



The role of cultural values and religion on views of body size and eating practices among adolescents from Fiji, Tonga, and Australia

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Objectives. This study investigated cultural values related to body image and eating practices in Western and non-Western societies.

Design and Methods. In total, 628 Fijian, 463 Indo-Fijian, 598 Tongan, and 534 Australian adolescents completed measures of cultural values and religious influences in relation to the ideal body and eating practices.

Results. Fijian and Tongan adolescents were more likely to value a large body. Religious influences were most strongly associated with eating practices for Fijians, Indo-Fijians, and Tongans.

Conclusions. The findings support the role of religion in transmitting cultural values regarding eating practices in Pacific Island communities.

Statement of contribution

What is already known on this subject?

- Previous research has demonstrated that sociocultural factors shape body image and eating behaviors.
- Most of this research has been conducted in Western countries.

What does this study add?

- The current study identifies the role of cultural values and religious influences on body image and eating behaviors in a number of different cultural groups.
- This is the first study to use the same methodology to explore these relationships across Western and Pacific Island communities.

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Cultural factors have been identified as playing a major role in shaping body image among adolescents in Western societies and other cultural groups (Markey, 2004; Ricciardelli & McCabe, 2004; Spurgas, 2005; Thompson & Heinberg, 1999). Body image ideals and body shape preferences, encompassing concepts of attractive and healthy body sizes, appear to be learned in social and cultural contexts (Markey, 2004; Markey, Tinsley, Ericksen, Ozer, & Markey, 2002; Sands & Wardle, 2003). Research suggests that individuals learn attractive or ideal body size ideals within their sociocultural context from a young age (Davison, Markey, & Birch, 2000; Markey *et al.*, 2002; Ricciardelli, McCabe, Holt, & Finmore, 2003). Body image ideals may be learned within the family, shaped by peers, and/or reflected and promoted through the media (Swami & Tovée, 2007).

Although a great deal of research has investigated body image disturbance of females and, to a lesser extent, males in Western societies, much less research attention has been directed towards body image disturbance among females and males from other ethnic, racial, and cultural backgrounds (Gray & Ginsberg, 2007; Swami & Tovée, 2007; Tiggemann & Ruutel, 2001). Moreover, most of the cross-cultural research is limited to examining body image among different ethnic or racial groups residing within a single Western country (e.g., Demarest & Allen, 2000; Ricciardelli, McCabe, Williams, & Thompson, 2007). These studies only allow for intra-country comparisons, where the differences between ethnic groups may be blurred, as individuals are likely to be influenced by the culture of the country in which they live, as well as their ethnic subgroup (Altabe, 1996). Cross-cultural comparisons between countries are needed, as they permit greater differentiation between ethnic groups and therefore comparisons between different ethnic groups can be more validly made (Altabe, 1996; Swami & Tovée, 2007). Both broader cultural influences and cultural values transmitted by religious influences have a strong influence on attitudes among Pacific Island communities (Mavoa & McCabe, 2008). In fact, this study suggested the church played a central role in shaping attitudes to food and eating in both of these countries. Therefore, the current study was designed empirically to investigate the nature of cultural messages regarding body size and messages from religious sources regarding eating in Fiji and Tonga compared with Australia, among adolescent males and females.

In Western culture, the contemporary ideal for feminine beauty predominately promotes a slender or thin body. However, there is increasing emphasis on a lean but shapely and toned female body build (Ricciardelli & McCabe, 2007). For Western males, cultural values stipulate that a muscular mesomorphic physique is ideal and representative of masculinity, strength, and power (Klein, 2007). In contrast, Fijian women and men traditionally value and admire a large and robust body size, as this physical stature is equated with health, power, and prosperity (Becker, 1995; Mavoa & McCabe, 2008). Moreover, large body sizes are associated with characteristics such as strength, vigour, and one's ability to work hard (Becker, 1995). In both Fijian and Tongan society, body size is also an indicator of care, nurturance, and social enmeshment; a Fijian or Tongan with a full-figured body is perceived to have an especially nurturing family and to be more socially connected than a thinner Fijian or Tongan (Mavoa & McCabe, 2008; McCabe, Ricciardelli, Waqa, Goundar, & Fotu, 2009). Whereas robust figures reflect healthy vigour and social prestige, thinness and weight loss reflect social neglect, deprivation, and poor nurturing (Becker, 1995).

