The Effects of English-Speaking in the Household and Immigrant Heritage on Eating Disorder Symptomatology Among Canadian Women & Men

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English-speaking in the household and immigrant heritage were investigated as predictors of eating disorder symptomatology. Subsamples of immigrants (n = 72) and native-born Canadians (n = 314) were analyzed. Each subsample had approximately equal numbers of men and women. Respondents in English-speaking households reported a higher tendency to think about dieting than respondents in non-English-speaking households. Immigrant men reported a higher tendency to think about dieting and a higher tendency to feel satisfied with the shape of their body than native-born Canadian men. Immigrant women, however, showed the opposite trend. They reported thinking about dieting to a lesser degree than native-born Canadian women. In contrast to immigrant men, immigrant women appear to be 'insulated' from Western cultural body ideals and standards. This study increases our understanding of factors that might affect the health of Canadian women and men, particularly immigrants, raises important implications for health promotion research, practice and policy.

Western cultural body ideals and standards emphasize the desirability of beauty and thinness – ideals accepted by most women but realistically impossible to achieve. Even though women today are becoming heavier (Spitzer, Henderson & Zivian, 1999), many are determined to attain a thin and youthful appearance at a cost to their physical and psychological health (Wolf, 1991). Feminist socio-cultural theorists (e.g., Fredrickson & Roberts, 1997; McKinley & Hyde, 1996)

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have identified the role that culture plays in increasing women’s risk for eating disorder symptomatology, viewing this symptomatology as arising in part from the thin-ideal standard of beauty promoted by media images. Studies have validated this, showing that recurrent social messages valuing a slim body lead women and girls to internalize this belief which is expressed as negative body image and eating disorder symptomatology (Hawkins, Richards, Granley & Stein, 2004; Lavine, Sweeney & Wagner, 1999; Mills, Polivy, Herman & Tiggemann, 2002; Monro & Huon, 2005; Thomsen, Weber & Brown, 2002; Turner et al., 1997; Stice et al., 1994).

Immigrants from non-Western countries may acculturate to a Western country such as Canada because of various social, financial, political and educational benefits (Pedersen et al., 2008). However, in doing so, they may also be exposed to certain risks. For example, exposure to Western culture may present specific health issues or risks for immigrant women and girls. A number of studies have investigated acculturation, i.e., the adoption of Western cultural values and practices, and identification with the adopted Western culture, in relation to the incidence of eating disorder symptomatology in immigrant women and girls from non-Western societies (e.g., Abrams, Allen & Gray, 1993; Akan & Grilo, 1995). The conventional wisdom is that immigrant women and girls’ exposure to Western cultural ideals and standards for beauty and thinness increases their risk for disordered eating and eating disorders (Geller & Thomas, 1999; Gowen et al., 1999; Jackson, Keel & Lee, 2006). It is postulated that through acculturation, these ‘unhealthy’ and potentially harmful ideals and standards about the body are acquired by immigrant women and girls, leading them to adopt unrealistic standards of thinness, poor body image and unhealthy eating behaviours (Abrams et al., 1993; Akan & Grilo, 1995).

\(^{2}\) ‘Acculturation’ takes a variety of meanings in social science literature as well as in everyday language. In this paper acculturation is defined simply as a socialization process—the adoption of Canadian values, attitudes, eating and lifestyle habits and, particularly, dietary preferences—of immigrant newcomers. The implication of most of the studies reviewed in this article is that acculturation into Western culture leads to the adoption of attitudes and eating and lifestyle habits such as eating disorder symptomatology which is less healthy than those in an immigrant’s non-Western home country. This may not always be the case, however. Western culture may have ‘healthier’ values with respect to standards of hygiene, levels of safety in the home or workplace, etc. In other contexts, for example in the case of research on the political integration of immigrants into Western society, acculturation may be viewed in a positive light, e.g., when Western values encourage embracing democracy or racial tolerance.
Most studies have considered one’s identification with her culture of birth and her adopted Western culture an indicator of acculturation versus identification with one’s culture of origin (e.g., Barry & Garner, 2001; Cachelin & Regan, 2006; Sussman, Truong & Lim, 2007). Other studies have considered an immigrant’s age of arrival in a Western country (Lopez, Blix & Blix, 1995) and duration of residency in that country (Al-Subaie, 2000; Chaudry & Mumford, 1992; Nasser, 1986) as indicators of acculturation. In a few studies, an immigrant’s ability to speak English (e.g., Sussman et al., 2007) or preference for English language use (e.g., Cachelin & Regan, 2006; Khan, Sobal & Martorell, 1997) are believed to be indicators of acculturation, i.e., identification with Western culture (Suinn et al., 1987; Ung, 2003). Unfortunately, in most of these studies, English language use or preference have been combined into larger indices including other dimensions of acculturation such as associating with Anglo peers (e.g., Ayala, Mickens, Galindo & Elder, 2007), observing Western customs, establishing friendships with Westerners (e.g., Jackson et al., 2006), ease of social interaction with Westerners (e.g., Barry & Garner, 2001), neighborhood cultural diversity (e.g., Sussman et al., 2007), and identification with Western cultural practices (e.g., Sussman et al., 2007). This precludes aggregating any analysis of the value of English language use or preference in its own right as a predictor of eating disorder symptomatology in immigrants.

