The influence of culture on perceptions of the female exerciser stereotype

Kimberley Dianne Curtin
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THE INFLUENCE OF CULTURE ON PERCEPTIONS OF THE FEMALE EXERCISER STEREOTYPE

By

Kimberley D. Curtin

A Thesis
Submitted to the Faculty of Graduate Studies through the Department of Kinesiology in Partial Fulfillment of the Requirements for the Degree of Master of Human Kinetics at the University of Windsor

Windsor, Ontario, Canada

2014

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The influence of culture on perceptions of the female exerciser stereotype

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July 28, 2014
DECLARATION OF ORIGINALITY

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication.

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ABSTRACT

An exerciser stereotype in which exercisers receive more positive ratings on physical and personality attributes than those described as non-exercisers and control targets has been identified in previous research (Munroe-Chandler et al., 2012). The purpose of the present study was to examine the female exerciser stereotype in light of both culture and individual mainstream acculturation. Participants (N = 510) read a vignette describing a female exerciser, and rated the target on personality and physical attributes before completing the Vancouver Index of Acculturation (Ryder et al., 2000). Results revealed that those who were more acculturated to mainstream Canadian culture rated the target higher on personality attributes compared to those who were less acculturated to mainstream culture (ps < .05). Findings indicate that mainstream acculturation may be a more important factor when forming impressions of exercisers than the individual’s acculturation to heritage culture.
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RESEARCH ARTICLE

Introduction

Self-presentation is a common social phenomenon wherein an individual attempts to generate, maintain or change an image of themselves in the minds of others (Baumeister, 1982). Self-presentation is influenced by several factors including the value and fulfillment of relevant goals (e.g., social, material, self-esteem maintenance, identity development), the discrepancy between one’s current image and their desired image, and role constraints (Leary & Kowalski, 1990). Most often, individuals wish to portray themselves in accordance with their self-concept (Leary, 1992). In the exercise domain, motivation to self-present is manifested through participation in exercise in order to improve appearance, lose or maintain weight, or socially identify as an exerciser (Leary, 1992). It is important to consider the effects that self-presentational concerns can have on actual exercise behaviour. Although a person may be motivated to create the impression they engage in exercise, they may not actually engage in the behaviour for a variety of reasons (Leary, 1992). For example, an individual may wish to exercise in order to lose weight; however they may be self-conscious about how they look in exercise attire and wish not to be seen by others in a gym setting. Therefore, this individual may choose not to exercise. This example points to the importance of not only the actor (exerciser) but also the observer in exercise behaviour.

Those observing and evaluating others in a social situation are engaging in impression formation. The observer calls upon initial information, central and peripheral personality traits, and pre-existing stereotypes in order to generate an impression of the target (Baron & Byrne, 1997; Schlenker, 1980). The self-presentational benefits of
certain behaviours, appearances or traits can therefore vary between observers and contexts (Leary & Kowalski, 1990). Further, the general impressions formed are often applied to specific encounters with others as opposed to evaluating situations individually (Thorndike, 1920).

In the exercise context, impressions are formed of others based on details such as their participation in exercise (Martin, Sinden, & Fleming, 2000), the type of exercise in which they participate (Drouin, Varga, & Gammage, 2008), and the amount of exercise they do (Martin Ginis, Latimer, & Jung, 2003). There is ample evidence suggesting the existence of a positive exerciser stereotype (Mack, 2003; Martin et al., 2000; Rodgers, Hall, Wilson, & Berry, 2009). This research is rooted in the “What is beautiful is good” theory, which posits that attractive individuals are presumed to have more socially desirable personalities, secure more prestigious jobs, and have a higher level of happiness compared to those rated less attractive (Dion, Berscheid, & Walster, 1972). Exercise generally has positive effects on appearance, weight management, and health outcomes, and as such the exerciser stereotype is shown through positive ratings on physical and personality attributes for those described as exercisers compared to those who are described as non-exercisers, or those described with no exercise information (Hodgins, 1992; Martin Ginis et al., 2003; Rodgers et al., 2009). This robust stereotype is held by those who exercise, those who do not exercise, and even those who do not intend to exercise in the future (Rodgers et al., 2009). Participant ratings of a genderless, ageless exercising target showed this target was rated more favourably on personality characteristics (e.g., more committed, more disciplined, more energetic) and physical attributes (e.g., healthier, thinner, more fit) than non-exercisers (Rodgers et al., 2009). In
addition to a positive exerciser stereotype, researchers have also found a negative non-exerciser stereotype as this target is considered, for example, to have fewer friends, be less brave, less intelligent, messier, less happy, less friendly, and less sociable than exercising and control targets (Martin et al., 2000).

The “halo effect” (Nisbett & Wilson, 1977; Thorndike, 1920) can be used to explain the positive exerciser stereotype, where positive general impressions (e.g., exercise habits) positively influence the perceptions of other traits (e.g., friendliness). Conversely, the “devil effect” occurs when a negative general impression (e.g., lack of exercise) negatively impacts the perception of other traits (Thorndike, 1920). Therefore, when an observer is gathering information that will be used to make judgments of another person, general positive or negative impressions can influence perceptions of potentially unrelated traits.

There are several factors contributing to self-presentational motives to engage in exercise including appearance motivation and weight management (Egli, Bland, Melton, & Czech, 2011). More specifically, individuals may use exercise as a means to improve their physical appearance and adhere to current body ideals (Leary, 1992). The current body ideal promoted in Western society is lean and toned with visible muscles for women (Gruber, 2007) and lean and muscular for men (Cafri, Yamamiya, Brannick, & Thompson, 2005). However, the ideal body may vary depending on one's culture. Researchers examining ethnocultural group differences in attitudes towards body image showed that body image concerns were not exclusive to White individuals (Shaw, Ramirez, Trost, Randall, & Stice, 2004). Yet rates of participation in moderate physical activity for non-White Canadians were found to be below that of White Canadians
(Bryan, Tremblay, Pérez, Ardern, & Katzmarzyk, 2006). Further, higher body-related anxiety and higher exercise levels were reported by White populations when compared to other ethnocultural groups (Bryan et al., 2006; Wildes, Emery, & Simmons 2001). These exercise rates may be related to the current body ideals that are promoted in Western society for women. When considering culture, however, exercise behaviour may be influenced by many factors which manifest differently depending on an individual’s experiences. For example, Latino or African American women may not feel compelled to change their body through exercise as they have been shown to value a more curvy figure (Frank & Roehrig, 2011; Schooler & Lowry, 2011), while other Latino or African American women may subscribe to the Western body ideal and take steps to attain it such as diet or exercise participation (Goodman, 2002; James, 2013). This example shows that there are many factors contributing to ethnocultural minorities’ perceptions of exercise, and that the intersection of an individual’s heritage culture (e.g., Latino) with a new culture (e.g., Canadian) does not necessarily imply that the individual will adhere to the values, beliefs and expectations of either culture.

The changes in an individual’s life as a result of movement from their original heritage culture along with prolonged and direct contact with a new and different mainstream culture is known as acculturation (Ryder, Alden, & Paulhus, 2000). These changes may occur in one’s attitudes, behaviours, values, and cultural identification (Ryder et al., 2000). An individual’s experience of acculturation can therefore greatly influence their perceptions of participation in exercise. A bi-dimensional model of acculturation has received ample empirical and theoretical support with diverse groups of acculturating individuals (LaFromboise, Coleman, & Gerton, 1993; Ryder at al., 2000;
Ward & Rana-Deuba, 1999). The bi-dimensional model posits that an individual’s heritage or mainstream cultural identities can vary independently as opposed to on a single continuum where the growth of one identity indicates a reduction of the other identity (Berry, 1997). As a result of the bi-dimensional model of acculturation, four acculturation identities or strategies have been presented which describe the adjustment of an individual to a new culture (Berry, 1997). From the perspective of the non-dominant culture, the integration identity involves the maintenance of both heritage and mainstream values; assimilation refers to the adoption of mainstream values while relinquishing heritage values or beliefs; separation is the maintenance of heritage values without adopting mainstream values; and marginalization refers to a disinterest in adopting the values, beliefs or preferences of either mainstream or heritage cultures (Berry, 1997). While these four strategies have been used to categorize acculturating individuals in previous research (e.g., Choi, Miller, & Wilbur, 2009), researchers have also used this model to examine the two underlying dimensions of acculturation, namely mainstream and heritage identification (e.g., Hwang & Ting, 2008; Swagler & Jome, 2005). Additionally, some researchers argue that the differences found between mainstream and heritage identification on psychological and social adjustment support the examination of the two dimensions underlying the four dimensions originally outlined (Berry, 1997; Ward & Rana-Deuba, 1999). Importantly, in their research with Asian Canadians, Ryder et al. (2000) found that psychological maladjustment was linked with a lack of identification with mainstream culture, while identification with heritage culture had little effect on participants’ mental health. This finding lead Ryder et al. to conclude
that mainstream acculturation was more important than heritage acculturation and should be further explored.

Researchers examining the impact of mainstream acculturation on physical activity found that Latin Americans (Mainous, Diaz, & Geesey, 2008; Vermeesch & Stommel, 2014), Asian Americans (Despues, & Friedman, 2007), and South Asian Americans (Daniel, Wilbur, Fogg, & Miller, 2013; Walker, Caperchione, Mummery, & Chau, 2014) who were more acculturated to the mainstream culture reported more engagement in physical activity than those who were considered to be less acculturated to mainstream culture. Research with adult Mexican American women found that these individuals reported increased body-related concerns as their mainstream acculturation increased (Bettendorf & Fischer, 2009). Research assessing body image and eating behaviours among Muslim-Australian women found that assimilation and integration acculturation strategies (characterized by high mainstream identification) predicted high levels of disordered eating; however, heritage identification protected one’s body image and acted as a buffer against mainstream Western beliefs concerning appearance (Mussap, 2009). This research supports the importance of mainstream identification on body perceptions and that high mainstream identification can lead to the internalization of the mediated thin ideal (Crago & Shisslak, 2003).

Body image and exercise researchers have examined the unique implications of culture with respect to Western body ideals, and psychological or behavioural outcomes. More specifically, African American women reported fewer symptoms of eating related psychopathology and body dissatisfaction compared to White women (Gillen & Lefkowitz, 2012; Wildes et al., 2001). Alternatively, Asian women reported similar or
higher levels of eating disturbance, dietary restraint, and weight and diet concerns compared to White women (Wildes et al., 2001). Similar research examining internalization of the thin ideal found that internalization was higher in White samples compared to Spanish and Mexican Americans and that ethnicity served as a protective factor against internalization of the thin ideal and body disturbance (Warren, Gleaves, Cepeda-Benito, del Carmen Fernandez, & Rodriguez-Ruiz, 2005). Research examining religious beliefs and dress preferences for Muslim women postulated that religious beliefs could impact perceptions of the thin ideal as women who wore a head veil reported a lower drive for thinness and preferences for a larger body shape compared to those who did not wear a head veil (Dunkel Davidson, & Quarashi, 2010). Muslim women could also be prohibited from participating in physical activity, or decide not to participate based on particular interpretations of scriptures from the Quran (Caperchione, Kolt, & Mummery, 2009). The differences between cultures in terms of body ideals, body perceptions, and choice of physical activity could impact how the exerciser stereotype manifests within varying ethnocultural groups in Canada.

In the only published research exploring the cultural nuances of the exerciser stereotype, Lindwall and Martin Ginis (2006) replicated a study conducted with a Canadian sample (Martin Ginis et al., 2003) with a Swedish sample. Both studies used the same methodology where participants rated female targets who were excessive exercisers (exercised every day even when sick or injured), typical exercisers (works out at the gym four or five days per week), active living targets (walks or bikes regularly, takes the stairs), non-exercisers (does not participate in exercise), or control targets (no mention of exercise information) on personality and physical attributes. The results of
the Swedish study indicated active living and typical exercising targets received higher personality and physical ratings than control, non-exercising or excessive exercising targets. Excessive exercisers received the lowest ratings for nine out of 12 personality dimensions, and thus received the lowest ratings of all the groups (e.g., meaner, sadder, less confident, and more dependent). Some of the results contrast with those found with the Canadian sample where the female non-exerciser received the lowest personality ratings. However, in both the Swedish and Canadian sample female non-exercisers received the lowest ratings for physical dimensions.

On the basis of these findings, it was concluded that the exerciser stereotype was not as strong in the Swedish sample as the Canadian sample, as differences in ratings between female targets were found mainly on physical attributes as opposed to personality ratings (Lindwall & Martin Ginis, 2006). Further, in the Swedish sample, physical attractiveness was not given the same self-presentational advantages, and this sample did not associate physical attractiveness with exercise as did the Canadian sample. Indeed, the female excessive exerciser in the Swedish sample suffered from a negative exerciser stereotype as they received no benefit on personality or physical ratings. Lindwall and Martin Ginis (2006) suggested that this latter finding is related to the Swedish cultural norm that one should remain neutral and avoid excess (Sandemose, 1934). Therefore, as the excessive exerciser represents a state of extreme, she did not incur self-presentational benefits in the Swedish sample. In the Canadian sample, the female excessive exerciser was only rated higher than the non-exerciser and control target on physical dimensions, not personality dimensions (Martin Ginis et al., 2003).
The examination of the influence of culture in exercise research is necessary given the changing demographics of the Canadian population. Between 2001 and 2006, there was an increase of 27.2% in Canada’s visible minority population (Statistics Canada, 2008). In light of this increasing diversity, it is imperative that researchers have a better understanding of cultural stereotypes. In order to generate a better understanding of these stereotypes, a critical examination of measurement and assessment techniques in diverse samples is warranted. Historically, the exerciser stereotype was measured with vignettes (e.g., Martin et al., 2000), which described a prototypical North American university student of European descent and included information such as plans to travel to Europe in the summer which suggests affluence and an adventurous personality. Additionally, their vignettes have included appearance and body size information, which is a potential source of experimental error considering the target was to be rated on physical dimensions. The targets created through vignettes should be relatable and similar to those rating the target, avoiding eccentric characteristics or alarming events (Finch, 1987). Research has shown that very little information is required for one to form an impression of another person (Funder, 1999), and minor differences in a target (e.g., body build) can generate large systematic changes in impression formation (Stewart, Powell, & Chetwynd, 1979). Therefore, certain details other than exercise information could prompt unintended impressions of the target, especially if the observer perceives these details as atypical with reference to their own experiences or values.

The purpose of the present study was to examine the influence of culture on perceptions of the female exerciser stereotype with the vignette that has been traditionally used when measuring the female exerciser stereotype in a large, culturally diverse
sample. Moreover, the influence of mainstream acculturation on ratings of the exercising target were examined for both White and non-White participants. Three hypotheses were forwarded: 1) those who identified as White in the sample would rate the target described in the vignette more positively on personality and physical characteristics than non-Whites; 2) those who identified more with the mainstream Canadian culture (i.e., assimilation, integration) would rate the target more positively than those who showed less identification with mainstream Canadian culture (i.e., separation, marginalization) on physical and personality attributes; 3) those who identified as White and had a high mainstream identification would rate the target the more positively on physical and personality attributes, and those who identified as non-White and had a low mainstream identification would rate the target the less positively on physical and personality dimensions.

