The present study examined the influence of cultural background on the causes of adolescents' loneliness. Eighty Canadian youth and 168 adolescents from the Czech Republic formed the participants' pool. They answered a 30-item yes/no questionnaire. The questionnaire is composed of five subscales, namely: Personal inadequacies, Developmental deficits, Unfulfilling intimate relationships, Relocation/significant separations, and Social marginality. Results revealed a mixed pattern of differences between the two cultures. Canadian youth had lower mean scores on Personal inadequacies, and Developmental deficits, but scored higher on Social marginality. Gender differences within and between the cultures were also examined. (Contains 67 references and 2 tables.) (Author)
Causes of Youth Loneliness:
Canada and the Czech republic

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ABSTRACT

The present study examined the influence of cultural background on the causes of adolescents' loneliness. Eighty Canadian youth and 168 adolescents from the Czech Republic formed the participants pool. They answered a 30 item yes/no questionnaire. The questionnaire is composed of five subscales, namely: Personal inadequacies, Developmental deficits, Unfulfilling intimate relationships, Relocation/significant separations, and Social marginality. Results revealed a mixed pattern of differences between the two cultures. Canadian youth had lower mean scores on Personal inadequacies, and Developmental deficits, but scored higher on Social marginality. Gender differences within and between the cultures were also examined.
INTRODUCTION

The present pervasiveness of loneliness is evident in its identification as a frequent presenting complaint to telephone hot-lines, college psychological clinics, and youth and marriage counseling services (Jones, Rose, & Russell, 1990). The social importance of loneliness is also indicated by the vast amount of research investigating its effects on emotional, physical, and behavioural problems (Jones, Rose, & Russell, 1990).

Loneliness has been inversely related to measures of self esteem (Jones, Freemon, & Goswick, 1981) and has been demonstrated to be strongly associated with depression, anxiety, and interpersonal hostility (Hansson, Jones, Carpenter, & Remondet, 1986) as well as with substance abuse, suicide, and a vulnerability to health problems (Jones, Rose, & Russell, 1990). Further, it was concluded in two carefully controlled studies (Berkman & Syme, 1979; House, Landis & Umberson, 1988) that increased mortality has been linked to social isolation.

Rathus and Etaugh (1995) pointed to the most alarming trend of a dramatic increase in school violence committed by teenagers. The recent (1999) traumatic and highly publicized school shootings in Colombine high school, Colorado USA and Taber Alberta, Canada, have focused public attention on the youth and their attempts (albeit inappropriate and at times deadly) to deal with life’s stresses and pressures. In both of the above cases, as no doubt in many others, the youth who opened fire and killed classmates were later described in the media as lonely, alienated by other children, and “not fitting in” (Kenna, 1999; see also Liao, 2001).

Brennan (1982) reported that “adolescence seems to be the time of life when loneliness first emerges as an intense recognizable phenomenon” (p. 269). Other writers report that contrary to the stereotype of the lonely elderly, adolescence is the developmental stage which is most frequently associated with loneliness and alienation since being included, accepted and loved is of such crucial importance in the formation of one’s identity (Ostrov & Offer, 1978; West, Kellner & Moore-West, 1986). Empirical data have shown that more adolescents experience loneliness than old people (Peplau & Goldston, 1984; Van Buskirk & Duke, 1991). Sullivan (1953) theorized that loneliness is experienced so intensely in adolescence as a result of the emerging interpersonal needs for intimacy. Brennan (1982) suggested that among the factors which contribute to adolescence loneliness are developmental changes, separation from parents.
maturation, striving for personal autonomy, and the struggle for significance. Van Buskirk and Duke (1991) maintained that most research on loneliness has focused on college students or adults. One of the studies which examined loneliness in various life stages was carried out by Rokach and Brock (1997). They concluded that the loneliness of those aged 13-20 differed phenomenologically from the loneliness experienced in adulthood or old age.

Largely, loneliness research tended to focus on individual factors, i.e. either on personality factors or lack of social contacts (Jylha & Jokela, 1990). However, if we accept the premise that loneliness is expressive of the individual’s relationship to the community, then it is conceivable that the difference amongst cultures and the ways people’s social relations are organized within them will result in cross-cultural variations in the way people perceive, experience and cope with loneliness.

Medora, Woodward and Larson (1987) maintained that “among the important factors affecting the individual’s experience of loneliness are the culture and the family in which he/she develops” (p.205). Consequently, the difference of social tapestry, interpersonal interactions, and the support networks which are available to individuals in various cultures and countries are, naturally, bound to effect the manner in which they experience loneliness. The present study focused on youth in two diverse populations: the North American one (as exemplified in this case by the Canadian participants) and the Czech. These two cultures differ geographically, religiously, economically and socially.

