Running head: NEW ZEALAND FEMALE BODY IMAGE

New Zealand Female Body Image: What Roles do Ethnicity and Body Mass Play?

Ruchika Talwar, Janet D. Carter and David H. Gleaves University of Canterbury

Author Note:

Ruchika Talwar, Department of Psychology, University of Canterbury, Christchurch, NZ; Janet D. Carter, Department of Psychology, University of Canterbury, Christchurch, NZ; David H. Gleaves, Department of Psychology, University of Canterbury, Christchurch, NZ.

Ruchika Talwar is now at the Department of Corrections, Christchurch, NZ; David H. Gleaves is now at School of Psychology, Social Work, and Social Policy, University of South Australia, Adelaide, SA Australia.

The authors would like to thank Leona Manna for her contribution to this manuscript.

Correspondence: David H. Gleaves, School of Psychology, Social Work, and Social Policy, University of South Australia; E-mail: david.gleaves@unisa.edu.au.

Formatted: Font: Times New Roman, 12 pt

2

New Zealand Female Body Image: What Roles do Ethnicity and Body Mass Play?

Formatted: Font: Times New Roman

NEW ZEALAND FEMALE BODY IMAGE 3 <u>Abstract</u> Formatted: For: Times New Roman Body dissatisfaction is a highly prevalent experience among women across the worki; however, there is minimal research relating to this topic for the different ethnic groups in New Zealand. In this study, 45 New Zealand female university students who identified formatted: Net Superscript/ Subscript measuring body dissatisfaction and ethnic identity. Although there were many similarities formatted: Net Superscript/ Subscript body concerns more so among European than Mãori participants. Furthermore, strength of Mãori ethnic identity was shown to be associated with lower levels of weight concern. Keywords: Body image; Mãori; New Zealand; ethnic identity Formatted: Net Superscript/ Subscript

¹ Māori phrase that literally translates as 'people of the land', and refers to Māori being the indigenous people of New Zealand. It stands to differentiate New Zealand Māori from other ethnic groups that contribute to New Zealand's ethnic diversity.

New Zealand Female Body Image: What Roles do Ethnicity and Body Mass Play?

Dissatisfaction with one's own body is one of the most well-established risk factors for the development of eating pathology in females (e.g., Attie & Brooks-Gunn, 1989; Cash, Theriault, & Annis, 2004; Stice, 1994; Stice, Mazotti, Krebs & Martin, 1998; Wildes, Simons, & Marcus, 2005). Body dissatisfaction is prevalent in general as well as clinical Western female populations, such that a moderate amount of dissatisfaction with one's own body image is considered by some to be normative (e.g., Mazzeo, 1999; Rodin, Silberstein & Striegel-Moore, 1984;).

Attitudes about body image standards appear to vary vastly across different ethnic groups (e.g., Slobal & Stunkard, 1989). For example, whereas large bodies have traditionally represented wealth, status and good health in Pacific communities, the opposite connotations have tended to apply within Westernised societies (Craig, Swinburn, Matenga-Smith, Matangi & Vaughan, 1996). However, body dissatisfaction is becoming increasingly prevalent across a wide range of cultural or ethnic groups (Brewis, McGarvery, Jones & Swinburn, 1998; Craig et. al., 1996; Gleaves et. al., 2000). Non-Western ethnic groups, in tune with Western media and culture, are beginning to shift their ideals about their own bodies towards Western ideals (Brewis et al., 1998, Tovee, Swami, Furnham & Mangalparsad, 2006).

Sociocultural theorists assert that Western cultural values for women emphasise the importance of appearance in determining one's own value and role in society, and that a pivotal determinant of attractiveness is 'thinness' (Rodin et. al., 1984, Stice, 1994, Warren et. al., 2005). To this end, many researchers in this field have explored the relationship between what men find attractive and women's perception of ideal body Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

image standards (e.g., Fallon & Rozin, 1985; Gleaves, et al., 2000; Miller & Halberstadt, 2005). In general these studies find that women tend to pick ideal figures that are thinner than the figures men choose as being most attractive (and women do seem to believe that men prefer thin ideals [Gleaves et al., 2000]). There may, therefore, be other influences that are more predictive of female body dissatisfaction, such as women's perceptions of body image standards for themselves as well as for other women.

Numerous studies have found differences in body image perceptions between groups of women that are of normal weight and those that are overweight (e.g., Brodie & Slade, 1988; Fitzgibbon, Blackman & Avellone, 2000; Twamley & Davis, 1999). Fitzgibbon et al. found that women who had greater body mass (as measured through the Body Mass Index [BMI]) also reported greater levels of body dissatisfaction. Fitzgibbon et al. also found that body dissatisfaction emerged at differing levels of body mass across the different ethnic groups, and that the effect of increasing body mass produced differing levels of increase in body dissatisfaction across ethnic groups. Accounting for the effect of body mass on the relationship between ethnicity and body dissatisfaction may be important in a population such as New Zealand Tāngata Whenua Māori women, who are overrepresented in overweight and obese groups compared to European women (Metcalf, Scragg, Willoughby, Finau & Tipene-Leach, 2000).