**Method**

**Participants**

A total of 542 participants completed the questionnaire package, surpassing the total of 210 required as per G*power analysis (Faul, Erdfelder, Lang & Buchner, 2007). The participants were undergraduate students recruited from different academic faculties at a medium sized Canadian university. Two participants were removed from the analysis due to incomplete questionnaires, and an additional 23 were removed as they failed the manipulation test (incorrectly answered two or more of the three questions about the target). Additionally, after examination of standardized residual values, seven cases were removed as they exceeded the cutoff value (± 2.5). Therefore, a final sample of 510 participants was included in the analysis. The overall sample comprised 41.8%
males \((n = 213)\), 57.8\% females \((n = 295)\); one participant identified their gender as “other” \((n = 1, 0.2\%)\), and one participant did not report their gender \((n = 1, 0.2\%)\). The mean age of the participants was 19.44 years \((SD = 2.85)\). Several university faculties were represented (Table 1), with the majority from Human Kinetics (31.4\%), followed by Engineering (26.5\%) and Arts, Humanities, and Social Sciences (19.4\%). Most participants identified themselves as exercisers (89.4\%). The first and second forms of exercise are presented in Table 2 with the majority identifying cardiovascular exercise (50.8\%) as their top form of exercise and lifting weights as their second form (30.4\%). The frequency of exercise participation with which the highest percentage identified was three to four times per week (31.4\%). Participants reported an average exercise time of 59.10 minutes \((SD = 39.52)\) per exercise session.

The purpose of this research was to compare participants from different ethnocultural groups on their perceptions of the exerciser stereotype. Therefore the researchers made efforts to collect a culturally diverse sample (see Table 3). However, in order to conduct the analysis with adequate power to detect group differences, two ethnocultural groups were formed from the sample; White \((n = 340)\) and non-White \((n = 170)\). The White group had a mean age of 19.31 \((SD = 3.00)\) and comprised 137 males and 203 females. The non-White group had a mean age of 19.69 \((SD = 2.51)\) and comprised 76 males, 92 females, one who identified as “other”, and one with no gender information.

**Measures**

**Descriptive Measures.** Participants were asked to provide their age, gender, faculty, cultural identification, information on the type, frequency and duration of
physical activity, and their relative agreement with Westernized body ideals (see Appendix A). Participants’ ethnocultural group was initially measured using 13 categories (i.e., Aboriginal; Black; Chinese; Filipino; Japanese; Korean; South Asian/East Indian; Southeast Asian; Non-White West Asian, North African or Arab; Non-White Latin American; Person of Mixed Origin; White/ Caucasian; Other).

**Vignette.** All participants read a vignette describing a moderate exerciser. This vignette was identical to that used by Martin et al. (2000) and Martin Ginis et al. (2003). The vignette read as follows:

Mary is 20 years old and a second-year student at a large university in Ontario. This semester she is taking courses in psychology, French, calculus, world history, and chemistry. She has not yet decided on a major. Mary is of average height and average weight. She has brown eyes and straight dark hair that is cut to her shoulders. In her spare time, she listens to music, reads, watches TV, and often gets together with her friends to go for a drink or see a movie. Mary exercises regularly, working out at the gym 4 or 5 times each week. Her exercise program consists of jogging, fitness classes, and some weight training. She is the oldest of three children and her parents are both schoolteachers. Last summer, Mary worked at a movie theatre. Next summer, she hopes to tour Europe for a few weeks.

**Ratings of personality and physical attributes.** Participants rated the vignette on 12 personality dimensions consisting of bipolar adjectives (e.g., mean/ kind, few friends/ many friends, afraid/ brave; see Appendix B). All dimensions were rated on a 9-point semantic differential rating scale (e.g., 1 = ugly, 9 = good looking; Martin Ginis et
al., 2003). These key attributes were used as they have been shown to be influenced by body build and level of obesity (Ryckman, Robbins, Kackzor, & Gold, 1989), which may elicit similar perceptions of a target. The overall sample showed an internal reliability of $\alpha = .85$ (White $\alpha = .85$, non-White $\alpha = .86$). Additionally, eight physical dimensions were assessed (e.g., ugly/ good looking, scrawny/ muscular, sick/ healthy). These dimensions were also used in measuring stereotypes regarding body build and obesity (Ryckman et al., 1989). The physical dimension has a Cronbach alpha of .77 in the overall sample (White $\alpha = .79$, non-White $\alpha = .73$).

**Manipulation check.** As in previous research (Munroe-Chandler, Loughead, & Kossert, 2012; Shields, Brawley, & Martin Ginis, 2007), participants answered three questions about the target after rating the target on physical and personality dimensions in order to test for comprehension of the vignette (Appendix C). Participants were asked to recall the name of the target, where the target worked, and one form of physical activity the target engaged in. Participants who were answered two out of three manipulation questions incorrectly were removed from the analysis. As previously indicated, 23 participants were removed due to a failed manipulation check.

**Acculturation.** The Vancouver Index of Acculturation (VIA; Ryder et al., 2000) was used to assess the level of acculturation in the sample (see Appendix D). The VIA is a 20-item questionnaire which measures identification with and participation in both heritage cultural practices as well as typical mainstream (Canadian) practices independently. As such, this bi-dimensional measure contains 10 items comprising a heritage culture subscale, and 10 items measuring a mainstream culture subscale. As recommended by Ryder et al. (2000), the mainstream items were modified from the
original VIA for this study to reflect a typical Canadian identification. The items in each subscale are identical except for the reference culture, and include items related to values, social relationships and adherence to traditions. For example, a heritage subscale item is: “I often participate in my heritage cultural traditions”, followed by the corresponding mainstream culture subscale: “I often participate in mainstream Canadian cultural traditions”. The items are rated on a 9-point Likert rating scale ranging from 1 (strongly disagree) to 9 (strongly agree). Reliability analysis for the current sample yielded overall Cronbach’s alphas of .85 for the mainstream subscale (White α = .89, non-White α = .84). Although the current study used the complete VIA, our interest was in the influence of mainstream acculturation on participant perceptions of exercisers, and therefore used the VIA scores to measure mainstream acculturation only.

**Procedure**

Participants were recruited from undergraduate classes after the researcher contacted the class instructors from different faculties through e-mail requesting 15-20 minutes of their class time to allow volunteers to complete the survey package (see Appendix E). Once permission was obtained, the researcher visited the classroom, and posted the recruitment slide (Appendix F) which included the study instructions, and a link to an online version of the package in addition to verbally explaining the purpose of the study and the procedure. Paper and pencil survey packages were then handed out to those who agreed to participate in the study, and those who wished to complete the identical survey package online were directed to the online version which they completed during class time. After the entire package was completed and submitted to the
researchers, all participants had the option to complete a ballot to win one of two gift certificates for the local shopping mall (Appendix G).

The survey package included a consent form to participate in the research study which required the participant to sign in acknowledgement of their voluntary involvement in the research (Appendix H). The consent form was followed by an instruction sheet (the online version did not require instructions, as participants were led through the survey in the required order) indicating the order in which the forms should be completed, with emphasis on returning the vignette to the envelope before completing the manipulation check (Appendix I). The vignette of the female exerciser followed the instruction sheet, which participants were asked to read (Appendix J). Given that the exerciser stereotype has been supported regardless of activity type, gender or culture (Drouin et al., 2008; Martin et al., 2000; Martin Ginis et al., 2003; Lindwall & Martin Ginis, 2006), it was not deemed necessary to include a non-exercising or control target as has been done in previous research. Participants then rated the target on physical and personality characteristics, and completed the manipulation check. The VIA was completed next, followed by the descriptive measures.

**Results**

**Preliminary Analysis**

Data screening was completed in order to check for missing data, outliers, and normality. Homogeneity of variance was assessed using Levene’s tests in each step of the analysis and will be reported accordingly. Missing data analysis revealed no variable was missing at greater than 1.3%, therefore no variables were excluded from the analysis (Tabachnick & Fidell, 2007). The missing data were imputed using case mean
substitution (Fox-Wasylyshyn & El-Masri, 2005). Outliers were assessed using Standardized Residual scores, resulting in seven cases being removed as they exceeded the absolute cut-off value of 2.5. Further, Mahalanobis and Cook’s distances were assessed, along with Studentized Residuals and Deleted Residuals revealing no excessively influential cases (Field, 2013; Tabachnick & Fidell, 2007). Inspection of skewness and kurtosis values indicated the sample was normally distributed.

To determine relationships between ethnocultural group membership, acculturation to mainstream culture, and ratings of physical and personality attributes, bivariate correlations were computed prior to the main analysis. Correlations for all of the variables are seen in Table 4. All of the correlations between the covariates and the dependent variables show that the variables are related, however none of the correlations exceed the acceptable limit of .9 (Tabachnick & Fidell, 2007). As seen in Table 5, the correlations show that for the overall sample, and the White sample, there are significant positive relationships between mainstream identification and target ratings (all ps < .01). However, for the non-White sample, significant positive correlations were found only for mainstream identification and personality ratings (p < .05).

Homogeneity across the groups (White and non-White) was assessed using chi-square tests and univariate ANOVAs. The analysis showed no significant difference between groups on gender, age, or agreement with the Western body ideal (all ps > .05). Significant differences were found, however, between cultures on faculty (p < .001), exercise status (p < .001; White exercisers n = 317, 93.2%; non-White exercisers n = 139, 81.76%), exercise frequency (p = .025; Whites who exercised five or more times per week n = 108, 32.0%; non-Whites who exercised five or more times per week n = 35,
20.7%, and average time spent exercising ($p = .018$; White $M = 62.03$ minutes; non-White $M = 53.20$ minutes). These variables were therefore accounted for in the ANCOVA. The covariates were found to be normally distributed.

A median-split procedure was used to generate two cultural groups based on VIA scores, which indicate acculturation to mainstream culture (Berry, 1997; Ward & Rana-Deuba, 1999). The median-split procedure has been supported as an appropriate method of generating acculturation groups within a sample (e.g., Ward & Rana-Deuba, 1999). Given the current study sought to understand the specific influence of mainstream acculturation on ratings of the exercising target, the groups were generated based on preference for mainstream culture only. The first group was characterized by a high identification with mainstream culture and is referred to as high mainstream ($n = 244$). The low mainstream ($n = 241$) group was characterized by a low identification with mainstream culture. The analysis of the level of mainstream identification has been supported by Berry (2006) in his review of the contexts of acculturation where he notes that while it is inappropriate to indicate a “level” of acculturation (e.g., indicating the person is highly acculturated), it is viable to measure the amount of support one possesses for each of the acculturation strategies. Therefore, it is logical that one could have a positive orientation toward both integration and assimilation identities because they are both characterized by a preference for adopting the mainstream culture (Berry, 2006). An independent samples t-test indicated that high and low mainstream groups were significantly different on acculturation scores ($p < .05$).

Chi-square tests and univariate ANOVAs were conducted on the descriptive variables in order to detect differences between the high mainstream and low mainstream
acculturation groups. The acculturation groups did not differ on gender, faculty, age, frequency of exercise per week, or exercise minutes (ps > .05). The groups varied, however, on exercise status (p < .001, n = 229, 93% of high mainstream exercised; n = 202, 83.8% of low mainstream exercised), agreement with Western body ideals (p = .004, high mainstream M = 6.42, SD = 2.31; low mainstream M = 5.78, SD = 2.45; rated on a scale from 1 [do not agree with this ideal] to 10 [completely agree with this ideal]), and culture (p < .001, n = 187, 76.6% of high mainstream were White; n = 137, 56.8% of low mainstream were White). These variables were found to be normally distributed and were accounted for in the subsequent analyses. The assumption of homogeneity of regression slopes was found to be acceptable for all of the covariates on personality ratings (p = .246) as well as physical ratings (p = 1.00; Mayers, 2013).

**Main Analysis**

In order to test for the possible interaction between culture and mainstream acculturation, two 2 (White vs. non-White) x 2 (high mainstream vs. low mainstream) univariate analysis of covariance (ANCOVA) was conducted on the overall ratings of both physical and personality ratings. For personality ratings, results revealed that faculty was a significant covariate, F(1, 2.722) = 4.185, p = .041, partial η² = .01. For physical attributes, the results showed that personal agreement with Western body ideals was a significant covariate, F(1, 3.489) = 6.782, p = .010, partial η² = .01, and average number of times per week one exercised was a significant covariate, F(1, 2.262) = 4.397, p = .037, partial η² = .01. Levene’s test for equality of error variances was violated for personality ratings (p = .012), as well as for physical ratings (p = .022). Therefore, a
more conservative alpha level was used to interpret the results ($\alpha = .025$) as recommended by Tabachnick and Fidell (2007).

**Ratings of personality attributes.** There was a non-significant main effect of ethnocultural group membership on the ratings of personality attributes, $F(1, 0.543) = 0.835, p = .361$, partial $\eta^2 = .00$. A significant main effect emerged for mainstream acculturation on ratings of personality attributes, $F(1, 5.867) = 9.021, p = .003$, partial $\eta^2 = .02$. The interaction effect was not significant between culture and mainstream acculturation on ratings of personality attributes, $F(1, 1.222) = 1.879, p = .171$, partial $\eta^2 = .00$.

Inspection of the mean ratings indicated the high mainstream group rated the target higher ($M = 7.17, SD = 0.73$) than the low mainstream group ($M = 6.87, SD = 0.88$). Follow-up t-tests were conducted in order to identify differences between acculturation types on specific personality attributes. A Bonferonni correction was applied in order to avoid Type 1 error, therefore the t-tests were analysed using an alpha of .004 (Field, 2013). The high mainstream group rated the target as significantly higher than the low mainstream group on the dimensions of not friendly/friendly, $t(483) = 3.90, p < .001, d = 0.35$, 95% CI [.23 -.69], mean/kind, $t(483) = 3.42, p = .001, d = 0.31$, 95% CI [.17 -.63] (equal variances not assumed), sloppy/neat, $t(483) = 3.17, p = .002, d = 0.29$, 95% CI [.15 -.62], unintelligent/intelligent, $t(483) = 3.68, p < .001, d = 0.33$, 95% CI [.18 -.69], and unsociable/sociable, $t(483) = 3.61, p < .001, d = 0.33$, 95% CI [.18 -.59]. Means and standard deviations can be found in Table 7.

**Ratings of physical attributes.** The main effect of ethnocultural group membership on physical ratings of the target was not significant, $F(1, 0.254) = 0.493, p =
.483, partial $\eta^2 = .00$. The main effect of mainstream acculturation was also not significant using the conservative alpha of .025, $F(1, 2.466) = 4.793, p = .029$, partial $\eta^2 = .01$. The interaction effect was not significant between culture and mainstream acculturation on ratings of physical attributes, $F(1, 0.244) = 0.475, p = .491$, partial $\eta^2 = .00$. Means and standard deviations for physical attributes can be found in Table 8.

**Discussion**

The purpose of the present research was to examine perceptions of the exerciser stereotype in light of an individual’s culture and mainstream acculturation. The examination of the interaction between participant culture and mainstream acculturation revealed that ratings of target attributes between cultures did not change based on the level of mainstream acculturation of the participant (hypothesis three). Although this finding is important and the variables of culture and acculturation are theoretically linked, the primary hypotheses looked to understand and expand previous research examining the exerciser stereotype in a thorough manner, as the complex factors of culture and acculturation have not been previously examined.

