preregistration has grown in popularity in psychology in recent years in response to well-known problems with the reproducibility of psychological studies (see Nosek, Ebersole, DeHaven, & Mellor, 2018; Open Science Collaboration, 2015; Pashler & Wagenmakers, 2012). Preregistering data collection and analysis plans prior to collecting data limits the capacity of the researcher to exploit "researcher degrees of freedom" (Simmons, Nelson, & Simonsohn, 2011, p. 1359) in order to produce statistically significant findings—a practice also known as "p-hacking" (Head, Holman, Lanfear, Kahn, & Jennions, 2015). As such, this study was preregistered on the Open Science Framework (see Method for details), with hypotheses, method, and analyses decided upon prior to data collection. The focus of this study was on the perceived causes of youth suicide, strategies that youth believed could decrease this rate, and their current help-seeking behaviour towards Massey University's counselling service.

Both Heled and Read's (2005) and

Curtis' (2010) studies were original research and were largely exploratory. Because of this, this study had only a few hypotheses, all of which were based on a small selection of key statistically significant differences found by Curtis. The hypotheses were: 1) female students will be more likely than male students to say they would seek help if experiencing personal, health or work-related issues; 2) students who are personally aware of another student's suicidality will be more willing to seek help for others from the university counselling service; 3) students who have been suicidal themselves will feel more confident that they can identify students at risk of suicide; and 4) students who have been suicidal themselves will be less likely to believe that suicide can be prevented.

METHODS

Participants and Procedure

A sample of students from Massey University were recruited for this study. A university population was used in both Heled and Read's (2005) and Curtis' (2010) studies, and it was a convenient, accessible population for this study as well. A questionnaire was used for data collection, which was distributed to students via their undergraduate course websites and social media. As specified in the study's preregistration, accessible at <https://osf.io/t3ynv>, the questionnaire remained online for six weeks, during which time 140 students responded. Of these responses, there were 100 that met the inclusion requirements of the preregistration (e.g., answered at least half of the questions that were going to be analysed). Of the 40 participants excluded by this rule, 9 stopped filling out the survey after the consent item, and 31 after the first page of questions. The preregistration specified that if there were remaining missing values on quantitative variables after applying this exclusion rule, single imputation would be executed. Of the 100 responses included in the analyses, none required imputation for missing values. The overall sample size for the study was only moderate, but delivered adequate power for the correlational analyses that were used to test the majority of hypotheses: An *N* of 100 provides 86% power to detect a medium-size correlation of $\rho = .3$ in a 2-tailed test.

Participant demographics. The age of participants ranged from 18 to 24, with a mean age of 21.38 (*SD* = 2.00). Females were over-represented in this study,

Table 1. Participant Demographics

Variable	%
Gender	
Female	89
Male	10
Gender diverse	1
Ethnicity	
New Zealand European/ Pākehā	76
Māori	8
Pacific Island	4
Asian	4
Other	8
Area of study	
Psychology	43
Social sciences and humanities (excluding psychology)	23
Business	12
Health sciences (excluding psychology)	5
Physical or mathematical sciences	4
Other	13

Note. As there are 100 participants, the percentages and frequencies of participants falling in each category are the same.

making up 89% of the sample (see Table 1).

Measures

A questionnaire containing 27 items was used for the study. This can be viewed at <https://osf.io/n5zc8/>. The first five items were related to demographic information, asking participants about their gender, age, ethnicity, what region they live in, and their area of study at Massey University.

The following four items were replicated from Heled and Read's (2005) study. The first two of these items asked if participants knew a young person who had attempted suicide, or who had died by suicide. The next two items, also replicated from Heled and Read, asked participants what they perceived the causes of New Zealand's high youth suicide rate to be, and what they thought could be done to reduce the rate (with qualitative responses).

Fourteen items were based on items from Curtis' (2010) study, with small changes made to the wording of some items. Participants were asked to rate their level of agreement with statements about their help-seeking behaviour, such as "I would personally seek help from Massey University's Health & Counselling Centre if I was experiencing personal, health or work-related issues". These items were rated on a Likert scale from 1 (strongly agree) to 5 (strongly disagree). To replicate the measurement used in the original study by Curtis (2010), participants' history of suicidality was measured by item 14 (I have personally sought help from Massey University's Health and Counselling Centre as a result of experiencing suicidal thoughts or feelings, or because I have engaged in suicidal behaviour).

A further three items were created specifically for this study. The first of these items asked participants what they would do to help a distressed or suicidal friend (with qualitative responses). Another item asked whether participants knew about the services offered by Massey University's Health and Counselling Centre. The last item asked participants to choose what their preferred method of booking an appointment at the Health and Counselling Centre would be: walk-in to make an appointment, phone call, email, Massey University website, or Massey University app.

Data sharing policy

A de-identified copy of the quantitative data has been transferred to an Open Science Framework project, along with analysis code that was used in R (R Core Team, 2018). This can be accessed at <https://osf.io/syxwr/>. Qualitative responses will not be made openly accessible. It is impossible to guarantee that individual participants would be unidentifiable based on the details in these responses.

Ethics approval

Approval for this study was given by the Massey University Human Ethics Committee. Relevant suicide prevention help lines were provided to all participants both prior to and following completion of the questionnaire.

RESULTS

Quantitative results

Descriptive statistics.

Most participants in this sample personally knew a young person that had attempted suicide (82%), while just over half of all participants personally knew a young person that had died by suicide (55%).

The distribution of responses to each Likert item is shown in Figure 1. The Likert scale ranged from 1 (strongly agree) to 5 (strongly disagree), the same scale used by Curtis (2010) for these items. Of the 100 participants in this sample, 29 had personally provided support to students at Massey University that were engaging in suicidal behaviour ($M = 3.52, SD = 1.45$), and 30 had encouraged fellow students to seek support for suicidal behaviour ($M = 3.37, SD = 1.57$).

For further information about the quantitative results, please see the Supplementary Materials at <https://osf.io/khbvg/>.

Confirmatory analyses.

A Welch's t-test was conducted to test hypothesis 1, that female students would show higher levels of agreement with the statement "I would personally seek help from Massey University's Health and Counselling Centre if I was experiencing personal, health or work-related issues". Female participants indicated slightly more agreement with this statement ($M = 2.70$) than males did ($M = 2.48$). However, this difference was not statistically significant, $t(11.19) = 0.52, p = .614, d = 0.17$. The robustness of this result was checked with a Mann-Whitney U test (as per preregistration, section C) which also showed a non-significant result, $W = 493, p = .570$.

Pearson's correlation tests were conducted to test hypotheses 2, 3, and 4, followed by Spearman's rank correlation tests to check robustness (as per preregistration, section C). These analyses found some support for hypothesis 2. Being aware of another student's suicidality was positively correlated with being more likely to seek help for peers, Pearson's $r = .255, p = .010$; Spearman's $r_s = .286, p = .004$. The third hypothesis was that students who had themselves been suicidal would be more confident that they could identify a student at risk of suicide. The analyses did not support this hypothesis, with the Pearson and Spearman's correlation tests both suggesting very small relationships that were not statistically significant, $r = -.015, p = .884$; $r_s = .029, p = .771$. Hypothesis 4 was also not supported by the results of the correlation tests. Students who had themselves been suicidal were more likely to believe suicide was preventable, not less likely (as was hypothesised), with the analyses finding a weak positive correlation between the two variables, $r = .198, p = .048$; $r_s = .210, p = .036$.

Qualitative results

The responses to each of the three qualitative questions were coded one question at a time, using a qualitative content analysis method as described by Forman and Damschroder (2007). This involved reading all responses to the question, followed by highlighting key words or phrases. These excerpts were typed into an Excel document, then all were read again before being coded inductively, with codes broadly describing the content of the excerpt. For example, "lack of conversation around the

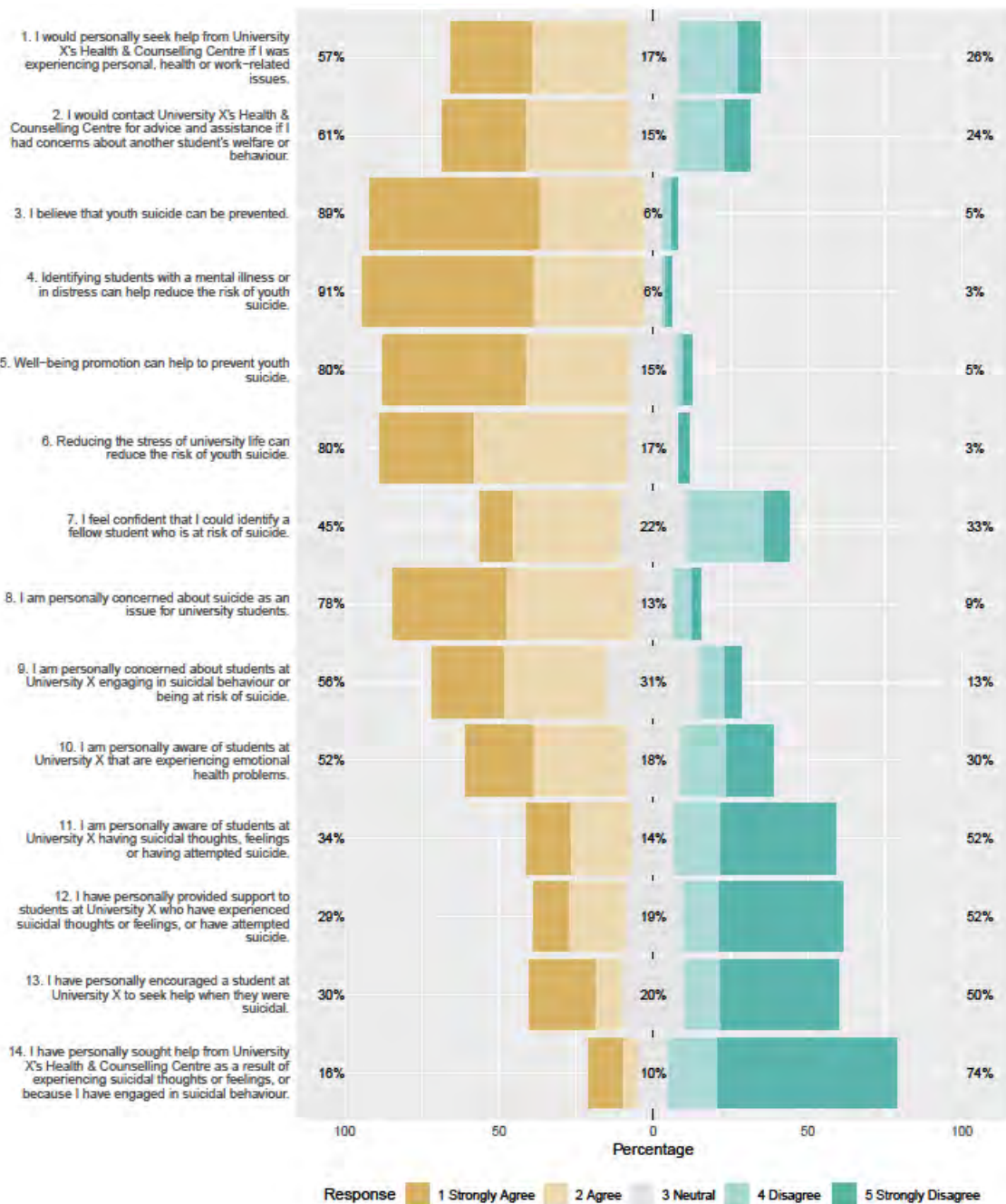


Figure 1. Bar plot of Likert items showing the percentage of each response category.

topic" was highlighted as a key phrase in one participant's response to the question "What do you think are causes of New Zealand's high youth suicide rate?" This was later grouped with similar excerpts from other participants like "lack of discussion amongst families, friends and society" and "I don't believe it is talked about enough" to create the broad code "not talking about it". The original responses were then read again to count the number of participants who mentioned this code, crossing off each associated excerpt to ensure all were counted. This process of coding responses occurred for each of the three qualitative questions. The total for each code is reported as the percentage of the sample that mentioned it. As each participant's response could be assigned to multiple codes, the codes were not mutually exclusive.

Participants' responses to the question "What do you think are causes of New Zealand's high youth suicide rate?" largely focused on factors that led to young people feeling suicidal. Bullying was the most commonly stated cause, being mentioned by 32% of participants. Stigma about mental illness and asking for help, as well as Kiwi expectations of stoicism (for example, the "she'll be right" mentality and the expectation to "harden up") were also thought to be largely at fault, mentioned by around a quarter of participants, at 23% and 25% respectively. A number of participants perceived mental health services to be a cause of the high youth suicide rate, with 14% claiming that these services were difficult to access, with long wait times and eligibility criteria that were too strict, while 9% perceived that the services were inadequate.

Participants' responses to the question "What do you think could be done to reduce New Zealand's high youth suicide rate" saw many propose ways to improve mental health services for this age group. 37% of the sample said that providing a different type of service would help to reduce the rate, while 20% thought that increasing accessibility would result in an improvement. The need for education about mental health, suicide, and symptom recognition was also frequently mentioned.

In response to the question "If one of your friends was experiencing distress, suicidal thoughts, or suicidal behaviour, how would you go about helping them?" the majority of participants mentioned that they would seek professional help, while just under half would offer help, support, advice or guidance. Talking and listening were also frequently perceived to be ways to help a suicidal friend.

For further information about the qualitative results, please see the Supplementary Materials at <https://osf.io/khbvg/>.

DISCUSSION

Of the four hypotheses, only one was found to be supported (hypothesis 2). Similar to the findings of Curtis (2010), students who were aware of a peer's suicidality were significantly more likely to seek help for others.

There were multiple differences between the present study's results and the findings of Curtis (2010), with the remaining three hypotheses not supported. Curtis found a significant gender difference in how likely students were to seek help for themselves (hypothesis 1), while the present study did not find this result. This could be due to differences in the demographics of this sample compared to Curtis'. This study had only 10 male participants (10%), limiting the statistical power of this analysis, while males made up 35.2% of Curtis' sample.

The third hypothesis was that students who had been suicidal themselves would be more confident in identifying a student at risk of suicide (as reported by Curtis, 2010). This hypothesis was not supported. That said, the participants we identified as having been suicidal themselves were limited to those who gave an affirmative response to the item "I have personally sought help from Massey University's Health & Counselling Centre as a result of experiencing suicidal thoughts or feelings, or because I have engaged in suicidal behaviour". This approach replicated that in Curtis (2010), but would not necessarily identify all students with a history of suicidal thoughts or behaviour. In future research, it may be more useful to use a general measure of history of suicidality when investigating this relationship.

The fourth hypothesis, that students who had themselves been suicidal would be less likely to believe that suicide could be prevented, was also not supported. Instead the opposite result to Curtis (2010) was found, with these students being significantly more likely to believe suicide could be prevented.

Nearly a third of the students in this sample (30%) said they would encourage a student to get support for suicidal behaviour. This proportion was nearly double the proportion of Victoria University students who reported they would do so in Curtis (2010). This difference may be the result of the two studies having different samples from

different universities, and taking place in different time periods, and thus there could be any number of factors that might explain these differences. The current study does not provide the basis for determining which factors are responsible for these differences, but such factors might include the much greater proportion of psychology students in the present study, public campaigns focused on mental health, and general societal changes in attitudes over time, among others.

The results of this study show that students at Massey University know of the services offered by the university's Health and Counselling Centre and many would be willing to utilise these services when in need themselves. Despite this willingness to seek help from the university's service, students held quite negative perceptions toward mental health services in general, mentioning barriers such as the services being inadequate or difficult to access, and having long wait lists or strict entry criteria, with such views repeated in other literature (e.g., Heled & Read, 2005).

In order to rectify some of these barriers to seeking help from mental health services, students made suggestions such as providing access to free counselling across the country and making the process of seeking help clearer, as well as increasing awareness of available services. Despite the largely negative views towards mental health services, more than half of the present sample mentioned that they would seek professional help in order to assist a friend who was feeling suicidal. In contrast, Curtis' (2010) sample thought that seeking professional help was a last resort, with many preferring to seek the support of family and friends primarily.

There were a number of important qualitative results regarding what students believed to be the cause of youth suicide. The most commonly perceived cause of suicide for young New Zealanders was bullying, with nearly a third of the sample mentioning this. In comparison, Heled and Read (2005) had just 4.2% of their participants mention bullying as a cause of youth suicide. The high percentage reported in the present study is a result echoed by recent New Zealand research by Stubbing and Gibson (2018).

In the present study, suggestions from participants to reduce New Zealand's youth suicide rate included tackling stigma and raising awareness about mental illness and suicide, although how to do this was not specified. Such actions require change at a societal level to challenge the negative perceptions held about people who feel suicidal. Stigma surrounding suicide involves the perception that someone who attempts or completes suicide is selfish, cowardly, or attention-seeking, similar to stigma towards mental illness (Sheehan, Nieweglowski, & Corrigan, 2017). Government-funded campaigns such as the ongoing 'Like Minds, Like Mine' campaign, have tried to reduce New Zealand's stigma and discrimination against people experiencing mental illness (Health Promotion Agency, 2018). Such anti-stigma campaigns have resulted in modest improvements, decreasing stigmatising attitudes and increasing knowledge, which in turn has been associated with an increase in help-seeking behaviour (Carpiniello & Pinna, 2017).

Interestingly, few participants perceived media stories about suicide to be an important cause of youth suicide,

with participants wanting more suicide awareness, not less. This is despite the fact that empirical research suggests that media reports of suicide can provoke copycat suicides (Stack, 2005) and suicide contagion (Gould, Jamieson, & Romer, 2003). Participants in the present study seem to be endorsing the argument that public awareness and education about where to seek help can help to prevent suicides (Gluckman, 2017), much like participants in Heled and Read's (2005) study, who suggested increasing media stories about suicide could be beneficial. New Zealand's guidelines for the responsible reporting of suicides encourage reports about suicide prevention (Ministry of Health, 2011). Perhaps reports with this angle should be more prominent in the media than they are at present, to increase public awareness of suicide and ways to get help.

Notably missing in participants' descriptions of the causes of youth suicide were attributions to genetic and biological causes, with participants instead emphasising situational causes of suicide such as bullying and social pressures. This is consistent with Heled and Read's (2005) findings. In some ways, the participants' sole emphasis on situational factors is at odds with the research literature: There is, for example, strong evidence that suicidal behaviour is partially heritable (Baldessarini & Hennen, 2004; Brent & Mann, 2005; Voracek & Loibl, 2007). Whether this difference between the beliefs of youth and the research evidence is a problem is an open question, although health professionals should certainly be aware that family history of suicide is a risk factor for suicide in young people (see Agerbo, Nordentoft, & Mortensen, 2002).

Practical Implications/ Recommendations

Despite the finding that many students would seek help from a professional service for a suicidal friend, they largely perceived such services to be inadequate for several reasons, as previously mentioned. To challenge and change this perception, mental health services should consider taking steps to increase accessibility. Even the perception of barriers to accessibility could be problematic, because if youth believe these services are difficult to access they likely will not try to access them, regardless of whether those barriers actually exist or not.

Limitations

The main limitations of this study relate to the size and demographic characteristics of the sample. As participation was limited to a convenience sample of students at Massey University, just one of the eight universities in New Zealand, it cannot be assumed the results of this study generalise to other New Zealand university student populations or to the general population of youth worldwide. The small number of males in the sample was problematic, particularly given that males are typically over-represented in suicide statistics in New Zealand (Coronial Services of New Zealand, 2018); and males may hold different views towards suicide and help-seeking compared to females. Such views will not have been accurately encapsulated in the results of this study. Subgroup analyses comparing male and female views could be conducted with the data obtained by the present study. However, no analyses by gender have been presented in this report, other than those pertaining to hypotheses, due to the small number of male participants, and the fact that such analyses were not preregistered. The quantitative data is openly accessible should others wish to explore these possibilities.

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Indian women's Experiences of Domestic Violence in the Context of Migration to Aotearoa New Zealand: The Role of Women's In-Laws

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Indian migrant women may experience violence and abuse not only from their partner but also from members of his family, including the mother-in-law. Such violence and abuse need to be understood within a cultural context in which arranged marriage and the provision of dowry are still normative. These arrangements give in-laws considerable leverage over married women and their natal family. We show how these dynamics can play out in the context of migration making women vulnerable to exploitation, close surveillance, control, isolation and abuse. It is important that service providers in the host country become educated about such dynamics.

Keywords: gender-based violence, migration; dowry, Indian culture, family structure

Introduction

A common view in the West is that domestic violence primarily involves the abuse of a lone woman by a lone man. It is widely thought that such violence thrives in isolation. In fact, isolating his partner from family and friends and keeping her under surveillance is a well-documented part of the male abuser's tactics to exercise power and control over her (Avni, 1991). Some historical analyses point to the undermining of the extended family and the weakening of community links as factors which have exacerbated violence against women (Cooper, 2012, p.18). Thus, service providers in New Zealand and other places where the relatively isolated nuclear family is the norm may be tempted to see involvement in extended family and community networks as a protective factor.

In fact, in certain contexts, such thinking is naïve and dangerous. Far from being protective, both the extended family, especially the woman's in-laws, and the wider community may be heavily implicated in the abuse she is experiencing. This may be the case in certain religious communities, sects, gangs and some "upscale" communities (Shapiro, 2013). Our research involves a group of women for whom extended family and community networks are particularly problematic: Indian immigrant women in New Zealand who are experiencing domestic violence. We think that the lessons to be learnt from our participants have important implications for service providers throughout the Indian diaspora.

Our study takes a broadly feminist view of domestic violence. That is, we see violence against women as, at least in part, both a reflection of – and a reinforcement of – a gender hierarchy in which the interests of men are privileged while women are systematically oppressed. Thus, we begin our article by providing a broad account of patriarchy in Indian culture. We focus particularly on the status of women, common assumptions and arrangements regarding marriage, and some key features of the nature and extent of domestic violence in India. But while such things reflect a strong gender hierarchy in

Indian culture, it is insufficient to explain the role of the husband's family and the wider community in the abuse of Indian immigrant women. Thus, we also examine power relations between the families of men and the families of women and certain aspects of mother-son relationships. In our view, these power relations are important if one wants to understand the role of the husband's family, particularly the mother-in-law, in the perpetration of violence against women. Moreover, as our introduction shows, these features of Indian culture tend to survive migration to the West.

Following the example Bronfenbrenner's (1979), Ecological Systems Theory, we argue that domestic violence in Indian migrant communities can be best understood as occurring within nested systems of oppression. While interveners will typically focus on the victim and, less frequently, the perpetrator, victim and perpetrator behaviour need to be understood in the context of their respective families, including the power disparities between those families. In turn, family dynamics are strongly influenced by the norms and values of the wider community. In the case of Indian immigrant families, that includes the community of the homeland and the immigrant community within the new country. Moreover, the way immigrant communities respond to domestic violence is shaped by their relationship with the wider host society. It is important to understand the way processes at each level can serve to exacerbate the challenges facing women, provide barriers to accessing help and undermine some of the protective factors which might otherwise serve to protect women's interests.