Literature in the field of cross-cultural perspectives of body image posits that cultures differ widely in their attitudes toward ideal body sizes (e.g., Brown & Konner, 1987; Popenoe, 2003; Sobal & Stunkard, 1989; Swami and Toveé, 2005; Swami, Knight, Toveé, Davies, and Furnham, 2007). In the South Pacific, larger bodies have been idealised, as this aspect of physical appearance has represented higher status, greater Formatted: Font: Times New Roman, Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript
Formatted: Font: Times New Roman, Not Superscript/
Subscript
Formatted: Not Superscript/ Subscript
Formatted: Font: Times New Roman

Formatted: Font: Times New Roman, Not Superscript/ Subscript

access to resources, and power (Brewis and McGarvey, 2000). However, some recent research has found that the experiences of body dissatisfaction and preference for thinner ideals may be increasing in Pacific female populations (Brewis and McGarvey, 2000; Brewis, McGarvey, Jones, & Swinburn, 1998). Researchers in this field suggest that improving socioeconomic development in the South Pacific may be involved in this shift in cultural ideals. That is, in communities where low socioeconomic status is prevalent, heavier bodies may be preferred due to their positive association with food, other resources, and power (Swami and Toveé, 2005, 2006; Swami et al., 2007).

Māori are the indigenous people of New Zealand and constitute approximately 14% of the country's population. The sharing of food is a symbol of peace, unity and welcome in Māori culture. As such, Māori feasts (hangi) are commonplace at official Māori ceremonies as well as less formal celebrations and commemorations (R.Tipene-Clarke, personal communication, 2009). At this point in time, little is known specifically about Māori body image (Burns, 2012), and some of the available information appears to be contradictory. On the one hand, there are the opinions of prominent health professionals that have suggested that body image standards among Māori are much different than among western cultural groups. For example, Durie (1994) wrote:

Body image may be regarded differently by Māori. Slender body forms are not necessarily prized more than well-rounded shapes, nor does obesity provoke the same sense of disapproval encountered in society generally. Perhaps because of this, anorexia nervosa remains relatively infrequent among Māori girls. By the same token, however, health workers report difficulties in trying to convince Māori patients that they should lose weight. Their efforts might be better spent in

6

Formatted: Font: Times New Roman

Formatted: Not Superscript/ Subscript

Formatted: Font: Times New Roman, Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

appealing to health risks, especially for future generations rather than to personal

vanity (p. 73).

However, the rates of eating disorders among Māori may be rising, and it may be for body image-related reasons. Fear, Bulik and Sullivan (1996) suggested that the rising figures for Māori might be related to Māori females having a larger body frame than their New Zealand European peers but at the same time and adopting the New Zealand European standard of thinness despite this difference.

There has subsequently been some empirical research, typically with university students that has typically found that Māori participants are in fact quite similar to non-Māori in terms of body image. In her study of Māori and Pakeha university students, Turangi-Joseph (1998) found no significant differences between Māori and Pakeha in terms of body image/body dissatisfaction and dieting behaviours/disordered eating attitudes. This finding led Turangi-Joseph (1998) to argue that the need to investigate eating difficulties and related issues within Māori populations may have been minimised due to the popular idea that Māori culture values fuller body shapes (Burns, 2012). She added that her research promoted the need for further exploration of body image attitudes and eating related issues in Māori populations. In more recent research, Moewaka Barnes and Borell (2002) (as cited in Burns, 2012) found that young Māori women associated "skinny" bodies with happiness, confidence, and popularity and fat bodies with low selfesteem, feeling 'down', less popularity and isolation. Such findings suggest again make them seem quite similar to their European counterparts.

Even more recently, Ngamanu (2006) compared Māori and Pakeha (European) female university students and reported no statistically significant group differences in Formatted: Font: Times New Roman

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Font: Times New Roman, 12 pt, Not Superscript/ Subscript Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

terms of body dissatisfaction or eating pathology. However, there were differences in body mass index (BMI) with the Māori group being larger, and such differences may have affected the comparisons based on body image. Given that actual body size is highly correlated with body dissatisfaction (e.g., Williamson, Gleaves, Watkins, & Schlundt, 1993), a group of participants with larger BMI will typically report greater body dissatisfaction. If a larger group reports the same level of dissatisfaction, it may actually be an indicator of less dissatisfaction relative to body size. Thus, research needs to somehow control for the effect of actual body size when making such comparisons.