Studies that have focused on English language use or preference have yielded mixed findings. In one study, preference for speaking English was not a statistically significant predictor of eating disorder symptomatology in women (Jackson et al., 2006). In another, Saudi adolescent girls with short-term residency in a Western country were more likely to report higher drive for thinness if they spoke English than if they did not (Al-Subaie, 2000). This finding suggests that for immigrants to Western countries, speaking English represents an adoption of Western cultural ideals and standards regarding eating and weight. Alternately, it suggests the possibility that this adoption involves a state of transition where “cultural clash” is experienced (Katzman & Lee, 1997), thereby increasing their risk for eating pathology (see Nam, 2001).

The present study examined whether or not English spoken in the household was predictive of eating disorder symptomatology. It was hypothesized that speaking English in the household would represent an adoption of Western cultural body ideals and standards, or a kind of linguistic acquisition that is linked to a higher level of eating disorder symptomatology (Gordon-Larsen et al., 2003; Keski-Rahkonen, 2005).

A small number of studies of acculturation have compared immigrants to Western societies with non-migrating counterparts, i.e., individuals who remained in their non-Western home country (e.g.,
Jackson et al., 2006), finding that eating disorder symptomatology tends to be greater in the immigrants than the non-immigrants. Other studies, however, have shown that immigrants, after a period of lengthy residency in the adopted country report a level of eating disorder symptomatology that is on par with native-born members of Western societies, and a level that is higher than that reported by other immigrants newcomers of the same ethnic group or non-migrating counterparts (e.g., Ball & Kenardy, 2002).

A smaller number of studies have looked at generational differences, e.g., comparing immigrants to native-born members (first and second generation) of Western societies who have immigrant heritage (e.g., Sussman et al., 2007). One study found first and second generations of children with immigrant parents or grandparents tended to have higher rates of eating disorders (Sussman et al., 2007). Another study found that the children of immigrants were more likely to have disordered eating patterns (Chamorro & Flores-Ortiz, 2000), possibly reflecting an intergenerational experience of “cultural clash”, wherein the children adopt Western cultural body ideals and standards yet are also expected to maintain an identification with their parent’s non-Western native ethnic group (see Nam, 2001). A study of Hispanics in the United States, however, found that while age and Anglo cultural orientation predicted eating disorders (Cachelin et al., 2006), generational status, i.e., immigrant heritage, did not. The implication in these studies is that generations further removed from the immigrant experience may have a more complete acculturation into Western cultural body ideals and standards and a pattern of eating disorder symptomatology similar to native-born members of Western societies, e.g., Canada, United States (Sundquist & Winkleby, 2000).

The present study examined whether or not immigrant heritage was predictive of eating disorder symptomatology. It was hypothesized that immigrant newcomers to Canada would have an incomplete acculturation into Western culture and that this would be linked to lower eating disorder symptomatology when compared to native-born Canadians with one or two immigrant parents or native-born Canadians with two native-born Canadian parents, i.e., who are further removed from the immigrant experience.

The few studies examining generational differences often fail to control for age differences, in spite of the fact that age is strongly related to the incidence of disordered eating and eating disorders (Polivy & Herman, 1985, 2002). This failure to control for age differences might have been a confounding factor in these studies since the samples of immigrants that were used in these studies tended to be younger compared to their non-migrating counterparts or to native-born Americans (e.g., Jackson et al., 2006). Consequently, generational
differences in self-reported level of eating disorder symptomatology of immigrants and their non-migrating counterparts may be largely due to age factors. To avoid this problem, age differences were controlled for in analyses, comparing immigrants with native-born Canadians of diverse immigrant heritage.