Our first hypothesis, that White participants would rate the target higher on both personality and physical attributes compared to non-White participants, was not supported thus suggesting that there may be no cultural difference in the sample on the perceptions of a typical female Canadian exerciser. However, support was found for the second hypothesis in that those who identified more with mainstream Canadian culture showed a positive exerciser bias. More specifically, those who identified more with mainstream Canadian culture (i.e., assimilation and integration) rated the target more
favourably on personality attributes compared to those who identified less with mainstream Canadian culture (i.e., separation, marginalization).

Identification with mainstream culture involves choosing to interact with others from the mainstream culture, and adopting the beliefs and values of the mainstream culture (Berry, 1997; Ryder et al., 2000). Mainstream values can be adopted while maintaining heritage cultural values (i.e., integration), or mainstream values can essentially replace one’s heritage values (i.e., assimilation; Berry, 1997). The influence that the adoption of certain mainstream values can have on behaviour and individual perceptions is extremely complex. However, our findings may help to shed light on how mainstream values influence perceptions of female exercisers for both White and non-White cultural groups. The finding that higher mainstream identification is linked with higher target ratings could be explained by previous research suggesting that more acculturation to mainstream culture is related to increased adoption of Western body ideals (Crago & Shisslak, 2003) compared to those who are less acculturated to mainstream culture. In our analysis, we found the high mainstream group agreed more with the ideal female figure promoted in Western society compared to the low mainstream group, suggesting that this group may value an ideal female figure despite traditional values that may exist in their heritage culture opposing this female body ideal. As such, the high mainstream group may rate the exercising target more positively because the target represented this ideal body. Although differences in ratings of the target were only found on personality attributes, these links could still be made based on research suggesting that those who are perceived attractive garner social benefits (Dion et al., 1972).
Higher mainstream identification has also been linked with increased levels of physical activity (Despues & Friedman, 2007; Guinn, Jorgensen, Semper, & Vincent, 2002; Walker et al., 2014). The present research supports this finding, as more people in the high mainstream group reported engaging in exercise compared to the low mainstream group (Bettendorf & Fischer, 2009; Mussap, 2009). A potential reason that those who are highly acculturated to mainstream culture engage in exercise more than those who identify less with mainstream culture are the pervasive media messages in Western society promoting a thin body ideal, the health benefits of exercise, and the belief that exercise promotes morality or virtue (Conrad, 1994; Despues & Friedman, 2007; Grabe, Monique Ward, & Hyde, 2008). In their meta-analysis of the impact of media on women’s body image concerns, Grabe et al. (2008) found that exposure to images of ideal bodies in the media was related to increased body image concerns. Importantly, exercise has been shown to promote positive body image for women, and as such it follows that women who show body image concerns may engage in exercise as a means to attain the ideal body and enhance personal body image (Hausenblas & Fallon, 2006). Conversely, heritage identification could work to dissuade women from attending to these media messages. For example, qualitative research assessing the media consumption of the feminine body ideal in Black female youth found that the girls were largely unaffected by the images of ideal bodies in teen magazines as they were not in line with their heritage culture’s standard of attractiveness (Duke, 2000).

The current findings related to acculturation support the notion that the way in which one identifies and interacts with their culture, and the cultures of those around them can influence their perceptions of exercisers. Lindwall and Martin Ginis (2006)
found the exerciser stereotype was not as strong in their Swedish sample compared to a Canadian sample (Martin Ginis et al., 2003). A suggested explanation for this result was the different meanings and values associated with exercise in a country such as Sweden with established traditions (Lindwall & Martin Ginis, 2006). For example, variables linked with physical attractiveness were not rated higher for typical exercisers compared to controls, suggesting that the Swedish sample did not associate physical attractiveness with exercise. Further, differences in ratings were found mainly on physical attributes in the Swedish sample, providing evidence that this population does not view exercise in terms of moral virtue as in Western society (Lindwall & Martin Ginis, 2006). In light of the findings from the Swedish sample, the results of the present study can be further discussed. In the current study, it was found that those in the high mainstream group did not rate the target higher than the low mainstream group on physical attributes, however, they did differ on five personality attributes (i.e., more friendly, more kind, neater, more intelligent and more sociable). The differences found on the personality attributes in the current sample show support for the perceptions of positive virtues attributed to exercisers in mainstream Canadian culture (Conrad, 1994).

Further explanation for the findings of the present study is shown in previous research assessing the positive exerciser stereotype which identified an in-group bias where exercisers rated other exercisers (i.e., the exercising target) more positively than non-exercisers (Lindwall & Martin Ginis, 2006). The high mainstream group could have exhibited a positive exerciser stereotype because more people in the high mainstream group reported that they were exercisers compared to the low mainstream group.
Although the present research did not support previous suggestions that differences between cultures on their perception of the exerciser stereotype exist, the findings highlight the importance of mainstream acculturation in shaping one’s perceptions of exercise. Canada is a diverse and culturally plural society, meaning that many ethnic and cultural groups reside in the same area and share social and political frameworks (Berry, 2006). The current research assessed the acculturation of both White and non-White participants, which extends previous work using the VIA which only assessed those who were explicitly part of the non-dominant culture (e.g., Ahrold & Meston, 2010). This assessment is important, as it has been noted that the acculturation process takes place for both the dominant and non-dominant culture groups (Berry, 2005, 2006). Each individual experiences acculturation in a unique way, therefore, it may be misguided to assume that White individuals will always identify more with mainstream Canadian culture when in fact they may choose a different association depending on a variety of personal factors (e.g., country of origin, family values, values of significant others, contact with other cultures; Berry, 2005). On a similar note, the population sampled in the current research was dissimilar to previous research assessing acculturation in that, regardless of culture, the participants were not necessarily immigrants or sojourners, and therefore their time in Canada could influence their perceptions and biases (Ryder et al., 2000). For example, a Black student could have been born in Canada, and integrated into mainstream culture from a young age, therefore potentially holding different values compared to a Black international student who may have only lived in Canada for a short time. This line of reasoning could help explain why no differences were found between the White and non-White groups on ratings of the
target. The complex nature of acculturation is apparent in plural societies, and this only accentuates the need to further understand how acculturation can shape perceptions which may lead to behaviour changes.

The present study was limited in that the sample was lacking in diversity and therefore the intended culture groupings were not possible while maintaining statistical power. However, inspection of the bivariate correlations suggests the White and non-White populations are indeed unique in their ratings of the target in relation to their level of acculturation with mainstream culture. Additionally, there were significantly more White participants in the high mainstream group compared to the low mainstream group, suggesting that cultural identification may have a larger impact than the results indicate. Looking further into the specific cultures present within our population, there is research to suggest that differences in perceptions of exercise could exist between these cultures (Goodman, 2002; Madanat, Hawks, & Angeles, 2011; Wildes et al., 2001). For example, in their analysis of the role of culture in the development of eating disturbance and body dissatisfaction, Wildes et al. (2001) found that membership in a non-White culture could serve to protect some cultural groups from these body concerns. However, other cultural groups may experience an increased risk for eating disturbance and body dissatisfaction. Specifically, Black women reported fewer symptoms of eating disturbance compared to White women, while Asian women report similar and sometimes higher levels of eating disturbance in comparison to White women (Wildes et al., 2001).

Further limitations surround the content of the vignette used to measure the exerciser stereotype, and the measurement of acculturation. The vignette used in this research and in previous work describes a typical Canadian student who engages in
exercise. However, the vignette does not provide the reader freedom to generate an image of the exerciser’s physical appearance, as the vignette provides this information (i.e., “Mary is of average height and average weight. She has brown eyes and straight dark hair that is cut to her shoulders”). As such, it cannot be clear whether perceptions of the target are being made based on stereotypes of a typical exerciser or simply information provided in the vignette. Support for the potential influence of appearance information influencing ratings of that target is found through inspection of the mean values for the underweight/overweight physical dimension (overall $M = 4.91$) which lies about the middle of the scale, thus the scores reflect an average weight. This could have contributed to the lack of significance found for physical attributes in the sample.

The VIA has been used previously to measure acculturation for populations adjusting to a new culture (Mussap, 2009; Ryder et al., 2000). However, the present research expanded the instrument to a population that may or may not be new to Canadian culture. Although this allowed for the assessment of acculturation as an important factor in perceptions of the exerciser stereotype, several issues arose throughout the analysis of the results. Those who identified as White in the sample were not asked to indicate which culture they identified as their heritage or mainstream culture. As such, there could have been variation in how the participant answered the questions in the VIA based on individual heritage and mainstream identification. It is possible that the heritage culture with which the individual identified was Canadian, and therefore they may rate heritage and mainstream subscales equally. It is also possible that a White person may identify with a heritage culture that is not Canadian (e.g., Irish, Italian, Romanian) adding yet another dimension to this population. Similarly, participants may
have had differing ideas regarding who a typical Canadian person is, or what a typical Canadian does, because Canada is a plural society which encourages the integration of many cultures (Berry, 2006). It is possible therefore, that one’s idea of a typical Canadian culture could be very similar to one’s own culture and diminish differences in ratings between subscales. A final criticism of the VIA is that it does not distinguish between acculturation in different domains (Mussap, 2009). For example, an individual could be very separated from mainstream culture in their family environment as they promote traditions and values that are not typical to Canadian culture; however, in the exercise domain they could be integrated into mainstream culture through their promotion and participation in typical exercise activities in order to maintain fitness, or adhere to body ideals.

Future research should look to recruit specific cultural populations who are immigrants, sojourners, or first generation Canadians in order to generate a more diverse perspective of the exerciser stereotype and the influence of acculturation. Additionally, in order to compare the current research to previous research, it would be valuable to include more vignettes such as an excessive exerciser, an active living target, a non-exerciser and a control target which would help create a rich picture of the views of different cultural groups, and may allow a clearer assessment of perceptions of physical attributes. Some cultural groups enjoy physical activity in a more traditional manner as opposed to the gym setting and as such specific activities such as Tai Chi or hunting could be explored using the vignette method (Van Duyn et al., 2007). The vignettes could further be altered to generate a more accurate picture of individual bias by removing or altering potentially influential information such as appearance information.
In a similar light, creating a vignette that is culturally sensitive by removing information that may be incongruent with cultural lifestyles that are not typically Canadian which would allow the examination of differences in target ratings based solely on the exercise information instead of information that could unintentionally influence ratings such as going out for drinks with friends. Gender could also be considered in light of cultural differences by using a male target, or gendered physical activities. There is evidence that perceptions of female exercisers may be different from perceptions of males depending on culture (Lee, 2005), and that some activities may be seen as inappropriate for women to participate (Caperchione et al., 2009). Finally, when using the VIA in a White population in a culturally plural society, it would be valuable to have participants indicate their heritage identity, allowing researchers to account for the heritage identification of these participants.

Overall, the current research demonstrated that holding a positive exercise stereotype could depend more on the level of acculturation to mainstream culture as opposed to the cultural background of the individual as more identification with mainstream Canadian culture was linked with greater self-presentational benefits for the female exercising target. These results speak to the pervasive nature of media messages in Western society promoting a thin body ideal and the health benefits of exercise, which may be effective for some people despite traditional beliefs of some cultural minorities which may discourage exercise behaviour. Although there is evidence that cultural minorities understand the health benefits of exercise, and engage in more physical activity as they become more acculturated (Agne, Daubert, Munos, Scarinci, & Cherrington, 2012; Walker et al., 2014), participation rates for these groups remain below
that of White individuals (Despues & Friedman, 2007). Additionally, it has been found that increased acculturation leads to poorer dietary habits and increased obesity among several minority cultures (Despues & Friedman, 2007; Mainous et al., 2008; Pérez-Escamilla & Putnik, 2007). It is important to delineate the many diverse factors which influence exercise perceptions and participation throughout Canadian society. Understanding that one’s mainstream acculturation is related to the perceptions of minority cultures towards exercise is a critical step in increasing exercise in these populations.
Footnote

1The cultural designation of White in this article refers to those of European
descent. It is acknowledged that many ethnic, racial and cultural terms carry a variety of
meanings in terms of their linguistic, historical and generational connotations. The
variation in geographic origins of ethnicities is often reflected in the way to which they
are referred (e.g., Caucasian, African American) which can sometimes lead to the
misidentification of certain individuals. As such, the term White is used throughout the
paper for consistency. When reporting the results from previous research, however, the
terms used in the original research were maintained with the exception of Caucasian
(which is referred to as White).
References


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doi:10.1370/afm.814


doi:10.2224/sbp.2003.31.3.283


increase physical activity among African Americans, Hispanics, Hmong, and Native Hawaiians: A social marketing approach. *Preventing Chronic Disease, 4*(4).


## Tables

**Table 1**

*Percentage of Participants from Each Faculty*

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Total</th>
<th>White</th>
<th>Non-White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts, Humanities and Social Sciences</td>
<td>19.4% (n = 99)</td>
<td>21.5% (n = 73)</td>
<td>15.3% (n = 26)</td>
</tr>
<tr>
<td>Business</td>
<td>2.5% (n = 13)</td>
<td>2.4% (n = 8)</td>
<td>2.9% (n = 5)</td>
</tr>
<tr>
<td>Education</td>
<td>1.2% (n = 6)</td>
<td>1.8% (n = 6)</td>
<td>0% (n = 0)</td>
</tr>
<tr>
<td>Engineering</td>
<td>26.5% (n = 135)</td>
<td>20.3% (n = 69)</td>
<td>38.8% (n = 66)</td>
</tr>
<tr>
<td>Human Kinetics</td>
<td>31.4% (n = 160)</td>
<td>35.3% (n = 120)</td>
<td>23.5% (n = 40)</td>
</tr>
<tr>
<td>Nursing</td>
<td>14.3% (n = 73)</td>
<td>14.4% (n = 49)</td>
<td>14.1% (n = 24)</td>
</tr>
<tr>
<td>Science</td>
<td>2.5% (n = 13)</td>
<td>1.8% (n = 6)</td>
<td>4.1% (n = 7)</td>
</tr>
<tr>
<td>Inter-Faculty</td>
<td>1.2% (n = 6)</td>
<td>1.8% (n = 6)</td>
<td>0% (n = 0)</td>
</tr>
<tr>
<td>Other</td>
<td>0.6% (n = 3)</td>
<td>.9% (n = 3)</td>
<td>0% (n = 0)</td>
</tr>
</tbody>
</table>