Unlike Western countries, the celebration of food is very much embedded in Fijian and Tongan culture. In Fiji and Tonga, communal gatherings centred around religious, political, economic, or social activities are always accompanied by an abundance of

traditional food and drink. Food and drink are provided as a symbol of the worth of the hosts, their guests, and of the community as a whole (Ravuvu, 1991). If all the food is not eaten on these ceremonial occasions, the host feels guilty, embarrassed, and insecure. Therefore, visitors often eat more than the host, consuming as much food as possible (Ravuvu, 1991). The cultural values of love, care, and respect drive these values around food, and they are reinforced by the values transmitted by the Christian religion in these countries. This is in contrast to Australian society that places less emphasis on volumes of food, and where religion plays a less significant role in the lives of the population (McCabe *et al.*, in press).

During the past few decades, Fiji has witnessed a period of rapid economic, political, and social change (Becker, Gilman, & Burwell, 2005). Fiji's entry into the global economy has stimulated consumerism and provided opportunities and increased pressure for Fijian youth to participate in wage-earning employment (Becker *et al.*, 2005). As a result, Fijians have been exposed to an increasing barrage of Western cultural ideas, standards, values, and media images (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). The Fijian population is comprised of Indigenous Fijians (referred to as Fijians) and Indian Fijians (referred to as Indo-Fijians). Both of these groups have a different body build, as well as different eating patterns and social customs. Fijians (both males and females) have a larger body build than Indo-Fijian, and are more likely to see this large body as a sign of love, care, and status (Mavoa & McCabe, 2008). Within this study these groups are analysed separately. A similar process of Westernization has occurred in Tonga. However, despite Fiji and Tonga's shifting economic and political environment and their rapid modernization and social transition, Fijians and Tongans have retained many of their traditional values, ceremonial practices, and village lifestyles (e.g., Becker *et al.*, 2005). As such, the prevailing cultural standards for thinness and healthy eating that exist in Western societies have been distinctly absent in Fiji and Tonga (e.g., Becker, Burwell, Navara, & Gilman, 2003; Ricciardelli, McCabe, Williams, *et al.*, 2007).

There is a growing body of research to suggest that Fijian and Tongan females are experiencing a shift in this idealized body shape to value a slimmer body, with Fijian and Tongan girls and women evidencing increased body dissatisfaction and eating disorder symptomatology (e.g., Williams, Ricciardelli, McCabe, Waqa, & Bavadra, 2006). There is a tension in Fijian and Tongan society between valuing a large robust body size (traditional values) and valuing the thin body size idealized by Western media. There is also evidence to suggest that body image ideals adopted by Fijian and Tongan adolescent boys more closely resemble those of their Western counterparts, which includes a preference for muscularity (Ricciardelli, McCabe, Williams, *et al.*, 2007). For example, Ricciardelli *et al.* (2007) found that adolescent boys from these Pacific Island countries wanted a strong muscular body and emphasized the importance of strength in terms of their bodies' capacity to engage in physical work. Likewise, McCabe *et al.* (2009) found that the sociocultural messages received from both Fijian and Tongan adolescent boys were to obtain a large, robust body. Both of these studies were based on interviews conducted in both Fiji and Tonga. However, in contrast to Western males who value a lean muscular body, males in Fiji and Tonga value a large robust muscular body.

The current study was designed to explore the nature of the cultural values in relation to body size and eating in Fiji, Tonga, and Australia with a large sample of adolescents from all three countries. This study will clarify if traditional cultural and religious values regarding the importance of a large body are shaping the views of a large body and eating patterns of adolescents from Fiji and Tonga. It was expected that adolescents from Fiji and Tonga would value a larger body size than adolescents from Australia. It was also expected

that messages from religious sources in Fiji and Tonga compared with Australia would be more likely to encourage eating of larger volumes of food.