The literature on eating disorder symptomatology comparing immigrants with native-born members of Western societies has tended to focus on women and girls. There is little research examining how Western body cultural ideals and standards affect the health of men, especially immigrant men. There is recognition in the literature that media images for men are increasingly promoting a thin yet muscular body ideal (e.g., Duggan & McCreary, 2004; Hatoum & Belle, 2004; Lorenzen, Grieve & Thomas, 2004; Rohlinger, 2002). A handful of studies have documented an increasing preoccupation with muscularity, i.e., the Adonis complex (Pope, Phillips, & Olivardia, 2000), among men in Western societies, noting that this preoccupation is often associated with a desire to achieve a fat-free body mass (Mangweth et al., 2001; Pope et al., 1997; Yang, Gray & Pope, 2005). A study of Taiwanese men indicates, however, that men from non-Western societies may have less exposure to the Adonis complex and, therefore, have less body dissatisfaction or preoccupation with reducing fat (Yang et al., 2005). Since the literature on immigrant status and eating disorder symptomatology focuses almost exclusively on women and girls, thus there is little basis for predicting sex differences on the basis of English-speaking in the household or immigrant heritage.

In addition to age and sex, the present study gave consideration to socioeconomic status (SES), specifically income, as a factor influencing self-reported level of eating disorder symptomatology. Women with higher SES tend to report lower body mass index (BMI), higher body dissatisfaction and more dieting behaviour than those with lower SES (Polivy & Herman, 2002; Rogers et al., 1997). Accordingly, it was hypothesized that respondents with higher income would self-report lower BMI values and higher levels of eating disorder symptomatology.

It is important to investigate factors that can affect the health of immigrants. Canadian immigrant’s health, particularly women’s, has been adversely affected by a variety of health issues and psychological, social, economic and political factors such as ‘broken dreams and harsh realities’, family stressors, domestic violence, unemployment or underemployment, language and cultural barriers, inaccessibility or underutilization of health care services, and discrimination (Aydemir & Skuterud, 2005; Chen & Kazanjian, 2005; Chen, Ng & Wilkins, 1996; Duff, Wong & Early, 2002; Fowler, 1998; Kahn & Watson, 2005; Man, 2004; McDonald, 1999; Mojab, 1999; Sent et al., 1998; Warman & Worswick, 2004; Wen, Goel & Williams, 1996). Indeed, immigrant health is complex
and multi-factorial, and warrants further attention in the interest of increasing intervention, prevention and promotion. In this paper we focus just on predictors of eating disorder symptomatology, and how these predictors, too, may affect the health of native-born Canadians.

The present study investigated the effects of English-speaking in the household and immigrant heritage as predictors of eating disorder symptomatology. This study differed from previous research by examining (1) English-speaking in the household and immigrant heritage as valid indicators of acculturation, (2) income in relation to self-reported BMI values and level of eating disorder symptomatology, and (3) using a sample of immigrant and native-born Canadian women and men across the lifespan to explore main effects and interaction effects along with sex and age differences in self-reported level of eating disorder symptomatology.

METHODS

Sample & Procedure
As part of a larger All Alberta Survey—an omnibus telephone survey—386 women and men residents in Edmonton, Alberta, Canada were recruited. For the total sample, 50.1% (n = 193) were women and 49.0% (n = 192) were men. Seventy-two respondents were immigrants to Canada (20.6%), and the remaining 79.4% (n = 314) were native-born Canadians. The subsample of immigrants was roughly equally divided between men (n = 35; 48.6%) and women (n = 37; 51.4%). Similarly, 50.3% of the native-born Canadians were men (n = 158) and 49.7% (n = 156) were women. The mean age of the sample was 43.55 years (SD = 16.37) with a range from 18 to 91 years. Respondents reported their ethnicity, though because of the relatively small sizes of these ethnic groups, no effort was made in the present study to analyze ethnic differences. The majority of respondents were classified as White (n = 338; 87.8%). A smaller number were Asian (n = 22, 5.7%) and Hispanic (n = 8, 2%). The remainder of respondents declined or failed to report their ethnicity amongst the response options.

To be eligible to participate in the study, respondents had to be 18 years or older and contacted at home through random digit telephone dialing. Informed consent was obtained from all respondents. Ethical approval was received from an Institutional Review Board (IRB).