The Indian context

Social mores and attitudes regarding the status and treatment of women as second-class citizens in Indian culture have a long history, dating back to ancient times. For example, the epic tale of Ramayana (over 5000 years ago), resonates with the concept of sex-appropriate behaviours by portraying women as possessing exaggerated feminine qualities and being subordinate to

men (Sarshar, 2010). As various authors have pointed out, In India, the ideology and practices of patriarchy ensure the domination of men over women at both an institutional and family level and condone violence against women (Ahmed-Ghosh, 2004; Chaudhuri, Morash, & Yingling, 2014; Esqueda & Harrison, 2005; Fernandez, 1997; Kapoor, 2014; McDuire-Ra, 2012; Nanda et al., 2014). Women are brought up with values that stress that family matters must be kept private and that husbands deserve respect regardless of the manner in which they treat their wives. But perhaps the most graphic examples of women's second-class status are female infanticide and foeticide. Estimates of the number of female fetuses selectively aborted in India each year range from 250,000 to 500,000 and where ultra sound scans are unavailable, an unknown number of girls are killed at birth (Summer, 2009).

It has been argued that patriarchal practices do have a protective factor for women. In what Kandiyoti called the "patriarchal bargain" (1988), a favourable marriage is said to provide women with financial and physical security and enhance their status within the community. In return, they are expected to assume a subservient role within the family and to ensure that other women maintain their subservient status within their families (Fernandez, 1997). While this helps explain how women may collude in the oppression of themselves and other women, it is not a paradigm that treats women as equal to men

It should be recognized that the status of women in India has seen significant change over the last few decades. For example, in the cities, there is little difference between the literacy rates of men and women (Kumar & Sangeeta, 2013). Women are seen in a much wider range of careers and more are holding positions of power in politics than used to be case (Nielsen & Waldrop, 2014). Nevertheless, many women have not experienced such improvements and continue to face significant levels of discrimination and oppression, including high levels of sexual and domestic violence, most of which goes unreported (Aduja et al., 2000).

It is also important to recognise that Indian culture is not monolithic. India is a land of religious diversity with an ancient caste system operating within each of the major religions (Almeida & Dolan-Delvecchio, 1999). However, across religions, certain scriptures are often cited as justifying the submission of women to male authority, even if more nuanced readings produce a more complex picture. This is evident in critical readings of texts from Hinduism (Omvedt, 1990), Islam (Hajjar, 2004), Sikhism (Sharma, 2000) and Christianity (Kroeger & Beck, 1996).

Marriage and dowry

About 90% of Indian marriages are arranged (Toledo, 2009): that is, the parents of the prospective bride and groom are primarily responsible for making the match.¹ They also discuss how much dowry, and in what forms, is to be given to the groom's family. Dowry is the money, goods and presents the bride's family is expected to give to the groom's family as part of the implicit marriage contract.

Dowry both reflects and perpetuates the status differential between men and women. This is graphically demonstrated by the widespread practices of female infanticide and foeticide. That is, parents often prefer the birth of a son over a daughter. A daughter is often seen as a financial liability due to the dowry her parents will need to provide when she marries and is given to another family (Kakar, 1988; Rudd, 2001). This is particularly so among the poor and those with little or no education (Nanda et al., 2014). In contrast, a son may be regarded as an asset who can attract dowry and thus elevate the position of his parents, not only within their family, but also within the wider community (Hegde, 2015).

Although outlawed by the Dowry Prohibition Act (1961), the dowry system continues in all parts of India (Rastogi & Therly, 2006). There are no set rules for these demands: they are usually proportional to the status, social class, and education of the groom (Billing, 1992). For example, the groom's parents are likely to feel entitled to demand significantly greater dowry if the prospective groom is resident abroad, highly educated and has a well-paying job (Rastogi & Therly, 2006), all of which are commonly held out as enhancing the standard of living and status of the bride. Significantly, dowry demands are not restricted to the beginning of the marriage: often they continue for years after the wedding ceremony (Kumari, 1989; Rao, 1997; Schular, Hashemi, Riley, & Akhter, 1996). In the most egregious cases, a woman whose family has not met demands for further dowry may be killed. Typically, she has kerosene poured over her before being set alight so that the death looks like a kitchen accident or a suicide (Rastogi & Therly, 2006; Stein, 1988; Stone & James, 1995). In New Zealand, dowry-related abuse has been included in the definition of family violence (Family Violence Act, 2018, s.9(4)). Dowry is one of the most widespread social practices that leads to oppression of women in India (Jeyaseelan et al., 2014).

Dowry places the bride's parents in a subordinate position in relation to the groom and his parents. Typically, the daughter is "given away" to the groom's family and can no longer rely on her parents financially and emotionally. Instead, she is expected to devote herself to her marital family (Jeyaseelan et al., 2014). Traditionally, the groom's family make all decisions for her. If she is subjected to domestic violence, the expectations of being a "good wife" will typically restrict her from reporting the violence owing to fear of being ostracized and isolated from her natal family and community (Ragavan, Iyengar, & Wurtz, 2015). It is considered highly shameful for the woman to return to her parents' home. In addition, most parents consider her a financial burden as they empty their savings on her wedding and dowry (Rastogi & Therly, 2006). As Rew (2013) points out, an abused wife's parents and other relatives may rationalize the situation, coercing her to remain in the relationship.

Migration

As mentioned, the pressure to provide dowry may continue well beyond the wedding. As our research shows, it may also continue when the couple migrate.

without the consent of at least one of the parties (Simon-Kumar, 2019)

¹ Arranged marriage should not be confused with forced marriage in which the marriage goes ahead

Usually a groom who has permanent residency or citizenship can use that status to leverage dowry demands upwards because of his ability to get his bride into the host country (Tse, 2007). In other cases, arranged marriages are fixed in order to get funds in the form of dowry for the groom and his bride to emigrate (Natarajan, 2002).

Historically, New Zealand is a bicultural country but a multicultural society in terms of contemporary demographics (Simon-Kumar, 2019). India is currently the largest source of migrants into New Zealand (Statistics New Zealand, 2015). Along with new, positive opportunities, migration can present significant challenges. These include limited knowledge of the language of the host country, lack of access to jobs of good standing, separation from community and family, and non-resident status (Abraham, 2000; Hass, Dutton, & Orloff, 2000). These challenges are particularly problematic for an immigrant woman experiencing any form of domestic violence, including continuing demands for dowry. For example, isolation from friends and family, lack of knowledge about the law and available services, and fear of being ostracised by the family and the wider community will likely discourage seeking help. She may be reluctant to involve the police because of negative experiences with the authorities at home. Her ability to remain in the country may depend on the perpetrator who may be the sponsor of her application for residence (if he is already a resident) or the principal applicant on their joint application for residence (Robertson et al., 2007). Perpetrators leverage these factors to exercise power and control over their partners and preventing women from seeking help (Raj & Silverman, 2002; Robertson et al., 2007). Sometimes, his family is heavily implicated in the abuse.

There are number of different scenarios regarding migration and in-laws. In some cases, wife and husband emigrate together after their wedding, leaving their respective families in India. In some cases, the man is already a resident in the host country and "imports" a wife from India. Less commonly, it is the woman who is a resident and brings her husband into the country. In all three scenarios, one or (occasionally) both sets of parents may follow their children in migrating. Sometimes, they may have already settled in the host country before the younger couple have married. A further possibility is that parents do not migrate but nevertheless visit the couple from time to time. Whether they stay in India, migrate to New Zealand or just visit, the women's parents- in-law can remain a powerful force in her life and can be heavily implicated in the abuse she experiences. This is particularly the case where the parents-in-law (and sometimes other of their children) live in the same household, as is the custom in India. At the same time, it is important to acknowledge that abuse by the in-laws can occur irrespective of their proximity: that is, abuse can be meted out to daughters-in-law from a distance.

Of course, extended family structures and multi-generational households can prove beneficial to the immigrant bride by provide support in various forms, including help with childcare (Baldassar & Wilding, 2014; Natarajan, 2002). However, naïve professionals working with immigrant Indian women may misinterpret the role of the in-laws in their client's life, assume that is

beneficial and fail to recognise the potential or actual abuse that may be perpetrated. As our research shows, parents-in-law, especially mothers-in-law, have a particular role in abuse directed against their daughters-in-laws.

METHODS

This article is a part of a larger study which explores how Indian women who experience domestic violence navigate safety in the context migration to New Zealand. The study was conducted in two stages. The first stage consisted of semi-structured interviews with 20 key informants in India and New Zealand (10 in each country), including counsellors and social workers associated with women's refuges and facilitators of stopping violence programmes in immigrant communities. These interviews helped us better understand the context within which Indian immigrant women resist domestic violence. They also helped us plan the second stage; four case studies of Indian immigrant women who experienced domestic violence in New Zealand. The case studies were based on interviews but in some instances, were supplemented by analysis of related documents such as applications for protection orders and written decisions by judges. Such documents provided insights into women's interactions with statutory authorities. Open-ended interviewing allowed women to tell their story in the way they wanted. Particular attention was paid to how cultural norms and factors relating to migration had an impact on their reaction to domestic violence in the host country. Case studies allow those stories to be understood in the context of such factors.

The first author conducted the interviews. All key informant interviews were interviewed in English while three out of four case study interviews were in Hindi but then transcribed into English. The first author is an Indian immigrant in New Zealand who was born and raised in South India and is fluent in both English and Hindi.

This study was approved by the Ethics Committee of the School of Psychology at the University of Waikato. The safety of the participants was paramount. We communicated with them using only channels the women felt were safe from interception. The interviews were conducted at places they felt safe: in each case, the premises of an ethnic service provider with which the women were familiar. We maintained their anonymity by using pseudonyms and having them check the draft case studies. Because these types of interviews may trigger strong feelings and can result in some discomfort or distress, the interviewer called woman participants a few days after the interview to check if they were okay. If needed, follow-up interviews were arranged.

Analytic Process

The interviews were subjected to thematic analysis, a widely-used technique for the analysis of qualitative information (Braun & Clarke, 2006). Thematic analysis provides a practical, yet flexible, research tool which leads to an in-depth analysis of the data by recognizing recurring themes or patterns within them (Braun & Clarke).

ANALYSIS AND DISCUSSION

Our findings are discussed below under five main themes: collusion by in-laws in the violence, in-laws' sense of entitlement, continuing dowry extortion, control of property, isolation, and domestic slavery.

Collusion

Research conducted across various settings confirms that outcomes for women who are being abused are much better if they receive a positive response from the people to whom they disclose the violence or who otherwise become aware of the violence (e.g. Domenech del Rio & Garcia del Valle, 2019; Dworkin, Brill & Ullman, 2019; Hydén, 2015; Sylaska, & Edwards, 2014). Invariably, our participants reported that members of the extended families into which they had married knew about the violence and either did nothing about it or actively colluded with it. For example, none of the ten members of the household intervened when Reena was being beaten by her husband although all were aware of it. Her sister-in-law would stand right outside their bedroom door hearing Reena wince in pain, but she did not come to her rescue.

Everyone at home knew I was being beaten and I would cry. The door would be closed and no one would come in. And no one would say anything after... One day I told my mother-in-law that he hits me so much, why doesn't she tell him anything? She replied, "How can I say anything? I can't do anything."

Although Reena's mother-in-law has positioned herself as a helpless, passive pawn in the patriarchal system, it is clear that she manipulated the situation, playing an integral role in undermining the relationship between Reena and her husband. For example, she would go to great lengths to ensure that Reena and her husband did not get time alone. She would distort facts and complain to her son about Reena in what Reena saw as a deliberate attempt to drive a wedge between husband and wife.

Similarly, when Nisha questioned her mother-in-law about the way things were, she would not only be verbally abused but her mother-in-law would complain to her husband about how she was being disrespected – for which Nisha got “punished” by her husband.

It seems likely that Amandeep's mother-in-law used manipulation to carry out physical abuse through her son. There were many instances where Amandeep would be slapped or beaten by Raj after he had talked to his mother. Although she couldn't tell for sure, Amandeep felt that these discussions involved her mother-in-law bad mouthing her to her husband. She overheard a conversation in which her mother-in-law “was telling my ex that he should have more control over me and he should be restricting me financially and he should be asking me where I am going and why.”

In-laws entitlement

Consistent with the general tendency for a son to be seen as an asset and a daughter as a liability, when a marriage is formed, the family of the bride is often in a subordinate position in relation to the family of the groom. In return for taking on the “liability” of the bride, the groom's family may feel entitled to exercise control over the woman, to treat her as a servant and to make demands of her family. Indeed, a sense of entitlement on the part of the groom's family can be evident before the wedding. This was evident in Nisha's marriage. Her husband's family were initially interested in her cousin but when they came to talk to the family of the prospective bride, they were more impressed by Nisha, who happened to be visiting. They called Nisha's mother saying they wanted their son to marry Nisha instead. This clearly indicates the power imbalance from the start between the families of the groom and the bride. The former has the “asset” of an eligible son and is able to demand a “better” outcome while the latter, burdened by the “liability” of a daughter, is in no position to make demands.

Such displays of entitlement continued throughout Nisha's time with her in-laws. The day Nisha went to her in-laws' house after her wedding, her mother-in-law yelled at her for not formally inviting her daughter to the dining table although everyone was aware when meals were being served. She said it was shameful to be treated that way by Nisha's family.

Continuing dowry extortion

One important set of demands are those related to dowry. These can continue into the marriage. For example, after the birth of a child, a new mother's family is usually expected to distribute presents to members of her husband's family. Typically, the presents are more extravagant and expensive if the child is a boy.

When her daughter was born, Amandeep bought clothes for her parents-in-law and sister-in-law. Her mother-in-law was angry: she had expected gold jewellery and her father-in-law demanded Rs. 2.5 million (approximately NZD 55,600) in cash. Similarly, Usha's parents-in-law were unhappy with the gifts they received from Usha's family. “(They) gathered around me, pestered me and had a huge fight with me till 3am because they were not satisfied with what they got.” Similarly, her husband was fond of telling her that he could have married a girl from a family who was willing to give him a lot more dowry because he was resident overseas. In this way, continuing concerns about dowry can become a focal point for abuse.

It should be evident from the above examples that it is not only the daughter-in-law who is subjected to dowry-related abuse, but also her parents. The woman's parents are often subject to threats if the dowry demands are not met. One of our key-informants discussed this:

The pressures put on by the families back home in the country of origin; you stay in that (abusive) relationship because the perpetrator... he'll have links back home. Then his family will be harassing the wife's family, all sorts of things happen.

Control of property

Economic abuse, in which an abusive man controls his partners access to resources, is a well-recognised tactic of power and control associated with domestic violence. Our research shows that the abuser's family, particularly his mother, can be complicit in this.

For example, Amandeep's mother-in-law took all of Amandeep's certificates and jewellery for "safe keeping." She would give her the jewellery if they had to go to the temple or a wedding. She would take it off Amandeep once they got back home. All of Nisha's jewellery was held by her mother-in-law back in India, even though Nisha herself was in New Zealand. When Nisha visited India for a wedding, she asked her mother-in-law if she could have her jewellery back, but was told that the keys to the locker which held the jewellery were lost, although Nisha knew that was not the case.

In the context of migration, one piece of property is particularly important: one's passport. Several of our key informants described instances in which women were denied access to their passports by their husbands and/or their mothers-in-law. In some cases, the women did not even know what visa they were on or when it expired. This made them vulnerable to threats of being reported to immigration authorities if they sought help with the violence they were experiencing.

Isolation

Isolating the victim is a well-recognised tactic of power and control. Migrant women, living in an unfamiliar community far away from their own family, can be particularly vulnerable to isolating tactics (Abraham, 2000). In the West, isolation is usually understood as being enforced by the male abuser. As our research shows, in the context of Indian migration, the abuser's family can be heavily implicated in this process.

In-laws can participate in such isolation by insisting that their daughter-in-law severs all ties with her natal family and by otherwise controlling her access to the outside world. The case studies include many examples of this. For example, Amandeep's mother-in-law not only took jewellery for "safe keeping": she also maintained control of her certificates. By keeping them in her possession, she could ensure that Amandeep could not look for a job without her knowledge. Nisha got a job in a school but...

My brother-in-law and sister-in-law made sure I got late to school, by taking a long time in the bathroom...When I'd come back from school, they would lock me out of the house and not open the door for hours. I would stand there in the scorching heat. When the neighbour came to my rescue by asking me to sit inside their house, my mother-in-law picked a fight with her. Finally, my father-in-law went to the principal and asked him to fire me.

Nisha's in-laws imposed strict rules on how often, and for how long, Nisha could visit her parents. After she rang her parents for help, they picked her up from her in-laws' house. However, despite knowing at least something of the abuse, her parents delivered her back to her in-laws five days later, in what can only be understood as keeping

their side of the marriage contract. Presumably, this was preferable for her parents than the shame of having a separated daughter.

In another story, Usha's parents-in-law followed her and her husband to New Zealand. They insisted on knowing her whereabouts throughout the day. They would ring their son and complain to him that Usha was not home on time. This in turn would lead to him calling her and yelling at her for not being home. These were attempts to isolate Usha, which often escalated to nasty verbal abuse.

There are other unique forms of surveillance to which migrant women may be subject which further increase their isolation. One of the key informants, a social worker with an ethnic social service provider, spoke about incidents where women attending community events and celebrations were constantly monitored by their in-laws and husband. They often dictated who the women were allowed to talk to. If suspicious of her interactions with others, they interrogated the daughter-in-law when she returned home.

Domestic slavery

As the lowest ranked adults in extended family households, our case study participants were often expected by their parents-in-law to do the bulk of the cooking and cleaning. For example, when Reena joined her husband and his family in New Zealand, she was expected to take over all the household chores. When Nisha went to live with her husband's family her mother-in-law fired the housemaid and expected Nisha to do all the household. When Nisha suggested that the workload be shared with her sister-in-law, her mother-in-law became enraged, yelling at her. Similarly, Amandeep's mother-in-law demanded Amandeep did all the household chores but made no such demand of her daughter.

Such examples reflect the difference in the status of daughters and daughters-in-law. Although the daughter falls under the surveillance of her father or brother before she gets married, she is still given more privileges than the daughter-in-law. Moreover, she may well collude with – or actively participate in – the abuse of the daughter-in-law. For example, as mentioned above, Nisha's sister-in-law actively participated in sabotaging Nisha's attempts to hold down a job. Reena's experience with her sister-in-law helps explain the dynamics. Initially, Reena thought her sister-in-law was "sweet" but in one telling incident, she overheard a conversation between her mother-in-law and sister-in-law. The sister-in-law was speaking positively of Reena only to have the mother-in-law angrily tell her to "shut up" and stop praising Reena. In a strict patriarchal hierarchy, loyalty to the system which may offer some protection is likely to take priority over any feeling of solidarity with an outsider.

Conclusion

We need to preface our conclusions by noting that we cannot extrapolate from our research to all Indian communities in New Zealand. Like India itself, Indian migrants in New Zealand are incredibly diverse: for example, in terms of religion, language, class and regional origin. Some families have been here for generations while others, such as our participants, are first generation

migrants. However, from the themes discussed, it is clear that those Indian migrant women who experience abuse from their husbands are highly vulnerable to extended family abuse as well. The roots of such abuse can be traced back to the second-class status of women in India wherein a birth of a son is celebrated while a birth of a daughter is usually a sombre occasion. Additionally, female foeticide and infanticide have been on the rise and have a direct link to financial pressures brought about by the practice of dowry. Following her wedding, the daughter typically enters a household comprising of her husband, his unmarried sisters, his brothers and their wives and in-laws. This household typically has a strict gender hierarchy with the men in the family at the top, followed by their respective wives. The new daughter-in-law is at the bottom. It is duty of the mother-in-law and other daughters-in-law to ensure that the new entrant submits to this hierarchy and the rules that accompany it. Disobedience will result in disciplinary action – although it needs to be added that following the rules will not necessarily protect her from abuse. As we have seen, her mother-in-law may directly abuse her or manipulate the situation such that the husband enacts the abuse. Either way, by such tactics, the mother-in-law seeks to maintain her position in the hierarchy. This hierarchy continues after migration to the host country, even if the in-laws remain in India. In such cases, the abuse continues via telephone, e-mails and the manipulation of family relationships.

Although it might seem like mothers-in-law are to be blamed, it is useful to place them into a broader context of structural patriarchy. As discussed earlier, Indian migrant women operate within nested structures in the ecological model that comprise of the perpetrator, family, Indian communities, Indian culture and the host society. The family layer can further be broken down to the patriarchal gender hierarchy wherein women are under the surveillance of men. That is, while mothers and mothers-in-law do not lack agency, they do operate within tight constraints of gender roles and gender power relations. According to the “patriarchal bargain” (Kandiyoti, 1988), either passively or actively, they may engage in self-perpetration of oppression in return for certain benefits patriarchy is presumed to bring. This includes the abuse daughters-in-law are subjected to by their mothers-in-law.

The production of a son plays a key role in advancing the position of women. The birth of a son and the hope of impending power it brings with it, subsequently play an important role in the way mothers treat their daughters-in-law. In this manner, giving birth to a son can be seen as a woman's first step in gaining a position of power and control within the family. The corollary of this is that a woman who is oppressed and abused by her mother-in-law can look forward to the possibility of giving birth to a son and becoming the oppressor.

In the ecological model, the family level is nested within the community level. From our analysis, it is evident that some parts of the wider Indian immigrant community condone domestic violence. This takes us back to cultural norms, on the family level, around the role of women in not bringing shame to the family and the community. On a community level, there is pressure to preserve home-cultural values within the context of

migration to a host society. For women, this could sometimes mean tolerating domestic violence. Since reporting abuse in a host society is largely viewed as bringing shame to the immigrant community, women are often expected to suffer in silence. Such community norms not only affect lower-order systems (family, perpetrator and woman) but also are affected by these systems. That is, there is reciprocity between the community and family levels. While mothers-in-law are viewed as elders in the community, there are certain implicit expectations that come with this position. Indeed, a mother-in-law can be frowned upon and may lose respect within the community if she does not keep her daughter-in-law in her place.

That is, mothers-in-law are endowed with the responsibility to maintain gender hierarchy within the household. In return, the community may condone the abuse to which daughters-in-law are subjected. In fact, in some cases, the community colludes with the husband and in-laws in perpetrating abuse. It can equally be said that the community's attitudes towards abuse allows extended family abuse to thrive within the household and the wider community.

While the status quo for Indian migrant women looks grim, it is important to remember that domestic violence in Indian migrant communities occurs within the wider context of the host society. Therefore, the host society also has some responsibility to ensure that migrant communities feel welcome and understood.

Implications for research

There is a paucity of research about family violence within the context of Indian migrant extended families, particularly research which considers the diversity of migrant communities in New Zealand. We argue that exploring in-laws' involvement in the lives of couples will help understand the family dynamics that help to perpetuate domestic violence in Indian migrant families and increase awareness among service providers about unique aspects of domestic violence in Indian families. Further, interviewing abusive mothers-in-law have the potential to not only help analyse how and why they became abusive but also to understand how women navigate their safety in this context.

Immigrant women are likely to benefit from research that identifies levers of change within Indian communities. Currently, the potential for communities to make a stand against domestic violence is largely unrealised. This in turn puts pressure on in-laws to keep their daughter-in-law in her place. Since the community level is the one that maintains and reinforces cultural norms that promote tolerance of abuse, studies identifying and tapping into community resources that do not condone violence against women could contribute to meaningful social change within Indian communities.