Method

Participants

In total, 628 Fijians (342 males, 286 females), 463 Indo-Fijians (248 males, 215 females), 598 Tongans (296 males, 302 females), and 534 European Australians (270 males, 264 females) participated in this study. The weight status and age range of the participants are summarized in Table 1. All Fijian and Tongan adolescents nominated a Christian religion as their religion, whereas Indo-Fijians nominated either Muslim or Hindu faith as their religion. The Australian adolescents were mixed in their response, with 75% indicating a Christian religion as their religion and the others not nominating a religion.

Materials

Demographic data in relation to gender and age were obtained from each participant. The Cultural Values Scale was a new scale that was developed for the current study to evaluate the extent to which Fijian and Tongan adolescents (compared with Australian adolescents) adopted the traditional values of Pacific Islanders that support the value of a large body size. This scale also evaluated the role of the religion on shaping eating practices. These themes emerged from past research (e.g., Becker, 1995) as well as interviews conducted with Fijian and Tongan adolescents (McCabe *et al.*, 2009; Ricciardelli *et al.*, 2007; Williams *et al.*, 2006). From an analysis of these interviews, it became clear that a large body size was valued by the Fijian and Tongan societies, and that the church played a strong role in eating behaviours. The items generated by these interviews formed the basis of the Cultural Values Scale, which is now being used to explore the themes from the interviews in a larger number of participants.

The Cultural Values scale was designed to determine the extent to which the traditional values outlined above are still adopted by adolescents in Fiji and Tonga, compared with adolescents in Australia. It was comprised of four items that evaluated the extent to which the adolescent was of the view that a well-respected male, female, and a person cared for by the family (represents both physical and psychological care) would be larger than most people in the adolescent's community. This was scored using a 5-point Likert-type scale (a higher score indicated a larger body size). The final two items evaluated the extent to which the adolescent was of the view that religion influenced the size of meals and eating a lot on special religious occasions. For this study, the items were analysed separately.

Procedure

Ethics approval to conduct the study was obtained from the University Ethics Committee, Victorian Department of Education, and the Ministry of Education in Fiji and Tonga. The Cultural Values Scale was translated into Tongan for completion by the participants (and back-translated to ensure accurate translation). It was not translated into Fijian or Hindi as adolescents in Fiji are fluent in English and so able to complete an English version of the scale. In Fiji and Tonga, principals from local schools were approached to provide permission for the students from their school to participate in the study. All schools that

Table 1. Number of participants by cultural group, gender, body mass index (BMI) status, and age

Cultural group	Total n	Females		Males		Mean BMI (SD)	Normal weight n	Overweight or obese n		Age groups		Mean age (SD)
		n	(SD)	n	(SD)			<13 years n	14–15 years n	>16 years n		
Fijians	628	342	24.06 (3.49)	286	22.47 (2.78)	419	209	9	184	435	16.21 (1.60)	
Indo-Fijians	463	248	19.67 (4.46)	215	19.33 (4.09)	382	81	42	223	198	15.21 (1.38)	
Tongans	598	296	25.78 (4.24)	302	22.75 (4.00)	306	292	147	238	213	15.02 (1.82)	
Australians	534	270	20.39 (3.64)	264	20.59 (3.20)	451	83	172	252	104	14.20 (1.42)	

were approached agreed to participate. In Australia, the same process was adopted. Four schools (from eight) agreed to participate in the study. Although data were not gathered on socioeconomic status, schools that enrolled students from a broad range of socioeconomic backgrounds were recruited for the study.