*Note.* Two participants did not report Faculty information.
Table 2

Participants’ Top Two Forms of Exercise

<table>
<thead>
<tr>
<th>Exercise Preference</th>
<th>Total</th>
<th>White</th>
<th>Non-White</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>50.8%</td>
<td>(n = 259)</td>
<td>55.0% (n = 187)</td>
</tr>
<tr>
<td>Weights</td>
<td>22.4%</td>
<td>(n = 114)</td>
<td>21.5% (n = 73)</td>
</tr>
<tr>
<td>None</td>
<td>10.2%</td>
<td>(n = 52)</td>
<td>6.2% (n = 21)</td>
</tr>
<tr>
<td>Sport</td>
<td>7.3%</td>
<td>(n = 37)</td>
<td>8.2% (n = 28)</td>
</tr>
<tr>
<td>Biking</td>
<td>2.4%</td>
<td>(n = 12)</td>
<td>2.1% (n = 7)</td>
</tr>
<tr>
<td>Swimming</td>
<td>2.2%</td>
<td>(n = 11)</td>
<td>2.6% (n = 9)</td>
</tr>
<tr>
<td>Body Weight</td>
<td>1.4%</td>
<td>(n = 7)</td>
<td>0.9% (n = 3)</td>
</tr>
<tr>
<td>Yoga</td>
<td>1.4%</td>
<td>(n = 7)</td>
<td>1.5% (n = 5)</td>
</tr>
<tr>
<td>Dance</td>
<td>1.0%</td>
<td>(n = 5)</td>
<td>0.9% (n = 3)</td>
</tr>
<tr>
<td>Exercise Class</td>
<td>0.6%</td>
<td>(n = 3)</td>
<td>0.9% (n = 3)</td>
</tr>
<tr>
<td>Other</td>
<td>0.6%</td>
<td>(n = 3)</td>
<td>0.3% (n = 1)</td>
</tr>
<tr>
<td><strong>Second</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weights</td>
<td>30.4%</td>
<td>(n = 155)</td>
<td>33.2% (n = 113)</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>23.9%</td>
<td>(n = 122)</td>
<td>24.7% (n = 84)</td>
</tr>
<tr>
<td>None</td>
<td>19.8%</td>
<td>(n = 101)</td>
<td>15.9% (n = 54)</td>
</tr>
<tr>
<td>Body Weight</td>
<td>6.9%</td>
<td>(n = 35)</td>
<td>7.6% (n = 26)</td>
</tr>
<tr>
<td>Sport</td>
<td>6.7%</td>
<td>(n = 34)</td>
<td>5.0% (n = 17)</td>
</tr>
<tr>
<td>Yoga</td>
<td>3.5%</td>
<td>(n = 18)</td>
<td>4.1% (n = 14)</td>
</tr>
<tr>
<td>Other</td>
<td>2.5%</td>
<td>(n = 13)</td>
<td>3.2% (n = 11)</td>
</tr>
<tr>
<td>Swimming</td>
<td>1.8%</td>
<td>(n = 9)</td>
<td>1.8% (n = 6)</td>
</tr>
<tr>
<td>Biking</td>
<td>1.6%</td>
<td>(n = 8)</td>
<td>1.8% (n = 6)</td>
</tr>
<tr>
<td>Exercise Class</td>
<td>1.4%</td>
<td>(n = 7)</td>
<td>1.5% (n = 5)</td>
</tr>
<tr>
<td>Dance</td>
<td>1.0%</td>
<td>(n = 5)</td>
<td>0.9% (n = 3)</td>
</tr>
<tr>
<td>Resistance</td>
<td>0.6%</td>
<td>(n = 3)</td>
<td>0.3% (n = 1)</td>
</tr>
</tbody>
</table>
Table 3

*Frequency and Percentage of Sample from Each Culture*

<table>
<thead>
<tr>
<th>Culture</th>
<th>Overall $N = 510$</th>
<th>High Mainstream $n = 244$</th>
<th>Low Mainstream $n = 241$</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>340 (66.7%)</td>
<td>187 (76.6%)</td>
<td>137 (56.8%)</td>
</tr>
<tr>
<td>Non-White</td>
<td>170 (33.3%)</td>
<td>57 (23.4%)</td>
<td>104 (43.2%)</td>
</tr>
<tr>
<td>Black</td>
<td>25 (4.9%)</td>
<td>4 (1.6%)</td>
<td>19 (7.9%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>13 (2.5%)</td>
<td>7 (2.9%)</td>
<td>6 (2.5%)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>58 (11.4%)</td>
<td>19 (7.8%)</td>
<td>38 (15.8%)</td>
</tr>
<tr>
<td>Non-White West Asian, North African, or Arab</td>
<td>40 (7.8%)</td>
<td>12 (4.9%)</td>
<td>26 (10.8%)</td>
</tr>
<tr>
<td>Other/ Mixed Origin</td>
<td>34 (6.7%)</td>
<td>15 (6.1%)</td>
<td>15 (6.2%)</td>
</tr>
</tbody>
</table>

*Note.* A median-split procedure used to generate the High Mainstream and Low Mainstream groups resulted in the exclusion of 16 White participants and nine non-White participants.
Table 4

Bivariate Correlations for Overall Sample on All Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>-</td>
<td>-0.20**</td>
<td>-0.31*</td>
<td>-0.11*</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.09*</td>
<td>-0.10*</td>
<td>0.05</td>
<td>-0.07</td>
<td>0.08</td>
<td>0.06</td>
<td>0.08*</td>
<td>-0.05</td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>-</td>
<td>0.35**</td>
<td>0.09</td>
<td>0.05</td>
<td>0.04</td>
<td>0.04</td>
<td>-0.01</td>
<td>-0.09*</td>
<td>-0.41</td>
<td>0.08</td>
<td>-0.05</td>
<td>-0.04</td>
<td>0.10*</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Faculty</td>
<td>-</td>
<td>0.14**</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.13**</td>
<td>0.16**</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.11*</td>
<td>-0.09</td>
<td>-0.13**</td>
<td>0.06</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ethnocultural identification</td>
<td>-</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.16**</td>
<td>0.01</td>
<td>0.08</td>
<td>0.04</td>
<td>0.00</td>
<td>0.22</td>
<td>-0.22**</td>
<td>-0.26**</td>
<td>-0.47</td>
<td>-0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Top form of exercise</td>
<td>-</td>
<td>0.36**</td>
<td>-0.38**</td>
<td>-0.35**</td>
<td>0.16**</td>
<td>-0.05</td>
<td>0.04</td>
<td>0.08</td>
<td>-0.61</td>
<td>-0.74</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Second form of exercise</td>
<td>-</td>
<td>-0.30**</td>
<td>-0.23**</td>
<td>&lt;0.09*</td>
<td>0.01</td>
<td>-0.31</td>
<td>0.06</td>
<td>-0.05</td>
<td>-0.48</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Participates in exercise</td>
<td>-</td>
<td>-0.50**</td>
<td>-0.47**</td>
<td>-0.12**</td>
<td>0.02</td>
<td>-0.11*</td>
<td>&lt;0.16**</td>
<td>0.18**</td>
<td>0.03</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. Exercise times per week</td>
<td>-</td>
<td>-0.35**</td>
<td>0.03</td>
<td>-0.04</td>
<td>-0.04</td>
<td>0.06</td>
<td>0.04</td>
<td>-0.02</td>
<td></td>
<td></td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Minutes per exercise bout</td>
<td>-</td>
<td>-0.16**</td>
<td>-0.08</td>
<td>-0.02</td>
<td>0.00</td>
<td>-0.11*</td>
<td>-0.08</td>
<td></td>
<td>-0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Agreement with Western body ideal</td>
<td>-</td>
<td>0.06</td>
<td>0.13**</td>
<td>&lt;0.13**</td>
<td>0.01</td>
<td>0.04</td>
<td>0.10*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Heritage acculturation</td>
<td>-</td>
<td>-0.37**</td>
<td>-0.37**</td>
<td>0.06</td>
<td>0.20**</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Mainstream acculturation</td>
<td>-</td>
<td>-0.81**</td>
<td>-0.10**</td>
<td>-0.21**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. High or low mainstream acculturation</td>
<td>-</td>
<td>-0.21**</td>
<td>-0.17**</td>
<td>-0.22**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. White or non-White</td>
<td>-</td>
<td>-0.01</td>
<td>-0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Personality average rating</td>
<td>-</td>
<td>-0.50**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Physical average rating</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. ** Indicates a significant two-tailed correlation at the $p < .01$ level.
* Indicates a significant two-tailed correlation at the $p < .05$ level.
Table 5

*Bivariate Correlations for Overall Sample on Mean Target Ratings and Acculturation Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Personality Ratings</td>
<td>-</td>
<td>.50**</td>
<td>.20**</td>
</tr>
<tr>
<td>2. Physical Ratings</td>
<td>-</td>
<td></td>
<td>.17**</td>
</tr>
<tr>
<td>3. Mainstream Identification</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Personality Ratings</td>
<td>-</td>
<td>.48**</td>
<td>.27**</td>
</tr>
<tr>
<td>2. Physical Ratings</td>
<td>-</td>
<td></td>
<td>.19**</td>
</tr>
<tr>
<td>3. Mainstream Identification</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Non-White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Personality Ratings</td>
<td>-</td>
<td>.53**</td>
<td>.10</td>
</tr>
<tr>
<td>2. Physical Ratings</td>
<td>-</td>
<td></td>
<td>.15*</td>
</tr>
<tr>
<td>3. Mainstream Identification</td>
<td></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* **Indicates a significant one-tailed correlation at the $p < .01$ level. * Indicates a significant one-tailed correlation at the $p < .05$ level.
Table 6

*Means for Mainstream Identification and Attribute Ratings by Acculturation Group*

<table>
<thead>
<tr>
<th>Acculturation Group</th>
<th>VIA Scores</th>
<th>Attribute Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mainstream</td>
<td>Personality</td>
</tr>
<tr>
<td>High mainstream</td>
<td>7.91 (0.55)</td>
<td>7.17 (0.73)</td>
</tr>
<tr>
<td>(n = 244)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low mainstream</td>
<td>5.92 (0.86)</td>
<td>6.89 (0.89)</td>
</tr>
<tr>
<td>(n = 241)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Standard deviations are indicated in parentheses following means. The VIA scores reflect ratings on the Vancouver Index of Acculturation (VIA; Ryder et al., 2000), where the maximum score is nine and higher scores indicate more identification with each subscale. Maximum rating for physical and personality dimensions is nine. Higher scores reflect more positive target ratings.
Table 7

*Mean Ratings of Personality Attributes*

<table>
<thead>
<tr>
<th>Personality Attributes</th>
<th>Overall $N = 510$</th>
<th>White $n = 340$</th>
<th>Non-White $n = 170$</th>
<th>High Mainstream $n = 244$</th>
<th>Low Mainstream $n = 241$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afraid-Brave</td>
<td>6.61 (1.30)</td>
<td>6.54 (1.29)</td>
<td>6.75 (1.29)</td>
<td>6.65 (1.30)</td>
<td>6.54 (1.34)</td>
</tr>
<tr>
<td>Lacks Confidence-Confident</td>
<td>6.83 (1.42)</td>
<td>6.75 (1.41)</td>
<td>6.99 (1.44)</td>
<td>6.95 (1.31)</td>
<td>6.70 (1.51)</td>
</tr>
<tr>
<td>Lacks self-control-Has self-control</td>
<td>7.14 (1.48)</td>
<td>7.17 (1.41)</td>
<td>7.08 (1.62)</td>
<td>7.25 (1.41)</td>
<td>7.07 (1.51)</td>
</tr>
<tr>
<td>Dependent-Independent</td>
<td>7.41 (1.38)</td>
<td>7.41 (1.31)</td>
<td>7.41 (1.52)</td>
<td>7.39 (1.39)</td>
<td>7.41 (1.40)</td>
</tr>
<tr>
<td>Few friends-Many friends</td>
<td>6.61 (1.40)</td>
<td>6.67 (1.29)</td>
<td>6.48 (1.60)</td>
<td>6.73 (1.31)</td>
<td>6.45 (1.49)</td>
</tr>
<tr>
<td>Not friendly-Friendly</td>
<td>7.11 (1.31)</td>
<td>7.10 (1.27)</td>
<td>7.14 (1.38)</td>
<td>7.33 (1.19)*</td>
<td>6.88 (1.38)</td>
</tr>
<tr>
<td>Lazy-Works hard</td>
<td>7.52 (1.36)</td>
<td>7.57 (1.22)</td>
<td>7.41 (1.59)</td>
<td>7.64 (1.25)</td>
<td>7.41 (1.46)</td>
</tr>
<tr>
<td>Mean-Kind</td>
<td>6.84 (1.29)</td>
<td>6.88 (1.14)</td>
<td>6.77 (1.55)</td>
<td>7.03 (1.18)*</td>
<td>6.63 (1.37)</td>
</tr>
<tr>
<td>Sad-Happy</td>
<td>6.99 (1.29)</td>
<td>7.04 (1.19)</td>
<td>6.91 (1.48)</td>
<td>7.14 (1.30)</td>
<td>6.83 (1.28)</td>
</tr>
<tr>
<td>Sloppy-Neat</td>
<td>6.72 (1.33)</td>
<td>6.69 (1.25)</td>
<td>6.79 (1.48)</td>
<td>6.92 (1.28)*</td>
<td>6.54 (1.38)</td>
</tr>
<tr>
<td>Unintelligent-Intelligent</td>
<td>7.35 (1.17)</td>
<td>7.41 (1.10)</td>
<td>7.24 (1.28)</td>
<td>7.55 (1.05)*</td>
<td>7.17 (1.23)</td>
</tr>
<tr>
<td>Unsociable-Sociable</td>
<td>7.26 (1.18)</td>
<td>7.25 (1.13)</td>
<td>7.28 (1.27)</td>
<td>7.43 (1.07)*</td>
<td>7.04 (1.27)</td>
</tr>
</tbody>
</table>

*Note.* Maximum rating value is nine. Higher scores indicate more positive trait attributions. Values enclosed in parentheses represent the standard deviations. * Indicates a significant difference between high and low mainstream at $p < .004$. 
Table 8

*Mean Ratings of Physical Attributes*

<table>
<thead>
<tr>
<th>Physical Attributes</th>
<th>Overall</th>
<th>White</th>
<th>Non-White</th>
<th>High Mainstream</th>
<th>Low Mainstream</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N = 510$</td>
<td>$n = 340$</td>
<td>$n = 170$</td>
<td>$n = 244$</td>
<td>$n = 241$</td>
</tr>
<tr>
<td>Physically sick-Healthy</td>
<td>7.98 (1.14)</td>
<td>8.01 (1.07)</td>
<td>7.93 (1.26)</td>
<td>8.15 (1.00)</td>
<td>7.79 (1.27)</td>
</tr>
<tr>
<td>Has an unattractive physique-Has an attractive physique</td>
<td>7.30 (1.25)</td>
<td>7.34 (1.19)</td>
<td>7.21 (1.36)</td>
<td>7.42 (1.18)</td>
<td>7.18 (1.30)</td>
</tr>
<tr>
<td>Underweight-Overweight</td>
<td>4.91 (1.02)</td>
<td>4.89 (0.92)</td>
<td>4.96 (1.19)</td>
<td>4.82 (1.13)</td>
<td>5.01 (0.87)</td>
</tr>
<tr>
<td>Unfit-Fit</td>
<td>7.50 (1.15)</td>
<td>7.56 (1.02)</td>
<td>7.38 (1.37)</td>
<td>7.65 (1.08)</td>
<td>7.35(1.22)</td>
</tr>
<tr>
<td>Physically weak-Physically strong</td>
<td>7.08 (1.14)</td>
<td>7.08 (1.07)</td>
<td>7.08 (1.27)</td>
<td>7.20 (1.05)</td>
<td>6.97(1.23)</td>
</tr>
<tr>
<td>Ugly-Good looking</td>
<td>6.67 (1.25)</td>
<td>6.65 (1.19)</td>
<td>6.70 (1.36)</td>
<td>6.72 (1.24)</td>
<td>6.60 (1.28)</td>
</tr>
<tr>
<td>Sexually unattractive-Sexually attractive</td>
<td>6.53 (1.31)</td>
<td>6.51 (1.26)</td>
<td>6.57 (1.41)</td>
<td>6.62 (1.27)</td>
<td>6.40 (1.35)</td>
</tr>
<tr>
<td>Scrawny-Muscular</td>
<td>6.28 (1.19)</td>
<td>6.31 (1.14)</td>
<td>6.25 (1.30)</td>
<td>6.36 (1.19)</td>
<td>6.23 (1.21)</td>
</tr>
</tbody>
</table>

*Note.* Maximum rating value is nine. Higher scores indicate more positive trait attributions. Values enclosed in parentheses represent the standard deviations.
REVIEW OF LITERATURE

A positive exerciser stereotype has been established through self-presentation and exercise research with Western populations (Martin, Sinden, & Fleming, 2000; Rodgers, Hall, Wilson, & Berry, 2009). Yet, the cultural limitations of this stereotype have received little attention. Therefore, further research is needed to understand the implications of the exerciser stereotype on non-Western cultures. A Cultural Sport Psychology (CSP) perspective (Schinke, Hanrahan, & Catina, 2008) will be applied to the exercise setting, in order to examine the applicability of the current vignettes used to examine the exerciser stereotype and contrast them with a more generic, culturally neutral vignette.