Implications for practice

Intervenor (e.g. social workers, counsellors, police officers) need to possess a culturally-nuanced understanding of domestic violence involving Indian migrant families. As can be seen from our analysis, it is particularly important for practitioners to be aware of the dynamics of extended families and the real possibility that

in-laws, including mothers-in-law, may be complicit in the abuse.

Indian women operate at the core of an ecological system, within multiple nested structures. These structures hinder women's efforts to seek help in the event of domestic violence. At both a family and community level, women can experience strongly negative consequences for breaking ranks and seeking outside help to end the violence. It is essential for social service providers to understand the constraints under which women live their lives and the dangers that they face when they seek help. These dangers may be amplified for women who are not New Zealand citizens or permanent residents. Service providers need to be persistent and patient in helping immigrant women. For instance, they should not give up if women are seen to be unresponsive. Instead, agencies should make the most of the opportunities presented to them in interacting with these women. They should do so in a culturally appropriate manner with an understanding of women's position within larger structures of their family and community. In particular, extended family dynamics should be explored.

Similarly, lawyers representing Indian migrant women need to understand the dynamics of migration and pay close attention to sociocultural aspects of the home country. For instance, according to some experts in this research, dowry and in-laws' involvement in abuse are largely overlooked in many cases by women's advocates. Lawyers need to understand the particular cultural and immigration barriers migrant women have had to overcome to seek help. That is, lawyers should be cognizant of the pressures facing Indian women on a family and community level. Perhaps this awareness can be achieved if professionals asked the 'right' questions when women approached them for help. For instance, asking them about their relationship with their in-laws has the potential to reveal the tough constraints women operate under while navigating their safety.

Education can help here. In our observations, training programmes, across a range of professions, pay inadequate attention to domestic violence in general and even less attention to domestic violence in the context of the diverse immigrant communities in New Zealand. Such education needs to go beyond broad stereotypes. For example, in relation to Indian immigrant communities, it is important to note that not all instances of arranged marriages involve the practice of dowry, not all instances of dowry lead to domestic violence and not all domestic violence in Indian migrant communities is caused by dowry. However, it is important for service providers to be vigilant about these cultural factors that play a vital role in sustaining injustices to women.

In paying attention to the sociocultural aspects of domestic violence, the multi-level factors that play out at community, family and individual level and the challenges posed by migration, there will likely be an improvement in not only the safety of women and children but also long term statistics of incidence of domestic violence in Indian immigrant communities in New Zealand.

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Exploring the relationship between support for protest and psychological well-being for Māori

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As a colonised peoples, many Māori have engaged in various forms of political resistance. Accordingly, research suggests that socio-political consciousness, which will sometimes involve at least considering protest, is an increasingly important aspect of identifying as Māori. This paper draws on a large, nationally representative sample of Māori ($N = 1,977$) to examine the links between expressing support for political activism (“activism” being used here synonymously with “protest”) and well-being. Support for political activism includes merely contemplating protesting and voting to support Māori issues, as well as actually signing petitions. Well-being includes self-reported mental health via the Kessler-6 and subjective health. Results show that support for political activism was strongly associated with greater subjective psychological distress and lower subjective health, above and beyond the variance explained by exhaustive demographic factors. This research presents the first empirical data in New Zealand demonstrating the strength of this relationship, and provides a good starting point for further investigation.

Keywords: Political Rights, Activism, Collective Action, Māori.

Introduction

New Zealand’s indigenous Māori peoples were colonised by the British (now called Pākehā) from the early 1800s. As the British gained control over Māori territories and people, Māori found themselves caught up in, and often crushed by, Britain’s colonial expansion. For generations, Māori have resisted colonisation and Pākehā encroachment on their rights to self-determination. In that way, Māori political activists have had a profound impact on New Zealand’s history. But while there has been much written about what activists have done and achieved, we ask the following: how does activism, engaging in it or even considering taking a stand, affect individuals psychologically? Research provides a clear picture of when and why people will engage in collective action (e.g., van Zomeren, Postmes, & Spears, 2008), yet studies which have assessed the psychological impact of collective action on individual participants report mixed findings, with some activists experiencing positive psychological outcomes and others experiencing negative psychological consequences.

At present, there are no studies for Māori on the impact of taking part, or engaging, in political activism on well-being. This paper recognises the efforts of Māori political activists, leaders, and lobbyists (Dominy, 2016; King, 1977; Mikaere, 1988; Patete, 2007; Walker, 1984, 2004) and asks, as its research question, ‘What is the psychological impact of supporting activism?’ Using a large, nationally representative panel sample of people who identify as Māori, we examine the links between supporting political protest (broadly defined) and psychological well-being. We consider factors other than activism that may contribute to this relationship. We conclude by giving qualified support to the argument that taking part in, supporting or considering supporting

protest can take a toll on Māori in terms of psychological distress and subjective health.

The New Zealand context: Māori identity, protest and activism

A key concern of political science and social-psychological literature concerned with activism is to identify the factors that give rise to acts of political protest. Previous research indicates people are motivated to protest when they (a) identify with a group (Kawakami & Dion, 1995; Simon et al., 1998), (b) perceive their group to be disadvantaged (Becker & Tausch, 2015; Osborne & Sibley, 2013; Osborne, Smith, & Huo, 2012; Smith, Pettigrew, Pippin, & Bialosiewicz, 2012; Smith & Walker, 2008), and (c) believe that their group can be successful at effecting change (van Zomeren et al., 2008). Recent literature also incorporates the role of ideology, noting that protests tend to occur in a context in which activists fight to either challenge or support the status quo (Jost, Becker, Osborne, & Badaan, 2017; Osborne, Jost, Becker, Badaan, & Sibley, 2019). These conditions have been met for Māori in New Zealand, who have a complex history of political activism, which we now outline.

The people now known as Māori arrived from Eastern Polynesia between 1100 and 1300 CE (Walker, 2004). Immersed in their own communities, Māori had no need for a word to define themselves as a collective (Howe, 2018). The name Māori, meaning “ordinary” people, came into use in the early 1800s to distinguish them from the new people arriving in New Zealand (mainly from the United Kingdom), namely, “Pākehā”. In that sense, identifying as Māori has always been implicated with the presence of non-Māori, and the need to clarify a different collective identity. After some years of tension, in 1840, some Māori Chiefs and representatives of the British

Crown signed the Treaty of Waitangi and formal colonisation by Pākehā ensued. The Māori and the English versions of the Treaty differed significantly, and the meanings of the documents are still a source of debate and disagreement today (Orange, 1992, 2004). Once the Treaty was signed and settler numbers multiplied, Pākehā established a system of laws that both Māori and Pākehā were required to follow (Mead, 1985, 1999). This process included Māori assimilation. Apart from the legal aspect, colonisation in New Zealand was an often violent process, including wars, and was certainly a process whereby Māori lost the majority of their lands and political control (Belich, 1986, 1996; Ministry for Culture & Heritage, 2017). By the early 1900s, Pākehā had become the majority group in New Zealand and held much of the lands previously occupied and utilised by Māori. Māori found themselves surrounded by a more numerous and economically powerful group who were in a position to exert massive influence over the experience of Māori in most areas of social and economic life (Awatere, 1984).

Within this context, Māori activism and resistance to colonisation over the last two centuries has included a range of strategies and participants (Penehira et al., 2014). Publicly visible protest over the last 40 years has largely centred on the Treaty's (unfulfilled) promises to Māori. Although open warfare was a feature of early colonial New Zealand, not all resistance during the early years of European colonial rule took the form of physical violence. In the early years of colonisation, Māori petitioned the New Zealand Government and local authorities, peacefully marched and occupied lands, disrupted land surveying, and sent deputations to England to implore the British monarch to honour the Treaty (Dell, 2018; Keane, 2012; Ward, 1999; Williams, 1999). Up until the 1950s, despite considerable peaceful interaction between Māori and Pākehā, the two groups remained at a distance geographically as well as socially. Māori lived largely in rural areas, while Pākehā lived in larger New Zealand cities. Māori social organisation changed dramatically after the 1950s as New Zealand's economy boomed and Māori moved to the cities to seek work.

According to Walker (2004), increased Māori-Pākehā contact in the cities meant Māori were exposed to racism in their day-to-day interactions with Pākehā making it difficult to secure good housing and employment. Exposure to racism and its effects, together with an increase in the number of highly educated Māori, led to heightened political consciousness among young urban Māori (Walker, 2004). In the 1970s and 1980s, there was a significant rise in publicly visible acts of Māori political activism and they began to feature in the mainstream New Zealand media. Māori leaders and political activists instigated a series of high profile protests, land occupations, and land marches that brought New Zealand's damaging history of colonialism and Māori grievances to the forefront of New Zealand politics (Walker, 2004; Webster, 1998). Māori activism placed the New Zealand Government under increasing pressure to deal with Māori demands for reparation for various breaches of the Treaty (see Sissons, 1993). Reflecting this, the Treaty of Waitangi was given greater recognition after 1975 with the establishment of the Waitangi Tribunal (a forum where Māori could make claims for compensation

for breaches of their Treaty rights). In the mid-1980s, the Government extended the jurisdiction of the Tribunal to examine Māori grievances retrospectively to 1840. This was a major coup for Māori as it enabled them to make claims to the Government for historical injustices against their ancestors (van Meijl, 1995). One goal of this period was the promotion of te reo Māori (Māori language) and Māori culture to counter the effects of assimilationist policies on generations of Māori (Grace, 1986; Ihimaera, 1977; Mane-Wheoki, 1995). Since the 1990s, Māori tribal groups seeking compensation have achieved many successes in the legal arena (see Lashley, 1996, 2000; van Meijl, 1995). This history of protest and resistance to assimilation in the legal, political, educational and artistic domain has become part of New Zealand's history and has featured prominently in the New Zealand media and political arena. This has brought the idea of activism to the attention of the broader community of Māori people, and resulted in socio-political consciousness becoming a core feature of the Māori cultural identity of some Māori – particularly those who have proactively learnt about New Zealand history and the colonisation experience of Māori people (Houkamau, 2006).

Māori-Pākehā social and political history, intermarriage and cohabitation, the urbanisation of Māori and the passing of time have resulted in considerable social and cultural integration between Māori and Pākehā. In the 2013 census, half the (self-identified) Māori population indicated they also have at least one parent who is either European/Pākehā or part-European/Pākehā (Statistics New Zealand, 2013). However, although Māori and Pākehā interact daily in relative harmony on a personal level, tensions remain between Pākehā and Māori as identity groups in New Zealand due to the history of inter-group conflict (King, 1988, 1999).

Moreover, evidence suggests that socio-political consciousness and an awareness of Māori-Pākehā history is increasingly a core aspect of how many Māori experience and form their own sense of identity. For example, Houkamau (2006, 2010) found young Māori women (aged 18 to 35 years), having been born in the 1970s and 1980s and raised at a time when Māori equity and rights were pushed to the fore and asserted publicly, were more likely to refer to Māori rights and the Treaty of Waitangi when they talked about what it means to be Māori. In a national probability sample of 686 Māori drawn from the New Zealand Attitudes and Values Study, Greaves et al. (2015) explored the extent to which, among other factors, socio-political consciousness was an important part of identifying as Māori. In this study, socio-political consciousness was defined as the extent to which the individual perceives historical factors as being of continued importance for understanding contemporary intergroup relations between Māori and other ethnic groups in New Zealand; and how actively engaged the individual is in promoting and defending Māori rights given the context of the Treaty of Waitangi versus the extent to which the individual perceives historical factors and injustices experienced by Māori as being irrelevant in contemporary society. Items used to measure socio-political consciousness asked participants to indicate on a scale from 1 to 7 whether they agreed or disagreed with eight items including "I stand up for Māori rights" and

“It’s important for Māori to stand together and be strong if we want to claim back the lands that were taken from us”. In this study, Greaves et al. (2015) found that approximately 70% of participants considered socio-political consciousness to be an important part of their identity. More recently, Stronge et al. (2016) found those who strongly identify as Māori report greater support for political protest.

Given the context of Māori–Pākehā relations in New Zealand and the historical legacies of colonisation and related social and political tensions—tensions that have been increasingly brought to the fore since the 1970s, socio-political consciousness appears to form a critical dimension of the lived experience of identifying as Māori for some Māori people (Greaves et al., 2015; Houkamau, 2006, 2010). And for good reason; Māori political activism and activists have played a key role in shaping New Zealand history. Socio-political consciousness and an awareness of Māori–Pākehā history impacts on the way in which some Māori form a sense of who they are. Accordingly, we ask the following: ‘What is the relationship between support for protest and psychological well-being for Māori?’

The uncertain impact of activism

Collective activism and protest may be defined as occurring when individuals engage in group-related activities with the goal of improving the condition of ones’ own group as a whole (van Zomeren et al., 2008). Involvement in activism and protest has been found to both promote positive mental health and to buffer the impact of discrimination on mental health (Friedman & Leaper, 2010), possibly because collective action provides the individual with a mechanism to express frustration and also to attempt to create change. However, we know little about the psychological impacts collective action has had on Māori who choose to engage in it, support it or even consider supporting it. International research suggests that engaging in collective action in the face of pervasive discrimination may have positive implications for well-being (Breslow et al., 2015). For example, Foster (2014) found that after being exposed to gender discrimination, women who engaged in collective action had better well-being than women who took no action (especially for those women who perceived gender discrimination to be pervasive). Another study (Foster, 2015) examined how tweeting about sexism affects women’s well-being. Women who were exposed to gender discrimination and then asked to tweet publicly about their experience (which could be seen as a form of collective action) experienced enhanced well-being. Drury and Reicher (1999) also point out that those who engage in collective action may experience a sense of empowerment, which, in turn, is associated with enhanced well-being.

At the same time, research shows that some people encounter negative experiences when engaging in collective action. For example, Cox (2014) recently conducted an online survey focusing on activist health and well-being in Australia. Cox’s sample of 195 participants was diverse but biased towards female, university-educated, non-indigenous people living in Australasia, and participants were overwhelmingly experienced

activists and campaigners. The survey found that, although activism was associated with a number of beneficial outcomes, those who reported in engaging in some form of political activism reported having a stronger sense of purpose, belonging and community. Many, however, reported a down side. For example, respondents reported that being sensitised and hyperaware of injustice can be depressing and the time commitment involved in activism can detract from family time and self-care. The survey also found that activists often felt subject to social stigmatisation and marginalisation. Some reported they took “too much personal responsibility for social change” (Cox, 2014, para. 10) and struggled to not take it all too personally.

Similarly, Chen and Gorski (2015) analysed data from interviews with 22 social justice and human rights activists on their experiences with, and observations of, activist burnout (defined as a sense of being overwhelmed, incapacitated and ground down by their work as activists). All respondents reported burnout including (1) the deterioration of physical health; (2) the deterioration of psychological and emotional health; and (3) feelings of hopelessness. Of the 22 activists interviewed, 16 believed they had suffered serious emotional or psychological health problems as a result of their activism and the conditions surrounding their political involvement. Many alluded to a culture of selflessness that discouraged them from tending to their own well-being, and others noted they felt overwhelmed by the lack of progress they perceived they were making with their activism. Eleven of the participants indicated that their sensitivities to injustice, and the related stress and pressure created by these sensitivities, contributed to their burnout, especially when the injustices they were battling appeared too “unwieldy”.

Although collective action may have psychological benefits for those who engage in it, the psychological benefits to the participants taking action against perceived inequalities are unclear. Engaging in collective action may involve positive connections with others who share similar goals and aspirations through engaging in practical strategies to reduce disadvantage along with the confirmation of a shared identity and belief that change is achievable. These experiences could be positive. On the other hand, it could be that people feel empowered when they first engage in collective action. But over time, they may burn out because the injustices they experience or perceive are made even more salient by their participation in collective action. Indeed, while some of the contributors to poorer well-being described in these studies relate to the activism itself (e.g., the time commitment), the activists also describe a more general psychological burden of caring and fighting for a cause – lack of progress, feelings of personal responsibility, and increased sensitivity to inequality. Abundant research shows that exposure to ongoing chronic stress can negatively affect people’s mental and physical health (Ford et al., 2014; Harris et al., 2012; Landsbergis, Dobson, Koutsouras, & Schnall, 2013). When the source of the stress is seen as uncontrollable or hopeless (Chen & Gorski, 2015; Cox, 2014), the negative effects on health and well-being can be exacerbated (see Pascoe & Richman, 2009). Accordingly, it is likely that the negative

affect (e.g., anger) that can so effectively fuel people's involvement in collective action (Becker & Tausch, 2015; Osborne et al., 2012; Smith et al., 2012; Tausch & Becker, 2013; Tausch et al., 2011) could also result in a decrease in the well-being of protestors.

The current study

The relationship between psychological well-being stemming from supporting protest and subjective health is unclear and has not been studied in relation to Māori. Some qualitative research suggests that, for self-identified activists at least, supporting political activism can have a negative impact on health and well-being (Chen & Gorski, 2015; Cox, 2014). Other studies indicate a potentially positive impact on well-being (Foster 2014, 2015). Political activism for Māori may have a negative impact, with the long history of Māori protest described as "the struggle without end" (Walker, 2004). At the same time, activism may have a positive impact for Māori, particularly if individuals believe that their behaviour will have a positive influence on political change (perhaps by sending a strong signal to politicians) and effectively help create change. This research aims to assess the associations between collective action and well-being for Māori, many of whom may view political consciousness as an important component of both history and identity. Specifically, we test the relationship between support for protest, subjective health satisfaction and psychological well-being as measured using the Kessler-6 scale.

METHOD

Sampling Procedure

This research used data from the New Zealand Attitudes and Values Study (NZAVS). The study began in 2009 and randomly sampled participants from the electoral roll (see Sibley, 2014 for details). The current research used the sixth wave of the NZAVS, collected in 2014. The Time 6 (2014) NZAVS contained responses from 15,821 participants (15,740 retained from one or more previous wave, and 82 unmatched participants or unsolicited opt-ins). The sample retained 14,875 from the previous year (2013) and 3,727 participants from the initial NZAVS sample in 2009 (a retention rate of 81.5% over one year and 57.2% over five years; for a comprehensive explanation of the sampling procedure, see NZAVS Technical Documents - The University of Auckland, 2018). Participants were posted a copy of the questionnaire, with a second postal follow-up two months later. Participants who provided an email address were also emailed and invited to complete an online version if they preferred.

Participants

We limited our sample to the 1,977 participants who identified as Māori (67.4% female; $N = 1,333$). The mean age of the sample was 47.29 ($SD = 13.14$). Seventy-five percent of the sample were employed, 68% of the sample were in a serious romantic relationship, 77% were parents, 59% lived in an urban environment, and 45% identified with a religious or spiritual group. The mean education level was 4.10 (on a scale from 0-10 where 10 is highly educated; $SD = 2.90$), and the average deprivation level was 6.12 (on a scale from 1-10 where 10 is high

deprivation; $SD = 2.89$). The majority of the sample jointly identified as New Zealand European (68.5%).

Materials

Support for protest was measured using three items adapted from Cronin, Levin, Branscombe, van Laar and Tropp (2012): "I've considered engaging in protest for my ethnic group", "I have considered voting in terms of what is good for my particular ethnic group", and "I've signed petitions for my ethnic group" ($\alpha = .76$). Items were measured on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

Psychological distress was measured using the Kessler-6 scale (Kessler et al., 2010). This scale uses six items measured on a scale from 0 (None of the time) to 4 (All of the time) in response to the item "During the last 30 days, how often did you feel...": "hopeless", "so depressed that nothing could cheer you up", "restless or fidgety", "that everything was an effort", "worthless", and "nervous" ($\alpha = .85$).

Subjective health was measured using a three-item measure adapted from Ware and Sherbourne's (1992) short-form health survey. Two items (i.e., "I seem to get sick a little easier than other people" and "I expect my health to get worse") were measured on a scale from 1 (Strongly Disagree) to 7 (Strongly Agree). The final item asked people to rate themselves on a scale from 1 (Poor) to 7 (Excellent) in response to the item, "In general, would you say your health is..." ($\alpha = .61$).

The health measure used here has previously been utilised with Māori (for example see Scott, 1999) and the protest support items have been used in a variety of contexts with non-Western samples (e.g. Cronin, Levin, Branscombe, Van Laar & Tropp, 2011). The Kessler-6 has been found to perform well as a broad screening measure of non-specific psychological distress for Māori, as it does for many other ethnic and cultural groups (Krynen, Osborne, Duck, Houkamau & Sibley, 2013). For example, the Kessler-6 has been found to have acceptable item response parameters for Māori (Krynen et al., 2013), as well as discriminant and convergent validity with Māori samples (Houkamau, Stronge & Sibley, 2017; Muriwai, Houkamau & Sibley, 2018; Lee, Duck & Sibley, 2017).

RESULTS

We assessed the link between Māori people's support for protest and both the Kessler-6 measure of psychological distress and subjective health satisfaction using Structural Equation Modelling (SEM). We estimated support for protest, subjective health and psychological distress as latent variables formed from the multiple items contained in each scale. The SEM also included the residual association between our dual outcomes (i.e., the Kessler-6 and ratings of subjective health). Thus, we recognised and controlled for the potential that other factors may partially account for the association between psychological distress and subjective health beyond those examined in our model.

We conducted the SEM in two nested steps. In the first step, we included support for protest as the sole predictor of psychological distress and subjective health. This first step thus assessed the associations support for protest has

with these dual outcomes unadjusted for other demographic “third variable” factors. In the second step, we extended the model to include a broad range of demographic factors. This model thus assessed whether the association between support for protest and the two outcomes held when adjusting for demographic covariates. As an aside, this model also provides information on demographic differences among Māori in psychological distress independent of support for protest.

one jointly identified as European, religion, parental status, relationship status, employment status, and whether one lived in an urban or rural area. Thus, the finding that Māori who indicate support for protest are also more likely to experience higher levels of psychological distress and report lower levels of health in general is not explained by any of these other demographics.

Table 1. Parameters from Structural Equation Model assessing the association between support for protest with psychological distress and subjective health.

	Psychological distress (K6)				Subjective Health			
	<i>b</i>	<i>se</i>	β	<i>t</i>	<i>b</i>	<i>se</i>	β	<i>t</i>
Model 1								
Support for Protest	.039	.015	.068	2.611**	-.108	.023	-.149	-4.782***
Model 2								
Support for Protest	.049	.016	.085	3.110**	-.108	.025	-.145	-4.389***
Gender (0 Women, 1 Men)	.056	.038	.034	1.472	-.089	.060	-.042	-1.496
Age	-.014	.002	-.240	-9.200***	.005	.002	.064	2.019*
Regional Deprivation	.005	.007	.018	.712	-.034	.011	-.097	-3.115**
Education	-.003	.008	-.012	-.401	.030	.013	.087	2.356*
Socio-Economic Index	-.005	.001	-.102	-3.444**	.002	.002	.028	.796
Household Income	-.100	.018	-.160	-5.596***	.026	.028	.032	.932
Joint European Ethnicity	-.023	.042	-.014	-.561	.094	.066	.044	1.427
Religious	-.023	.037	-.015	-.625	-.059	.058	-.030	-1.027
Parent	-.017	.047	-.010	-.368	.123	.073	.052	1.682
Romantic Partner	-.090	.042	-.055	-2.116*	.069	.066	.032	1.041
Employed	-.233	.044	-.132	-5.290***	.373	.069	.163	5.386*
Live in Urban Area	.044	.036	.028	1.210	-.080	.057	-.039	-1.402

Note. N = 1,977. * = $p < .05$, ** = $p < .01$, *** = $p < .001$. Latent estimates of K-6 and subjective health were predicted simultaneously and their residuals allowed to correlate. Model 1 fit indices: Loglikelihood = -35074.674, AIC = 70622.847, BIC = 70840.851, $\chi^2(66) = 395.498$, $p < .001$, CFI = .960, RMSEA = .058, sRMR = .031. Model 2 fit indices: Loglikelihood = -71296.008, AIC = 143808.298, BIC = 144730.622, $\chi^2(159) = 891.322$, $p < .001$, CFI = .923, RMSEA = .048, sRMR = .030. Support for protest, psychological distress (K-6) and subjective health were estimated as latent variables. Regional deprivation ranged from 1 (low) to 10 (high), Education ranged from 0 (low) to 10 (high), Socio-Economic Index ranged from 10 (low) to 90 (high). Missing values for exogenous demographic covariates were imputed.