For all potential participants, information sheets and consent forms were sent home for parents to provide consent for their adolescent child to complete the questionnaire. In Fiji, consent was provided for about 80% of the children. In Tonga, all parents of adolescents provided consent for their child to participate in the study. The consent rate was lower in Australia, averaging about 50% across the schools. All students completed the anonymous questionnaire in small well-spaced groups. All adolescents were weighed in private, and their height was measured. This allowed us to calculate the body mass index of each participant. The completion of the survey and measurement of height and weight took about 15 min to complete.

Results

Data analysis

To fully explore the nature of the messages regarding body size and eating, these items were analysed as separate items rather than as a complete scale (see Appendix for items in the scale). Analyses of variance were conducted to determine gender, weight, and group differences on the separate items in the Cultural Values Scale. There was no evidence of multicollinearity or skewness. Univariate and multivariate outliers were recoded to be within 2 *SD* of the mean.

Separate analyses were conducted for the cultural values items (four items) and the religious influence items (two item), and these two major influences were the focus of this study. The MANOVA demonstrated a significant effect for culture, $F(12, 5697) = 17.78$, $p < .001$, $\eta^2 = .125$. Univariate analyses demonstrated that there was a significant difference in the extent to which different groups were of the view that well-respected persons were seen as large for a male, $F(3, 2156) = 18.54$, $p < .001$, $\eta^2 = .13$, or female, $F(3, 2156) = 22.40$, $p < .001$, $\eta^2 = .18$, or a person who is well cared for by their family is large, $F(3, 2156) = 18.80$, $p < .001$, $\eta^2 = .14$, or a person who has a good relationship with their family is large, $F(3, 2156) = 50.07$, $p < .001$, $\eta^2 = .53$. For all analyses, the *post-hoc* results demonstrated that Tongans were significantly more likely to hold these views

Table 2. Mean scores and standard deviations for the Cultural Values Scale

Cultural group	Well-respected male		Well-respected female		Well-respected person		A person cared for by the family	
	M	SD	M	SD	M	SD	M	SD
Fijians	3.30bc	.67	3.20bc	.69	3.33bc	.89	3.31bc	.73
Indo-Fijians	3.20b	.67	3.15b	.62	3.17b	.66	3.14b	.53
Tongans	3.48a	1.07	3.46a	.99	3.64a	1.18	3.69a	1.09
Australians	3.08bd	.42	3.00bd	.42	3.18bd	.48	3.03bd	.29

All contrasts completed between groups in columns.

a–b significantly different from one another ($p < .01$).

c–d significantly different from one another ($p < .01$).

Table 3. Mean scores and standard deviations for cultural group, gender, and body mass index status on the religious influence

	Eat a lot on religious occasions						Religious group influences size of meal									
	Male		Female		Healthy weight		Overweight or obese		Male		Female		Healthy weight		Overweight or obese	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Fijians	4.36	1.59	3.83	1.34	4.14	1.47	3.93	1.49	3.29	1.50	3.10	1.26	3.23	1.47	3.09	1.17
Indo-Fijians	3.07	1.12	2.72	0.95	2.92	1.08	2.71	0.84	3.42	1.28	3.53	1.44	3.55	1.40	3.16	1.15
Tongans	4.34	1.52	4.53	1.76	4.44	1.55	4.43	1.74	3.64	1.58	3.29	1.56	3.54	1.57	3.39	1.58
Australians	2.84	1.12	2.73	1.04	2.75	1.06	2.92	1.17	2.23	0.84	2.21	0.55	2.17	0.51	2.47	1.29

compared with all other groups, and Fijians were more likely to hold these views than Australians (see Table 2). There were no significant differences for overweight or normal weight adolescents, or for males and females.