Ngamanu (2006) also examined ethnic identity and concluded that it was unrelated to body image. However, this conclusion was based on the finding that the correlations between ethnic identity and body dissatisfaction were not statistically significant in any of their three ethnic groups (Māori, Pakeha, and "both"). It is worth noting, however, that there was a consistent pattern of positive correlations among the Māori group and negative correlations among the Pakeha group. Thus, there may have been an interaction between ethnicity and ethnic identity in predicting body dissatisfaction that the author did not directly test.

The following study explores the relationship between ethnicity (Māori and European) and body dissatisfaction and esteem in a New Zealand female University sample. Previous research in the field (e.g., Craig et al., 1996; Slobal & Stunkard, 1989) suggests that differences in body dissatisfaction could exist between the two ethnic groups but there is a need to control for differences in body size. Further, research also suggests that individuals' strength of ethnic identity and BMI score may influence the Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

relationship between ethnicity and body image ratings (Warren, Castillo, & Gleaves, 2010).

Method **Participants** Subscript Participants were 45 women that identified either as as Tāngata Whenua Māori (n = 20), or as New Zealand European (n = 25). These women were aged between 18 and 25, and of average weight (20<BMI<25). All were recruited from a New Zealand university. The mean (s.d.) age of the Māori participants, 19.8 years (1.4), was not significantly different from that of the European participants, 19.0 years (1.2), t (43) = 1.94, p > 0.05. The mean (s.d.) BMI in the Māori female sample, 22.8 (1.5), was also not statistically different from those in the European female sample, 22.4 (1.7), t (43) = 0.87, p > 0.05.

Assessment Measures

Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992). The MEIM

comprises 14 items that assess three aspects of ethnic identity: positive ethnic attitudes and a sense of belonging (5 items); ethnic identity achievement (7 items); and ethnic behaviours or practices (2 items). Items are rated on a 4 point Likert scale from 1 =strongly agree to 4 = strongly disagree. We employed a modified version of the MEIM in which the first question was split into three questions (refer to the Cultural Consultation section for an explanation). The MEIM total score, and the subscales of positive ethnic attitudes, a sense of belonging and ethnic identity achievement have demonstrated high reliability ($\alpha = 0.90$, 0.86 and 0.80 respectively) when administered to university students identifying with various ethnic groups (Phinney, 1992) as well as satisfactory levels of

Formatted: Not Superscript/ Subscript

Formatted: Font: Times New Roman, Not Superscript/ Formatted: Font: Times New Roman Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

internal consistency, and moderate degrees of construct and criterion-related validity (Ponterotto, Gretchen, Utsey, Stracuzzi & Saya, 2003). In the present sample, the MEIM had a high alpha for the total participant sample ($\alpha = 0.91$) as well as for the Māori group ($\alpha = 0.95$). However, in this sample, internal consistency was lower for the European sample ($\alpha = 0.51$).

The Group Administered version of the Body Image Assessment (BIA-G; Williams, Gleaves, Cepeda-Benito, Erath, & Cororve, 2001). The BIA-G is a figural rating assessment consisting of a set of nine female silhouettes ranging in adiposity levels. Participants identify figures that most closely represent their current body size (CBS) and their ideal body size (IBS). Level of body dissatisfaction is calculated by the discrepancy (DISC) between CBS and IBS. Williams et al. (2001) reported test-retest reliability for this assessment tool of 0.95 for CBS, 0.78 for IBS and 0.75 for CBS – IBS discrepancy scores for women. There is also considerable support for the validity of the self-ideal discrepancy as a measure of body dissatisfaction. For example, Williamson Gleaves, Watkins, and Schlundt (1993 found that self-ideal discrepancy correlated r = .79 with affective body dissatisfaction.

We used a slightly modified version of the BIA-G where two additional questions were asked; *Please select the figure that you think most closely matches the ideal body size for a typical woman who identifies with the New Zealand European ethnic group* and *Please select the figure that you think most closely matches the ideal body size for a typical woman who identifies with the New Zealand Māori ethnic group*. These two extra questions were asked to measure whether the participants perceived there to be differential body shape standards for other females from the same and different ethnic Formatted: Not Superscript/ Subscript

group as them. We were also interested in how participants' own ideal body size compared with what they identified as ideal for their own ethnic group. Self_-reported demographic data such as age, weight and height measurements were also extracted from participants' responses in the BIA-G.