Parameter estimates for the SEM assessing links between support for protest and psychological distress and subjective health are reported in Table 1. The initial model indicated that support for protest was positively associated with psychological distress and negatively associated with ratings of subjective health. These findings indicate that Māori who are more supportive of protests are also more likely to experience higher levels of psychological distress, but lower levels of subjective health in general.

Critically, the associations between support for protest and psychological distress and subjective health held when adjusting for numerous other demographic factors, including gender, age, regional deprivation, education, socio-economic status, household income (log), whether

DISCUSSION

To summarise, our results showed that Māori who reported that they considered taking political action on behalf of their ethnic group had higher levels of psychological distress than those who did not. These results held, and in fact strengthened, when a wide array of demographic variables were controlled, including participants’ mixed ethnic identity status, gender, age, deprivation, level of education, SES, household income and employment status. Additionally, as support for protest increased, individual ratings of health decreased (i.e., people were less likely to agree with the statement,

“I am happy with my health”). These results also held after accounting for key demographic variables.

Activism can take normative and socially acceptable forms (such as lobbying, making submissions, and circulating petitions) that fit within the dominant political system, as well as more vigorous, disruptive, and non-normative forms (such as demonstrations, pickets, marches, boycotts, and land occupations; Walker, 1984; Wright, Taylor, & Moghaddam, 1990). In relation to the latter, Walker (1984) notes that activism tactics exercised in public places are “a two-edged weapon” (p. 267). “On one hand the action may further the cause, on the other, it also generates opposition from sections of the general populace not in sympathy with the cause. It is these vigorous tactics which, although legitimate, bring down opprobrium on the heads of activists” (Walker, 1984, p. 267).

What is notable about our results is that the forms of support for protest assessed here fit quite clearly into the realm of moderate forms of socio-political consciousness and orientation. Support for protest as measured here included merely contemplating political action: however, the wording of the items was such that individuals who had actually taken political action were also captured by the measures. Support for political protest, or even considering it, is still related to poorer psychological health. Another way to look at this is that those who are more socio-politically conscious, to the point they have considered engaging in protest, are more likely to report higher levels of psychological stress than those who did not. Poor scores on the Kessler-6 are not trivial; self-rated perceptions of health may reflect changes in physical functioning. The Kessler-6 measures non-specific psychological distress and is used by the World Health Organisation as a screening tool for identifying serious mental illness (Kessler et al., 2010).

Socio-political consciousness is an important aspect of how some Māori form a sense of their own identity (Awatere, 2014; Greaves, Houkamau, & Sibley, 2015; Houkamau, 2006, 2010). Another way to put this is that holding activist sympathies in one’s identity makes a person more likely to consider protesting, to consider voting for Māori issues, and to sign petitions that support Māori interests. Although this is likely to be true of activists from a wide variety of spheres of interest, given that many activists identify with disadvantaged minority groups (Chen & Gorski, 2015; Cox, 2014), the centrality of socio-political consciousness to Māori identity makes it difficult for those who identify as Māori to ignore political issues related to Māori in New Zealand. Activists report that they feel stress and pressure relating to the perceived injustices they mobilise against, and feel hopeless and overwhelmed in the long term due to the lack of change effected by their activism (Chen & Gorski, 2015; Cox, 2014). For Māori who support protest on behalf of their own group and their own rights, stress from this activism may be particularly challenging. Stress has long been shown to impact negatively upon physical and psychological health, particularly when stress levels remain elevated for long periods of time (Ford et al., 2014; Harris et al., 2012; Landsbergis et al., 2013; Pascoe & Richman, 2009). Additionally, protest requires recognition of inequality, and that process wears on

activists day-to-day (e.g., Becker & Tausch, 2015; Chen & Gorski, 2015; Osborne et al., 2012; Smith et al., 2012; Tausch et al., 2011). Supporting even successful protest, or merely thinking about it, may also mean increased identification with a stigmatized identity (Branscombe, Schmitt, & Harvey, 1999; Stronge et al., 2016). There may be multiple explanations of the mechanisms behind this relationship, and the direction of causation may run opposite to the way we are suggesting here (i.e., those who are more distressed by the experience of their group may be more likely to consider activism). While the mechanisms and causal direction require further investigation, what is clear is that Māori who have considered political activism on behalf of their group have poorer psychological health than those who have not. This research presents the first empirical data in New Zealand demonstrating the strength of this relationship, and provides a good starting point for further investigation.

Although there is a growing body of research that examines the links between activism and psychological well-being, this is the first study to demonstrate these links in New Zealand. This is also the first study to examine the psychological and reported health impact of support for protest on a minority group as a whole. It is ironic, but worth pointing out, that insofar as activism has won gains for Māori in terms of compensation, apologies, official acknowledgement of Treaty rights, an arts renaissance and some revival of the language, its impacts on the whole people are positive; yet our data suggest there is also a downside. Unlike previous research (Chen & Gorski, 2015; Cox, 2014), we do not recruit those who are involved in activism specifically, but rather, focus on a random sample of an indigenous ethnic minority community. Thus, we are able to examine the extent to which varying degrees of support for protest correspond to people’s well-being. This research is also the first to examine these links among an indigenous group, which may have interesting implications for other contexts and countries with a background of colonisation.

Limitations

Findings from the present study must be interpreted in the light of certain limitations. The measure used in this study assessed attitudes and intentions in relation to political support rather than actual behaviour. Also, the sample includes people who have considered political action, as well as those who may have actually taken action. One could argue that there is a difference between those who take behavioural action and those who merely consider it. Although we agree with this point, Māori who are politically conscious enough to support protests on behalf of their group are likely to also be aware of the socio-political history which created contemporary New Zealand. This sensitivity to inequality, understanding the socio-historical marginalisation of Māori and thinking about how it might be rectified through political protest is, in itself, a stressor likely to contribute to the results reported in our study.

Although we demonstrate a relationship between support for protest and psychological well-being above and beyond what can be explained by demographic factors, we cannot identify the causal direction of this relationship, as the current research is cross-sectional.

Responding to injustice through providing a collective response may also be viewed by some as a proactive means of coping with the series of historical and contemporary injustices. However, previous qualitative research in the area finds that activists themselves pinpoint their work as the source of their decline in psychological well-being (Chen & Gorski, 2015; Cox, 2014). Therefore, the question remains: Does the act (or thought) of political engagement lead to higher reported levels of psychological distress, or does causation run from distress to considering—and sometimes taking—political action?

Alternatively, it could be that the conditions created by colonisation itself are the cause of the stressors and that those who are more aware of injustices and racism are more likely to report stress as opposed to speaking out against it. Indeed, some data suggest that the intergenerational impact of colonisation on Māori now is felt as a “present day reality” because of the negative effects that colonisation still has on Māori every day (Houkamau, Stronge & Sibley, 2017). For example, Dell (2018) interviewed 22 Māori who were involved in the management of Māori land and found what she refers to as “historical trauma” to be a factor affecting Māori alienated from land. Historical trauma can be defined as “cumulative emotional and psychological wounding across generations, including the lifespan, which emanates from massive group trauma” (Brave Heart, 2003, p. 283). Although colonial disruption to possession of the land had occurred in the late 1800s, participants in Dell’s study spoke of their suffering and anger occurring in the present. For example, in speaking about the historical loss of their land, participants said the “generation who saw and felt and were part of that loss, it’s still there” and, “all those historic grievances, sort of come out, and play out” (p. 135). Dell argued that the negative experiences of subsequent generations had been transferred to them via epigenetics and disrupted attachments (Haskell & Randall, 2009). Further, Dell’s (2018) study found high levels of stress related to anger, unprocessed grief and shame tended to be prevalent in colonised communities. Starting from the point that disempowerment is inherited suggests that collective action does not necessarily create a psychological toll, but rather, merely becomes the channel for already existing levels of stress.

Further, it is possible that a self-sustaining cycle occurs in which both protest and poor psychological well-being fuel each other, until those engaged in collective action reach complete burnout. Yet, previous research has found no longitudinal association between well-being (measured by life satisfaction) and support for protest among Māori (Stronge et al., 2016). As we take the first steps into quantitatively examining these links, longitudinal research is an important future direction.

Research that determines which types of people (or personalities) and which types of activism are more likely to cause burnout may answer the question as to where activism and well-being are connected. Activism related to immediate survival needs of shelter, security and food is likely to cause the highest levels of stress. Similarly, threats to deeply held beliefs about identity will also invoke intense anxiety, possibly leading to burnout.

Activism may attract a type of person to the cause. The activist fights against those who do wrong, but this may inadvertently develop into a wronged identity. A wronged identity seeks confirmation and validation for anger and pain. Consequently, it needs to be fed with attention and sympathy for their suffering. Anger and victimhood provides solidarity and purpose for collective action and the group might find a type of strength and rightness in their wronged identity. The focus centres on maintaining solidarity of the collective struggle, instead of the actual transformation out of that struggle. Grievance and suffering may actually perpetuate challenging circumstances. What might be the relationship between this type of activist and the psychological toll? Understanding the interplay of the two may help to inform this field. A potential avenue for future research is to examine moderators of the relationship between protest and well-being. Using online surveys with American college students (N = 341) and a national sample of activists matched with a control group (N = 718), Klar and Kasser (2009) demonstrated that several indicators of activism were in fact positively associated with measures of hedonic, eudemonic, and social well-being. Firstly, it may be that activists can have higher eudemonic well-being (measuring concepts such as autonomy and personal growth), while also experiencing greater psychological distress and poorer physical health from the practical demands of their activism. However, it may be that activism is associated with an initial increase in well-being for younger or newer activists, but that this relationship changes direction over time as stress begins to accumulate. Finally, as suggested by Klar and Kasser, there may be a different association with well-being for those who protest for other people or external concepts such as “the environment”, as compared to those who protest to assert the rights of their own group.

Conclusion

Given New Zealand’s history, it is difficult for those who identify as Māori to avoid exposure to Māori identity politics. In this study, those who considered engaging in activism (or who had actually done so) experienced elevated levels of psychological distress. While Māori political activism has shown clear collective benefits and has advanced the recognition of Māori political rights to equality, it appears that undertaking such actions—or even thinking about them—may come with a cost to the individual. Over time, these driving forces may take a personal toll on the health of activists. The data also emphasise the potential personal implications of engaging in, or even contemplating, collective political action to advance the interests of one’s own ethnic group. While based on findings for Māori, our results suggest generalizability to at least in-group activism (ethnic, gender, or other) in other countries and for different causes, but especially colonised indigenous groups.

High levels of awareness of injustice may mean that Māori are subject to higher levels of psychological distress. This paper is not intended to devalue becoming politically conscious and acting on that awareness. Indeed, Māori efforts to hold Pākehā accountable for the Treaty of Waitangi have been crucial for advancing Māori rights and political recognition (Awatere, 1996;

Greenland, 1984; Ihimaera & Kelly, 2017). While there is evidence that engaging in collective action may give individuals a psychological boost, it is important to recognise there is also a toll associated with such activism. Understanding and coping with historical injustice

involves a host of difficult experiences and emotions. Therefore, understanding the personal impact of political engagement and activism becomes increasingly important.

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Prejudice toward Muslims in New Zealand:

Insights from the New Zealand Attitudes and Values Study

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Following the March 15th Christchurch terrorist attack, members of our research team have been repeatedly asked to comment or provide summary statistics from the New Zealand Attitudes and Values Study (NZAVS) on prejudice toward Muslims. As the curators of the NZAVS, we think that these findings should be in the public domain and accessible to as wide an audience as possible. In this article, we aim to provide a comprehensive summary of what we know from the NZAVS about attitudes toward Muslims and prejudice in New Zealand more generally. From 2012 onwards, the NZAVS included a feeling thermometer rating of people's level of warmth toward Muslims. Here, we summarize what we know from the NZAVS about levels of warmth toward Muslims in the New Zealand population. We describe the distribution of thermometer ratings of warmth toward Muslims annually from 2012 onward, and compare these with thermometer ratings of a range of other groups that we also track. We present a regression model documenting the extent to which a broad range of demographics and aspects of personality are associated with low levels of warmth toward Muslims, and present a parallel model assessing warmth ratings toward immigrants as a comparison. Finally, we present a series of growth curve models outlining the relative level and rate of change over time in warmth toward Muslims and other groups from 2012-2018. Results from these analyses indicate that over the 2012-2018 period, levels of warmth toward Muslims in New Zealand were comparatively low relative to warmth ratings of other groups. However, warmth toward Muslims has also been steadily but gradually increasing over time in New Zealand.

Keywords: Prejudice, Muslim, Christchurch Terrorist Attack, Feeling Thermometer

Introduction

The shock and horror of the March 15th 2019 terrorist attack in Christchurch will shape our nation for many years to come. With 51 Muslim men, women, and children killed in the attack, 49 more injured, and many more deeply traumatised, this attack will indeed be remembered as one of the nation's darkest days. Our research team offer their heartfelt sympathies to the victims of the attack, their families, friends, colleagues and the broader Muslim community in Aotearoa, New Zealand. One of the authors (MUA), is a regular to the Al-Noor Mosque, and is among those grieving the loss of 14 friends, and also knows several others who were injured in the attacks.

In the days following the terrorist attack, members of our research team were repeatedly approached and asked

to comment or provide summary statistics on attitudes toward Muslims in New Zealand, levels of prejudice in New Zealand more generally, and to discuss how we think the attack has and will continue to shape our national identity. Central to such questioning is the placing of Muslims as not just a religious other but also an ethnic other; this exposes underlying attitudes and dualisms in our conceptions of national identity.

The reason our research team have been approached is because we collectively manage the New Zealand Attitudes and Values Study, or NZAVS. The NZAVS is a large-scale national probability longitudinal panel questionnaire study that surveys thousands of New Zealand citizens annually. Each year, our questionnaire asks New Zealanders to self-report on their attitudes toward a range of topics, their values, their level of

wellbeing, different aspects of their health, their personality, how they spend their time, and so forth. For those interested, more information about the NZAVS is available at: www.nzavs.auckland.ac.nz

The NZAVS questionnaire also includes a scale that asks people to rate their warmth toward different social groups. As part of this scale, since 2012, the NZAVS has measured self-reported ratings of warmth toward Muslims. In writing this paper, our goal is to present what we know from the NZAVS about attitudes toward Muslims in New Zealand in one place, in an accessible manner for as wide an audience as possible.

What is a feeling thermometer?

The measure of warmth toward Muslims that we include in the NZAVS questionnaire is generally known as a ‘feeling thermometer’, or just ‘thermometer scale.’ The thermometer scale was popularised in the American National Election Study, beginning in 1964. The scale was designed to provide a very simple and broad self-report instrument for measuring general positive (warm) versus negative (cold) feelings toward a range of different groups, topics, social policies, and presidential candidates (see Kinder & Drake, 2009, for discussion of thermometer scales used to track racism over time in the American

measures, including levels of agreement with attitude statements positioning historical injustices experienced by Māori as being no longer relevant, and attitude statements denying that Māori continue to experience discrimination.

Satherley and Sibley’s (2018) research provides a good example of how feeling thermometer ratings provide a window into the same overall generalized positive-negative attitude factor as other types of attitude statements assessing group attitudes in New Zealand. This is important because while feeling thermometers undeniably miss a lot of subtleties in people’s attitudes, they do reliably intercorrelate and load on the same overall attitude factor, or latent construct, as other more detailed and specific attitude statements (see also Bergh, Akrami, Sidanius, & Sibley, 2016, for additional research in this area). That is, people who rate a group less warmly on a feeling thermometer also tend to respond in similar, prejudicial ways to more specific questions about that group. This research thus provides evidence for the construct validity of feeling thermometers as measures of positive-negative ethnic group attitudes, or put simply, prejudice.

Research by Barlow and colleagues (2019) also provides good evidence for the construct validity of the

Please rate your feelings of WARMTH toward the following groups using the “feeling thermometer scale” for each group.

Feel LEAST WARM Toward This Group	Neutral						Feel MOST WARM Toward This Group								
1	2	3	4	5	6	7									
NZ Europeans	1	2	3	4	5	6	7	Overweight people	1	2	3	4	5	6	7
Māori	1	2	3	4	5	6	7	Immigrants in general	1	2	3	4	5	6	7
Asians in general	1	2	3	4	5	6	7	Chinese	1	2	3	4	5	6	7
Pacific Islanders	1	2	3	4	5	6	7	Indians	1	2	3	4	5	6	7
Elderly people	1	2	3	4	5	6	7	Muslims	1	2	3	4	5	6	7
Refugees	1	2	3	4	5	6	7	People with mental illness	1	2	3	4	5	6	7

Figure 1. The feeling thermometer scale included in the Time 9 (2017) wave of the NZAVS questionnaire.

feeling thermometers employed in the NZAVS (see also Perry, Priest, Paradies, Barlow & Sibley, 2018, for additional evidence of the validity of these scales in the New Zealand context). Barlow et al. demonstrated that how people scored on feeling thermometers measuring their

National Election Study).

An exact copy of the thermometer scale used in the most recent (2017) wave of the NZAVS questionnaire is presented in Figure 1. As you can see, the NZAVS version of the scale simply asks people to rate their warmth toward a range of different groups from 1 (feel least warm) to 7 (feel most warm). The specific scale wording is based on earlier psychometric work that we conducted assessing warmth ratings toward a much broader range of groups in New Zealand. The evidence from this early work indicates that the NZAVS thermometer scale provides a valid and reliable index of overall generalized positive-negative attitudes toward a large range of different groups (see Duckitt & Sibley, 2007, for information about scale validation in New Zealand).

Feeling thermometer research in New Zealand

Feeling thermometers have been used to test a fairly broad range of research questions relating specifically to prejudice and intergroup attitudes in the New Zealand context. Most of this work is from our research group and uses data from the NZAVS. Satherley and Sibley (2018), for example, validated a new measure of modern racism toward Māori. They showed that thermometer ratings assessing negative affect toward Māori loaded on the same superordinate or overall factor as a variety of other

warmth and anger toward European/Pākehā, Māori, Pacific and Asian people was predicted by their level of contact with those same groups. The contact hypothesis is somewhat of a cornerstone theory of prejudice reduction in social psychology (see, for example, Pettigrew & Tropp, 2006). The theory states that one way to reduce prejudice toward different groups is to have members of the groups come into contact with one another under positive conditions, ideally with shared goals, and in ways supported by the broader community. Barlow and colleagues’ (2019) findings replicate and extend an extremely large body of previous research from around the world studying how intergroup contact reduces prejudice and shows that the widely observed effect of intergroup contact holds when measuring prejudice using short and simple feeling thermometers (see also Sengupta, Barlow, & Sibley, 2012, for additional research on contact and feeling thermometers using NZAVS data).

Barlow and colleagues (2019) also showed that feeling thermometers of warmth and anger were predicted by different types of contact with other ethnic groups: positive contact with members of another ethnic group predicted increased feelings of warmth toward them over time but predicted a much weaker reduction in anger.

Negative contact, in contrast, led to increased feelings of anger toward them, but predicted a much weaker reduction in warmth. This is also an important finding in its own right because it shows that merely increasing how much members of groups interact with one another might have unintended negative effects if some of the contact that occurs is negative or when groups are in competition with one another.

We emphasise again that although feeling thermometers certainly miss nuance in people's attitudes, they remain extremely useful when one wants to conduct comparative analyses assessing how positive or negative people feel toward different social groups. The measurement of simple warm-cold thermometer ratings toward a range of groups allows researchers to ask questions such as 'which group is most liked or disliked?' and 'how warm do people feel toward their own group relative to other groups?'

Sibley and Ward (2013), for example, analysed feeling thermometer ratings from the first (2009) wave of the NZAVS. They conducted what one might call a '360 degree' analysis of NZ European/Pākehā, Māori, Pacific and Asian participant's ratings of warmth toward their own group, and also their levels of warmth toward each of the three other groups. Unsurprisingly, Sibley and Ward showed that each ethnic group tended to express fairly high levels of warmth toward their ingroup (or ingroup bias). However, the results also revealed a series of fairly subtle asymmetries in how each group felt toward the other groups—it was certainly not the case that people merely liked their own group more and expressed the same magnitude of reduced warmth toward other ethnic groups.

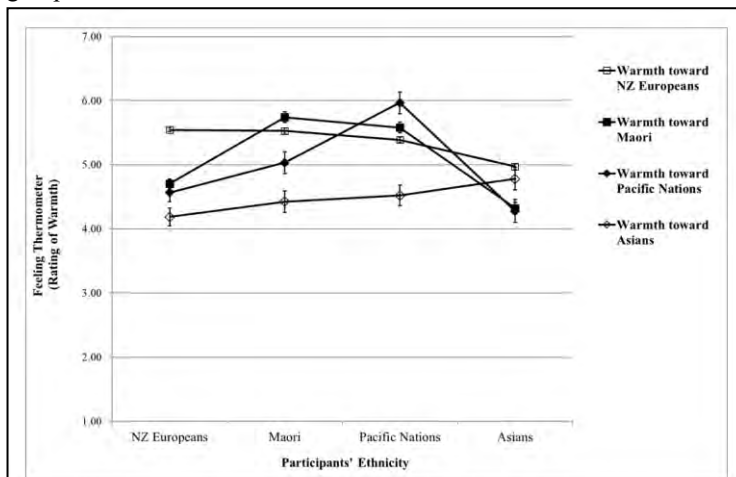


Figure 2. Feeling thermometers of NZ Europeans/Pākehā, Māori, Pacific and Asians toward one another in New Zealand (adapted from Sibley & Ward, 2013, Figure 2).

The '360 degree' analysis reported by Sibley and Ward (2013) is reproduced in Figure 2. As can be seen in Figure 2, NZ European/Pākehā, Māori, and Pacific people all expressed the lowest level of warmth toward Asian peoples. Māori, Pacific and Asian people, by contrast, all expressed relatively high warmth toward NZ

European/Pākehā. Pacific people also expressed a high level of warmth toward Māori, which Sibley and Ward suggested was consistent with Teaiwa and Mallon's (2005) notion of ambivalent kinship between the two groups.