Measures
Acculturation: Almost 92% (n = 353) of respondents reported speaking English in the household, while 8.5% (n = 33) did not. The total subsample was partitioned into four groups of immigrant heritage: (1) Immigrants to Canada (n = 72; 18.7%); (2) Native-born Canadians (first
generation) with two immigrant parents \( (n = 42; 11.0\%) \); (3) Native-born Canadians (first generation) with one native-born parent and one immigrant parent \( (n = 53; 13.7\%) \); and (4) Native-born Canadian with two native-born Canadian parents \( (n = 218; 56.6\%) \).

**Income:** Respondents reported their total household income, before taxes, for the previous year. The mean income for this subsample fell into the $50,000-$54,999 bracket.

**Body Mass Index (BMI):** The measures of height and weight used in the calculation of BMI were self-reported. Most studies have concluded there is only a small discrepancy between observed and self-reported height and weight measures, and that self-reports of height and weight can be considered as reliable and clinical measures for research purposes, i.e., 2-3 pound discrepancy (e.g., Betz, Mintz, & Speakmon, 1994; Brownell, 1982; Gupta, Schork, & Dhaliwal, 1993). Using self-reported height and weight, BMI was calculated as weight \( (\text{kg}) \) by height squared \( (m^2) \): \( \text{BMI} = \frac{\text{weight (kg)}}{\text{height (m}^2)} \) (Garrow & Webster, 1985). The mean BMI of the subsample was 25.68 \( (SD = 4.58) \) with a range from 11.60 to 48.04.

**Eating Disorder Symptomatology:** Eating disorder symptomatology was measured using one item from each of the drive for thinness, bulimia and body dissatisfaction subscales of the Eating Disorder Inventory (EDI: Garner, Olmsted, & Polivy, 1983). The drive for thinness item was, “I think about dieting.” The bulimia item was, “I stuff myself with food.” The body dissatisfaction item was, “I feel satisfied with the shape of my body.” These items were rated on a Likert-style scale with response categories ranging from a value of one (never) to six (always). These items reflect dimensions of eating disorder attitudes and behaviours (Garner et al., 1983). The rationale for choosing one item from each of the drive for thinness, bulimia and body dissatisfaction subscales of the EDI was twofold. First, items from these subscales have been used in nonclinical samples (see Schoemaker, van Strien, & van der Staak, 1994; Welch, Hall & Walkey, 1988; see for example, Klemchuk, Hutchinson, & Frank, 1990; McComb & Clopton, 2002). Second, concerns over survey length and respondent burden predicated that only selected items of each of these subscales should appear on the survey.\(^3\)

**Analyses:** All analyses were performed using SPSS 15.0. Each of the eating disorder symptomatology items was analyzed in a multivariate analysis of variance (ANOVA) in which income, BMI and

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\(^3\) Studies using complete drive for thinness, bulimia and body dissatisfaction subscales of the EDI have the advantage of offering more reliable measures of these eating disorder symptomatology constructs by virtue of using more items. Since the “All Alberta Survey” dealt with a range of topics, including eating disorder attitudes and behaviours and immigration, we were restricted to the items that are reported in this article.
age were treated as covariates. Sex, English-speaking in the household, and immigrant heritage were introduced as factor variables. All main effects and interaction effects were analyzed.

RESULTS

Drive for Thinness Item: An adjusted 18% of the variance was explained for the drive for thinness item (“I think about dieting”). BMI was significantly and positively associated with the tendency to think about dieting ($F(1, 300) = 20.68, p < .001$). Respondents with higher BMI values reported a higher tendency to think about dieting ($r = .25, p < .001$). Women ($M = 3.26, SD = 1.60$) had a higher tendency to think about dieting than men ($M = 2.51, SD = 1.27$) ($F(1, 300) = 23.39, p < .001$). Respondents who reported higher income also reported a higher tendency to think about dieting ($F(1, 299) = 9.68, p < .01$). Respondents who reported that English was not spoken in the household reported a higher tendency to think about dieting ($M = 3.09, SD = 1.59$) than those who reported speaking English in the household ($M = 2.89, SD = 1.49$) ($F(1, 300) = 5.69, p = .01$). The interaction of sex X immigrant heritage was statistically significant ($F(3, 300) = 4.73, p < .01$). In Figure 1, women’s higher tendency to think about dieting compared to men was prominent. However, within each sex category, there were clear trends based on immigrant heritage. Thus, immigrant men had marginally higher tendency to think about dieting compared to all categories of native-born Canadian men. The tendency to think about dieting declined for successive generations of native-born Canadian men. Women, on the other hand, showed a relatively higher tendency to think about dieting than all categories of men. Native-born Canadian women with two native-born parents had a higher tendency to think about dieting than immigrant women. Finally, there was a significant interaction of sex X English-speaking in the household ($F(1, 300) = 6.48, p = .01$), in which women in households in which English was not spoken reported the highest tendency to think about dieting ($M = 3.44, SD = 1.71$), particularly when compared to men in households where English was spoken ($M = 2.49, SD = 1.26$).