Body Esteem Scale (BES; Franzoi & Shields, 1984). The BES measures three dimensions of body satisfaction in women through the subscales of sexual attractiveness (BES-SA), weight concern (BES-WC) and physical condition (BES-PC). It comprises 35 items, and respondents rate individual body parts and functions using a 5-point scale ranging from 1 (have strong negative feelings about) to 5 (have strong positive feelings about). Researchers have reported a high level of internal consistency (0.74 - 0.87), and it has been validated on diverse ethnic groups in the USA (Stewart & Williamson, 2004). The BES is not solely focussed on thinness ideals and therefore was administered in this study to measure potential qualitative differences in areas of body satisfaction that may exist between ethnic groups. In the current study, the BES total score and its subscales scores (WC, SA, and PC) showed good internal consistency in use with the combined sample (BES total $\alpha = 0.92$, WC $\alpha = 0.91$, SA $\alpha = 0.73$, PC $\alpha = 0.85$) and with the Māori participants (BES total $\alpha = 0.95$, WC $\alpha = 0.92$, SA $\alpha = 0.82$, PC $\alpha = 0.84$). In addition, the BES total score and its WC and PC subscales had good internal consistency in use with the European participants (BES total α =0.871, WC α = 0.89, and PC α = 0.85). However, the α for the SA subscale was lower (SA $\alpha = 0.55$).

Procedure

Cultural consultation. The South Island Māori advisor for the Ministry of Education was consulted about the purpose, design and procedure of this study. The

Formatted: Font: Times New Roman, Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Font: Times New Roman, Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Font: Times New Roman, Not Superscript/ Subscript
Formatted: Not Superscript/ Subscript
Tomatted. Not Superscript Subscript

	Subscript
	Formatted: Not Superscript/ Subscript
	Formatted: Font: Times New Roman
-	Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

major modifications suggested were to refer to the indigenous group of New Zealand as "tāngata whenua Māori" rather than "New Zealand Māori". It was suggested that question 1 in the original MEIM, "I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs", be split into three parts, separately focussing on history, traditions or customs as these areas may have been differentially explored by participants.

Participant recruitment. This study was approved by the appropriate university Human Ethics Committee. Recruitment information specified that we were seeking women that identified either as NZ European or NZ Māori. Recruitment was via advertising in the Māori students' University newsletter and, the University students' magazine, advertisement notices around the campus, and by as well as approaching femalespresenting information about the study in Māori classes and around the campus. At that time, potential participant were given contact information for the principal researcher, if they initiated contact with the researcher to ascertain more information about this study. Those who indicated (by contacting the researcher) an interest in being part of this study were then provided with an information sheet and consent form (via email), which they were asked to read through. At this that time, participants were advised to contact the researcher once they had completed the consent form if they wished to be part of this study. Once the researcher received completed consent forms, participants were provided with an appointment to complete the assessment. Participants completed the assessment on their own in a quiet room at the University, after the researcher reviewed the information in the information sheet and consent form with them. At this time, participants were advised of their right to change their mind and not

complete the measures. They were asked to answer the questionnaires honestly, told that there were no right or wrong answers and that responses would be kept confidential.

Ethnic Comparisons in Current and Ideal Body Sizes and Body Esteem

Group means and inter_correlations among variables are presented in Table 1. There were no significant difference between the Māori and European participants in terms of CBS, t (43) = 0.42, p = 0.67, IBS, t (43) = 1.03, p = 0.31, or body dissatisfaction (DISC), t (43) = -.16, p = .88, from the BIA Similarly, there were no ethnic differences in terms of the three scales from the BES (weight concern, perceived sexual attractiveness, or perceived physical condition), t (43) = .05, p = .96; t (43) = .94, p = .34; and t(43) = .03 p = .87 respectively.

Comparisons on Perceived Body Shape Standards across Ethnic Groups

Interesting patterns emerged however when we examined ratings of the ideal Māori Versus ideal European body sizes. European participants identified the ideal Māori body size (4.92) as significantly larger than that for Europeans (3.40), t (24) = -5.25, p <001. However, for Māori participants, the ratings were similar (4.65 versus 4.25) and the difference was not statistically significant, t (19) = -.77, p = .45. Thus, based on those comparisons, there appeared to be different ethnic-based appearance standards for European but not Māori women. However, a different pattern emerged when we compared women's ratings of their own ideal with size with that which they rated as the ideal for their *own* ethnicity. For European women, these values (3.12 and 3.40) were roughly equivalent and not significantly different, $t_2(24) = -0.96$, p = .35. In other words, European women reported that their own ideal was equivalent to that of the typical New

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Zealand European woman. In contrast, Māori participants chose an ideal body size (3.40) that was significantly smaller than what they said the typical Māori woman want to have (4.65), t (19) = -3.10, p =.01.

Relationship between BMI and Body Dissatisfaction/Esteem

As can be seen in Table 1, there were also interesting differences in the patterns of correlations for the two groups. Considering the correlations between BMI and both CBS and BES-WC, the correlations for the European participants were larger and statistically significant (r = .51 and r = -.55 respectively) whereas both correlations for the Māori group were smaller (r = .27 and r = -.16 respectively) and not statistically significant. Thus, European participants' body esteem was more strongly related to their body size relative to Māori participants.