Sibley and Ward's (2013) analysis only included European/Pākehā, Māori, Pacific and Asian peoples due to the small number of participants from other ethnic groups in the sample (e.g., Middle Eastern, Latin American or African). Thus, although it is easily possible to look at warmth toward all other groups included in the thermometer scale (we report this data in full in the current paper), it was not possible to conduct a full '360 degree' analysis including responses from a larger number of ethnic groups due to limited sample size.

Hamley, Houkamau, Osborne, Barlow, and Sibley (2020) built upon Sibley and Ward (2013) by presenting a more focused examination of Māori and NZ European/Pākehā ratings of warmth toward both their own group (or ingroup) and each other's group (or outgroup). Using Latent Profile Analysis, Hamley and colleagues (2020) showed that some Māori and NZ European/Pākehā expressed a specific combination of high ingroup, but low outgroup warmth, which is indicative of ingroup bias. However, this group was made up of a relatively small number of people in both cases (about 7% of Māori and 10% of NZ Europeans). The majority of both Māori and NZ European/Pākehā scored the feeling thermometers in a consistent pattern indicating high warmth toward their ingroup, but also high warmth toward each other's group (about 59% of Māori and 54% of NZ Europeans).¹

Most of the research on feeling thermometers

(including the results we report in the current paper) examine overall mean or proportional differences in feeling thermometers. The research by Hamley et al. (2020) is particularly important because it clearly shows that just examining means and the distribution around them is not necessarily the full story. If research only examines overall mean (or median, or mode, or summed) ratings, then there is a risk of missing subtler differences in the distinct combinations of high/moderate/low warmth that people hold across multiple groups. These more subtle patterns are not contradictory to research examining mean differences (statistically speaking), but a lot can be missed when only examining overall aggregate summaries, or assuming that there is only one underlying distribution to

people's scores in the population, rather than many distinct types of people who express qualitatively distinct high/moderate/low levels of warmth or positive emotion toward different groups (see also Osborne & Sibley, 2017, for a general discussion of this topic in political science).

¹ Hamley and colleagues (2020) also showed that even the psychological factors underlying why a small minority fit an ingroup bias profile differed for Māori and NZ European/Pākehā. For Māori, ingroup bias seems to be strongly driven by the motivation to maintain strong and coherent ingroup identity; for NZ

European/Pākehā, it seems to be more strongly driven by Social Dominance Orientation (Sidanius & Pratto, 1999). This is an orientation based on the competitive-driven goal of group-based dominance and superiority.

Warmth toward Muslims in New Zealand: What do we already know?

As far as we are aware, prior to the March 15th terrorist attack, there had been only two published quantitative studies examining feeling thermometer ratings of Muslims (or other quantitative scales assessing anti-Muslim or anti-Islamic sentiment) in New Zealand. Both studies used data from the NZAVS and both examined feeling thermometer ratings (which at this time is the only measure of attitudes toward Muslims in the NZAVS).² Readers are directed to see also Highland, Troughton, Shaver, Barrett, Sibley and Bulbulia (2019); Hawi, Osborne, Bulbulia and Sibley (2019); and Yogeewaran, Afzali, Andrews, Chivers, Wang, Devos and Sibley (2019) that also analyzed ratings of warmth toward Muslims using NZAVS data.

Shaver, Troughton, Sibley and Bulbulia (2016) used data from the 2013 (Time 5) wave of the NZAVS to analyse feeling thermometer ratings of Muslims, Arabs, and ‘immigrants in general’. Shaver and colleagues noted a fairly large difference in levels of warmth toward these groups, with warmth ratings of both Muslims and Arabs being near-identical and markedly lower (.5 units on the scale from 1-7) than warmth toward immigrants. The goal of Shaver and colleagues’ research was to test specific predictions from Evolutionary Lag Theory. This theory broadly states that under specific conditions (such as in New Zealand) religion should predict increased levels of tolerance toward other religious groups. Shaver et al. (2016) found good support for this prediction by showing that among Christians, a higher level of religious identification was associated with higher levels of warmth toward Muslims. In the wake of the March 15th terrorist attack, this finding is particularly relevant, and shows that the Christian community in New Zealand may help to support norms of acceptance, inclusion and warmth toward Muslims. Interfaith gatherings and support offered to the Muslim community after the attack also illustrate this point.

A second study by Shaver, Sibley, Osborne and Bulbulia (2017) also examined feeling thermometer ratings of Muslims using data from the 2013 (Time 5) wave of the NZAVS. Shaver et al. examined the association between rates of overall media exposure (self-reported hours of news consumption per week) and feeling thermometer ratings of warmth and anger toward Muslims (see also Kabir & Bourk, 2012, for qualitative analysis of media representation of Islam and Muslims in New Zealand media). Results indicated that hours of news consumption was associated with lower warmth and increased anger toward Muslims specifically, but not warmth and anger toward Asians (the ethnic group to

which most of New Zealand’s and the world’s Muslims belong). Moreover, these associations held when adjusting for a broad range of other factors, such as education, age, gender, socio-economic status, and political orientation.

The lack of moderating effect for political orientation observed by Shaver et al. (2017) is particularly noteworthy, as it did not interact with hours of news exposure. This suggests that the news New Zealanders consume has a general effect of decreasing warmth toward Muslims, rather than being driven by those in a specific liberal or conservative news bubble. This, in turn, suggests that a general negative representation of Muslims and Islam may span much of the news, rather than reflecting a specific partisan news bias. The lack of similar effects observed for warmth toward Asians further suggests that this news bias is specific and localized anti-Muslim sentiment.

Outside of the NZAVS, there has been very little recent research on prejudice towards Muslims in New Zealand. An exception is Greaves et al. (2020), who conducted a nationally representative survey on religion as part of the International Social Survey Programme in the months before the March 15th attack. Participants rated Muslims more negatively, and as far more threatening, than they did other religious groups such as Christians, Hindus, Buddhists, Jews, and ‘atheists or non-believers’. Negativity toward Muslims and other religious groups was measured in both 2008 and in 2018, and had decreased over the time period reflecting a small reduction in prejudice. The percentage of people who agreed that Muslims were ‘somewhat’ or ‘very’ threatening had decreased from 22.5% in 2008 to 19.5% in 2018. The predictors of prejudice were similar to those found in past studies using the NZAVS (e.g. Shaver et al., 2016, 2017). These findings also support work from Wilson (2019) who found that participants from a convenience sample found Muslims more threatening than other religious groups. This past research shows that the results of the NZAVS likely generalise when also comparing religious groups with other religious groups, rather than with ethnicities (as is the case with the NZAVS).

Overview of the present study

The two papers by Shaver and colleagues (2016, 2017) attracted widespread interest following the March 15th terrorist attack. However, the goal of these two papers was to test specific, fine-grained theoretical predictions, rather than comprehensively and broadly describe levels of warmth toward Muslims in New Zealand. In the current research, we first aim to address this need from the community by comprehensively describing the

² There is also one other paper by Duckitt and Sibley (2007) which measured warmth toward the social category labelled ‘Arabs’, in a sample of 212 undergraduate students. Duckitt and Sibley (2007) measured warmth toward a larger number of different groups in their study, and showed that variation in peoples levels of warmth toward Arabs was weakly correlated with Right-Wing Authoritarianism (an individual difference measure that indexes the threat-driven motivation for collective security and social cohesion) and more strongly correlated with Social Dominance Orientation (an individual difference measure that indexes the competitive-driven goal of group-based dominance and superiority). The paper by Duckitt and Sibley (2007) shows that, together, Right-Wing

Authoritarianism and Social Dominance Orientation explain many different forms of prejudice, and prejudice toward many different groups (see also Duckitt, 2001, for an excellent discussion of this topic). Their research suggests that back in 2002 when these data were collected, and at least among undergraduate university students in New Zealand, negative feelings toward Arabs were more strongly linked with the desire for group hierarchy and dominance over groups seen as weak and inferior (i.e., Social Dominance Orientation) than they were by the desire for security and cohesion based on perceived danger and threat (i.e., Right-Wing Authoritarianism).

distribution, means and frequencies for feeling thermometer data assessing warmth (and anger) toward Muslims from all waves of the NZAVS which have included these measures. We also include similar descriptive data for ratings of ethnic groups for which we collected feeling thermometer ratings as a point of comparison.³

Second, we present a regression model assessing the extent to which a broad range of demographics and aspects of personality are associated with concurrent levels of warmth toward Muslims in the latest (2017) wave of the NZAVS. Similar to the comparison analysis of Asians included in the news consumption analysis by Shaver et al. (2017), we present a parallel model assessing the extent to which the same set of demographics and personality traits are associated with warmth toward immigrants. This model is useful because it comprehensively profiles the various demographics associated with feelings of lesser or greater warmth toward Muslims in New Zealand using the most recent available NZAVS data.

Third, we directly answer the question of whether levels of warmth toward Muslims are increasing or decreasing over time in New Zealand. We examine change in levels of warmth toward Muslims from 2012-2018, as the NZAVS only began including a thermometer rating of Muslims in 2012. We model rates of change in warmth using Latent Growth Curve analysis. Because the NZAVS is a longitudinal panel survey, the study tracks the same people consistently each year. Our analysis of change therefore describes the average rate of change within individuals over time. This is an important, but subtle, point, and should not be confused with analyses of means or percentages from repeated annual cross-sectional samples (such as the International Social Survey Programme data reported in Greaves et al., 2020), which randomly sample different groups of people each year. Analyses of these latter types of data can provide useful data on trends in the overall population level of something over time. It is crucial to realize that they do not actually test change within individuals over time, however. This is an important limitation because it is often change within individuals that is actually of interest.⁴ Again, we also report growth curves describing how feeling thermometer ratings of other immigrant groups ('Chinese', 'Indians', 'Asians in general' and 'Immigrants in general') have changed over this same time period as a comparison.⁵

METHODS

Participants

Demographics for the Time 4 (2012) – Time 9 (2017)

³ The NZAVS questionnaire has not, up to this point, included thermometer ratings of other religious groups.

⁴ Consider the following simple example. Imagine you collect two waves of data a year apart, from the same 5 people each year. Each person's scores at year 1 and again at year 2 are as follow: person one: 1,2; person two: 4,5; person three: 9,10; person four: 8,9; person five: 9,2. If you take the average of these 5 scores then you observe a mean of 6.2 at year 1 and a mean of 5.6 at year 2. You conclude that people's scores are going down by about .6 units per year. This is incorrect. The population average may have decreased, but 4 of the 5 people are actually increasing by one unit each year. There is just one person that has shown a decrease, albeit a

dramatic one. Of course, the bias can be subtler than this. This example merely shows how one can draw the wrong conclusions depending on the level of analysis in a very simple case.

Sampling Procedure

The original Time 1 (2009) NZAVS sample was drawn from a random sample of the New Zealand Electoral Roll. Postal questionnaires were sent to 40,500 registered voters or roughly 1.36% of all registered voters in New Zealand. The overall response rate (adjusting for the address accuracy of the Electoral Roll and including anonymous responses) was 16.6%. To boost sample size at Time 3 (2011) and compensate for sample attrition, a booster sample was recruited through an unrelated survey posted on the website of a major New Zealand newspaper in 2011. A total of 3,208 participants registered an initial expression of interest in being contacted to participate in the NZAVS via this survey. Participants in this non-random booster sample were emailed an invitation to participate in an online version of the NZAVS, and those who did not respond to the email were also sent a postal version of the questionnaire. A total of 2,962 participants completed the questionnaire when subsequently contacted (92.4%).

Full details about the sampling procedure, response rates and so on for the 2009-2011 waves of the NZAVS are provided in Sibley (2019a). Full sampling details for the waves analysed in the current paper, from 2012-2017 (Times 4-9), are included in the Appendix. Thermometer ratings of Muslims were included in the NZAVS from Time 4 (2012) onwards (hence, we do not report on data from before this time point in this paper).

Measures

Feeling thermometer ratings were measured using the following question: "Please rate your feelings of warmth toward the following groups using the 'feeling thermometer scale' for each group". The rating scale ranged from 1 (Feel LEAST WARM toward this group) through 4 (Neutral) to 7 (Feel MOST WARM toward this group). An exact copy of the question wording and formatting from the Time 9 NZAVS questionnaire is presented in Figure 1.

⁵ These are the labels that are used in the feeling thermometer rating scales in the NZAVS, hence their use in quotes. We also note that Muslims as a group include a wide diversity of cultures and ethnicities and it is indicative of contemporary global discourse that one religious identity very often becomes collapsed into a type of popular and populist ethnicized and collectivist immigrant discourse. The NZAVS research group are aware of this issue and this is indeed central to our research regarding warmth towards Muslims.

Table 1. Sample details for the Time 4 – Time 9 waves of the NZAVS.

Time (Year):		4 (2012)	5 (2013)	6 (2014)	7 (2015)	8 (2016)	9 (2017)
N		12,179	18,261	15,820	13,942	21,936	17,072
Gender	Women	7,621	11,460	10,002	8,726	13,722	10,802
	Men	4,554	6,798	5,798	5,197	8,171	6,246
	Diverse	-----	-----	20	17	41	24
Ethnicity	Europeans	10,281	15,607	14,161	12,506	19,478	15,606
	Māori	2,025	2,328	1,977	1,672	2,473	2,007
	Pacific Nations	610	625	526	427	574	466
	Asian	619	814	684	545	1,001	700
Age	Mean(SD)	49.11(15.02)	47.65(14.07)	49.33(14.03)	50.79(13.90)	49.62(13.93)	51.33(13.77)
Education¹	Mean(SD)	4.70(2.84)	4.93(2.82)	5.08(2.81)	5.19(2.78)	5.30(2.75)	5.26(2.77)
Income²	Mean(SD)	11.23(0.80)	11.30(0.79)	11.25(1.14)	11.30(0.97)	11.29(1.04)	11.37(0.85)
Deprivation³	Mean(SD)	5.02(2.85)	4.81(2.79)	4.71(2.76)	4.70(2.78)	4.67(2.75)	4.59(2.72)
SES⁴	Mean(SD)	52.30(16.27)	52.94(16.46)	53.73(16.26)	54.36(16.04)	54.30(16.29)	54.88(16.16)
Categorical Demographics	Religious	4,934	6,879	6,030	5,844	8,274	6,137
	Parent	8,856	13,084	11,655	10,511	15,883	12,628
	Partner	8,314	12,984	11,354	10,090	15,885	12,770
	Employed	8,464	13,578	12,037	10,457	17,119	13,136
	Urban	7,871	12,151	10,454	8,994	14,074	13,732
	NZ Born	9,421	14,225	12,497	10,624	17,157	13,517

¹ NZReg 0-10; ² Household income (Log); ³ 2013 Meshblock NZDep 1-10; ⁴ 2013 Socioeconomic Index SEI 10-90

From Times 4-6 the NZAVS questionnaire also included thermometer ratings assessing anger toward these same groups. The anger thermometer used the following instructions: ‘Now please rate your feelings of anger toward the same groups using the scale below.’ The rating scale ranged from 1 (Feel NO ANGER toward this group) through 4 (Neutral) to 7 (Feel ANGER toward this group). The anger thermometer followed immediately after the warmth thermometer in the questionnaire.

Big-Six personality was measured using the Mini-IPIP6 (Sibley et al., 2011). Each trait is measured using 4 marker items, rated from 1 (very inaccurate) to 7 (very accurate) and averaged to give scale scores for Extraversion ($\alpha = .76$), Agreeableness ($\alpha = .72$), Conscientiousness ($\alpha = .69$), Neuroticism ($\alpha = .74$), Openness to Experience ($\alpha = .71$), and Honesty/Humility ($\alpha = .77$). Internal reliability estimates are reported for the Time 9 wave, but are similar in all waves.⁶

With regard to demographics, deprivation was assessed using the 2013 New Zealand Deprivation Index, which uses census information to assign a decile-rank index from 1 (least deprived) to 10 (most deprived) to each meshblock unit (Atkinson, Salmond, & Crampton, 2014). Participants’ socio-economic index was measured using the occupation-based rating developed by Milne, Byun, and Lee (2013). This index assigns a score from 10 to 90, where 90 indicates high socio-economic status. Education was coded into an eleven-level ordinal variable following the NZQA education coding scheme (0 = no qualification to 10 = doctorate).

The complete data dictionary listing all questions included in each wave of the NZAVS is available in

Sibley (2019b). A full copy of all NZAVS questionnaires is provided in Sibley (2019c). Details on post-stratification sample weighting are provided in Sibley (2019d).

RESULTS

Descriptive statistics

Tables 2-4 present means, standard deviations, and distributional information (percentages of extreme ratings) for thermometer ratings of warmth and anger toward different groups from Time 4 (2012) to Time 9 (2017). These descriptive statistics applied a post-stratification sample weighting to correct for sampling bias in gender, ethnicity and region in each wave of the study (see Sibley, 2019b).⁷

Histograms displaying the distribution of thermometer ratings of warmth and anger toward each group for each wave of the NZAVS from Time 4 (2012) to Time 9 (2017) are presented in Figures 3-8. As with Tables 2-4, these figures provide warmth ratings for all years, and anger ratings for the years where they were also measured. The numbers on top of each bar represent the percentage of people who rated that point on the thermometer scale. The data presented in these histograms were also weighted following Sibley (2019b), and hence represent estimates of the distribution of warmth and anger in the population of New Zealand adults. Note that the percentages in these tables and figures represent those of valid responses (i.e., missing data are not included in the denominator). For each feeling thermometer rating we also re-estimated the histogram excluding members of that group from the analysis in order to estimate how others in New Zealand felt toward each group.

⁶ The Big-Six personality model provides, in our view, the most representative and valid representation of the broad structure of individual differences in personality. The theory extends earlier Big-Five models of personality by identifying an additional dimension of Honesty-Humility, and is supported by a vast range of studies, across numerous cultures (although it is more robust in Western nations; see Ashton & Lee, 2007). The Mini-IPIP6 Big-Six measure of Big-Six personality has been extensively validated in New Zealand, its factor structure is reliable and it shows good convergent and discrimination validity (Sibley et al., 2011), is stable over time (Milojev, Osborne, Greaves, Barlow & Sibley,

2013), has acceptable item response properties (Sibley, 2012), and demographic norms are available (see Sibley & Pirie, 2013).

⁷ Excluding people who identify as Muslim from the data did not change this overall pattern, and the same was the case when people reporting Middle Eastern ethnicity were removed from frequency calculations for warmth and anger towards Arab people (in the tables and graphs, these patterns are referred to as patterns of ratings by the “outgroup”).

Table 2. Descriptive statistics for thermometer ratings of 'Muslims', 'Arabs' and 'Indians' from the NZAVS.

Question	Year	Weighted mean	95%CI low	95%CI high	Weighted SD	% of people resp. 1	% of people resp. 7	Weighted N
'Muslims'								
Warmth	2012	3.65	3.61	3.68	1.55	12.16	4.21	11,785
	2013	3.74	3.71	3.76	1.57	10.97	5.04	17,462
	2014	3.84	3.81	3.87	1.55	9.87	4.74	15,075
	2015	3.80	3.77	3.83	1.54	10.45	3.94	13,548
	2016	3.91	3.88	3.93	1.54	9.22	4.84	21,095
	2017	4.04	4.01	4.06	1.48	7.40	4.79	16,563
Anger	2012	3.01	2.98	3.05	1.85	33.43	5.44	11,778
	2013	2.97	2.93	3.00	1.83	33.59	5.20	17,424
	2014	3.09	3.05	3.12	1.82	29.90	5.19	15,157
'Arabs'								
Warmth	2012	3.73	3.71	3.76	1.49	9.04	4.30	11,780
	2013	3.78	3.76	3.81	1.50	8.45	4.84	17,428
	2014	3.88	3.85	3.91	1.49	7.73	4.62	15,079
	2015	3.82	3.79	3.85	1.46	8.07	3.83	13,515
	2016	3.88	3.86	3.90	1.48	7.52	4.53	21,017
	2017	-	-	-	-	-	-	-
Anger	2012	2.93	2.89	2.96	1.79	34.35	3.97	11,752
	2013	2.89	2.86	2.91	1.75	34.27	3.69	17,421
	2014	2.97	2.93	3.00	1.73	31.47	3.31	15,161
'Indians'								
Warmth	2012	4.12	4.09	4.15	1.41	4.93	5.62	11,796
	2013	4.21	4.18	4.23	1.42	4.47	6.49	17,488
	2014	4.32	4.30	4.35	1.40	3.55	6.37	15,119
	2015	4.23	4.20	4.25	1.37	3.89	4.68	13,558
	2016	4.23	4.21	4.25	1.42	4.45	5.67	21,135
	2017	4.25	4.23	4.28	1.39	3.99	5.42	16,568
Anger	2012	2.67	2.64	2.70	1.62	37.46	2.05	11,782
	2013	2.66	2.63	2.69	1.64	37.90	2.29	17,463
	2014	2.73	2.70	2.76	1.60	34.71	1.83	15,192

We present these data for broadly descriptive purposes and so that the full set of information from the NZAVS on feeling thermometer ratings is available for other researchers, government departments, and other community groups. More detailed descriptive information, including full information of the distribution of scores used to create the histograms in Figures 3-8, is available in an online supplement at www.nzavs.auckland.ac.nz on the NZAVS bibliography page.

Demographic Differences in Warmth toward Muslims

We conducted a multiple regression predicting warmth toward Muslims using a range of demographic and personality factors ($N = 16,641$). Warmth towards 'immigrants in general' was also included as a dependent

models are presented in Table 6. Missing data for exogenous variables were estimated using Rubin's (1987) procedure for multiple imputation with parameter estimates averaged over 2,000 datasets (thinned using every 100th iteration). The model was estimated with Maximum Likelihood with robust estimation of standard errors.

As can be seen in Table 6, lower warmth toward Muslims was predicted by being male, being older, lower educational attainment, lower socioeconomic status, being religious, not being Muslim, being unemployed, and living in rural areas. There was no significant association between warmth toward Muslims and household income, deprivation levels, ethnicity, having children or a partner, or being born in New Zealand. In terms of personality variables, lower warmth toward Muslims was predicted by lower Extraversion,

variable so as to provide a comparison group. Bivariate correlations between all variables included in the model are reported in Table 5. The results from these regression

Agreeableness, Openness, and Honesty-Humility, and higher Conscientiousness and Neuroticism.

Table 3. Descriptive statistics for thermometer ratings of 'Chinese', 'Asians in general' and 'Pacific Islanders' from the NZAVS.