In terms of the effect of religion on eating practices, there was a significant group, $F(6, 4310) = 64.77, p < .001, \eta^2 = .65$, and gender, $F(2, 2155) = 5.21, p < .01, \eta^2 = .01$, effect. Univariate effects for group indicated that there were significant effects for eating a lot on religious occasions, $F(3, 2156) = 103.87, p < .001, \eta^2 = .83$, and religious groups influencing the size of meals, $F(3, 2156) = 47.19, p < .001, \eta^2 = .50$. *Post-hoc* analyses demonstrated that Tongans were more likely than all other groups to eat a lot on religious occasions, and for religion to influence the size of meals than Australians and Fijians. Fijians were more likely to eat a lot on religious occasions than both Indo-Fijians and Australians. Interestingly, Indo-Fijians reported a greater religious influence on their meal size than Fijians and Australians, and this influence was greater for Fijians than for Australians (see Table 3). In terms of gender differences, males were more likely to report that their religion influenced their meal size than females, $F(1, 2156) = 9.68, p < .01, \eta^2 = .04$. There was a significant interaction between group and gender, $F(6, 4310) = 2.95, p < .01, \eta^2 = .01$. This effect was significant for religious influence on meal size, $F(3, 2156) = 3.35, p < .05, \eta^2 = .01$. *Post-hoc* analyses demonstrated that for both males and females, all three groups of Pacific Islanders reported a greater religious influence on their meal size than Australians. However, Tongan males reported a greater religious influence than females, whereas Indo-Fijian females reported a greater influence than males (see Table 3). There were no significant differences for overweight or normal weight adolescents.

Discussion

The results from the current study demonstrate that both adolescent males and females from Fiji and Tonga are more likely to hold the view that males and females with a large body are well respected and cared for than adolescents from Australia. These findings applied for Tongan and Fijian adolescents but not for Indo-Fijian adolescents. Tongans were even more likely to hold this view than Fijians. The findings support previous research findings in relation to the value attached to a larger body (Becker, 1995; Mavoia & McCabe, 2008; McCabe *et al.*, in press; Ricciardelli *et al.*, 2007). It appears that the traditional view that a large body shows a high level of community respect and care from the family is still being endorsed by adolescents from these countries. Examining the effect sizes in the Results shows this was particularly the case for having a good relationship with the family. However, the body size endorsed by Fijians and Tongans was not extremely large, and so the extent to which adolescents from these countries endorse this ideal may be lower than expected from previous research. It is interesting to note that these views were less likely to be held by Indo-Fijians. Although they are resident in Fiji, Indo-Fijians do not appear to adopt the same traditional value of a large body held by Fijian adolescents. The body build of male Indo-Fijians is generally smaller than Fijians, and they are traditionally less likely to be engaged in farming their own plot of land. Furthermore, they are not as interested in rugby football as Fijian adolescents (Ricciardelli *et al.*, 2007), and so this may explain the lower value that they attach to a large, robust body. Indo-Fijian females also have a smaller body build, and may be more focused on obtaining a slim body through missing meals but not through physical activity (McCabe *et al.*, 2009).

It is interesting to note that although adolescents in Fiji and Tonga place a higher social value on a large body compared with other adolescents, this does not mean that they adopt strategies to increase their body size. The adolescents endorsed the value of a robust body in terms of societal and family respect for a large body. However, peer and media messages that may be more affected by Western influences may not be congruent with these broader social messages, and these may influence the type of body that adolescents in these countries want to obtain (Becker *et al.*, 2002; McCabe *et al.*, in press; Williams *et al.*, 2006). Clearly, more research is necessary to explore the nature of the messages that these adolescents receive from peers and the media. Furthermore, the relative role of these influences in relation to the role played by the variables in the Cultural Values Scale needs to be explored in future research.

The current results demonstrated the central role of religion in shaping meal sizes and volume of food consumed in Fiji and Tonga compared with Australia, particularly for males. Again, these results were more apparent for Tongan males and females. An interesting finding was that although Fijians were more likely to eat more than both Indo-Fijians and Australians on special religious occasions, the Indo-Fijians reported that religion had a greater influence on their eating than was the case for Fijians. It would appear that different religions may transmit different messages in relation to eating: those religions adopted by Tongans and Fijians (i.e., Christian religions) seem to encourage high levels of consumption of food on special occasions, whereas those religions attended by Indo-Fijians (i.e., Muslim or Hindu religion) may provide messages on the type of food but not on the value of high levels of consumption (Mavoa & McCabe, 2008). A limitation of the current study was that the nature of the messages from specific religions and the level of influence of the religions in the lives of the adolescents were not determined. Future research needs to determine if some religions are more likely than others to transmit messages that may lead to obesity, and whether the level of adherence to the religious ideals is a factor in these relationships.