Relationship between Māori Ethnic Identity and Weight Concern

Finally, we examined the relationship between Māori ethnic identity and weight concerns both controlling and not controlling for BMI. In both cases, the correlations were in the medium range and statistically significant, r = .48 in both instances. Higher Māori ethnic identity was associated with greater body esteem (i.e. lower weight concerns). There was a similar pattern for the relationship between ethnic identity and the discrepancy score from the BIA, although the correlations were smaller (r = -.35). Because the ethnic identity measure demonstrated a low alpha in the European group, we were cautious in using it. However, it is noteworthy that the correlation with DISC (r =.28) was in the opposite direction for that group. Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Discussion

Initial examination of the data suggested that Māori and European women in this study were very similar in terms of perceived current and ideal body shapes, body shape dissatisfaction and elements of body esteem (weight concern, sexual attractiveness and physical condition). Both groups, on average, wanted the be smaller than their current size (for the Māori participants 65% chose a smaller ideal. For the European participants, 72% chose a smaller size). However, closer examination suggested some interesting differences, particularly when examining ratings of ideal European and ideal Māori women. European but not Māori women seemed to think that Māori women had a larger ideal body size. Perhaps more interestingly, Māori but not European women chose a personal ideal body size that was smaller than what they identified as the ideal for their own ethnic group. In other words, they wanted to be thinner than what they believed the typical Māori women was of normal weight which would perhaps make them thinner than the typical Māori woman, given the higher rate of obesity among Māori.

The fact that the ethnic identity scale demonstrated poor internal consistency in the European group supports the commonly cited idea that ethnic identity is more salient for members of ethnic minority groups than for members of the majority group. Reasons for this disparity have not received much empirical attention; however it is postulated that minority ethnic status may contribute more to personal identity than majority ethnic status (Martinez & Dukes, 1997; Phinney, 1992; Umāna Taylor & Shin, 2007).

This study also highlights the potential protective capacity of Māori ethnicity in terms of providing resilience against the development of facets of body dissatisfaction

Formatted: Not Superscript/ Subscript

15

within a majority Western society. Furthermore, this study suggests that a greater affiliation with Māori ethnic identity significantly contributes to lower weight concern, which is considered an essential element of body esteem (Franzoi & Shields, 1984).

Limitations of this study include a small sample size and restricted demographic sample (University students). Furthermore, all participants were in the normal weight range and we did not account for participants' socioeconomic status, which may be an important determinant of how individuals experience body dissatisfaction (Swami, Knight, Tovee, Davies & Furnham, 2007). Nevertheless, these findings have important implications in the study of cross-cultural body image. Despite the aforementioned resilience associated with Māori ethnic identity, it is possible that body dissatisfaction will become an increasingly common experience for Māori women attempting to achieve Western body ideals. Therefore, it is important for researchers to continue to unearth and promote reasons why certain ethnic groups were, until recently, protected from the development of body dissatisfaction, and subsequent eating pathology. Formatted: Not Superscript/ Subscript

References

Altabe, M. (1996). Issues in the assessment and treatment of body image disturbance in culturally diverse populations. In J.<u>K</u>. Thompson (Eds.), *Eating disorders*, *obesity and body image: An integrative guide to assessment to treatment and assessment* (pp. 129-148). Washington, D.C.: American Psychological Association

- Attie, I., & Brooks-Gunn, J., (1989). Development of eating problems in adolescent girls: A longitudinal study. *Developmental Psychology*, 25, 70-79. doi: <u>10.1037/0012-</u> <u>1649.25.1.70</u>10.1037/0012-1649.25.1.70
- Brewis, A. A., & McGarvey, S. T. (2000). Body image, body size and Samoan ecological and individual modernization. *Ecology of Food and Nutrition, 39*, 105–120. doi: <u>10.1080/03670244.2000.9991609</u>10.1080/03670244.2000.9991609
- Brewis, A. A., McGarvery, S. T., Jones, J., & Swinburn, B. A., (1998). Perceptions of body size in Pacific Islanders. *International Journal of Obesity*, 22, 185-189. doi:
- Brodie, D. A., & Slade, P. D. (1988). The relationship between body image and body fat in adult women. *Psychological Medicine*, *18*, 623-631. doi: 10.1017/S0033291700008308
- Brown, P. J., & Konner, M. (1987). An anthropological perspective of obesity. *Annals of the New York Academy of Science, 499*, 29-46. <u>doi: 10.1111/j.1749-</u> <u>6632.1987.tb36195.x</u>
- Burns, M. (2012). Research and Statistics. Eating Difficulties Education Network (EDEN). Retrieved from http://www.eden.org.nz/research-statistics/.