Question	Year	Weighted mean	95%CI low	95%CI high	Weighted SD	% of people resp. 1	% of people resp. 7	Weighted N
'Chinese'								
Warmth	2012	4.27	4.25	4.30	1.36	3.36	6.08	11,803
	2013	4.35	4.33	4.38	1.37	3.04	7.12	17,486
	2014	4.44	4.42	4.47	1.37	2.85	7.08	15,113
	2015	4.34	4.32	4.37	1.35	3.22	5.59	13,558
	2016	4.33	4.30	4.35	1.39	3.59	6.04	21,119
	2017	4.36	4.33	4.38	1.35	2.81	5.85	16,574
Anger	2012	2.62	2.59	2.65	1.58	37.71	1.65	11,783
	2013	2.59	2.56	2.62	1.58	38.59	1.63	17,448
	2014	2.70	2.67	2.73	1.58	34.95	1.51	15,192
'Asians in general'								
Warmth	2012	4.47	4.44	4.49	1.33	2.55	7.46	11,802
	2013	4.56	4.53	4.58	1.33	2.12	8.19	17,469
	2014	4.62	4.59	4.64	1.32	2.10	7.63	15,127
	2015	4.53	4.50	4.55	1.28	2.07	5.98	13,531
	2016	4.54	4.52	4.56	1.32	2.07	6.94	21,086
	2017	4.55	4.52	4.57	1.29	1.83	6.72	16,590
Anger	2012	2.61	2.58	2.64	1.58	38.14	1.67	11,787
	2013	2.57	2.54	2.60	1.59	39.41	1.74	17,468
	2014	2.68	2.65	2.71	1.58	35.33	1.44	15,219
'Pacific Islanders'								
Warmth	2012	4.67	4.65	4.70	1.32	1.49	9.86	11,800
	2013	4.74	4.72	4.77	1.34	1.70	10.92	17,492
	2014	4.82	4.79	4.84	1.30	1.30	10.55	15,132
	2015	4.74	4.71	4.76	1.27	1.51	8.22	13,533
	2016	4.79	4.76	4.81	1.31	1.50	10.03	21,111
	2017	4.77	4.75	4.80	1.28	1.48	9.27	16,586
Anger	2012	2.57	2.54	2.61	1.59	39.37	1.81	11,798
	2013	2.52	2.49	2.54	1.59	41.08	1.88	17,464
	2014	2.61	2.58	2.64	1.55	37.02	1.32	15,221

As with warmth toward Muslims, lower warmth toward immigrants in general was predicted by being male, lower education, lower socioeconomic status, and living in rural areas. For personality variables, the same pattern was identified for warmth toward immigrants as for warmth toward Muslims, suggesting that personality traits predict prejudice more generally (i.e., the associations are not specific to attitudes toward Muslims).

There were some differences in the pattern of predictors for warmth toward Muslims as compared to warmth toward 'immigrants in general'. Lower warmth toward immigrants was uniquely predicted by lower household income, Māori ethnicity, being a parent, and being born in New Zealand, while higher warmth toward immigrants was predicted by Pacific ethnicity. These variables were unassociated with warmth toward Muslims. In contrast, lower warmth toward Muslims was uniquely predicted by being older, not being Muslim, and being unemployed; these variables were not associated

with warmth toward immigrants.

Changes in Warmth toward Muslims from 2012-2018

We assessed changes in warmth toward Muslims in New Zealand from 2012-2018 (Time 4 – Time 9 of the NZAVS) using Latent Growth Modelling (LGM). LGM allows us to examine change in warmth over time *within* individuals, rather than change resulting from changes in sample composition over time. The LGMs presented here examine the same group of individuals over time, estimating a distinct latent trajectory of change over time for each individual in the analysis. These trajectories are then averaged to create an overall image of within-person change in the population. Although we focus on changes in warmth toward Muslims, we also estimated growth curves for warmth ratings of 'Asians in general', 'Immigrants in general', 'Chinese' and 'Indians', which provides a useful reference as to how attitudes toward

Table 4. Descriptive statistics for thermometer ratings of 'Immigrants in general', 'NZ Europeans' and 'Māori' from the NZAVS.

Question	Year	Weighted mean	95%CI low	95%CI high	Weighted SD	% of people resp. 1	% of people resp. 7	Weighted N
'Immigrants in general'								
Warmth	2012	4.43	4.41	4.46	1.25	1.96	6.32	11,802
	2013	4.49	4.47	4.51	1.26	1.90	7.04	17,468
	2014	4.55	4.53	4.57	1.24	1.61	6.66	15,098
	2015	4.47	4.44	4.49	1.23	1.85	5.38	13,548
	2016	4.51	4.49	4.53	1.27	1.88	6.51	21,090
	2017	4.51	4.49	4.54	1.25	1.93	6.33	16,563
Anger	2012	2.58	2.55	2.61	1.54	38.33	1.29	11,787
	2013	2.58	2.55	2.60	1.55	38.47	1.46	17,440
	2014	2.67	2.64	2.70	1.53	35.10	1.16	15,184
'NZ Europeans'								
Warmth	2012	5.53	5.50	5.55	1.25	0.57	27.99	11,812
	2013	5.58	5.55	5.60	1.28	0.68	30.74	17,512
	2014	5.60	5.58	5.63	1.23	0.31	29.70	15,127
	2015	5.52	5.49	5.54	1.23	0.55	26.18	13,543
	2016	5.56	5.54	5.58	1.24	0.47	28.37	21,114
	2017	5.51	5.49	5.54	1.24	0.38	27.27	16,570
Anger	2012	2.31	2.27	2.34	1.60	48.85	1.93	11,799
	2013	2.27	2.25	2.30	1.61	50.15	2.10	17,485
	2014	2.41	2.39	2.44	1.59	44.12	1.56	15,234
'Māori'								
Warmth	2012	4.85	4.82	4.88	1.37	1.55	13.14	11,810
	2013	4.92	4.90	4.95	1.37	1.69	14.51	17,498
	2014	5.00	4.98	5.03	1.32	1.34	13.67	15,136
	2015	4.93	4.91	4.96	1.30	1.31	11.88	13,538
	2016	5.00	4.98	5.02	1.31	1.20	13.45	21,091
	2017	4.99	4.96	5.01	1.29	1.24	12.76	16,593
Anger	2012	2.69	2.66	2.72	1.70	37.74	2.57	11,788
	2013	2.63	2.60	2.66	1.69	39.29	2.55	17,479
	2014	2.69	2.66	2.72	1.64	35.71	1.87	15,235

Muslims specifically may be changing relative to attitudes toward other groups in New Zealand who also tend to be viewed less favourably.

Participants provided ratings of warmth at each year (or wave) of data collection (Time 4 – Time 9). However, rather than fixing participants' responses to a single year, we allowed time scores (the time each individual's rating of warmth was made each year) to vary between individuals within each year to match the specific day of the year an individual's response was received. The model intercept for time (i.e., a score of 0) reflected the mean level of warmth expressed by participants in October 2012 (the start of data collection for Time 4). As such, we were able to estimate mean warmth at any point in time (in this

case, every three months), rather than once for each year.⁸

For completeness, we ran models that included linear, quadratic, and cubic terms for time. If necessary, these models were then re-run after removing higher order terms (e.g., cubic, then quadratic terms) when they were not significant. Analyses were limited to participants who completed at least 4 of the 6 waves, with missing data among participants who completed 4 or more waves estimated using Full Information Maximum Likelihood, with data assumed to be missing at random. Individual trajectories of change were weighted, such that individuals who completed more time points contributed the most information to the estimated mean trajectory of change.

⁸ Note that data collection for each wave of the NZAVS tends to run from October of one year to October of the next year, with data collection distributed throughout the 12 months. Thus, although the Time 9 NZAVS is referred to for simplicity as the 2017 wave, data

collection for that wave spanned October 2017 to October 2018. This is why we estimate model-implied rates of change for our LGMs from October 2012 – October 2018.

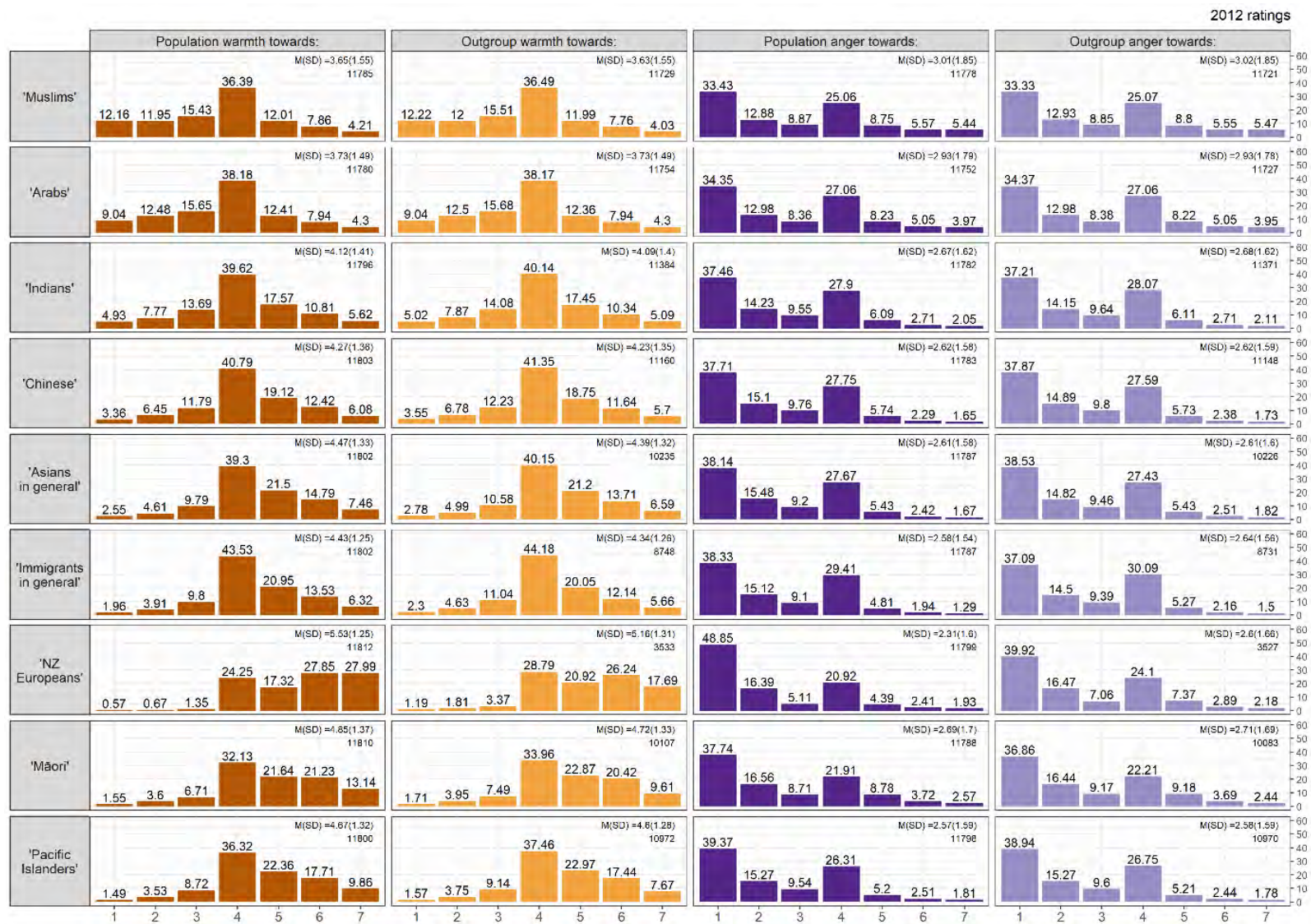


Figure 3. Histograms showing the distribution of thermometer ratings of warmth and anger toward each group in the Time 4 (2012) wave of the NZAVS.

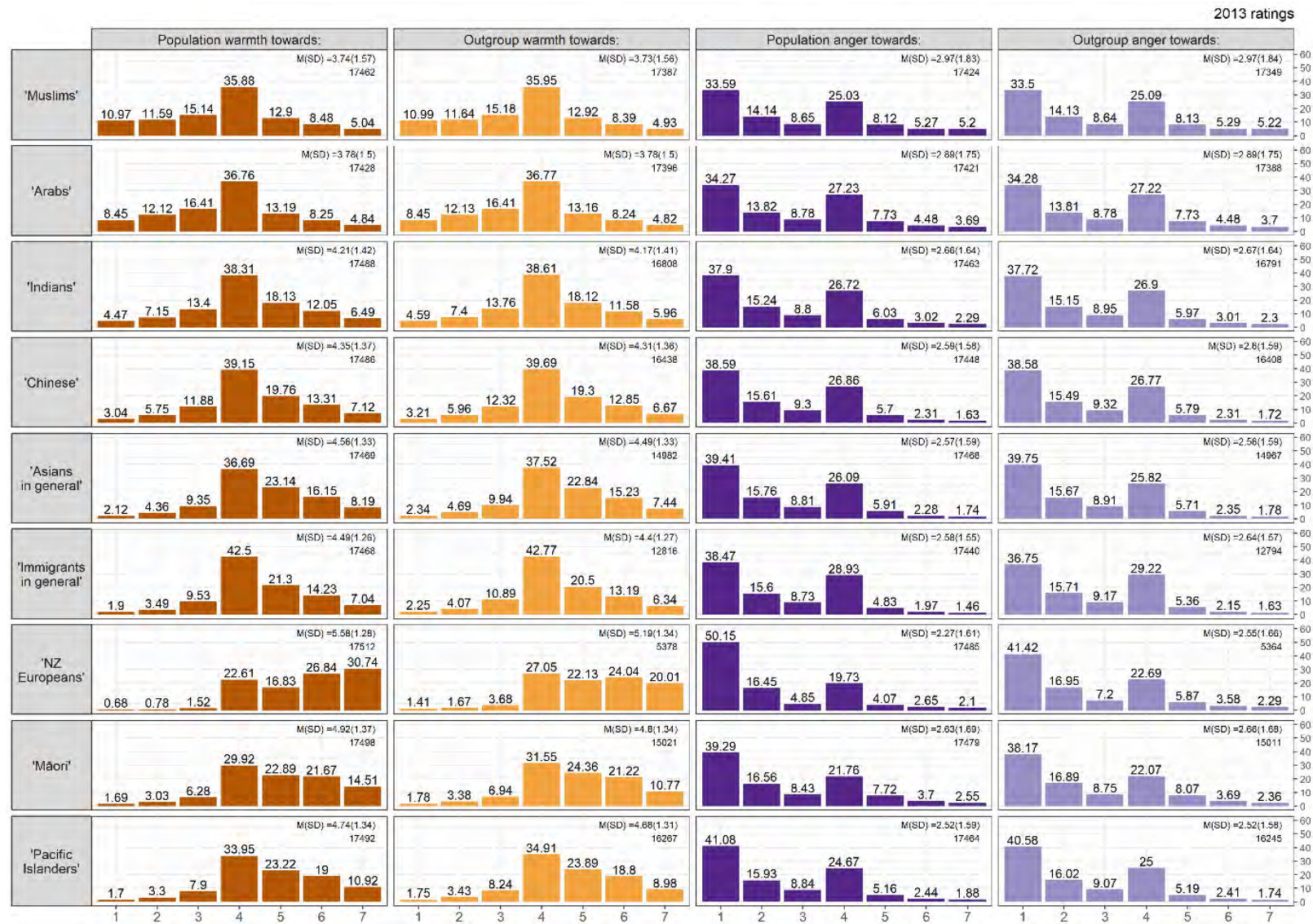


Figure 4. Histograms showing the distribution of thermometer ratings of warmth and anger toward each group in the Time 5 (2013) wave of the NZAVS

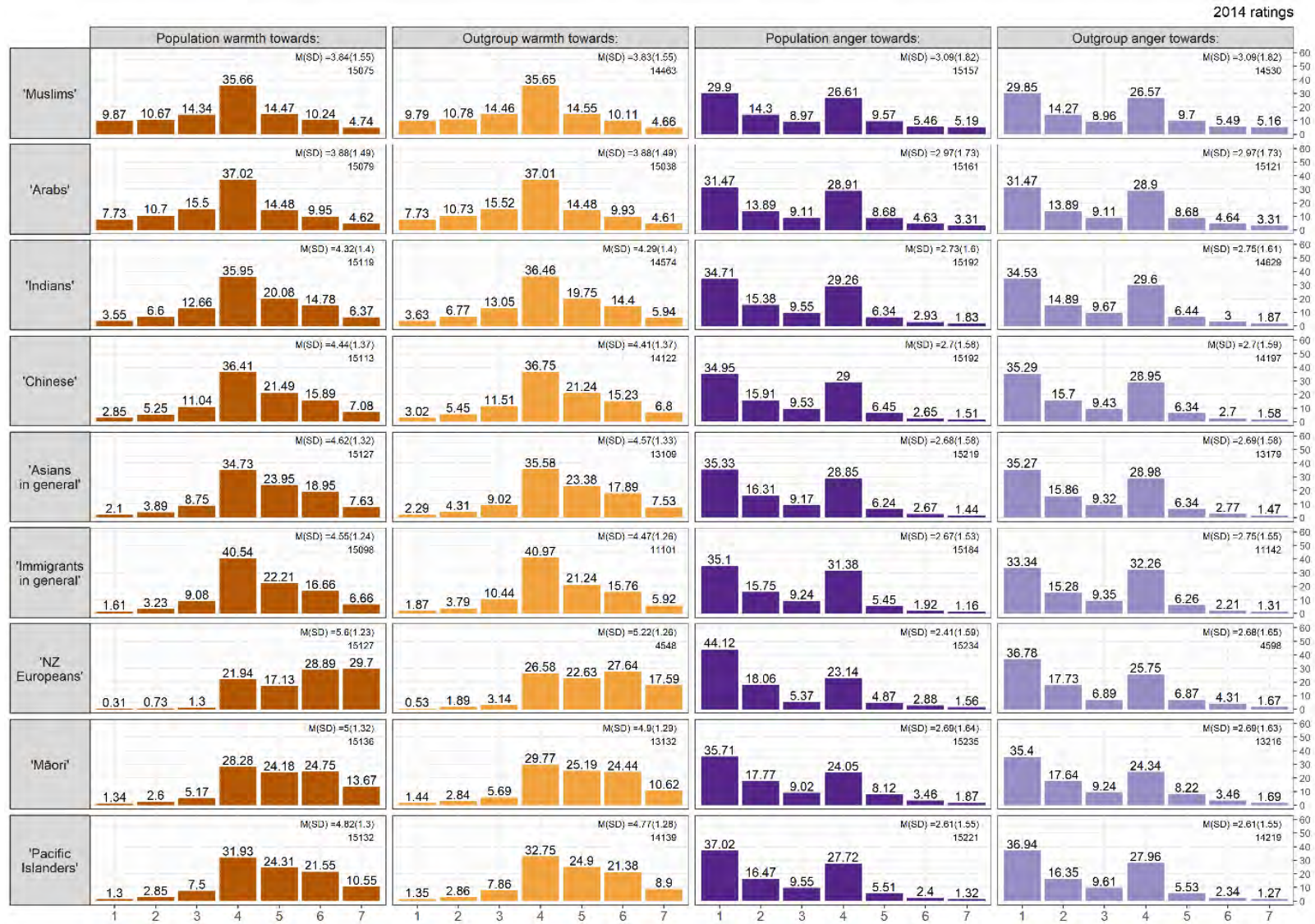


Figure 5. Histograms showing the distribution of thermometer ratings of warmth and anger toward each group in the Time 6 (2014) wave of the NZAVS

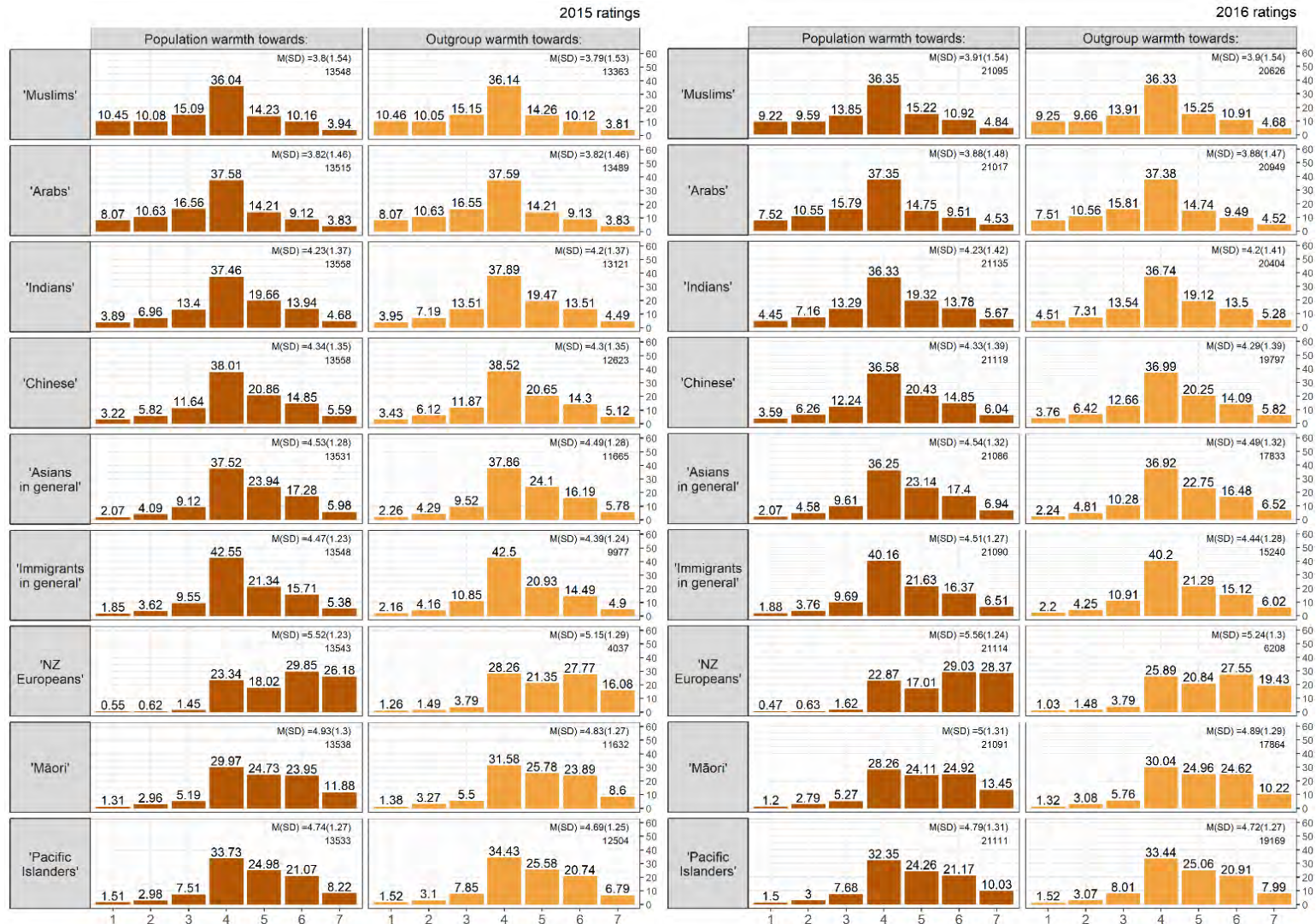


Figure 6. Histograms showing the distribution of thermometer ratings of warmth toward each group in the Time 7 (2015) wave of the NZAVS.

Figure 7. Histograms showing the distribution of thermometer ratings of warmth toward each group in the Time 8 (2016) wave of the NZAVS.