Body Dissatisfaction Item: The variables in this analysis accounted for an adjusted 14% of the variance in the body dissatisfaction item (“I feel satisfied with the shape of my body”). Respondents with lower BMI values reported a higher tendency to feel more satisfied with the shape of their body than those with higher BMI values ($r = -.24, p < .001$) ($F(1, 293) = 26.65, p < .001$). As was the case with the drive for thinness item, there was a significant sex X immigrant heritage interaction ($F(3, 293) = 2.68, p < .05$). Men had a higher tendency to feel satisfied with the shape of their body than women for all categories, with immigrant men
reporting the highest tendency to feel satisfied with the shape of their body. Immigrant women and native-born Canadian women with two native-born Canadian parents, in contrast, reported the lowest tendency to feel satisfied with the shape of their body.

**Figure 1. Interactive effect of sex and immigrant heritage on drive for thinness item.**

Bulimia Item: Five percent of the variance in the bulimia item ("I stuff myself with food") was explained by the factor variables and covariates. Age was significantly associated with the tendency to stuff oneself with food ($F(1, 294) = 13.98, p < .001$), with younger respondents reporting a higher tendency to stuff oneself with food ($r = -18, p < .01$) than older respondents. The interaction of English-speaking in the household X immigrant heritage was also statistically significant ($F(2, 294) = 3.64, p < .05$). The tendency to stuff oneself with food in English-speaking households was lowest for immigrants ($M = 2.31, SD = 1.10$), increasing across the generations of native-born Canadians with the highest tendency to stuff oneself with food being reported by native-born Canadians with one native-born Canadian parent ($M = 2.64, SD = 1.11$). A reverse trend was observed for households where English was not spoken. The tendency to stuff oneself with food was highest for immigrants ($M = 2.76, SD = 1.17$), and lowest for native-born Canadians with two native-born Canadian parents living in non-English speaking households ($M = 1.75, SD = 0.50$).

**DISCUSSION**

Generational differences, i.e., differences in immigrant heritage, were prominent factors in self-reported eating disorder symptomatology, even when age as a possible confounding factor was controlled for. In terms of the drive for thinness item, men showed a consistent decline over successive generations, with immigrant men
reporting the highest tendency to think about dieting and native-born Canadian men with two native-born Canadian parents reporting the lowest tendency to think about dieting. Women showed significantly higher average scores on the drive for thinness item than men; however, these levels also varied as a function of immigrant heritage. The trend for women was opposite to that noted for men. Immigrant women reported a lower tendency to think about dieting than native-born Canadian women in all categories. Assuming that acculturation into Western culture is slower or incomplete for immigrants and progressively more complete for native-born Canadian women and men as their immigrant heritage becomes more remote over time, it can be said that acculturation into Western culture results in different health outcomes for women than for men. That is to say, native-born Canadian women with one immigrant parent or two native-born parents, i.e., generations further removed from the immigrant experience, have more complete acculturation into Western cultural body ideals and standards than all categories of men, putting them at increased risk for eating disorder symptomatology. As was shown, native-born Canadian women who become progressively more removed from the immigrant experience reported a higher tendency to think about dieting than immigrant women or other native-born categories of women, and all categories of men, i.e., immigrant and native-born Canadian. This finding is consistent with feminist socio-cultural theory that argues culture may increase women’s risk for eating disorder symptomatology (e.g., Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). It is also consistent with study findings on generational differences (e.g., Chamorro & Flores-Ortiz, 2000; Sussman et al., 2007).