**The North American culture**

Seligman & Csikszentmihalyi (2000) pointed out that the present American generation, “live surrounded by many more people than their ancestors did, yet they are intimate with fewer individuals and thus experience greater loneliness and alienation” (p.9). It has been frequently pointed out (Schneider, 1998; Sermat, 1980) that loneliness is prevalent and may even be encouraged by the North American culture. Ostrov and Offer (1980) had reasoned that the North American culture emphasizes individual achievement, competitiveness, and impersonal social relations. Consequently, loneliness may be quite pronounced in the face of such socially alienating values. Coupled with the increased computerization and internet use, this culture magnifies the
individual's social alienation, limited contact with others (within and without one's family), and loneliness (Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay & Scherlis, 1998). Since the American and the Canadian cultures share a common language, geographical proximity, a flow of visitors between the countries, commercial interconnections, and economical alliances, the Canadian sample will be examined as part of the North American culture.

**The Czech Republic**

The Czech Republic is a small country of approximately 10 million citizens situated in the very middle of Europe. It is surrounded by Slovakia, Poland, Germany and Austria as its neighbours. It was originally part of Czechoslovakia but the country split into two independent republics in 1993. The population consists of Czechs (81%), Slovaks (3%) and several other minorities (15%) approximately 80% live in cities and towns. The country is predominantly Roman Catholic with a Protestant minority (Encyclopedia of World Geography, 1994).

The country has gone through rather turbulent history during the last sixty years. It was occupied by the Nazis during the Second World War. In 1948, under the influence and with the support of the former Soviet Union, communists staged a coup, turned the country's parliamentary democracy into a hardline regime and Czechoslovakia's status became the one of a Soviet satellite (Macek, Flanagan, Gallay, Kostron, Botcheva & Csapo, 1998). In 1960’s the country’s attempt to introduce liberal reforms leading to the “socialism with a human face” that became known as “Prague Spring” was crushed in 1968. The Soviet Union initiated an invasion of Czechoslovakia with the help of Warsaw Pact troops on the pretext of “defending socialism” and a puppet government was installed (Encyclopedia of World Geography, 1994).

During the late 1980's - the Soviet Union's years of “perestroika” - the wave of revolts against totalitarian regimes swept Eastern and Central Europe and the former Soviet satellites shook off their bonds. Czechoslovakia became a real parliamentary democracy again (Encyclopedia of World Geography, 1994).

The 1990's brought new freedom and new hopes but also an upheaval of ethnic tensions, economic hardship and uncertainties linked to the transition from state regulated to market economy. The decades of economic egalitarianism were replaced by growing economic and social...
disparities and an emergence of a new class of working poor (Vecernik & Mateju, 1998). The new freedom also came accompanied by a variety of social problems that have either emerged or increased in their severity - homelessness, prostitution, pornography, drug use, crime and violence (Wolchik, 1994).

The Czech Culture

A typical feature of the Czech culture is the high value it has always been attaching to education. The population is fully literate (The World in Figures, 1987), and the nation has been always taking pride in its highly skilled labor force. Geographical mobility is low and it is not uncommon that people would live in the same city or even the same house for most of their life.

Throughout the country's rather turbulent history and periods of dictatorship, the family has been the refuge and safe haven for its members. It has had a dual role - not only the one of an economic unit, but also "...an effective hiding place, an escape route from the all pervasive forms of public authority, internal immigration as a form of dissent" (Castle - Kanerova, 1992, p. 117). The loyalty among family members is high and parent-children relationships are strong. Unlike in North America, parents feel obligated to support their children until their educational goals are achieved, whether it would be apprenticeship, college or university. Because of severe shortages in the housing market, it is not uncommon that two generations live together even after adult children get married and have children of their own. Both families then help each other with household chores, child care etc (Macek et. al., 1998).

The patterns of partnership and family life have been changing over the last decade. In the 1980's Czechoslovakia had one of the highest rates of marriages with 85 percent of all women marrying (Heitlinger, 1996). The 1990's have brought a gradual but significant change. The end of the totalitarian regime and the newly acquired freedom influenced the philosophy and value orientation of the young generation. The values of new opportunities, freedom of choice and autonomy, and the uniqueness of the individual changed the social climate of the land and influenced patterns of partnership and family life. An increase in common-law relationships, in the number of children born out of wedlock, in single parent families, a delay in marriage to the average age of 27 years, and an overall decrease of number of children in the family, are among changes experienced by young people today (Vecernik & Mateju, 1998).
Macek et al. (1998) pointed out that "Adolescents who came of age in the 1990's in the nations of Central and Eastern Europe are a unique historical generation. They were children during an era of state controlled economy, but were teenagers when market mechanisms were introduced" (p. 548). During childhood, their lives were marked by a totalitarian system. However, when these youngsters entered adolescence with its central developmental task of identity formation (Erickson, 1968), they experienced it amid a whole society which was searching for a new identity while rejecting the existing social system (Macek et al., 1998).