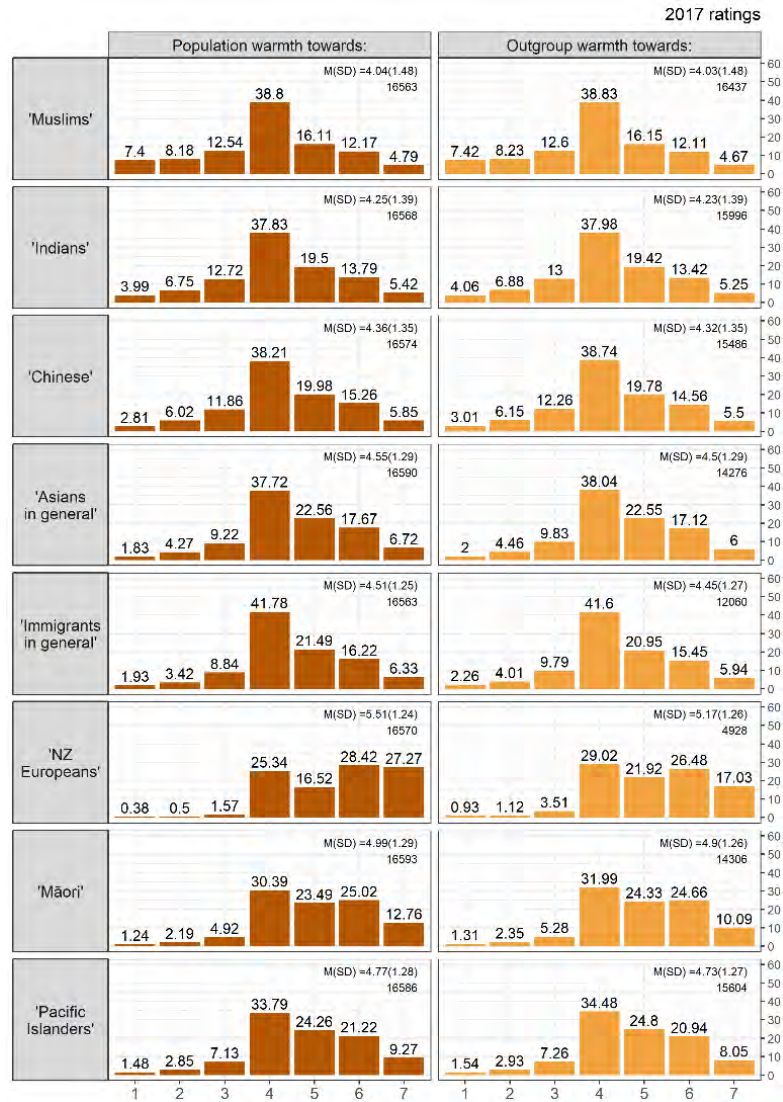


Figure 8. Histograms showing the distribution of thermometer ratings of warmth toward each group in the Time 9 (2017) wave of the NZAVS.

Table 5. Descriptive statistics and correlations for all variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
1. Warmth toward Muslims	-																							
2. Warmth toward Immigrants	.704	-																						
3. Gender (0 women, 1 male)	-.102	-.064	-																					
4. Age	-.095	-.005	.111	-																				
5. Education	.170	.155	-.044	-.198	-																			
6. Household Income (Log)	.062	.068	.064	-.163	.251	-																		
7. Deprivation	-.024	-.047	-.027	-.033	-.142	-.274	-																	
8. Socio-economic Status	.141	.139	-.076	-.086	.559	.295	-.152	-																
9. Māori Ethnicity (0 no, 1 yes)	-.011	-.054	-.031	-.047	-.099	-.061	.157	-.069	-															
10. Pacific Ethnicity (0 no, 1 yes)	.006	.008	-.005	-.064	-.025	-.030	.117	-.022	.105	-														
11. Asian Ethnicity (0 no, 1 yes)	.002	.024	-.015	-.121	.096	-.012	.009	.045	-.046	.004	-													
12. Religious (0 no, 1 yes)	-.025	.038	-.045	.131	-.005	-.064	.038	.002	.020	.082	.057	-												
13. Muslim (0 no, 1 yes)	.044	.009	-.007	-.017	.017	-.007	.018	.010	-.008	.017	.078	.061	-											
14. Parent (0 no, 1 yes)	-.045	-.011	.008	.416	-.110	.044	-.057	-.010	.026	-.025	-.086	.079	-.001	-										
15. Partner (0 no, 1 yes)	-.001	.025	.079	.034	.051	.343	-.189	.098	-.068	-.035	-.022	-.019	-.002	.271	-									
16. Employed (0 no, 1 yes)	.054	.030	.036	-.314	.155	.339	-.067	.123	-.006	-.008	.003	-.055	-.017	-.074	.079	-								
17. Urban (0 rural, 1 urban)	.045	.048	-.007	-.053	.091	.028	.097	.094	-.011	.045	.059	.022	.014	-.085	-.101	-.011	-							
18. Born in NZ (0 no, 1 yes)	-.021	-.077	-.030	-.009	-.158	-.032	.059	-.100	.160	-.023	-.254	-.032	-.033	.007	-.059	.009	-.015	-						
19. Extraversion	.073	.104	-.042	-.011	.026	.098	-.045	.057	.020	.016	-.026	.021	-.005	.070	.072	.052	.003	.001	-					
20. Agreeableness	.203	.214	-.292	.007	.095	.018	-.044	.109	-.053	-.032	-.020	.074	.001	.040	.027	-.010	.018	-.019	.204	-				
21. Conscientiousness	-.014	.026	-.085	.065	-.018	.071	-.059	.020	.002	.022	.003	.042	.010	.076	.074	.007	.004	-.019	.055	.137	-			
22. Neuroticism	-.055	-.100	-.134	-.220	.006	-.053	.043	-.020	.000	.005	.026	-.025	.007	-.119	-.063	.008	.032	.002	-.143	-.035	-.189	-		
23. Openness	.149	.138	.055	-.115	.232	.073	-.040	.144	-.011	-.002	.005	-.057	.004	-.079	-.001	.064	.022	-.067	.188	.234	-.027	-.040	-	
24. Honesty/Humility	.152	.148	-.123	.174	.058	-.030	-.026	.054	-.056	-.045	-.067	.015	-.001	.065	.027	-.084	-.046	-.035	-.063	.208	.099	-.176	.063	-
Mean	4.08	4.52	.37	51.20	5.27	11.37	4.59	54.95	.12	.03	.04	.36	.002	.74	.76	.78	.82	.80	3.87	5.35	5.11	3.44	4.93	5.43
SD	1.47	1.25	.48	13.75	2.77	0.84	2.72	16.13	.32	.16	.20	.48	.045	.44	.43	.42	.39	.40	1.17	0.96	1.02	1.14	1.11	1.17

Note. Correlations above .015 are significant at $p < .05$

Table 6. Multiple regression with demographic predictors for warmth toward 'Muslims', and toward 'Immigrants in general' as a comparison (N = 16,641)

	Warmth toward Muslims						Warmth toward Immigrants						
	<i>b</i>	β	<i>se</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>	<i>b</i>	β	<i>se</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>	
Gender (0 women, 1 men)	-.141**	-.046	.025	-5.599	<.001	-.190 -.092	-.044*	-.017	.021	-2.099	.036	-.086	-.003
Age	-.008**	-.076	.001	-8.207	<.001	-.010 -.006	.000	.004	.001	0.441	.659	-.001	.002
Education	.045**	.086	.005	8.931	<.001	.035 .055	.033**	.074	.004	7.759	<.001	.025	.042
Household Income (Log)	.014	.008	.018	0.772	.440	-.022 .050	.029*	.020	.015	1.985	.047	.000	.058
Deprivation	-.001	-.001	.004	-0.164	.870	-.009 .008	-.004	-.010	.004	-1.189	.234	-.012	.003
Socio-economic Index	.004**	.045	.001	4.806	<.001	.002 .006	.003**	.044	.001	4.675	<.001	.002	.005
Māori Ethnicity (0 no, 1 yes)	.044	.010	.035	1.230	.219	-.026 .113	-.082*	-.021	.032	-2.569	.010	-.145	-.020
Pacific Ethnicity (0 no, 1 yes)	.139	.015	.074	1.892	.059	-.005 .283	.148*	.019	.068	2.178	.029	.015	.281
Asian Ethnicity (0 no, 1 yes)	-.067	-.009	.056	-1.187	.235	-.176 .043	.060	.010	.047	1.271	.204	-.033	.153
Religious (0 no, 1 yes)	-.083**	-.027	.024	-3.539	<.001	-.130 -.037	.065*	.025	.020	3.311	.001	.027	.104
Muslim (0 no, 1 yes)	1.413**	.043	.232	6.102	<.001	.959 1.867	.110	.004	.208	0.531	.596	-.297	.518
Parent (0 no, 1 yes)	-.028	-.008	.028	-0.989	.323	-.083 .027	-.060*	-.021	.024	-2.459	.014	-.108	-.012
Partner (0 no, 1 yes)	-.036	-.010	.029	-1.240	.215	-.092 .021	.005	.002	.025	0.203	.840	-.044	.054
Employed (0 no, 1 yes)	.061*	.017	.030	2.026	.043	.002 .120	.038	.013	.026	1.469	.142	-.013	.088
Urban (0 rural, 1 urban)	.117**	.031	.029	4.033	<.001	.060 .174	.116**	.036	.025	4.693	<.001	.067	.164
Born in NZ (0 no, 1 yes)	.011	.003	.028	0.392	.695	-.045 .067	-.134**	-.043	.023	-5.735	<.001	-.180	-.088
Extraversion	.034*	.027	.010	3.308	.001	.014 .054	.056**	.053	.009	6.416	<.001	.039	.073
Agreeableness	.214**	.140	.013	16.029	<.001	.188 .240	.195**	.151	.012	16.884	<.001	.173	.218
Conscientiousness	-.076**	-.053	.011	-6.695	<.001	-.098 -.054	-.030*	-.024	.010	-3.063	.002	-.049	-.011
Neuroticism	-.074**	-.058	.011	-7.052	<.001	-.095 -.054	-.081**	-.075	.009	-9.007	<.001	-.099	-.064
Openness	.082**	.062	.011	7.474	<.001	.061 .104	.059**	.053	.009	6.272	<.001	.041	.078
Honesty-Humility	.151**	.121	.011	14.39	<.001	.131 .172	.105**	.099	.009	11.485	<.001	.087	.123

Note. ** $p < .001$, * $p < .05$

Table 7. Fixed and random effects for the Latent Growth Model of warmth toward ‘Muslims’ between 2012 – 2018.

	<i>b</i> [95% CI]	<i>se</i>	<i>t</i>	<i>p</i>
Warmth toward ‘Muslims’				
<i>Fixed effects</i>				
Intercept	3.684 [3.647, 3.721]	.019	194.453	< .001
Linear slope	.118 [.076, .159]	.021	5.571	< .001
Quadratic slope	-.038 [-.054, -.022]	.008	-4.697	< .001
Cubic slope	.005 [.004, .007]	.001	5.844	< .001
<i>Random effects</i>				
Intercept	1.513 [1.418, 1.609]	.049	31.086	< .001
Linear slope	.256 [.083, .429]	.088	2.903	.004
Quadratic slope	.032 [.005, .059]	.014	2.330	.020
Cubic slope	.000 [.000, .001]	.000	1.966	.049
<i>Covariances</i>				
Intercept – Linear slope	-.030 [-.140, -.079]	.056	-0.545	.586
Intercept – Quadratic slope	-.016 [-.058, .027]	.022	-0.724	.469
Intercept – Cubic slope	.002 [-.003, .007]	.002	0.896	.370
Linear slope – Quadratic slope	-.079 [-.146, -.012]	.034	-2.308	.021
Linear slope – Cubic slope	.007 [-.001, .014]	.004	1.806	.071
Quadratic slope – Cubic slope	-.003 [-.006, .000]	.002	-2.077	.038

Note: *N* = 12,936. Fit indices: loglikelihood = -102318.36, AIC = 204666.71, BIC = 204778.73. Models estimated using Maximum Likelihood with robust estimation of standard errors.

Table 9. Fixed and random effects for the Latent Growth Model of warmth toward ‘Asians in general’ between 2012 – 2018.

	<i>b</i> [95% CI]	<i>se</i>	<i>t</i>	<i>p</i>
Warmth toward ‘Asians in general’				
<i>Fixed effects</i>				
Intercept	4.374 [4.340, 4.408]	.017	252.255	< .001
Linear slope	.233 [.193, .273]	.021	11.300	< .001
Quadratic slope	-.080 [-.096, -.065]	.008	-10.142	< .001
Cubic slope	.008 [.006, .010]	.001	9.077	< .001
<i>Random effects</i>				
Intercept	1.005 [.922, 1.089]	.043	23.569	< .001
Linear slope	.309 [.152, .467]	.080	3.844	< .001
Quadratic slope	.037 [.013, .062]	.012	3.002	.003
Cubic slope	.000 [.000, .001]	.000	2.292	.022
<i>Covariances</i>				
Intercept – Linear slope	-.140 [-.238, -.042]	.050	-2.789	.005
Intercept – Quadratic slope	.030 [-.008, .067]	.019	1.542	.123
Intercept – Cubic slope	-.002 [-.006, .002]	.002	-0.983	.325
Linear slope – Quadratic slope	-.101 [-.162, -.040]	.031	-3.227	.001
Linear slope – Cubic slope	.009 [.002, .015]	.003	2.632	.008
Quadratic slope – Cubic slope	-.004 [-.006, .001]	.001	-2.587	.010

Note: *N* = 12,936. Fit indices: loglikelihood = -97068.81, AIC = 194167.62, BIC = 194279.64. Models estimated using Maximum Likelihood with robust estimation of standard errors.

Table 8. Fixed and random effects for the Latent Growth Model of warmth toward ‘Immigrants in general’ between 2012 – 2018.

	<i>b</i> [95% CI]	<i>se</i>	<i>t</i>	<i>p</i>
Warmth toward ‘immigrants in general’				
<i>Fixed effects</i>				
Intercept	4.445 [4.414, 4.477]	.016	275.427	< .001
Linear slope	.120 [.081, .158]	.020	6.102	< .001
Quadratic slope	-.046 [-.061, -.031]	.008	-6.084	< .001
Cubic slope	.005 [.003, .007]	.001	5.757	< .001
<i>Random effects</i>				
Intercept	0.770 [.695, .846]	.039	19.963	< .001
Linear slope	.191 [.038, .343]	.078	2.446	.014
Quadratic slope	.029 [.005, .053]	.012	2.363	.018
Cubic slope	.000 [.000, .001]	.000	2.276	.023
<i>Covariances</i>				
Intercept – Linear slope	-.026 [-.118, .066]	.047	-0.554	.580
Intercept – Quadratic slope	-.002 [-.039, .034]	.018	-0.127	.899
Intercept – Cubic slope	.001 [-.003, .005]	.002	0.410	.682
Linear slope – Quadratic slope	-.068 [-.128, -.008]	.031	-2.209	.027
Linear slope – Cubic slope	.006 [.000, .013]	.003	1.943	.052
Quadratic slope – Cubic slope	-.003 [-.006, .000]	.001	-2.268	.023

Note: *N* = 12,936. Fit indices: loglikelihood = -94536.98, AIC = 189103.95, BIC = 189215.97. Models estimated using Maximum Likelihood with robust estimation of standard errors.

Table 10. Fixed and random effects for the Latent Growth Model of warmth toward ‘Chinese’ between 2012 – 2018.

	<i>b</i> [95% CI]	<i>se</i>	<i>t</i>	<i>p</i>
Warmth toward ‘Chinese’				
<i>Fixed effects</i>				
Intercept	4.191 [4.167, 4.224]	.017	244.998	< .001
Linear slope	.249 [.210, .288]	.020	12.389	< .001
Quadratic slope	-.088 [-.103, -.073]	.008	-11.308	< .001
Cubic slope	.009 [.007, .011]	.001	10.322	< .001
<i>Random effects</i>				
Intercept	0.999 [.918, 1.079]	.041	24.354	< .001
Linear slope	.168 [.055, .280]	.057	2.916	.004
Quadratic slope	.022 [.007, .038]	.008	2.781	.005
Cubic slope	.000 [.000, .000]	.000	2.181	.029
<i>Covariances</i>				
Intercept – Linear slope	-.024 [-.107, .059]	.042	-0.572	.568
Intercept – Quadratic slope	-.004 [-.035, .027]	.016	-0.251	.801
Intercept – Cubic slope	.001 [-.002, .004]	.002	0.560	.575
Linear slope – Quadratic slope	-.053 [-.096, -.012]	.021	-2.555	.011
Linear slope – Cubic slope	.004 [.000, .009]	.002	1.952	.051
Quadratic slope – Cubic slope	-.002 [-.004, .000]	.001	-2.413	.016

Note: *N* = 12,936. Fit indices: loglikelihood = -97530.35, AIC = 195090.71, BIC = 195202.72. Models estimated using Maximum Likelihood with robust estimation of standard errors.

Table 11. Fixed and random effects for the Latent Growth Model of warmth toward 'Indians' between 2012 – 2018.

	<i>b</i> [95% CI]	<i>se</i>	<i>t</i>	<i>p</i>
Warmth toward 'Indians'				
<i>Fixed effects</i>				
Intercept	4.103 [4.068, 4.138]	.018	231.693	< .001
Linear slope	.220 [.180, .260]	.021	10.690	< .001
Quadratic slope	-.075 [-.090, -.059]	.008	-9.417	< .001
Cubic slope	.007 [.006, .009]	.001	8.484	< .001
<i>Random effects</i>				
Intercept	1.172 [1.083, 1.261]	.045	25.799	< .001
Linear slope	.277 [.116, .438]	.082	3.375	.001
Quadratic slope	.037 [.012, .062]	.013	2.913	.004
Cubic slope	.000 [.000, .001]	.000	2.533	.011
<i>Covariances</i>				
Intercept – Linear slope	-.096 [-.198, .007]	.052	-1.831	.067
Intercept – Quadratic slope	.015 [-.025, .054]	.020	0.732	.464
Intercept – Cubic slope	-.001 [-.005, .004]	.002	-0.317	.751
Linear slope – Quadratic slope	-.092 [-.155, -.030]	.032	-2.884	.004
Linear slope – Cubic slope	.008 [.002, .015]	.003	2.398	.016
Quadratic slope – Cubic slope	-.004 [-.006, -.001]	.001	-2.653	.008

Note: *N* = 12,936. Fit indices: loglikelihood = -98644.52, AIC = 197319.04, BIC = 197431.05. Model estimated using Maximum Likelihood with robust estimation of standard errors.

The results of the models assessing each group are displayed in Tables 7-11, with the fixed effect coefficients indicating the extent and pattern of change in warmth. Looking at warmth toward Muslims, the cubic slope ($b = .005$, $p < .001$), quadratic slope ($b = -.038$, $p < .001$), and linear slope ($b = .118$, $p < .001$) were each significant, indicating non-linear change in warmth over time. Similarly, the models assessing warmth toward immigrants, Asian peoples, Chinese people, and Indians also showed significant linear, quadratic, and cubic effects.

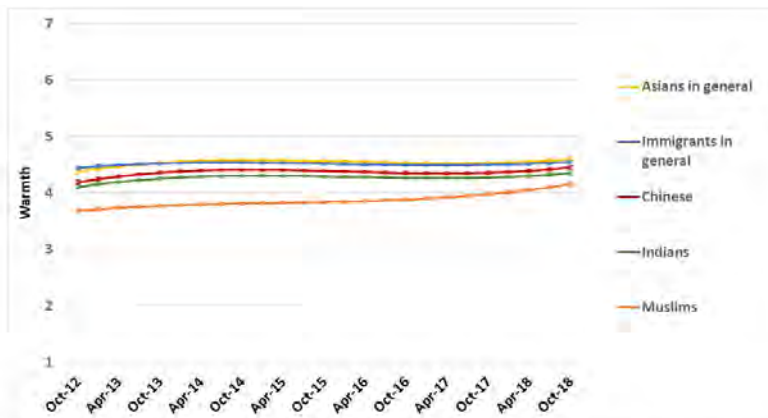


Figure 9. Latent growth curves representing the average rate of change in feeling thermometer ratings toward 'Asians in general', 'Immigrants in general', 'Chinese', 'Indians' and 'Muslims.' Growth curves were estimated separately for ratings of each group, and the curves represent model-implied values based on the parameters reported in Tables 7-11.

The trajectory of change in warmth toward Muslims (alongside the comparative groups) is displayed in Figure 9. The figure plots model-implied levels of warmth estimated at 3-monthly intervals between October 2012 and October 2018. As shown in Figure 9, warmth toward Muslims (3.68) was lower than the mid-point of the scale in October 2012, and the lowest of any group examined. However, warmth increased (at varying rates) over the six-year period, and was notably higher (4.16; although still at the neutral point of the scale) by October 2018.

Whereas the trajectory of change in warmth toward the other groups examined exhibited periods of slight decline in warmth, the trajectory of change in warmth toward Muslims was always positive. Overall, between October 2012 to October 2018, warmth toward Muslims rose by .474 (on a scale from 1-7), which was the largest increase in warmth toward any group examined.

DISCUSSION

In this paper, we present a summary of feeling thermometer data on warmth toward Muslims from the New Zealand Attitudes and Values Study (NZAVS). We present data from the Time 4 (2012) to Time 9 (2017) waves of the NZAVS, as we included warmth toward Muslims for the first time in 2012.

Summary of Findings

Our results are organized in three sections: (a) a comprehensive description of the levels of warmth and anger toward Muslims and other groups in New Zealand, and the distribution of these ratings, (b) a regression model summarizing the extent to which a broad range of demographics and aspects of personality are associated with low versus high levels of warmth toward Muslims, and (c) a latent growth curve model showing how feelings toward Muslims changed from 2012 onwards. We summarize the results of each section below.

The histograms summarizing feeling thermometer ratings (Figures 3-8) indicate that, across the years, warmth ratings toward Muslims were relatively normally distributed, yet lower on average than warmth ratings toward all the other groups we examined. This was apparent in analyses of both the overall sample for each wave, and the outgroup estimate excluding members of each group when estimating warmth ratings toward that group. From 2012 to 2017, there was consistently less warmth expressed toward Muslims than other groups in New Zealand. The same pattern held for the years in which we also measured ratings of 'Arabs.'

Another trend that can be seen in these histograms is that, across years, there are consistently fewer people in the population rating below the midpoint (i.e., ratings below neutral) in feelings of warmth toward NZ Europeans, Pacific peoples, and Māori. This pattern remains consistent when looking specifically at outgroup ratings (e.g., warmth toward NZ Europeans excluding the

ratings of NZ European participants). For ratings of NZ Europeans, Pacific people and Māori, the effective thermometer scale looks more like it is truncated and effectively ranges from 'neutral' to 'most warm' rather than from 'least warm' through 'neutral' to 'most warm.'

The histograms for anger show a different pattern of distributions to those measuring feelings of warmth. A sizeable proportion of the NZ population (between 30-40%) expressed no anger toward any of the groups, including Muslims. However, even here we see variation. As can be seen in Figures 3-8, across the years in which we measured anger, consistently more people rated no anger toward all other groups than the amount of people who rated no anger toward Muslims or Arabs (the exact proportions are reported in Tables 2-4). As with low warmth, more people in New Zealand report at least a little anger toward Muslims and Arabs relative to the other groups we measured feelings toward.

The regression model presented in the second section of results provides a profile of the demographics and aspects of personality that are associated with lower or higher levels of concurrent warmth toward Muslims. This model assesses the correlation of each demographic or personality trait with warmth toward Muslims, when statistically adjusting for all the other factors in the model. For example, it documents the association between age and warmth toward Muslims adjusting for gender, education, Extraversion and so forth. Another way to think about this regression model is that it provides a profile of the factors associated with low or high warmth toward Muslims, or a demographic and personality segmentation of those factors.