The findings from the present study suggest the possibility that immigrant women are, for a period of time after their arrival to Canada, “insulated” from exposure to Western cultural ideals and standards. Non-Western ethnic/cultural values and norms may also slow the pace of acculturation, and with it, the internalization of Western cultural body ideals and standards putting them at increased risk for eating disorder symptomatology (Harris, 1999). Non-Western ethnic/cultural values and norms may temporarily “insulate” immigrant women. Indeed, literature in this area suggests that for some non-Western ethnic groups, e.g., Asian, an ethnic identity and cultural context may afford “protection” or “insulation” against the development of eating disorder symptomatology (Mok, 1998). For example, Asian women who have a strong ethnic identity and attachment to Eastern culture values are insulated from Western culture beauty and thinness ideals and hence, less likely to report eating disorder symptomatology (Bisaga et al., 2005). Hispanic immigrant women also may be less vulnerable to eating disorder symptomatology because Latin culture favors a more robust,
less thin-ideal female body type (Gil-Kashiwabura, 2002). Unfortunately, the sizes of the ethnic subgroups of immigrant women in the present study were too small to investigate this explanation.

The findings for men with respect to the tendency to think about dieting and to feel more satisfied with the shape of their body were both surprising and interesting. The finding that immigrant men reported a higher tendency to feel satisfied with the shape of their body than all categories of native-born Canadian men is consistent with the literature (e.g., Yang et al., 2005), possibly demonstrating a slow or incomplete acculturation into Western cultural body ideals and standards for men, i.e., less exposure to the Adonis complex. However, the finding that immigrant men reported a higher tendency to think about dieting compared to all categories of native-born Canadian men is inconsistent with the literature (e.g., Yang et al., 2005), suggesting this as an area for further study. It is possible that immigrant men, like immigrant women, are temporarily “insulated” from Western cultural ideals and standards for a period of time after their arrival to Canada because they identify with non-Western ethnic/cultural values and norms.

An alternate explanation is that immigrant men’s higher tendency to think about dieting compared to all other categories of native-born Canadian men may reflect a desire to possess a body that is thin yet muscular – one portrayed in media as an ideal for men (Pope et al., 2000). Thus, although immigrant men may feel satisfied with the shape of their bodies, they might have a desire to alter specific parts of their bodies through exercise, e.g., more muscular arms/legs. This explanation is consistent with literature showing that certain subgroups of men such as gay men aspire to a thin yet muscular ideal achieved by exercise (Yelland & Tiggemann, 2003). Future research should investigate the drive for thinness and drive for muscularity in immigrant men, teasing out nuances such as the role of exercise status or sexual orientation (Boroughs & Thompson, 2002; Kaminski, Chapman, Haynes, & Own, 2005). Such attention is warranted as few studies to date have explored factors related to eating disorder symptomatology in samples of immigrant men. Further, while a few studies have examined drive for muscularity in Canadian men (e.g., Morrison, Morrison, & Hopkins, 2003), none of these appear to have examined this factor as a predictor of eating disorder symptomatology in immigrant men. Similarly, although studies have examined ethnic age differences in eating disorder symptomatology in Canadian women (e.g., Boisvert & Harrell, in press), there is a lack of research investigating the role of ethnicity and age in increasing Canadian men’s risk for body image and eating problems.

The findings in the present study reject the notion argued by others (e.g., Chamorro & Flores-Ortiz, 2000; Sussman et al., 2007) that the children of immigrants, transitioning between cultures and experiencing
“cultural clash”, are the most adversely affected by Western culture. This was not the case; instead, with respect to the drive for thinness item, generational differences appear to reflect progressively greater adoption of Western cultural body ideals and standards for these individuals also are born in Canada and further removed from their immigrant parent’s ethnic/cultural values and norms. The present study did not examine immigrant heritage beyond the first generation, i.e., children of immigrant parents, and thus, it is possible that the second generation, i.e., grandchildren of immigrants, may be more adversely affected by Western cultural body ideals and standards because they are even further removed from immigrant ancestry, notably non-Western ethnic/cultural values and norms. There is an abundance of literature pointing to that fact that the grandchildren of immigrants are the most adversely affected by Western culture by virtue of adopting unhealthy eating attitudes and habits, and sedentary lifestyle, putting them at risk for becoming overweight or obese (e.g., Goel, McCarthy, Phillips, & Wee, 2004; Gordon-Larsen et al., 2003; Kaplan, Huguet, Newson, & McFarland, 2004; McDonald & Kennedy, 2005). The present study did not specifically deal with overweight or obesity. However, an analysis of BMI, performed for exploratory purposes, found that only age ($r = .18, p < .01$) was significantly related, with older respondents more likely to have higher BMI values. Neither English-speaking in the household nor immigrant heritage was significantly related to BMI.