Cultural Sport Psychology

Culture and ethnicity are terms often used interchangeably within research (Wildes, Emery, & Simons, 2001). For the purposes of this document, culture describes a system of information about how a group of people (e.g., society, nation) lives in both its social and physical environment (Ryba, 2009). Culture involves the environmental adaptation of its members and includes information that is essential to effective social functioning (Triandis & Arzu, 2008). Although many definitions and ideas of culture exist, the commonality is the inclusion of norms, values, beliefs and behaviours of a group (Hanrahan & Schinke, 2011). Ethnicity is included within culture and allows the distinction of people based on characteristics such as language, ancestry, customs, religion or nationality as opposed to physical characteristics as is customary with race classifications (Atkinson, Morten, & Sue, 1998). Ethnicity and race are constructs often used when researching and discussing culture, because they are easier to evaluate in a
person (e.g., looking at country of origin, religion, skin colour; Taras, Rowney, & Steel, 2009). However, insight into culture can vastly enhance the understanding of social functioning as it describes beliefs and behaviours that are influenced by ever changing social and individual narratives (Hanrahan & Schinke, 2011).

CSP, as a research perspective, is most often applied to the sport psychology practitioner, and builds upon work in cross-cultural psychology. CSP emphasizes fostering individual athlete experiences in relation to their backgrounds, gaining knowledge about new cultures, and choosing culturally sensitive strategies that will allow insight into the lived experiences of other people (Hanrahan & Schinke, 2011; Schinke et al., 2008). This approach can transfer to the exercise domain, where the individual works towards goals through physical action and experiences varying degrees of psychological factors such as motivation, social pressure, commitment, and obligation. In 1990, Duda and Allison noted a gap in the field wherein culture (including racial and ethnic factors) in relation to sport and exercise behaviour was largely ignored. Although advances have been made in the CSP domain (Hanrahan & Schinke, 2011), little exploration of cultural exercise psychology has been completed (Edmunds, Duda, & Ntoumanis, 2010; Ram, Starek, & Johnson 2004). The consideration of culture within sport and exercise psychology research is important in order to ensure a clear understanding of how experiences may differ between participants of varying backgrounds (Hanrahan & Schinke, 2011). The notion that the athlete or exerciser embodies multiple discourses or narratives (e.g., race, gender), social groups and cultural groups immersed in a specific sociocultural and historical context is imperative when considering research within and across cultures (Ryba, 2009). Researchers are encouraged to take a place in the
background in order to accentuate the standpoint of the participant and bring forth the multiple identities exercisers or athletes may embody (e.g., class, religion, sexuality; Hanrahan & Schinke, 2011; Ryba, 2009). The complexity of the self-concept can only be understood fully if one considers the cultural factors involved (Catina, 2009). The impact of culture on exercise participation is evident in the following example. A Korean woman living in Canada may believe that exercise is good for her health because of the health emphasis in Western society. However, traditional values of femininity in Korean culture may restrict exercise behaviour as she may fear presenting herself as “unladylike” (Lee, 2005).

The general goals of cross-cultural psychology are easily applied to CSP and exercise research. These goals denote the importance of testing existing knowledge and theories (e.g., self-presentation) in diverse cultural contexts, the identification of differences in behaviour that can be explained by cultural context, and the generation of a broad and universal psychology that can be applied to many cultures (Berry, 2002). The following work is conducted in light of the aforementioned goals and purpose of CSP.

**Exercise Rates and Culture**

The Canadian Physical Activity Guidelines for adults (18 to 64 years) include an accumulation of 150 minutes of moderate to vigorous intensity aerobic physical activity per week in bouts of 10 minutes or more (CSEP, 2014). Additionally, muscle and bone strengthening of major muscle groups at least two days per week is recommended for health benefits (CSEP, 2014). Despite these guidelines, only 17.4% of Canadians aged 20-39 and 14.6% of those aged 40-59 accumulated 150 minutes of moderate to vigorous physical activity per week (Statistics Canada, 2009). These statistics indicate a lack of
adequate physical activity participation by Canadians, which can be attributed to multiple factors including culture. Researchers examining the relationship between ethnicity and self-reported physical activity in Canada have found notable patterns from the Canadian Community Health Survey (Bryan, Tremblay, Pérez, Ardern, & Katzmarzyk, 2006). The ethnic group that was the most moderately physically active (≥ 1.5 kkd; kkd represents metabolic energy expenditure in kilocalories per day) were Whites (49%), followed by Other (48%), North American Aboriginal (47%), Latin American (40%), East/Southeast Asian (39%), Black (38%), West Asian/Arab (36%), and South Asian (34%). The highest prevalence of moderate to high physical activity (≥ 3 kkd) was found for Aboriginal men and women (Males = 32%, Females =22%), while the lowest prevalence occurred in East/Southeast Asian (19%) and East Asian/Arab men (19%) and South Asian women (12%). Further, only 7% of Canadian men and 3% of Canadian women were considered highly active (≥ 6 kkd). These statistics show that there are important cultural considerations with regard to the physical activity patterns of Canadians.

Additional research from the United States indicated clear cultural differences in regards to physical activity participation rates. In 2005, trends indicated that the prevalence of moderate to vigorous physical activity for adults was the greatest for the White population (32%) followed by Asian/Pacific Islander (28%), American Indian/Alaskan Native (27%), African American/Black (21%), and Hispanic (20%; Lox, Martin Ginis, & Petruzello, 2010). Clearly, culture can influence the amount of physical activity in which one participates, and therefore its resultant health benefits (Warburton, Nicol, & Bredin, 2006).
Culture, Body Image, and Exercise

Common reasons for participating in physical activity include positive health, ill-health avoidance, appearance and weight management (Egli, Bland, Melton, & Czech, 2011). Of particular interest to the current research is appearance motivation and drive to attain an ideal body. An individual’s body image ideal may, however, depend upon their cultural expectations (Anderson-Fye, 2011). Currently, the most promoted body ideal in Western culture for women is lean and toned with visible muscles (Gruber, 2007) and lean and muscular for men (Cafri, Yamamiya, Brannick, & Thompson, 2005). Research including cultural minority groups indicated that body image concerns were not exclusive to White individuals (Shaw, Ramirez, Trost, Randall, & Stice, 2004). Using a large sample comprised of Asians, Blacks, Hispanics, and Whites, Shaw et al. (2004) examined ethnic differences in eating disorder symptoms, risk factors for eating pathology, and the relationship between these factors. Contrary to previous suggestions, the research found that various cultural groups experienced much the same sociocultural pressures for thinness and therefore exhibited essentially equal levels of eating disturbance and body image disturbance when compared to the dominant Western culture (Shaw et al., 2004).

Due to the complex nature of culture and ethnicity, however, there are a multitude of factors that may influence body image, body modification behaviours, and preferences. The measurement of these constructs, in a way that is culturally sensitive, is imperative to the understanding of the experiences of others, and may also contribute to the confounding results regarding body preferences and behavioural attempts to attain an ideal body. Some of these factors include desire to maintain traditional values (Agne, Daubert, Munoz, Scarinci, & Cherrington, 2012), internalization of Western body ideals
(Duke, 2000), religious obligations and beliefs surrounding health and body image (Dunkel, Davidson, & Quarashi, 2010), perceived gender appropriateness of physical activity (Lee, 2005), and degree of acculturation (Caperchione, Kolt, & Mummery, 2009).

Previous research found ethnicity served to protect against body dissatisfaction and eating disturbances (Warren, Gleaves, Cepeda-Benito, del Carmen Fernandez, & Rodriguez-Ruiz, 2005; Wildes, et al., 2001). Specifically, Warren et al. (2005) found that Mexican Americans were less aware of the thin ideal than Spanish or European Americans. Further, the European American group showed higher internalization and more overall body dissatisfaction than both Spanish and Mexican Americans. The authors (Warren et al., 2005) suggested two ways in which ethnicity could serve as a protective factor against body dissatisfaction; (1) these groups may idealize a larger, more realistic physical ideal, and (2) physical appearance may hold less value in terms of a woman’s worth, role in society and perceived success. Even with these protective benefits, acculturation to mainstream North American culture may compromise more realistic values surrounding body image and body ideals for ethnic minorities. For example, a recent qualitative study examining Latina immigrants and their perceptions of obesity and weight loss found that the women were not only aware of the negative consequences of obesity; they also desired to lose weight (Agne et al., 2012). These results are contrary to previous research which described cultural acceptance of larger body types, thus suggesting a possible shift in the cultural norms of this population (Agne et al., 2012).
These assertions that minority cultures may be accepting Western body ideals contrast with meta-analytic research findings which indicated that White individuals reported more eating disturbances than non-Whites, and White women living in Western countries reported greater body dissatisfaction than non-White women (Wildes et al., 2001). However, such relationships may not hold true for all non-White individuals living in Western countries. In accordance with the previous findings, African American women reported fewer symptoms of eating related psychopathology and body dissatisfaction than White women (Gillen & Lefkowitz, 2012; Wildes et al., 2001). Alternatively, Asians who reported weighing significantly less than their White counterparts reported similar or higher levels of eating disturbance, dietary restraint, weight, and diet concerns when compared to White women (Wildes et al., 2001). Moreover, female Asian adolescents reported pressure from the media to lose weight which is predictive of body dissatisfaction (Xu et al., 2010). Acculturation is clearly a dynamic process, and the magnitude of its influence on behaviour is impacted by the internalization of certain narratives including the thin body ideal. The extent of this internalization and the resulting behaviours may differ from traditional expectations and preferences of non-Western cultures. Although internalization of thin ideals and mainstream acculturation are related, research examining eating and body-related concerns among Mexican American women posited that acculturation to mainstream American society may play a larger role in predicting eating and body-related concerns than awareness and internalization of the thin ideal (Bettendorf & Fischer, 2009). This speculation arose because current internalization measures do not specify which mainstream cultural values participants are internalizing, and therefore cultures such as
the Mexican culture which generally does not idealize a thin body may be protected
against eating and body-related concerns (Bettendorf & Fischer, 2009). Moreover,
research evaluating internalization of thin ideal measures found that White and Hispanic
women scored similarly, while Black women noted that they did experience body
disturbance; however, their experience was not captured in the measures (Cashel,
Cunningham, Landeros, Cokley, & Muhammad, 2003).

Related to the acculturation experiences of minority cultures, research involving
ethnic populations living in Westernized countries often describes the feelings of cultural
minorities as an internal tug-of-war between traditional values and mainstream cultural
narratives (Agne et al., 2012; Duke, 2000; Rubin, Fitts, & Becker, 2003). Research with
Latina women suggests that diet restriction and exercise reflected a departure from
traditional eating and health practices, and weight loss was viewed as a rejection of the
traditionally curvy Latin physique (Agne et al., 2012; Franko, et al., 2012; Rubin et al.,
2003). These women valued overall health, and family above an ideal thin body (Agne et
al., 2012; Rubin et al., 2003). However, they also exhibited weight loss behaviours
which followed the mediated ideal (i.e., diet and exercise), they understood the positive
social benefits garnered by having a thin body as opposed to being overweight, and those
who grew up around White women felt a desire to fit in could override messages from
family members which promoted a shapely figure (Franko et al., 2012; Goodman, 2002).

Multiple narratives involving the body were also seen in Jordanian women
(Madanat, Hawks, & Angeles, 2011), Muslim girls (Stranbu, 2005), Aboriginal
Americans (Thompson et al., 2002), and African American women (Duke, 2000).
African American women seem to be one of the groups least affected by the Western
body ideal and pressures to attain this ideal (Duke, 2000; Gillen & Lefkowitz, 2012). Although researchers found this population to exhibit high body surveillance (the behavioural manifestation of self-objectification), this was explained as a reflection of the care they put into their appearance (e.g., style and grooming) as opposed to body modification given that this population also exhibited high acceptance of a range of body types, and viewed heavier women as healthier and more sexually appealing (Duke, 2000; Fitzsimmons & Bardone-Cone, 2011; Gipson et al., 2005). Moreover, teenage African American girls found mainstream media unappealing and experienced little to no anxiety from images of models or the promotion of the thin ideal through exercise (Duke, 2000).

Such a desire to remain true to traditional body narratives in minority cultures is often rooted in strong religious beliefs and values pertaining to family and specific female roles (Dunkel et al., 2010). Religion can serve to positively influence mental health and feelings of self-worth through the belief that the individual is loved by an omniscient deity regardless of body type (Dunkel et al., 2010). Body acceptance and the attitude that one’s body does not need modification is a common theme among Hispanic and African American groups (Rubin et al., 2003). The idea of religious fatalism shared by Muslim and African American groups posits that one’s health is not within the control of the individual, rather in the hands of God or Allah (Blanchard et al., 2008; Caperchione et al., 2009). If one believes they have no control over their body, they may not feel compelled to exercise as a means of obtaining the thin Western ideal. Moreover, Caperchione et al. (2009) found that religious obligations could be barriers to physical activity in a different manner such as through periods of fasting, or time commitments to prayer. These authors also noted that religion tied into family values and expectations of
female roles in relation to exercise. For example, certain scriptures in the Quran can be interpreted as disallowing women to participate in physical activity (Caperchione et al., 2009). In the Muslim culture, women are often expected to dress in non-Western clothing along with a head veil in order to maintain a modest appearance. Thus, if the option for gender segregated physical activity is not available, it becomes difficult to participate in most forms of physical activity (Sfeir, 1985). Moreover, researchers (Dunkel et al., 2010) found that the type of clothing adopted by Muslim women influenced body dissatisfaction and pressure to lose weight. Dunkel et al. (2010) surveyed younger and older Muslim and non-Muslim women who wore non-Western clothing and a head veil, non-Western clothing without a head veil, Western clothing with a head veil, or Western clothing without a head veil. The results indicated that protective factors against a strong drive for thinness may be influenced by the religious or cultural beliefs surrounding non-Western clothing and the head veil in particular. Specifically, those women who chose not to wear the head veil may feel more pressure to attain Western beauty standards than those who continued to wear the veil (Dunkel et al, 2010). In light of these results, Muslim women may have differing perceptions of the importance of exercise based on their cultural expectations. This serves as a strong example of the power of religion and cultural values in relation to physical activity and body standards.