Formatted: Not Superscript/ Subscript

Formatted: Not Superscript/ Subscript

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto Formatted: Default Paragraph Font, Font: Times New Roman, 12 pt

Formatted: No underline, Font color: Auto							
Formatted: Default Paragraph Font, Font: Times New Roman, 12 pt							
Formatted: Font: Times New Roman, 12 pt							
Formatted: No underline, Font color: Auto							

Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

- Bushnell, J. (1997). Eating Disorders. In <u>P. M.</u> Ellis, <u>P. M., & C. D.</u> Collings, <u>S. C.D.</u>
 (Eds.). Mental Health in New Zealand from a Public Health Perspective. (pp. 327-341). Wellington: Public Health Group, Ministry of Health.
- Cafri, G. & Thompson, J. K. (2004). Measuring male body image: A review of current methodology. *Psychology of Men and Masculinity*, *5*, 18-29. doi: <u>10.1037/1524-</u> <u>9220.5.1.1810.1037/1524-9220.5.1.18</u>
- Cash, T. F., Theriault, J., & Annis, N. M. (2004). Body image in an interpersonal context: Adult attachment, fear of intimacy and social anxiety. *Journal of Social and Clinical Psychology*, 23, 89-103. doi: 10.1521/jscp.23.1.89.26987
- Coates, T. J., Jeffrery, R. W., & Wing, R. R. (1978). The relationship between person's relative body weights and the quality and quantity of food stored in their homes. *Addictive Behaviors, 3*, 179–185. doi: 10.1016/0306-4603(78)90016-3
- Craig, P. L., Swinburn, B. A., Matenga-Smith, T., Matangi, H., & Vaughan, G. (1996). Do Polynesians still believe that big is beautiful? Comparison of body size perceptions and preferences of Cook Islands, Māori and Australians. *New Zealand Medical Journal*, 109, 200-203. doi:
- Durie, M. (1994). *Whaiora: Māori health development*. Auckland: Oxford University Press.
- Fallon, A. E. & Rozin, P. (1985). Sex differences in perceptions of desirable body shape. Journal of Abnormal Psychology, 94, 102-105. doi: <u>10.1037/0021</u> <u>843X.94.1.102</u>10.1037/0021-843X.94.1.102

Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto
Formatted: Default Paragraph Font, Font: Times New Roman, 12 pt

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline,
Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto Formatted: Default Paragraph Font, Font: Times New

Roman, 12 pt

- Fear, J. L., Bulik, C. M., & Sullivan, P. F. (1996). The prevalence of disordered eating behaviours and attitudes in adolescent girls. *The New Zealand Journal of Psychology*, 25, 7-12.<u>doi:</u>
- Fitzgibbon, M. L., Blackman, L. R., Avellone, M. E. (2000). The relationship between body image discrepancy and body mass index across ethnic groups. *Obesity Research*, 8, 582-589. doi: 10.1038/oby.2000.75
- Franzoi, S.L. & Shields, S.A. (1984). The Body-Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment*, 48, 173-178. doi: 10.1207/s15327752jpa4802_12
- Furnham A, Alibhai N. (1983). Cross-cultural differences in the perception of female body shapes. *Psychological Medicine*, 13, 829-837. <u>doi:</u> 10.1017/S0033291700051540
- Gleaves, D. H., Cepeda-Benito, A., Williams, T. L., Cororve, M. B., del Carmen, Fernandez, M., Vila, J. (2000). Body image preferences of self and others: A comparison of Spanish and American male and female college students. *Eating Disorders: The Journal of Treatment & Prevention, 8*, 269-282. doi: 10.1080/10640260008251236.
- Kowner, R. (2004). When ideals are too "far off": Physical self-ideal discrepancy and body dissatisfaction in Japan. *Genetic, Social, and General Psychology Monographs, 130,* 333–361. <u>doi:</u>
- Martinez, R. O., & Dukes, R. L. (1997). The effects of ethnic identity, ethnicity, and gender on adolescent well-being. *Journal of Youth and Adolescence*, 26, 503-516. <u>doi: 10.1023/A:1024525821078</u>

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: No underline, Font color: Auto
Formatted: No underline
Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto						
Formatted: English (United States)						
Formatted: No underline Font color: Auto	atted: English (United States)					

Formatted: Font: Times New Roman, 12 pt Formatted: English (United States)