The theory that slow or incomplete acculturation among immigrants may increase their vulnerability to eating disorder symptomatology is partly rejected by the findings with respect to the bulimia item. For example, in households where English was not spoken, the tendency to stuff oneself with food was highest for immigrants and lowest for all categories of native-born Canadians. One would expect, however, that acculturation would be slowest or least complete for these respondents who were most removed from their immigrant parents’ ethnic/cultural values and norms, but who continued to speak a language other than English in the household. The fact that the tendency to stuff oneself with food was higher in English-speaking households of native-born Canadians of native-born parents points to an increasing impact of acculturation into Western culture, i.e., increased exposure to and hence, internalization of Western cultural body ideals and standards.

The theory that slow or incomplete acculturation among immigrants may increase their vulnerability to eating disorder symptomatology received some support from the significant main effect of English-speaking on the drive for thinness item. The tendency to think about dieting was higher for respondents living in non-English speaking households than for those living in English-speaking households. It is
possible that in our sample, respondents living in non-English speaking households, especially immigrants may be undergoing a slow or incomplete acculturation into Western culture, or they may be in a state of transition where “cultural clash” is experienced. Additional data documenting the transition or conflict between cultures are necessary to verify this interpretation. In a post hoc analysis, dummy variables representing whether or not a respondent was Hispanic or Asian were introduced as covariates in the analysis of variance of the drive for thinness item; however, neither of these ethnic categories was statistically significant. Furthermore, the significant impact of English-speaking in the household main effect was not reduced once ethnicity was introduced. Future studies using a longitudinal design and larger sample sizes of immigrants from different ethnic subgroups are needed to clarify the role that “cultural clash” plays in increasing risk for eating disorder symptomatology.

This study makes a unique contribution to the literature by demonstrating that English-speaking in the household and immigrant heritage are valid indicators of acculturation. It increases our understanding of predictors of eating disorder symptomatology in Canadian women and men, both immigrants and native-born. Previous studies have examined the unhealthy effect of acculturation on immigrant’s BMI and eating attitudes and behaviours (e.g., Cachelin et al., 2006; Goel et al., 2004; Gordon-Larsen et al., 2003; Kaplan et al., 2004; McDonald & Kennedy, 2005). However, none, to our knowledge, have examined the combination of English-speaking in the household and immigrant heritage. It is recommended that in future research English-speaking in the household and immigrant heritage should be used as indicators of acculturation into Western culture.

Further, this study increases our understanding of immigrant health by examining factors such as sex and age in relation to self-reported level of eating disorder symptomatology. Higher income was significantly related to a tendency to think about dieting. This factor, and others such as family stressors, language and cultural barriers, inaccessibility or underutilization of health care services, and discrimination should be considered when examining immigrant’s risk for eating disorder symptomatology.

Population differences need to be considered when comparing and contrasting our results with those from studies conducted in other Western societies. Generalizations to other populations need to be made cautiously, since the present data were based on a nonclinical sample of immigrants aged 18 years and older residing in Edmonton, Alberta, Canada— a province with a predominantly White population (see Statistics Canada, 2001, 2006). Our findings, therefore, cannot be directly extrapolated to other populations of immigrants, e.g., those who are
visible minorities, or to populations with subclinical variations of disordered eating or clinical eating disorders of anorexia nervosa or bulimia nervosa.

In conclusion, the present study showed the effects of English-speaking in the household and immigrant heritage on eating disorder symptomatology. These findings highlight a public health issue worthy of future attention. These findings show a need for community-based health promotion that is focused on educating immigrant women and men in a manner rendering them less vulnerable to those Western cultural body ideals and standards putting them at risk for eating disorder symptomatology. For example, media literacy programs or other interventions that address sociocultural attitudes toward appearance may effectively reduce the incidence of body image and eating disturbances among immigrant women and men. It is recommended that a modified version of these programs or interventions may also be developed for native-born Canadians, particularly women, especially since our findings showed that native-born Canadian women have an even higher tendency to think about dieting than immigrant women. Further study of English-speaking in the household and immigrant heritage, along with other indicators of acculturation, e.g., frequency of consuming Westernized or “junk” food and exercise status, can provide important information for intervention, prevention, promotion and policy.

REFERENCES


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