Another population strongly influenced by cultural expectations is Aboriginal women. Thompson et al. (2002) conducted focus groups with sedentary Native American women in order to understand environmental, policy and cultural factors that influenced physical activity for this population. The women described cultural
acceptance of a larger body size, and found it hard to balance family obligations and physical activity as family always received priority. As well, the Aboriginal women were expected to eat large portions of high-fat foods and were unable or failed to follow a traditionally active lifestyle (e.g., traditional dance). The communities of these women did not support physical activity, and the women felt they would be scorned or socially ostracized if they exercised in public (Thompson et al., 2002). This population is a good example of how competing pressures from different cultures (e.g., heritage culture and mainstream Canadian culture) can influence behaviours and attitudes differently.

The changes that occur in one’s attitudes, beliefs, behaviours and values resulting from prolonged and direct contact with another culture are referred to as acculturation (Ryder, Alden, & Paulhus, 2000). Adoption of certain aspects of a typical North American lifestyle was found to be a detriment to the health behaviours of migrant people due to the acceptance of a high-fat, calorie dense diet, smoking, and alcohol use (Caperchione et al., 2009; Wolin, Colditz, Stoddard, Emmons, & Sorensen, 2006). Further, research found that increased acculturation to mainstream culture led to more body image related concerns (Bettendorf & Fischer, 2009; Mussap, 2009). Despite the negative influence Western culture had on the eating habits and body image of cultural minority populations, a higher degree of mainstream (North American) acculturation improved rates of leisure time physical activity (Walker, Caperchione, Mummery, & Chau, 2014; Wolin et al., 2006). Mainstream acculturation also helped to overcome common barriers to physical activity such as language, environmental barriers, economic, and social relationship or networking issues (Caperchione et al., 2009; Wolin et al., 2006). The impact of acculturation can manifest differently for various cultures. For
example, Latinos who adopted mainstream values showed higher body image concerns and engagement in unhealthy behaviours such as eating fast food and not exercising (Schooler, & Lowry, 2011). However, research with Asian Americans showed no consistent relationship between body image concern and acculturation (Kawamura, 2011). Clearly, evaluation of one’s body and its relationship to physical activity and exercise is multifaceted, and encompasses more than the widely accepted vision of the Western body ideal and the common exercise behaviours practiced in order to attain this ideal.

**Acculturation**

Acculturation is a multifaceted process, and although a collective, or group-level change may occur through contact with a new culture, it is important to acknowledge that individuals can experience acculturation differently from the group as a whole (Berry, 1997, 2005). Additionally, there is a common misconception that cultural minorities are simply expected to become part of the mainstream culture, which is known as assimilation. While assimilation occurs in many societies, both dominant and non-dominant cultures sometimes oppose this mainstream acculturation which results in many contemporary societies maintaining cultural diversity (Kymlicka & Norman, 2000). In light of the various means by which acculturation can occur depending on the individual, their perspective, and specific context, a bi-dimensional perspective of acculturation has received ample empirical support (Huynh, Howell, & Benet-Martinez, 2009; Ryder et al., 2000).

The bi-dimensional perspective of acculturation contrasts the unidimensional perspective of acculturation which suggests that one’s heritage culture is suppressed
through exposure to mainstream culture and that the individual essentially assimilates to the host culture (Gordon, 1964). The bi-dimensional perspective acknowledges that both mainstream and heritage cultural identities can vary independently of one another (LaFromboise, Coleman, & Gerton, 1993). Two core assumptions serve as the basis for this perspective. First, individual differences exist in the extent to which one includes culturally based values, attitudes and behaviours in their self-identity. Second, the strength and number of cultural identities is highly individual (Ryder et al., 2000). John Berry (1997) developed a framework outlining four specific strategies, or identities individuals utilize, when dealing with the issue of how to acculturate. Importantly, these strategies can occur in all societies that are multicultural, with individual members who are considered to be either members of the dominant culture, or the non-dominant culture. The main issues involved in strategy selection are that of maintaining cultural identity, and involvement with other cultural groups as well as their own (Berry, 1997).

From the perspective of an ethnic minority: integration involves the maintenance of both heritage and mainstream values; assimilation refers to the adoption of mainstream values while relinquishing heritage values or beliefs; separation is the maintenance of heritage values without adopting mainstream values; and marginalization refers to a disinterest in adopting the values, beliefs or preferences of either mainstream or heritage cultures (Berry, 1997). The strategies proposed by Berry support the idea that the relationships between fundamental constructs across cultures display independent relationships as opposed to inverse interactions (Ryder et al., 2000).

Research which assessed relationships between acculturation, body image, eating disorders, and body dissatisfaction using the bi-dimensional perspective of acculturation
generally concluded that greater acculturation to Western values was associated with greater body image disturbance, body disturbance, and dietary restraint (Mussap, 2009; Soh et al., 2008). Mainstream identification has also been linked with increased levels of physical activity (Después & Friedman, 2007; Vermeesch & Stommel, 2014). Moreover, research with Muslim-Australian women found that high identification with heritage culture protected individuals from body image disturbance as it served as a buffer against exposure to Western body ideals (Mussap, 2009). More specific to Berry’s (1997) framework, this research supported that those who assimilated and those who integrated were more likely to show higher levels of eating disturbance and body dissatisfaction than those who did not assimilate or integrate (Mussap, 2009; Soh et al., 2008). Adult Mexican American women were found to report more body-related concerns with increasing mainstream acculturation (Bettendorf & Fischer, 2009). This relationship was moderated by an individual’s sense of familism (i.e., strong family relationships and ties) indicating that one’s heritage culture can have a strong opposing influence to mainstream culture. These results have important implications for cultural minorities in relation to their perceptions of exercise, their body image, and how these perceptions are acted upon.

**Measurement of Acculturation**

The bi-dimensional perspective of acculturation posits that mainstream and heritage acculturation levels can vary independent of one another (Berry, 1997). Therefore, in order to measure acculturation from this perspective, Ryder et al. (2000) developed the Vancouver Index of Acculturation (VIA) which measures identification with each type of acculturation separately. The questionnaire comprises 20 item pairs, with 10 questions assessing mainstream orientation and 10 questions assessing heritage
orientation. Three domains of acculturation are assessed through the measure including values, social relationships and individual adherence to cultural traditions. Each item pair is worded in the same manner, with the exception of the culture referenced. Ryder et al. recommended that the mainstream items be altered in order to reflect the mainstream population the researcher is examining (e.g., Canadian). For example, an item from the heritage subscale is: “I often participate in my heritage cultural traditions”, this is followed by its corresponding item which is altered to reflect a mainstream Canadian population: “I often participate in mainstream Canadian cultural traditions”. The items are rated on a 9-point Likert rating scale ranging from 1 (strongly disagree) to 9 (strongly agree). The VIA has shown good scale reliability and psychometric properties in several ethnically diverse samples (e.g., Chinese, non-Chinese East Asian, Latinos, and mixed ethnicity groups; Huynh et al. 2009; Ryder et al., 2000). Specifically, in a meta-analysis of the reliability of bi-dimensional acculturation measures, the VIA had a Chronbach alpha of .83 ($SD = .08$) for the heritage subscale, and .83 ($SD = .06$) for the mainstream subscale (Huynh et al., 2009).

**Self-Presentation**

Self-presentation is a conscious or unconscious attempt to monitor and control how we are perceived and evaluated by others (Schlenker, 1980). The term self-presentation is often used interchangeably with impression management. The key distinction pertains to the degree of self-relevance the projected images possess, with self-presentation having a higher degree of self-relevance than impression management (Schlenker, 1980). The images we attempt to portray may include aspects relating to our personality, abilities, intentions, behaviours, attitudes, values, family, friends, jobs and
possessions (Baumeister, 1982; Schlenker, 1980). These aspects of the self are given meaning and value depending on one’s personal goals, the perceived goals or values of the observer, and the relative importance of the values of the observer for one wishing to make an impression (Baumeister, 1982; Schlenker, 1980). Self-presentation, therefore, can have a large influence on an individual’s social outcomes (Schlenker, 1980).

Exercise (physical activity) can be used to improve one’s appearance in attempts to attain the thin Western body ideal thus leading to self-presentation benefits (Leary, 1992). As such, people may use an exercise context to present themselves as athletic, fit, and healthy which can be seen as a symbol of status, and discipline (Leary, Tchividijian, & Kraxberger, 1994). People may also exercise for social reasons if their identities are primarily defined by their social relationships with others (including group membership, relationships, and social reputation) (Leary, 1992). For example, one might join an exercise class to feel connected with the other members of the class, improve their appearance and establish an image of being physically active. These are all examples of self-presentation motives for engaging in exercise. However, other self-presentation motives may have a more powerful influence on one’s behaviour resulting in alternative choices to exercise engagement (e.g., watching TV, going out for drinks).

The choice to engage in exercise behavior can also be related to perceived roles. If a person feels that they are expected to act a certain way in order fulfill behavioural expectations, they will often act in accordance with these expectations, otherwise there may be self-presentation consequences (Leary, 1992). Role theory proposes that role conflict occurs when a person’s actual behaviours and expected behaviours are inconsistent, resulting in stress and dissatisfaction (Rizzo, House, & Lirtzman, 1970).
The impact of role conflict in sport and exercise is often described in the context of gender, wherein a desire to engage in certain activities is outweighed by a fear of conveying a gender inappropriate impression (e.g., a female engaging in weight lifting) resulting in a decision not to engage in that behaviour (Goldberg & Chandler, 1991; Leary, 1992). In addition to and often in conjunction with gender, culture also plays an important role in choice of physical activity.

Given the evidence suggesting that exercise may not be viewed as appropriate for women of all cultural groups (Lee, 2005), it follows that culture can influence one’s choice of activity in light of self-presentational motives. For example, researchers found that some Latin American communities valued a traditional curvy physique and felt that attempts to eat healthier or exercise were seen as an insult to important family members (Franko et al., 2012). The view that important family members may influence exercise participation points to the importance of the observer in one’s motivation to generate a specific impression (e.g., an exerciser, a non-exerciser; Leary, 1992). As in the previous example, if one believes that being seen at the gym by a family member is detrimental to their desired image in the context of their culture, they may avoid this situation as their self-presentational motives are stronger than their desire to exercise.

**Impression Formation**

There are two central characters involved in the exchange of self-presentational information; the *actor* (*target*), who is attempting to create a desired impression, and the *observer*, who is forming an impression of the actor. An observer forms their impression based upon the behaviours and information (e.g., appearance) conveyed by the actor and inferences (e.g., motives, values) made about the actors based on this information (Leary,
Further, observers call upon several sources to generate an impression including initial information (which tends to be weighed more heavily than information received later), central and peripheral traits (central traits being more salient), and pre-existing stereotypes (Baron & Byrne, 1997; Schlenker, 1980). Cohen (1981) conducted two experiments testing the effects of prior knowledge on social perception. The findings indicated that prior knowledge influenced memory of an actor’s behavior, suggesting that this information is stored in the observer’s mind and is called upon when processing novel information about the actor. Cohen posited that in a social situation, many features of a person are used as a basis for categorizing an actor (e.g., age, gender, culture, personality characteristics). Moreover, concrete information such as physical appearance and lifestyle are more highly processed than personality related behaviours, suggesting that selective social processing can be extended to objective facts about people along with personality cues (Cohen, 1981). Therefore, a target’s lifestyle information, such as being an exerciser or a student, can impact impressions formed by observers and influence the interpretation of future interactions with that target.

Impression formation research has demonstrated that the characteristics of the observer (e.g., status, perceived values) may influence motivations to manage self-presentations (Leary, 1983). In a similar fashion, the interpretation of the self-presentational behaviours in which the actor engages depends on the characteristics and values of the observer (Leary, 1983). The self-presentational benefits that one ascribes to certain behaviours or traits, such as exercise, can vary between observers and contexts and further influence interpretations of other characteristics of the actor. Thorndike’s (1920) research describing the “halo effect” and the “devil effect” exhibit this notion of
observer cognitive bias. The halo effect is the cognitive bias by which positive general impressions (e.g., exercise habits) influence the impressions one forms of other, more discrete traits in a positive way (e.g., personality characteristics). Conversely, the devil effect describes the influence of a negative general impression (e.g., lack of exercise) so that the impressions formed of other discrete traits will also be negative. For instance, if an observer values cardiovascular exercise and learns that an actor is a runner, the observer may automatically attribute personality characteristics to this person such as being determined, happy, and hard-working. Alternatively, if an observer learns that an actor dislikes running, the observer may attribute traits such as lazy, unenthusiastic or reserved. Accessible, stereotypic information is collected and applied to specific encounters when forming an impression of others (Nisbett & DeCamp Wilson, 1977; Thorndike, 1920). While research on self-presentation focuses largely on the actor and the factors which may motivate or cultivate self-presentational behaviours, it is equally important to regard the observer and their role in self-presentation.

**Self-Presentation Theories and Models**

Research pertaining to the influence of others on individual performance is not novel. Social facilitation theories (Zajonc, 1965, 1966) postulated that the mere presence of an audience could elicit performance and response effects. These theories have evolved to include anticipation and the drive response (Cottrell, Wack, Sekerak, & Rittle, 1968), self-presentation (Bond, 1982), and the development of impression management (Leary & Kowalski, 1990). The following models and theories look to delineate the nature and functions of self-presentation in social situations.
**Evaluation apprehension model.** Early research looking to understand the influence of others on behaviour resulted in the social facilitation model, which proposed that the mere presence of others can influence the human drive response (Zajonc, 1965). This model postulates that the presence of others could lead to altered performance effects, specifically by eliciting incorrect responses on novel tasks, or correct responses on learned tasks (Zajonc, 1965). Cottrell et al. (1968) developed the evaluation apprehension model as an extension of the social facilitation model. Their initial findings indicated that an audience watching a performance increased the arousal of the actor and resulted in responses that were incorrect if the task was novel. Therefore, potential to be evaluated by others generated increased arousal, especially after several experiences where one learned to anticipate the evaluation (Cottrell, 1968; Geen, 1979). The exact nature of how evaluation apprehension influences performance is not clear. However, it is important to note that the ideas presented within the model emphasize the presence of evaluative others and their potential influence on behaviour, which provides valuable insight into social behaviour.

**Self-presentation model.** Given that social facilitation is inherently related to the desire to generate a positive self-image, Bond (1982) adopted a self-presentation view of social facilitation. This view contends that performance depends on aggregate task difficulty wherein an individual who wishes to maintain an impression of competence will be successful in creating a desirable impression through predominantly correct performances; however they will suffer embarrassment if the performance is mainly incorrect. If the performer feels embarrassed when they are not successful in their performance, further impairments in performance can be expected. This embarrassment
and its association with failure differs from drive theories, which predict the heightening of arousal in the presence of others (Zajonc, 1965). The self-presentational model creates a link between self-presentational motives and the presence of others on performance. However, given the current research focuses on stereotypes, which do not depend on the presence of others, it may be more useful to a context where more explicit observer effects could be measured such as social physique anxiety.