- Mazzeo, S. E. (1999). Modification of an existing measure of body image preoccupation and its relationship to disordered eating in female college students. *Journal of Counselling Psychology*, 46, 42–50. <u>doi: 10.1037/0022-0167.46.1.42</u>
- McGarvey, S. (1991). Obesity in Samoans and a perspective in its aetiology in Polynesians. *American Journal of Clinical Nutrition*, 53, 86–94. doi:
- Miller, E., & Halberstadt, J. (2005). Media consumption, body image and thin ideals in New Zealand men and women. *New Zealand Journal of Psychology, 34*, 189-195.
 doi:
- Miller, M. N. & Pumariega, A. J. (2001). Culture and eating disorders: A historical and cross-cultural review. *Psychiatry: Interpersonal and Biological Processes*, 64, 93-110. doi: 10.1521/psyc.64.2.93.18621
- Moewaka Barnes, H. & Borell, B (2002). Not too fat and not too skinny: A study of body perceptions and influences with female rangatahi. Whariki Research Group, Alcohol and Public Health Research Unit. University of Auckland.
- Ngamanu, R. E (2006). *Body Image Attitudes amongst Māori and Pakeha Females*. Unpublished master's thesis. University of Waikato, Hamilton, New Zealand.
- Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, *7*, 156-176. <u>doi:</u>

10.1177/074355489272003

Ponterotto, J. G., Gretchen, D., Utsey, S. O., Stracuzzi, T., Saya, R. Jr. (2003). The multigroup ethnic identity measure (MEIM): Psychometric review and further

Formatted: Font: Times New Roman, 12 pt Formatted: English (United States)

Formatted: Font: Italic

20

Formatted: Font: Times New Roman, 12 pt

Formatted: Font: (Default) Times New Roman, 12 pt

validity testing. Educational and Psychological Measurement, 63, 502-515. doi:

10.1177/0013164403063003010

Popenoe, R. (2004). Feeding desire: Fatness and beauty in the Sahara. London: Routledge.

- Rodin, J., Silberstein, L., & Striegel-Moore, R. (1984). Women and weight: A normative discontent. *Nebraska Symposium on Motivation*, 32, 267-307.<u>doi:</u>
- Sobal, J., & Stunkard, A. J. (1989). Socioeconomic status and obesity: A review of the literature. *Psychological Bulletin*, 105, 260-275. <u>doi: 10.1037/0033-</u> 2909.105.2.26010.1037/0033-2909.105.2.260
- Soh, N. L., Touyz S. W., & Surgenor, L. J. (2006). Eating and body image disturbances across cultures: A review. *European Eating Disorders Review*, 14, 54-65. doi: <u>10.1002/erv.678</u>
- Stice, E. (1994). Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. *Clinical Psychology Review*, 14, 633-661. doi: 10.1016/0272-7358(94)90002-7
- Stice, E., Mazotti, L., Krebs, M., & Martin, S. (1998). Predictors of adolescent eating behaviours: A longitudinal study. *Psychology of Addictive Behaviors*, 12, 195doi: 10.1037/0893-164X.12.3.195
- Stewart, T., & Williamson, D. A. (2004). Assessment of body image disturbances. In Thompson, K. J. (Ed.), Handbook of Eating Disorders and Obesity. (495-514). New Jersey, US: John Wiley & Sons.

Formatted: Font: Times New Roman, 12 pt

21

 Formatted: Font: Times New Roman, 12 pt

 Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

 Formatted: Default Paragraph Font, Font: Times New Roman, 12 pt

 Formatted: No underline, Font color: Auto

 Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: No underline, Font color: Auto

- Swami, V., Knight, D., Toveé, M. J., Davies, P., & Furnham, A. (2007). Preference for female body size in Britain and the South Pacific. *Body Image*, 4, 219-223. doi: <u>10.1016/j.bodyim.2007.01.002</u>
- Swami, V., & Tove´e, M. J. (2005). Female physical attractiveness in Britain and Malaysia: A cross-cultural study. *Body Image*, 2, 115–128. <u>doi:</u> <u>10.1016/j.bodyim.2005.02.002</u>
- Swami, V., & Tove'e, M. J. (2006). Does hunger influence judgements of female physical attractiveness? *British Journal of Psychology*, 97, 353–363. doi: 10.1348/000712605X80713
- Tassell, N. & Flett, R. (2005). Stages of change for fruit and vegetable intake and dietary fat modification in Māori women: Some relationships with body attitudes and eating behaviours. *New Zealand Journal of Psychology*, *34*, 28-35.<u>doi:</u>
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tautleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance.* Washington, D.C: American Psychological Association.
- Turangi-Joseph, A. (1998). Tyranny of appearance: Body image, dieting and eating attitudes among Māori and Pakeha students. Unpublished master's thesis, University of Waikato, Hamilton, New Zealand.
- Twamley, E. W., & Davis, M. C. (1999). The sociocultural model of eating disturbance in young women: The effects of personal attributes and family environment. *Journal of Social and Clinical Psychology, 18*, 467-489. <u>doi:</u> <u>10.1521/jscp.1999.18.4.467</u>

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto
Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