For Tongans, food is a form of giving where members of the church community may not have been able to afford monetary contributions to the church. As a result, the Church is seen to place a high value on food to be given and consumed. In Fiji, both food and money may be seen as a form of giving, and so when there is an abundance of food there is an expectation that large quantities of food will be consumed (Mavoa & McCabe, 2008). The Muslim religion adopted by Indo-Fijians has a strict regime in relation to fasting and the low consumption of meat, and so this may explain the finding that religion had a strong influence on the eating patterns of Indo-Fijians (Mavoa & McCabe, 2008).

The above findings are consistent with the broader societal endorsement of a large body ideal among Tongans and Fijians, although the endorsement was not as strong as one would expect from previous research. The finding that male eating practices were more influenced by religion than female eating practices in Tonga and Fiji may be due to the fact that males determine the timing of the religious functions that involve eating. Females are normally responsible for preparing the food, and males are the main consumers of the food. By eating the food, men show their appreciation, and also generally sit at the front and eat the best quality food. This is a frequent occurrence in Tonga and Fiji. For Indo-Fijians, females may have a greater respect for their culture and religion, and so females are more likely to fast and follow the dictates of their religion (Mavoa & McCabe, 2008). These findings suggest that the church plays a central role in influencing the eating practices of males and females in these two countries.

Given the importance of the religion among Fijian and Tongan adolescents, churches are a possible location for health promotion messages to encourage Fijians and Tongans to

modify the view that a large body is valued and to adopt healthy eating practices, so that the levels of obesity in these countries can be reduced (Becker *et al.*, 2005). In the current study only cultural values in relation to the meaning of a larger body were considered. A more extensive study of cultural values needs to be studied in the future. The validity of the Cultural Values Scale also needs to be investigated. Of course, religion is only one source of sociocultural messages. Future research needs to investigate the role of other sociocultural influences (e.g., family, peers, media) on the body image and eating practices of adolescents from Fiji and Tonga. The specific nature of these messages and the way in which they are transmitted also needs to be investigated. This information can then be used for health promotion messages and interventions to reduce the high levels of obesity among both males and females from these two countries (McCabe *et al.*, 2009). The use of the words 'large' and 'small' may have been interpreted differently by respondents. For example, some respondents may have seen 'large' as signifying 'fat', others as signifying 'muscular'. These terms need to be more explicitly defined in future research.

In conclusion, the current study demonstrates the important association between cultural values and both body image and eating practices among adolescents. Although individual factors are also likely to impact on both of these variables, it is clear that the societal view of the meaning of body size, as well as the types and volumes of food that are of value, needs to be considered in obtaining an understanding of the factors impacting on ideal body size and the consumption of food. A more comprehensive understanding of all factors related to body image and eating is likely to improve interventions to address the increasing levels of obesity in many countries in the world.

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Received 9 December 2011; revised version received 14 June 2012

Appendix: Cultural Values Scale

1. I expect a male who is well respected to be

much smaller than most people in my community	smaller than most people in my community	the same as most people in my community	larger than most people in my community	larger than most people in my community	much larger than most in my community

2. I expect a female who is well respected to be

much smaller than most people in my community	smaller than most people in my community	the same as most people in my community	larger than most people in my community	larger than most people in my community	much larger than most in my community

3. A person who is well cared for by their family will be

very small	small	neither large nor small	neither large nor small	large	very large

4. A person who has good relationships with their family will be

very small	small	neither large nor small	neither large nor small	large	very large

5. Does your religious group influence you in the size of your meals

never	sometimes	often	often	almost always	always

6. Does your religious group influence you in eating a lot on special religious occasions

never	sometimes	often	often	almost always	always