**The two component model.** Impression management refers to “the process by which individuals attempt to control the impressions others form of them” (Leary & Kowalski, 1990, p. 34). The two component model describes impression management in relation to its development (Leary & Kowalski, 1990). Specifically, the authors outlined two discrete processes involved in impression management, which are uniquely affected by situational and dispositional antecedents; impression motivation and impression construction. Impression motivation is the desire to establish a particular impression in the minds of others. Impression motivation may or may not result in overt behavioural reactions relevant to the desired impression. For example, a woman may be motivated to engage in exercise for self-presentational benefits (e.g., weight loss), however she may choose not to exercise due to perceived cultural restrictions (e.g., exercising in the presence of men). Impression construction includes the actions in which one may engage to influence the impressions others may form of them. The chosen behaviours are directly related to the type of impression one desires to make, and can include behaviours such as self-descriptions, body language, or clothing (Leary & Kowalski, 1990). For instance, someone may wear exercise clothing in a social situation, in order to give the impression that they are involved in physical activity.
The motivation to generate a specific impression (impression motivation) is affected by three factors: the goal relevance of impressions, the value of the desired outcomes, and any discrepancy between one’s current image and the image one desires to express (Leary & Kowalski, 1990). Goal relevance refers the attainment of a combination of desired outcomes (social and material), self-esteem maintenance, and identity development. Higher publicity of one’s behaviour, more dependency on the target and increased probability of future interactions tends to magnify the salience of the aforementioned outcomes and can therefore result in a higher impression motivation.

The value of the desired outcomes demonstrates the importance one places on the desired goals. The higher the value one places on the potential outcomes of impression management, the higher their motivation will be to manage their impressions. This notion stems from basic motivational theory asserting that motivation increases with the value of desired goals (Beck, 1983).

Impression construction, the other component in the two component model, refers to the behavioural manifestation of impression motivation (Leary & Kowalski, 1990). The types of actions one uses to generate an impression are regulated by intrapersonal variables such as the self-concept and desired identities. Most often, impressions people wish to convey are consistent with their self-concept, such that they display desirable self-images, and individuals feel compelled to present an honest image (Baumeister & Jones, 1978; Leary & Kowalski, 1990). Desirable self-images describe what a person would like to be and what they believe they can be at their best. Often the images people project are in the direction of the desirable self-image, but remain realistic in nature (Leary & Kowalski, 1990).
The interpersonal determinates of impression construction are role constraints, target values, and current or potential social images (Leary & Kowalski, 1990). Role constraints are social and behavioural expectations to which consistency generates positive self-presentational outcomes. When selecting aspects of the self to present to an observer, the actor will consider the expectations of this observer, and tailor self-presentations so they are met with approval. For example, a young man who stubs his toe on a table leg may pretend it does not hurt if he believes that an image of toughness is valued by the observer. Finally, the impressions the actor attempts to form depend on perceptions of how others (observers) may view them at present and predictions of how this view may change in the future (Leary & Kowalski, 1990).

**Self-Presentation and Body Image**

The formation of body image can be influenced by several factors, many of which are self-presentational in that a desire to create a positive impression may motivate one to pursue a certain body image (Leary et al., 1994). Body image “encompasses one’s body-related self-perceptions and self-attitudes, including thoughts, beliefs, feelings and behaviours” (Cash, 2004, p.1). Research evaluating different cultures has indicated that culture may have a large influence on body image such that some women in cultural minorities valued a more curvy figure (Frank & Roehrig, 2011; Franko et al., 2012), while others subscribed to the Western body ideal and took steps to attain it through diet or exercise participation (Goodman, 2002). The body preferences of one’s culture (e.g., curvy), in addition to pressures from the media and dominant cultural narratives, may impact exercise participation and perceived self-presentational advantages of exercise. Moreover, exercise status of the observer was an important factor when measuring the
self-presentational benefits of exercise in relation to perceptions of body shapes and personal body image satisfaction (Furnham, Titman, & Sleeman, 1994).

Research by Furnham et al. (1994) investigated the influence of exercise participation on White British women’s views of nine different body types (i.e., extremely anorexic to hypertrophic). The authors found that exercisers had more positive self-perceptions, and although they supported the typical Western ideal body shape, they were more accepting of muscular body types compared to non-exercisers. While both exercisers and non-exercisers rated anorexic and extremely thin females body shapes negatively, non-exercisers rated a thin, near anorexic body more positively than exercisers. This differing view of body ideals, may be a result of exercisers viewing their bodies in terms of functionality, rather than appearance (Furnham et al., 1994).

In combination with differing cultural views on ideal body types, it is possible that exercise status may moderate the relationship between body image preferences and culture. For example, researchers found that Latino women growing up around White women, adopted mainstream body ideals (i.e., assimilation) that over-rode family member pressures to maintain a shapely figure (Franko et al., 2012). The suggestion was that these women engaged in exercise or dietary restraint and adopted a Westernized view of female body ideals. The extent that body image ideals permeate cultural groups and their influence on impression formation and construction has yet to be examined in the context of exercise. Body image, along with culture, plays an important role in the type of exercise in which one engages, and therefore there is a clear need to delineate the specific role it plays in the formation of impressions of the self and others.
**Exerciser Stereotype**

In general, stereotypes are beliefs about the features, attributes and actions of certain groups (Hilton & von Hippel, 1996). Stereotypic thinking allows observers to rely on previously gained knowledge instead of processing incoming information (Eagly, 1995; Hilton & von Hippel, 1996; Macrae, Milne, & Bodenhausen, 1994). Stereotypes can be accurate representations of differences perceived by the observer and permit more efficient information processing regarding others (Hilton & von Hippel, 1996). However, stereotypes can also be erroneous if they are based on enduring characteristics of an actor such as race or gender because these stereotypes often do not reflect real group differences (Hilton & von Hippel, 1996). Motivational and contextual factors influencing stereotypic thinking include demands of social roles (Eagly, 1995), differences in power (Fiske, 1993), and establishing a social identity through the creation of in and out-groups (Hogg & Abrams, 1988). Stereotypes are formed and maintained through self-fulfilling prophecies, inaccurate correlations, and one’s perceptions regarding out-group homogeneity (Hilton & von Hippel, 1996). Stereotypes are maintained by applying previous experience to subsequent observations (priming), assuming others are more similar to their stereotype than they actually are (assimilation), and attributing stereotype-congruent explanations or accessible information to behaviours or people regardless of actual behaviour (stereotype-incongruent or stereotype congruent information; Hilton & von Hippel, 1996).

Self-presentation research often converges with stereotype research in that the judgments an observer makes about an actor can be influenced by previously held stereotypes the actor represents. Early research in social psychology by Dion, Berscheid,
and Walster (1972) examined the “what is beautiful is good” theory, and showed that attractive individuals of both genders were presumed to have more socially desirable personalities, more prestigious jobs, and a higher level of happiness than those rated less attractive. Being attractive holds positive stereotypes, and as such it could be seen as advantageous to generate an attractive self-image. From this early research (Dion et al., 1972) stemmed numerous studies examining the nuances of the positive exerciser stereotype.

**The Positive Exerciser Stereotype**

In the context of exercise psychology, stereotypes influence behaviour and cognitions in terms of the types of activities in which people choose to engage, the location of these activities, and the perceptions of others who exercise (Dworkin, 2001; Hodgins, 1992; Mack, 2003). The “healthy body-healthy mind” stereotype underlies general classifications of exercisers, where research indicated that those who were fit and presumably exercised regularly were perceived to have possessed characteristics of psychological well-being to a greater extent than those who were unfit and may not have exercised (Hodgins, 1992). This preliminary research is largely related to the positive exerciser stereotype which has received ample support. Research by Rodgers et al. (2009) noted the prevalence of the positive exerciser stereotype, such that those who did not exercise, and did not have any intent to exercise in the future, showed evidence of holding this stereotype. In support of a positive exerciser stereotype, participant ratings of a genderless, ageless exercising target showed that exercisers were rated more positively (e.g., healthier, more energetic, thinner, more fit, stronger, more disciplined)
by both exercising and non-exercising observers than non-exercisers (Rodgers et al., 2009).

The self-presentational nature of the exerciser stereotype has also been examined through inspection of impression formation and impression motivation (Leary & Kowalski, 1990). Early investigation of the exerciser stereotype by Martin et al. (2000) studied the effects of exercise participation on impression formation. Personality and appearance ratings were collected for female and male exercising targets, non-exercising targets, and control targets. The results supported the positive exerciser stereotype as the exercising targets were regarded as harder workers, more confident, and as possessing more self-control than non-exercising or control targets. A negative non-exerciser stereotype was also found, which indicated that when compared to control and exercising targets, non-exercisers were considered to have fewer friends, be less brave, less intelligent, messier, less happy, less friendly, and less sociable (Martin et al., 2000). This negative stereotype can be likened to the devil effect where the observer generates a negative overall impression of an individual, disregarding discrete traits (Thorndike, 1920). As one would predict, the exerciser received the highest physical ratings; however non-exercisers were rated worse than the exerciser and control targets on all physical dimensions (Martin et al., 2000).

**Exerciser Stereotype and Gender**

Exercise could have different self-presentational outcomes for females and males regardless of activity, depending on the goals of the observer. Research by Mack (2003) compared exercisers and non-exercisers using the same vignette method as Martin et al. (2000) with an American sample of college students. The results were consistent with
previous exerciser stereotype studies (Martin et al., 2000), such that exercisers received more positive ratings on both physical and personality attributes compared to non-exercisers. Mack’s research, however, differed from previous work (e.g., Hodgins, 1992; Martin et al., 2000) as females were rated more positively on eight out of 12 personality dimensions compared to males, while no differences were found between the genders on physical ratings. Specifically, females were seen as harder working, more independent, kinder, more self-confident, neater, braver, happier and possessing more self-control than male exercisers. Given two-thirds of the sample was male, this latter finding was intriguing as the results indicated the importance of rater gender (Mack, 2003). Following this finding, researchers accounted for the impact of gender on the exerciser stereotype in terms of both actor and observer (Drouin, Varga & Gammage, 2008).

Selection of certain gendered activities can play an important role in self-presentation such that one risks generating an unfavourable impression if they choose to participate in an activity deemed specific to the opposite gender (Leary, 1992). Certain activities have been traditionally perceived as masculine or feminine; these categorizations are social constructions based on expectations and beliefs that gender categories are natural, unambiguous, bipolar, static, and individual (Koivula, 2001). Activities labelled as feminine (e.g., dance, aerobics) are those which prescribe to stereotyped expectations of femininity (e.g., graceful, complacent) and support beauty or aesthetic pleasure (Koivula, 2001). Masculine stereotyped activities (e.g., football, weight lifting) emphasize strength, power, aggression, competition, and discipline (Koivula, 2001). Research by Drouin et al. (2008) examined the exerciser stereotype in with regard to gender stereotyped activities. Participants were asked to rate eight targets
(male or female) who participated in a masculine-stereotyped activity (weight lifting), feminine stereotyped activity (group aerobics class), gender neutral activity (treadmill running/cycling), or control (no mention of exercise) on physical and personality characteristics. The positive exerciser stereotype existed for physical ratings regardless of the gender stereotype of the activity. In terms of personality ratings, the only difference found for gender was that male targets were rated more masculine than female targets. Therefore, the authors concluded there were no self-presentational disadvantages to participating in an opposite gender stereotyped activity (e.g., male participating in a dance class, or female participating in weight training) and that simply participating in some form of exercise garnered self-presentational benefits (Drouin et al., 2008).

In addition to gender stereotype of the activity, female body stereotypes have also been explored in relation to the exerciser stereotype. Martin Ginis and Leary (2006) examined the moderating effect of women’s body weight on the positive exerciser stereotype. Nine female targets were rated on physical and personality attributes. Specifically, the targets were either underweight, average weight, or overweight and were described as an exerciser, a non-exerciser or a control. For personality ratings, the exercising and control targets received more favourable ratings than the non-exerciser, regardless of body weight. Physical ratings were influenced by body weight in that being underweight countered negative stereotypes associated with being a non-exerciser. In addition, overweight targets who were exercisers did not receive negative stereotypes associated with being overweight. The average weight exerciser received higher attractiveness ratings than the overweight exerciser; however, the overweight exerciser was considered just as physically attractive as all the underweight targets, and the
remaining average weight targets. Taken together, the current findings were consistent with previous research in that non-exercisers were negatively stereotyped; however, the self-presentational advantages of being an exerciser overruled the disadvantages of being overweight (Martin Ginis & Leary, 2006).

In light of the influences of gendered activities, and the potential for female targets to hold a unique manifestation of the exerciser stereotype, Shirazipour, Munroe-Chandler, and Loughead (2014) examined the exerciser stereotypes of female weight trainers (a traditionally masculine activity). Participants rated control targets, non-weight trainers, typical weight trainers, and excessive weight trainers on both personality and physical attributes. Both typical and excessive weight trainers received higher ratings for physical health, fitness, strength, and muscularity than non-weight trainers and control targets. The results confirmed the positive exerciser stereotype for those participating in opposite gendered activities for physical attributes (Drouin et al., 2008). The authors noted that future research should control for cultural or ethnic differences, as certain biases toward exercise or weight training may be unique to certain cultures (Shirzapour et al., 2014).

**Exerciser Stereotype and Culture**

There has been relatively little research detailing the cultural limitations of the exerciser stereotype. However, there is evidence to suggest that this stereotype may manifest in different ways based on culture. Using a Canadian sample, Martin Ginis, Latimer and Jung (2003) examined the exerciser stereotype in the context of the amount and type of physical activity or exercise the target participated in as well as the exercise status of the observer. Participants rated female targets who were excessive exercisers,
exercisers, active living targets, non-exercisers and control targets on personality (e.g., kindness, friendliness, confidence) and physical (e.g., physical strength, muscularity) attributes. Results showed that active living and exercising targets received higher ratings on most personality dimensions than control, excessive exercising and non-exercising targets. For physical ratings, the excessive exerciser, typical exerciser, and active living targets received more favourable ratings than the control and non-exercising targets. The authors concluded that the positive exerciser stereotype only existed to a certain extent for the excessive exercisers (positive physical ratings as opposed to personality ratings). However the active living targets received similar positive biases to typical exercisers (Martin Ginis et al., 2003).

Given that all previous research investigating the exerciser stereotype was gathered using samples of North American university students, Lindwall and Martin Ginis’ (2006) research using a Swedish sample allowed for a direct comparison of the exerciser stereotype between two cultures. The authors believed that differences between the samples may exist due to the Swedish culture having longer traditions and different meanings associated with exercise (Lindwall & Martin Ginis, 2006). Using the same method as Martin Ginis et al. (2003), the results revealed that active living and typical exercising targets received higher personality and physical ratings than control, non-exercising or excessive exercising targets. Excessive exercisers received the lowest ratings of all the groups for nine out of 12 personality dimensions (e.g., meaner, sadder, less confident, and more dependent). These findings differed from those with the Canadian sample wherein the non-exerciser received the lowest personality ratings (Martin Ginis et al., 2003). Congruent with the Canadian sample, Swedish non-
exercisers received the lowest ratings for physical dimensions (Lindwall & Martin Ginis, 2006).