- Twenge, J. M. & Crocker, J. (2002) Race and self-esteem: meta-analyses comparing Whites, Blacks, Hispanics, Asians, and American Indians and comment on Gray-Little and Hafdahl. *Psychological Bulletin*, 128, 371–408. doi: 10.1037/0033-2909.128.3.371
- Umaña-Taylor, A. J. & Shin, N. (2007) An examination of ethnic identity and self-esteem with diverse populations: Exploring variation by ethnicity and geography. *Cultural Diversity & Ethnic Minority Psychology. 13*, 178-186. <u>doi:</u> <u>10.1037/1099-9809.13.2.178</u>
- Warren, C. S., Castillo, L., & Gleaves, D. H. (2010). The Sociocultural model of eating disorders in Mexican American women: Behavioral acculturation and cognitive marginalization as moderators. *Eating Disorders: The Journal of Treatment and Prevention, 18*, 43-57. doi: 10.1080/10640260903439532
- Warren, C. S., Gleaves, D. H., Cepeda-Benito, A., del Carmen Fernandez, A., & Rodriguez-Ruiz, S. (2005). Ethnicity as a protective factor against internalization of a thin ideal and body dissatisfaction. *International Journal of Eating Disorders*, 37, 241-249. doi: 10.1002/eat.20102
- Wildes, J. E., Emery, R. E., & Simmons, A. D. (2001). The roles of ethnicity and culture in the development of eating disturbance and body dissatisfaction: A Meta analytic review. *Clinical Psychology Review*, 21, 521-551. <u>doi: 10.1016/S0272-7358(99)00071-9</u>
- Wildes, J. E., Simons, A. D., & Marcus, M. D. (2005). Bulimic symptoms,
 cognitions, and body dissatisfaction in women with major depressive disorder.
 International Journal of Eating Disorders, 38, 9-17. doi: 10.1002/eat.20152

Formatted: Font: Times New Roman, 12 pt, No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: No underline, Font color: Auto

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Font: Times New Roman, 12 pt

Formatted: Font: Times New Roman, 12 pt

Formatted: Font: Times New Roman, 12 pt

Wilkinson, J., Ben-Tovim, D., & Walker, M. (1994). An insight into the personal<u>and</u> <u>cultural</u>-significance of weight and shape in large Samoan women. *International Journal of Obesity and Related Metabolic Disorders*, 18, 602–606.<u>doi:</u>

Williams, L. K., Ricciardelli, L. A., McCabe, M. P., Waqa, G. C., & Bavadra, K. (2006).
Body image attitudes and concerns among indigenous Fijians and European
Australian adolescent girls. *Body Image*, *3*, 275–287. doi:

10.1016/j.bodyim.2006.06.001

Williams, T. L., Gleaves, D. H., Cepeda-Benito, A., Erath, S. A., & Cororve, M. B.
(2001) The reliability and validity of a group administered version of the Body Image Assessment. Assessment, 8, 37-46. doi: 10.1177/107319110100800104

Williamson, D. A., Gleaves, D. H., Watkins, P. K, & Schlundt, D. G. (1993). Validation of self-ideal body size discrepancy as a measure of body dissatisfaction. *Journal* of Psychopathology and Behavioral Assessment, 15, 57-68. doi: <u>10.1007/BF00964324</u> Formatted: Font: Times New Roman, 12 pt

Formatted: Font: (Default) Times New Roman, 12 pt

25

Table 1

Summary of Inter_correlations, Means, and Standard Deviations for Māori and European participants

Measure	1	2	3	4	5	6	7	8	9	10	Μ	SD
1. BMI	-	.27	.04	.29	.16	09	16	.07	26	.02	22.8	1.5
2. BIA Current	.51*	-	.50*	.89*	.21	.16	47*	33	47*	36	4.45	1.96
3. BIA Ideal	.23	.41*	-	.06	.10	01	.19	.10	.01	13	3.40	0.88
4. BIA DISC	.37	.76*	29	-	.19	.19	64*	43	55*	35	1.05	1.70
5. BIA IDE	.05	.43*	.07	.40*	-	.10	07	.05	21	28	4.25	1.89
6. BIA IDM	.04	.15	02	.17	.56*	-	26	34	31	23	4.65	1.57
7. BESWC	55*	59*	02	60*	31	05	-	.72*	.85*	.48*	27.33	9.14
8. BESSA	05	04	12	.05	26	15	.20	-	.75*	.28	42.30	7.58
9. BESPC	.01	07	23	.08	05	.34	.41	.22	-	.39	29.70	6.40
10. MEIS	.18	.27	.01	.28	.28	.19	.02	.36	.10	-	49.85	11.73
Μ	22.4	4.24	3.12	1.12	3.40	4.92	27.20	40.48	29.56	41.16		
SD	1.7	1.36	0.93	1.30	1.19	1.73	8.45	4.53	6.31	4.19		

Values above the diagonal are for Māori women and those below the diagonal are for European women.

* = p < .05