The *b* values in the model represent the unstandardized regression parameters. These parameters are extremely useful because they provide the actual predicted units of change in warmth associated with a one-unit change in the predictor, adjusting for all other predictors in the model. Put another way, for each one-unit increase in a predictor variable, there is, on average, a corresponding *b* unit change in the level of warmth toward Muslims. The β parameters in the model provide much the same information, but in standard deviation units. This is useful because it allows one to get a sense of the relative magnitude of each predictor compared to the others, as they are on a common (standard deviation unit) metric.

Walking through the regression parameters reported in Table 6, men tended, on average, to express less warmth toward Muslims than women (specifically, they tended on average to report .141 units less warmth). Older people were also less warm toward Muslims, again on average. Those with a higher level of education were warmer toward Muslims, as were those with a higher socio-economic index, and those living in urban areas. Differences in the regional deprivation of one's neighbourhood, household income, whether one was a parent, had a partner, were born in New Zealand, and one's own ethnicity were all unassociated with levels of warmth toward Muslims. Unsurprisingly, Muslims expressed a high level of warmth toward Muslims.

The regression model reported in Table 6 also indicates that religiously affiliated people were less warm toward Muslims than were non-religiously affiliated people. This observation is qualified by the in-depth analyses of NZAVS data conducted by Shaver et al. (2016). Shaver et al. showed that weakly religiously identified people exhibited less warmth to Muslims than non-affiliated people, and that among the religiously affiliated, higher warmth to Muslims was observed only among highly religiously-identified, church-attending religious affiliates (see also Highland et al., 2019).

With regard to personality, higher levels of Extraversion, Agreeableness, Openness to Experience and Honesty-Humility were associated with higher warmth toward Muslims. Conversely, higher levels of Conscientiousness and Neuroticism (or low Emotional Stability) were associated with lower warmth toward Muslims. These personality results are broadly consistent with the links between personality and prejudice in other domains (see Sibley & Duckitt, 2008, for a meta-analysis and review), and were included in this model simply to statistically adjust for their associations when examining the correlations between demographic factors and thermometer ratings.

Although many of the demographics in the regression model were significant, it is critical to recognize that many of the associations in the model were extremely small in magnitude. They describe, at best, extremely weak effects. One can get a sense of this by looking at the standardized coefficients in the model, which were all below .30 (a correlation value of .30 is typically described as a moderate effect, and one of .50 as strong). Of the various demographics included in the regression model, education showed the largest effect size (although still being quite a small effect), with $\beta = .086$. This is promising as levels of education are something that a society can change (also see Osborne, Satherley, Yogeewaran, Hawi, & Sibley, 2019).

We hope that this regression model will be of use for people seeking to understand the segmentation and prediction of anti-Muslim sentiment in the population. We hope that this model will also provide an evidence base moving forward when developing prejudice reduction interventions tailored toward specific segments of the population.

The third section of the results describes a series of Latent Growth Curves assessing the level and rate of change in feeling thermometer ratings of warmth toward Muslims from October 2012 to October 2018. We also report separate growth models examining change in warmth ratings toward 'Asians in general', 'Immigrants in general', 'Chinese', and 'Indians' as a comparison. We chose to include ratings of these groups as a comparison because they showed the most similar levels and distributions to rating of Muslims in our histograms.⁹

The results of our growth curve analyses indicate that ratings of warmth toward all five groups in our analysis increased from October 2012 to October 2018. The slopes reported in Figure 9 further indicate that change may not

⁹ We did not estimate a growth model for thermometer ratings of 'Arabs' because warmth toward them was not included in the Time 9 questionnaire (it was swapped out to measure warmth toward

refugees instead). We also did not estimate growth curves for anger ratings as they likewise had been included at a more limited set of study waves.

be entirely linear, perhaps plateauing for some period of time, and accelerating at other times.¹⁰ As can also be seen in Figure 9, overall levels of warmth toward Muslims remained lower than warmth ratings of 'Asians in general', 'Immigrants in general', 'Chinese' and 'Indians' throughout the October 2012 to October 2018. Moreover, while warmth toward all groups increased over this time period, warmth toward Muslims showed the greatest increase over time. There is most certainly further room for improvement, but we are tracking an upward trend in warmth.¹¹

Ruling Out Response Bias in Thermometer Ratings

Readers might reasonably wonder if people respond honestly to feeling thermometer ratings. Perhaps no one is willing to rate that they feel little or no warmth toward other groups, or perhaps our scales underestimate the number of people who actually feel this way? For a start, we do see considerable variation in feeling thermometer ratings toward a range of different groups, with people responding using the full range of the scale for a number of groups. Our results certainly indicate that some people rate that they feel little or no warmth toward Muslims. This does not, however, speak to the possibility that low levels of warmth may be underestimated in survey studies (they would be underestimated if perhaps some people were unwilling to admit the magnitude of their consciously-held low feelings of warmth, and this would inflate our estimate of the true score).

One way to see if affect thermometer ratings are biased because some people are unwilling to admit their consciously-held low feelings of warmth is to check whether warmth ratings are systematically correlated with lie detection items (known as socially desirable responding). The Time 1 (2009) NZAVS questionnaire included two marker items from Paulhus' (1991) inventory of socially desirable responding. One item assessed impression management (i.e., I ... 'Don't care to know what other people really think of me') and one item assessed self-deceptive enhancement (i.e., I ... 'Don't gossip about other people's business'). These are the two primary factors underlying response bias due to socially desirable responding.

The idea behind including these items is that very few people should be able to honestly agree with them. Most

of us care at least a little regarding what others think about us, and most of us gossip at least a little. One can then check to see if the tendency to agree with these items (i.e., reporting that one does not care what others think or ever gossips) correlates with other self-report measures of interest. To the extent to which they reliably correlate with other scales, those scales may be contaminated by response bias due to impression management and self-deceptive enhancement. This contamination may then be adjusted for statistically to obtain a more reliable estimate of the true level of warmth or anger.

Fortunately, analysis of the Time 1 NZAVS ($N = 6,518$) indicated that scores on the two social desirability marker items were not, or at best extremely weakly, correlated with the various affect thermometer ratings included in the questionnaire. This is good news as it indicates little-to-no response bias due to socially desirable responding. For each feeling thermometer ratings, the correlation with the impression management and self-deceptive enhancement items were, respectively: Māori ($r_s = .023, .025$), Pacific peoples ($r_s = -.009, .035$), Asians ($r_s = -.015, .054$), NZ Europeans ($r_s = -.042, -.006$), Chinese ($r_s = -.014, .049$), immigrants in general ($r_s = -.031, .064$), overweight people ($r_s = .027, .031$), and Americans ($r_s = -.012, .042$).

It is also possible that the specific thermometer items included in the NZAVS may be biased by a comparison effect, where people are subjectively rating their warmth toward each group relative to the list of other groups also included in the scale. This is a difficult criticism to entirely rule out, and there is research suggesting that people are influenced by previous Likert items more generally when completing questionnaires. For instance, it is generally recommended that more general questions should be asked first and specific questions afterwards, as asking specific questions can bias responses to more general questions in the same domain (see for example, Garbarski, Schaeffer & Dykema, 2015). If there is a bias introduced by some sort of comparison effect in the thermometer ratings included in the NZAVS, then the point that people feel the least warmth toward Muslims of all the groups we measure still stands. Unfortunately, we do not have experimental data comparing warmth ratings of groups when the order or composition of the target groups included in the list differs across conditions.

¹⁰ Although the data do indicate subtle cubic effects in the rate of change, it is risky to read too much into possible curvilinear patterns without more waves of data. We are, quite literally, fitting curves with only six annual time points, or six points of observation per person (and less in some cases, as not all participants completed all six waves). Our Monte Carlo simulations indicate that this provides adequate statistical power to estimate overall rates of change given the sample size and pattern of missingness in the NZAVS dataset (see Sibley & Milojev, 2014). However, it is by no means enough to test subtler trends, such as possible cyclical trends or oscillations across election cycles or changes in government. We also do not have enough waves of data (yet) to test piecewise growth models, where one rate of change is estimated prior to some point in time (say a major world event) and another rate of change is estimated following it. In sum, we would not make too much of the slight non-linear curves in these growth models - perhaps they are patterns of change as we emerge from the Global Financial Crisis? Or perhaps New Zealander's attitudes have become more tolerant in recent years following the rise in populism seen in some other countries? Both are possibilities, although highly post-hoc,

and somewhat tenuous explanations. Yet a third possibility is the increased number of migrants to New Zealand overall during this period. As our migrant population increases, in particular urban areas and populations attitudes to migrants may have warmed; conversely, in areas with lower direct experience of migrants, attitudes may not have warmed to the same level. Regardless, this should not overshadow the primary result: rates of warmth have increased.

¹¹ Some readers may wonder if the rate of increase in warmth toward Muslims might simply be explained by regression to the mean. The argument here is that, statistically, observations that are at the extreme, i.e., those most above or below the mean, are the most likely to move toward the mean over time. We think that this is unlikely because if regression to the mean were driving this trend then one might expect to see a corresponding decrease in warmth toward Asians (as those ratings are approximately as much above the midpoint as ratings of Muslims are below it). The trends are also consistent across six annual waves of data, rather than say, just two.

The NZAVS also included a warmth rating of ‘Arabs’ from Time 4-Time 8, but this was swapped out to include ratings toward ‘Refugees’ in Time 9. Warmth toward Muslims and warmth towards Arabs were highly correlated at each time point (e.g., at Time 4, $r = .834$; at Time 5, $r = .823$; at Time 6, $r = .845$; at Time 7, $r = .847$; at Time 8, $r = .842$), suggesting that responses to these two measures are relatively indistinguishable in the New Zealand context. Of course, this coupling of attitudes toward Muslims and Arabs is context specific and would likely differ in contexts where people were more exposed, or at least aware of, Muslim communities in different parts of the world and of different ethnic groups, and also people from the Middle East who affiliate with religions other than Islam. In New Zealand, however, the concepts of Muslim and Arab are strongly linked as one overall concept.

Concluding Comments

In the wake of the March 15th Christchurch terrorist attacks, our research group feels that it is important to provide aggregate or overall summary data on levels of prejudice toward Muslims in New Zealand. It is our hope that such information will help policy-makers, community groups, and other bodies reflect on and alleviate prejudices faced by Muslims in New Zealand. Rather than presenting these data piecemeal, or providing some specific findings to some groups, but different analyses to others, we opted to present, as comprehensively as we could, a summary of what we

know about levels of warmth and anger toward Muslims and other groups in New Zealand. As the curators of the NZAVS, we think that these findings should be in the public domain, accessible to all.

There is a lot of subjectivity in how one can present research findings, particularly in the social sciences. We have deliberately stuck close to these data, and tried to present findings from the NZAVS in a broadly descriptive way so that they may be understood by a wide audience while keeping our (subjective) interpretation of the findings fairly brief. We wanted to let our findings speak for themselves. We think that they do.

We hope that, in some small way, our findings may be of benefit to the community moving forward, to Muslim members of our community in particular, to government departments and other community groups seeking to understand the level of prejudice in New Zealand. We hope that our findings will be useful for those aiming to design policy or evaluate interventions to increase tolerance and challenge prejudice and anti-Islamic attitudes, such as the Human Rights Commission and Ministry of Social Development. Finally, we hope that our findings will be useful for those contributing their voice to the inevitable and enduring conversation that we, as a bicultural nation but also a multicultural nation, must have about what our national identity is, and the values and beliefs that we think should represent us (and those that it seems sometimes do whether we like it or not).

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Appendix: NZAVS Sampling Procedure

Sampling Procedure -- NZAVS Time 4 (2012)

The Time 4 (2012) NZAVS contained responses from 12,179 participants (6,807 retained from one or more previous wave, 5,107 new additions from booster sampling, and 265 unmatched participants or unsolicited opt-ins). Informal analysis indicates that unsolicited opt-ins were often the partners of existing participants. The sample retained 4,053 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 62.2% over three years). The sample retained 5,762 participants from the full Time 3 (2011) sample (a retention rate of 83.7% from the previous year). Participants were posted a copy of the questionnaire, with a second postal follow-up two months later. Participants who provided an email address were also emailed and invited to complete an online version if they preferred.

Non-respondents were emailed a follow-up reminder email approximately two months later. Three attempts were then made using each provided phone number (typically home and cell phone) to contact non-respondents to encourage participation. These attempts were made on separate days, approximately one week apart. When possible, a phone message was left for each phone number after the third attempt. Participants were also posted a pamphlet outlining recent findings from the study mid-way through the year. Finally, participants were posted a Season's Greetings from the NZAVS research team, and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw for a total pool of \$NZ 1,000). Participants were informed that the draw would happen automatically and winners contacted. The Season's Greetings card also asked participants to contact us (online, email or phone) to let us know if any of their contact details had changed before the prize draw was conducted. These additional materials are presented by Huang, Greaves, and Sibley (2014) in an online NZAVS technical report.

To boost sample size at Time 4 and increase sample diversity for subsequent waves, five independent booster samples using different sample frames were also conducted. Booster sampling was conducted without replacement (i.e., all people included in previous sample frames were identified and removed from the electoral roll before generation of the new sample frames). The first sample frame consisted of a randomly selected sample of 20,000 people from the 2012 New Zealand Electoral, and who were currently residing in New Zealand (one can be registered to vote in New Zealand but living overseas). A total of 2,429 participants responded to this booster sample (response rate = 12.33% when adjusting for the 98.5% accuracy of the 2012 electoral roll). The second sample frame consisted of a regional booster of 10,000 people randomly selected from people listed in the 2012 Electoral Roll who lived in the Auckland region. A total of 890 participants responded to this booster sample (adjusted response rate = 9.04). The Auckland region was oversampled because it is the fastest growing and most ethnically diverse region of the country with an increasing number of Asian

and Pacific peoples in particular. The questionnaire used for this Auckland sample was longer than the standard NZAVS questionnaire, and contained additional unrelated questions that are not included in the NZAVS dataset (these related to the use of community facilities). Exit interviews conducted during Time 5 indicated that the longer length of this questionnaire may have contributed to the low response rate in this case.

The third sample frame consisted of 3,000 people randomly selected from the 2012 Electoral Roll who lived in the Christchurch region. A total of 332 participants responded to this booster sample (adjusted response rate = 11.24%). The Christchurch region was oversampled because it has experienced significant hardship and change due to the Christchurch earthquakes of 2010 and 2011 with many people moving out of the region (Statistics New Zealand, 2013) and problems with mail delivery with some city zones being placed under restricted entry due to safety concerns and considerable infrastructure destroyed).

The fourth sample frame consisted of 9,000 respondents selected from meshblock area units across the country that were moderate-to-high in deprivation according to the index developed by Salmond, Crampton and Atkinson (2007). Regions with levels of deprivation were selected using scores on the decile-ranked NZ Deprivation index from 6-10, with 10 being the most deprived). This sample frame used scaled weighting so that people in increasingly deprived regions were increasingly more likely to be selected (with random sampling of people within regions that had a given level of deprivation). The scaling factor was as follows: $n_i = n_{base} * weight_i$, where $n_{base} = 600$, and $weight_i$ ranged from 1 to 5 and increased by 1 for each one-unit increase in deprivation score. Thus, 600 people were randomly selected from regions with a deprivation score of 6, 1,200 people were randomly selected from regions with a deprivation score of 7, and so on. This sampling strategy was designed to increase the representativeness of the sample across regions with different levels of deprivation, as the NZAVS showed increased attrition in increasingly more deprived regions over the first three years of the study. A total of 767 participants responded to this booster sample (adjusted response rate = 8.65%). The fifth sample frame consisted of 9,000 people randomly selected from those who indicated on the 2012 Electoral Roll that they were of Māori ethnicity (ethnic affiliation as Māori is listed on the roll, but other ethnic affiliations are not). A total of 689 participants responded to this booster sample (adjusted response rate = 7.78%). The questionnaire administered to the Māori booster sample included questions specifically designed for Māori.

Sampling Procedure -- NZAVS Time 5 (2013)

The Time 5 (2013) NZAVS contained responses from 18,261 participants (10,502 retained from one or more previous wave, 7,579 new additions from booster sampling, and 179 unmatched participants or unsolicited opt-ins). Informal analysis indicates that unsolicited opt-ins were often the partners of existing participants. The sample retained 3,934 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate

of 60.4% over four years). The sample retained 9,844 participants from the full Time 4 (2011) sample (a retention rate of 80.8% from the previous year). Participants were posted a copy of the questionnaire, with a second postal follow-up two months later. Participants who provided an email address were also emailed and invited to complete an online version if they preferred. As described in the Time 4 procedure, we offered a prize draw for participation, non-respondents were emailed and phoned multiple times, and all participants were posted a Season's Greetings card from the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw. We also posted our yearly pamphlet summarizing key research findings published during the current wave of the study.

To boost sample size and increase sample diversity for subsequent waves, two booster samples were also conducted by selecting people from the New Zealand electoral roll. As with previous booster samples, sampling was conducted without replacement (i.e., all people included in previous sample frames were identified and removed from the 2014 roll). The first sample frame consisted of 70,000 people aged from 18-60 randomly selected from the 2014 New Zealand Electoral Roll, who were currently residing in New Zealand (one can be registered to vote in New Zealand but living overseas). The New Zealand Electoral Roll contains participants' date of birth (within a one-year window), and we limited our frame to people who 60 or younger, due to our aim of retaining participants for the following 15 years. A total of 7487 participants responded to this booster sample (response rate = 10.9% when adjusting for the 98.6% accuracy of the 2014 electoral roll). The second sample frame consisted of 1,500 people who were listed on the Electoral Roll as being of Maori ancestry, aged between 18-60 years of age, and currently residing in New Zealand. A total of 92 participants responded to this booster sample (response rate = 6.2% adjusting for electoral roll accuracy).

Sampling Procedure -- NZAVS Time 6 (2014)

The Time 6 (2014) NZAVS contained responses from 15,820 participants (15,740 retained from one or more previous wave, and 82 unmatched participants or unsolicited opt-ins). The sample retained 3,728 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 57.2% over five years). The sample retained 14,878 participants from the full Time 5 (2013) sample (a retention rate of 81.5% from the previous year). Participants who provided an email address were first emailed and invited to complete an online version if they preferred. Participants who did not complete the online version (or did not provide an email) were then posted a copy of the questionnaire, with a second postal follow-up two months later. We staggered the time of contact, so that participants who had completed the previous wave were contacted approximately one year after they last completed the questionnaire. As described in the Time 5 procedure, we offered a prize draw for participation, non-respondents were emailed and phoned multiple times, and all participants were posted a Season's Greetings card from

the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw. We also emailed participants an online pamphlet containing a series of video interviews with the researchers summarizing different research findings.

Sampling Procedure -- NZAVS Time 7 (2015)

The Time 7 (2015) NZAVS contained responses from 13,942 participants (13,941 retained from one or more previous wave, and 1 unmatched participant or unsolicited opt-ins). The sample retained 3,344 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 51.3% over five years). The sample retained 12,550 participants from the full Time 6 (2014) sample (a retention rate of 79.3% from the previous year). Participants who provided an email address were first emailed and invited to complete an online version if they preferred. Participants who did not complete the online version (or did not provide an email) were then posted a copy of the questionnaire, with a second postal follow-up two months later. We staggered the time of contact, so that participants who had completed the previous wave were contacted approximately one year after they last completed the questionnaire. As described in the Time 5 procedure, we offered a prize draw for participation, non-respondents were emailed and phoned multiple times, and all participants were posted a Season's Greetings card from the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw.

Sampling Procedure -- NZAVS Time 8 (2016)

The Time 8 (2016) NZAVS contained responses from 21,936 participants (13,781 retained from one or more previous wave, 7,667 new additions from booster sampling, and 488 unmatched participants or unsolicited opt-ins). The sample retained 3,347 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 51.4%). The sample retained 11,933 participants from the full Time 7 (2015) sample (a retention rate of 85.6% from the previous year). Participants who provided an email address were first emailed and invited to complete an online version if they preferred. Participants who did not complete the online version (or did not provide an email) were then posted a copy of the questionnaire, with a second postal follow-up two months later. We staggered the time of contact, so that participants who had completed the previous wave were contacted approximately one year after they last completed the questionnaire. As described in the Time 4 procedure, we offered a prize draw for participation, non-respondents were emailed and phoned multiple times, and all participants were posted a Season's Greetings card from the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw.

To boost sample size and increase sample diversity for subsequent waves, a booster sample was also conducted by selecting people from the New Zealand electoral roll. As with previous booster samples, sampling was conducted without replacement (i.e., all

people included in previous sample frames were identified and removed from the 2016 roll). The sample frame consisted of 80,000 people aged from 18-65 randomly selected from the 2016 New Zealand Electoral Roll, who were currently residing in New Zealand (one can be registered to vote in New Zealand but living overseas). The New Zealand Electoral Roll contains participants' date of birth (within a one-year window), and we limited our frame to people who 65 or younger, due to our aim of retaining participants longitudinally. A total of 7667 participants responded to this booster sample (response rate = 9.7% when adjusting for the 98.6% accuracy of the 2016 electoral roll).

Sampling Procedure -- NZAVS Time 9 (2017)

The Time 9 (2017) NZAVS contained responses from 17,072 participants (16,931 retained from one or more previous wave, and 141 unmatched participants or unsolicited opt-ins). The sample retained 2,771 participants from the initial Time 1 (2009) NZAVS of 6,518 participants (a retention rate of 42.5% over five years). The sample retained 15,784 participants from the full Time 8 (2016) sample (a retention rate of 72.0% from the previous year). Participants who provided an email address were first emailed and invited to complete an online version if they preferred. Participants who did not complete the online version (or did not provide an email) were then posted a copy of the questionnaire, with a second postal follow-up two months later. We staggered the time of contact, so that participants who had completed the previous wave were contacted approximately one year after they last completed the questionnaire. We offered a prize draw for participation (five draws each for \$1000 grocery vouchers, \$5000 total prize pool). All participants were posted a Season's Greetings card from the NZAVS research team and informed that they had been automatically entered into a bonus seasonal grocery voucher prize draw.

The retention rate from Time 8 to Time 9 of 72% was notably lower than the ~80% achieved in previous few years. We had opted not to phone non-respondents during the Time 9 wave of data collection, and instead decided to let one-year past and then intensify phoning of non-respondents the following year. We decided on this approach in the hope that it might reduce 'contact fatigue', and hence increase the recovery rate and give more time (two years) for intermittent and non-respondents to become re-enthused about participating in the study. We thus decided to risk a lower retention rate in Time 9 with the hopes of getting a bounce back in the recovery rate during the following wave of data collection amongst these most hard-to-retain participants (see Satherley et al. 2015, for a detailed analysis of the demographic and individual difference factors predicting retention, non-response and intermittent response). Our decision to reduce the risk of contact fatigue during Time 9 was also compounded by a major telecommunications carrier in New Zealand opting to discontinue their email servers in November 2017. Many of our participants had used these email services, and hence a large number of the emails in our database were rendered invalid. This increased the subsequent load on attempting to contact participants via postal mail and phone until contact could be made and our email database could be updated with participants' new email addresses.