The authors (Lindwall & Martin Ginis, 2006) concluded that the exerciser stereotype did not appear to be as strong in the Swedish sample since differences in ratings of exercisers and active living targets were mostly shown on physical attributes, rather than personality ratings as found with North American samples. The lack of effect for many of the personality dimensions indicated no evidence for the halo effect (Thorndike, 1920) in the Swedish sample as this population may not attribute the same virtues to exercise as North American populations do (Lindwall & Martin Ginis, 2006). Moreover, variables linked to physical attractiveness (i.e., ugly-good looking, and sexually attractive-sexually unattractive) did not hold strong self-presentational advantages in the Swedish sample, which is contrary to the research with North American samples, and thus supported the notion that Swedish samples would not associate physical attractiveness with exercise (Lindwall & Martin Ginis, 2006; Martin Ginis, et al., 2003).

The negative ratings for the excessive exerciser in the Swedish sample are a good example of culture influencing the formation of the exerciser stereotype. Unlike the North American sample, the excessive exerciser in the Swedish sample did not benefit on physical or personality ratings, which reflected a negative exerciser stereotype (Lindwall & Martin Ginis, 2006). The authors likened this to the phenomenon known in Sweden as “the Jante-law” (Sandemose, 1934). This informal, global norm states that one should remain neutral, be moderate, and avoid sticking out with regard to attitudes, opinions, and behaviour (Sandemose, 1934). The excessive exerciser represented a state of extreme,
and therefore generated a negative bias according to the Jante-law, and may have reflected increased concern within this population regarding issues of overtraining and exercise dependence (Lindwall & Martin Ginis, 2006).

In order to detect differences in ratings based on target gender in a Swedish sample, Lindwall and Martin Ginis (2008) examined ratings of a male typical exerciser, excessive exerciser, active living target, non-exercising target and control target. The typical exerciser, active living target and excessive exerciser received more positive ratings than the non-exerciser and control target overall, and the non-exerciser received less favourable ratings than the control. Some differences between physical and personality ratings existed wherein the typical exerciser did not differ from the control on several personality items, but differences were found for physical attributes. Similar to the female targets (Lindwall & Martin Ginis, 2006), a halo effect (Thorndike, 1920) was not apparent for the male sample. The ratings of the male excessive exerciser were slightly less harsh, but similar to the results from previous Canadian (Martin Ginis et al., 2003) and Swedish (Lindwall & Martin Ginis, 2006) samples. Specifically, the excessive exerciser was the only active target that differed significantly from the control on personality dimensions (i.e., harder working, less sociable), and he was considered sadder, less confident, and less sociable than the typical exerciser. In light of these characteristics, being an excessive exerciser was considered a self-presentational liability (Lindwall & Martin Ginis, 2008). The existing research demonstrates that culture is an important dimension to consider when examining exerciser stereotype and self-presentation. By understanding the nuances brought forth by culture, a clearer picture of
the exerciser stereotype can be constructed in order to generate a comprehensive understanding of self-presentation motivations for exercising.

**Measurement of the Exerciser Stereotype**

Early exerciser stereotype research used photographs of target persons (Dion et al., 1972) as a measure of the stereotype. The current review of literature, however, has predominantly focused on the use of vignettes describing targets (Drouin et al., 2008; Hodgins, 1992; Martin Ginis et al. 2003). The aim of a vignette is to create a target that is relatable and similar to those rating the target, avoiding eccentric characteristics or alarming events (Finch, 1987). Small differences in a target (e.g., body build) can generate large systematic changes in impression formation (Stewart, Powell, & Chetwynd, 1979). Further, very little information is required to generate an impression, and too much information can create inaccurate impressions of others (Stewart et al., 1979).

After the participant reads the vignette describing the target, the participant rates the target on the dimensions of personality, physical appearance, or both. Personality and physical dimensions are rated on a 9-point semantic differential rating scale. For example, the personality dimension of dependent/ independent would read, 1 = *dependent*, 9 = *independent* (Martin et al., 2000). Other personality dimensions often assessed include friendly/ not friendly, lazy/ works hard, sloppy/ neat, and lacks confidence/ confident (Drouin et al., 2008; Mack, 2003).

Physical appearance dimensions are also rated on a 9-point semantic differential rating scale and include items such as ugly/ good looking, sexually unattractive/ sexually attractive, underweight/ overweight, scrawny/ muscular, physically sick/ healthy, has an
attractive figure/ has an unattractive figure, unfit/ fit, and physically weak/ physically strong (Martin et al., 2000). It is important to note that the personality and physical appearance dimensions mentioned have been used with North American samples representing cultural majorities (e.g., Martin Ginis et al., 2003; Ryckman, Robbins, & Kackzor 1989) and as such may not be inclusive of characteristics typical of other cultures.
References


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APPENDICES

APPENDIX A

Descriptive Measures

1. Age: _______________
2. Gender: ______________
3. University Faculty: ______________

4. To which ethnocultural background do you most identify (please select one):
   - Aboriginal
   - Southeast Asian (e.g., Burmese, Cambodian, Laotian, Thai, Vietnamese)
   - Black
   - Non-White West Asian, North African, or Arab (e.g., Egyptian, Libyan, Lebanese, Iranian)
   - Chinese
   - Non-White Latin American (e.g., indigenous persons from Central and South America)
   - Filipino
   - Person of Mixed Origin (with one parent in one of the visible minority groups listed above)
   - Japanese
   - White/Caucasian
   - Korean
   - Other Visible Minority Group (please specify)
   - South Asian/ East Indian (e.g., Indian from India; Bangladeshi; Pakistani; East Indian from Guyana, Trinidad, or East Africa)

5. If you exercise, please list your top two form(s) of exercise (e.g. cardiovascular, weights, etc.):
   1) __________________
   2) __________________
   3) I do not exercise □
6. If you exercise how many times per week on average do you exercise?
   - 1-2
   - 3-4
   - 5 or more
   - I do not exercise

8. Every time I exercise, I exercise for approximately ______________ minutes

9. Please read the following description of a female body ideal:

   Lean with visible muscle tone.

Please indicate how much you agree with the described ideal (please circle a number).

   1  2  3  4  5  6  7  8  9  10

   Do not agree with this ideal

   Somewhat agree with this ideal

   Completely agree with this ideal
## APPENDIX B

### Personality and Physical Attributes

Please circle the number that you believe best describes the character on the following attributes:

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APPENDIX C

Manipulation Check

To the best of your abilities, please answer the following questions regarding the story that you read earlier. To enhance your memory, you may want to close your eyes and envision the image you created of the individual.

a) The character described in the story was named ___________.

b) Last summer, the character described in the story worked at ________________.

c) Provide one form of physical activity mentioned in the story: _____________.

APPENDIX D

Vancouver Index of Acculturation (Ryder et al., 2000)

Please answer each question as carefully as possible. Circle one of the numbers to the right of each question to indicate your degree of agreement or disagreement. Many of these questions will refer to your heritage culture, meaning the culture that has influenced you most (other than Canadian culture). It may be the culture of your birth, the culture in which you have been raised, or another culture that forms part of your background. If there are several such cultures, pick the one that has influenced you most (e.g., Chinese, Latin American, Black). If you do not feel that you have been influenced by any other culture, please try to identify a culture that may have had an impact on previous generations of your family.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral/Depends</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>1. I often participate in my heritage cultural traditions</td>
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<td>2. I often participate in mainstream Canadian cultural traditions</td>
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<td>2</td>
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<tr>
<td>3. I would be willing to marry a person from my heritage culture.</td>
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<td>4. I would be willing to marry a Canadian person.</td>
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<td>5. I enjoy social activities with people from the same heritage culture as myself.</td>
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<td>6. I enjoy social activities with typical Canadian people.</td>
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<td>7. I am comfortable working with people of the same heritage culture as myself.</td>
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<td>8. I am comfortable working with typical Canadian people</td>
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<td>9. I enjoy entertainment (e.g. movies, music) from my <em>heritage culture</em>.</td>
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<td>10. I enjoy Canadian entertainment (e.g. movies, music).</td>
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<td>11. I often behave in ways that are typical of my <em>heritage culture</em>.</td>
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<td>12. I often behave in ways that are ‘typically Canadian.’</td>
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<td>13. It is important for me to maintain or develop the practices of my <em>heritage culture</em>.</td>
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<td>14. It is important for me to maintain or develop Canadian cultural practices.</td>
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<td>15. I believe in the values of my <em>heritage culture</em>.</td>
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<td>16. I believe in mainstream Canadian values.</td>
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<td>17. I enjoy the jokes and humor of my <em>heritage culture</em>.</td>
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<td>18. I enjoy typical Canadian jokes and humor.</td>
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<td>19. I am interested in having friends from my <em>heritage culture</em>.</td>
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<td>20. I am interested in having Canadian friends.</td>
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</table>
Dear [insert professor’s name],

My name is Kim Curtin and I am a Master’s student in Human Kinetics at the University of Windsor, studying under the supervision of Dr. Krista Chandler (chandler@uwindsor.ca).

For my thesis, I am investigating person perception in relation to exercise. The results obtained from this study will contribute to existing literature on exercise perceptions, methods of assessing these perceptions, as well as an applied understanding of the self-presentation outcomes of exercise for females.

With your permission, I would appreciate visiting a lecture of [insert name of class] to recruit participants from amongst your students, and have consenting students complete the questionnaires. I will remain in the class during this process to answer any questions and collect completed questionnaires. The entire process should take no longer than 15 - 20 minutes, during which I would request that you step out of the class to reassure participant confidentiality. In addition, please note that this study has received clearance from the University of Windsor REB.

For more information, I have attached a letter of permission. If you are willing to have me visit your class, or have any questions, please contact me via e-mail (curtink@uwindsor.ca) or phone (519 253-3000 ext. 4058).

Thank you,

Kim Curtin

Master’s Student in Human Kinetics
Department of Kinesiology
University of Windsor
401 Sunset Ave
Windsor, ON N9B 3P4
APPENDIX F

Recruitment Slide (Powerpoint)

Person Perception Study: Instructions

<table>
<thead>
<tr>
<th>Paper and Pencil:</th>
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<tbody>
<tr>
<td>1. Read the letter of information and sign in the space provided, please keep a copy of this letter. Return the signed copy to the envelope.</td>
</tr>
<tr>
<td>2. Remove the coloured paper from the envelope and read the description of the individual. Return the paper to the envelope.</td>
</tr>
<tr>
<td>3. Remove the remaining papers from the package, and complete them in order. Return them to the envelope.</td>
</tr>
<tr>
<td>4. Return your full package to the investigators and complete your ballot to win a gift card.</td>
</tr>
</tbody>
</table>

If you would like to save paper and use your laptop...

http://uwindsor.fluidsurveys.com/s/personperception/

Thank you for participating!
APPENDIX G

Entry Ballot for $50 Gift Card to Devonshire Mall

Please fill out the following information for your chance to win! Your information will be kept strictly confidential.

Name: ___________________
e-mail: ___________________
Telephone number: (         ) _______ -______________
APPENDIX H
Letter of Consent to Participate in Research
Person Perception Study

You are asked to participate in a research study conducted by Kimberley Curtin under the supervision of Dr. Krista Chandler, from the Department of Kinesiology at the University of Windsor. Results obtained from this research study will contribute to the completion of a Master’s degree in the Faculty of Human Kinetics.

If you have any questions or concerns about the research, please feel to contact Dr. Krista Chandler at (519) 253-3000, ext. 2446 or via e-mail at chandler@uwindsor.ca. You may also contact Kimberley Curtin at (519) 253-3000, ext. 4058 or via e-mail at curtink@uwindsor.ca.

PURPOSE OF THE STUDY
The purpose of the study is to investigate physical and personality attributes involved in person perception.

PROCEDURES
If you volunteer to participate in this study, you will be asked to read a short description of an individual and rate the individual on various physical and personality characteristics based on the information presented. Following this, you will complete a brief questionnaire: the SPEQ. Lastly, you will answer several questions and provide demographic information.

The study should take no more than 15-20 minutes to complete.

POTENTIAL RISKS AND DISCOMFORTS
There are no anticipated risks or discomforts associated with participation in this study.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
Subjects may benefit from participation in this study, as their exposure to research will be increased. Participation may be of particular interest to students who are required to complete a Research Methods course.

COMPENSATION FOR PARTICIPATION
You can choose to enter a draw to win one of two $50.00 gift cards for the Devonshire mall.

CONFIDENTIALITY
Responses to the questionnaires cannot guarantee anonymity due to the nature of submitting written questionnaires. However, this risk will be minimized through the use of a drop-box to collect written questionnaires. Further, no identifying information will be required on the questionnaire. The information from the draw will remain confidential. All data will be kept in a password protected file which will only be accessible by the primary investigators. Potentially the data may also be utilized in subsequent studies conducted by the researchers. Data will be kept secured for five years when it will then be destroyed.

PARTICIPATION AND WITHDRAWAL
Participation in this study is voluntary. If you volunteer to be in this study, you may withdraw at any time while you are completing the surveys, without consequences of any kind. However, once you have submitted the completed survey, this will be accepted as your consent to participate and it is not possible to
withdraw because the surveys are anonymous. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

If you wish to receive any additional information regarding this research, please contact the researchers via e-mail (curtink@uwindsor.ca or chandler@uwindsor.ca). The results from this research will be available on the REB study results website upon completion (www.uwindsor.ca/reb).

Date when results are available: May, 2014

SUBSEQUENT USE OF DATA
These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS
If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.

_________________________________________  __________________
Signature of Investigator                     Date

SIGNATURE OF PARTICIPANT

I have read the above information and consent to participate in this research.

_________________________________________  __________________
Signature of Participant                      Date

Please keep a copy of this consent form for your records.
APPENDIX I

Instructions for Participants

1. Read the letter of information and sign in the space provided; please keep a copy of this letter. Return the signed copy to the envelope.
2. Remove the coloured paper from the envelope and read the description of the individual. Return the paper to the envelope.
3. Remove the remaining papers from the package, and complete them in order. Return them to the envelope.
4. Return your full package to the investigators and complete your ballot to win a gift card.
APPENDIX J

Vignette

Please read the following description carefully. After reading, please return this sheet to the envelope.

Mary is 20 years old and a second-year student at a large university in Ontario. This semester she is taking courses in psychology, French, calculus, world history, and chemistry. She has not yet decided on a major. Mary is of average height and average weight. She has brown eyes and straight dark hair that is cut to her shoulders. In her spare time, she listens to music, reads, watches TV, and often gets together with her friends to go for a drink or see a movie. Mary exercises regularly, working out at the gym 4 or 5 times each week. Her exercise program consists of jogging, fitness classes, and some weight training. She is the oldest of three children and her parents are both schoolteachers. Last summer, Mary worked at a movie theatre. Next summer, she hopes to tour Europe for a few weeks.
VITA AUCTORIS

NAME: Kimberley D. Curtin
PLACE OF BIRTH: Lindsay, ON
YEAR OF BIRTH: 1990
EDUCATION: University of Windsor, M.H.K., Windsor, ON, 2014
Laurentian University, B.A., Sudbury, ON, 2012