Loneliness research tends to focus on individual factors, that is, either on personality factors or lack of social contacts (Jylha & Jokela, 1990). However, loneliness could be caused by the individual’s relationship to the community. It is conceivable, then, that the difference amongst cultures and the ways people’s social relations are organized within them will result in cross-cultural variations in the way people perceive the causes of their loneliness. The difference of the social tapestry, interpersonal interactions and the support networks which are available to individuals in various culture are, naturally, bound to affect the causes of loneliness as outlined by Rokach and Brock (1996). Czech and North American youth were the focus of the present study which aimed at examining the causes of youths’ loneliness; youths with differing cultural backgrounds, religious beliefs, norms and values.

METHOD

Participants

A total of 248 participants volunteered to answer the loneliness questionnaire. Eighty participants from Canada. and 168 participants from Czech Republic formed the participant’s pool of this study. The average age of the 248 participants was 17.06 years (range: 15-19) and the mean education was 11.0 years (range: 8-15). All the participants were single and were comparable in age, educational level, all attended high school or university, and all lived in urban areas. Table 1 outlines the breakdown of genders, age, and educational levels within each culture.

Procedure

Participants were asked to reflect on their past loneliness experiences and to endorse those items which described it’s causes. They took approximately 10 minutes to answer the
questionnaire. Participants in the two countries were recruited in urban centers such as community centers, local universities, or high school classes. Participants took part in the study on a volunteer basis and were assured of anonymity. The Czech participants received the questionnaire translated into their language. The questionnaire was translated by a bilingual faculty member at Charles University in the Czech Republic, and translated back to English by a bilingual Canadian university professor. Both translators are each fluent in the English and Czech languages.

The Loneliness Questionnaire

All items for the questionnaire were written by the author and based on Rokach's previous research on loneliness (Rokach, 1989). The 82 items which were included in the original questionnaire captured the variety of responses given by the participants in that initial study. The general instructions requested that participants reflect on their previous experiences of loneliness and endorse those items which describe the antecedents of those experiences. They were assured of anonymity and were not asked to identify themselves.

The questionnaire is based on a phenomenologically derived general model of the causes of loneliness which was composed of five factors (see Rokach & Brock, 1996 for a complete description of the questionnaire development). The most salient factor to emerge was Personal inadequacies (17% of variance) which included items that addressed enduring personal characteristics and/or previous aversive experiences which result in low self-esteem, mistrust, fear of intimacy, and feeling socially ill-at-ease. The second factor, Developmental deficits (6%), addressed the developmental and familial antecedents of adult loneliness such as growing up in an inadequate or dysfunctional home that is characterized by emotionally distant or rejecting parents, psychological or physical abuse, and/or an atmosphere that is generally marred by upset and unhappiness. The third factor, Unfulfilling intimate relationships (5%), acknowledged the impact of disappointing, hurtful and/or emotionally abusive intimate friendships on the development of loneliness. Factor four, Relocation/significant separations (4%), captured the effects of the changes - and often loss of - important relationships that occur as a consequence of mobility or relocation. The fifth factor, Social marginality (4%), addressed the actual or perceived social rejection and distancing which criminals, the unemployed, and the chronically ill commonly experience.
Each of the five factors comprised a subscale and participants' scores are the sum of the items which they endorsed in each subscale. Although the original questionnaire included 82 items, due to participants' past feedback about its length, it was shortened and only the six highest loading items in each subscale were included; hence, the questionnaire included a total of 30 items. Kuder-Richardson internal consistency reliabilities were calculated and yielded the following alpha values: \( F_1 = 0.64; F_2 = 0.72; F_3 = 0.72; F_4 = 0.70; F_5 = 0.50 \). K-R alpha for the 30 item questionnaire was 0.62. (See Appendix A for sample items).

**RESULTS**

Results of the present study confirm the hypothesis that the causes of loneliness are varied depending on one's culture and background. Canadian youth had significantly lower mean scores than the Czech on two out of the five subscales; namely: Emotional distress, Personal inadequacies and Developmental deficits, and scored higher than the Czech youth on the Social marginality subscale.

Table 1 outlines the breakdown of gender, educational level, and age. A gender by culture Chi square analysis was not significant (\( X^2_{1.11} = 0.25 \)). Similarly, age by culture ANOVA (\( F_{1.249} = 1.05 \)) and education by culture ANOVA (\( F_{1.249} = 0.64 \)) found age and education not to be significantly different amongst the two cultures.

Table 2 compared the mean scores on each of the five loneliness subscales amongst the two cultural groups. A Multivariate Analysis of Variance (MANOVA) was significant at the .01 level (\( F_{5.229} = 8.29 \)). Consequently, univariate analyses of variance (ANOVA)s for each subscale across the two cultures were conducted. The ANOVAs indicated that Canadians had a lower mean score on Personal inadequacies and on Developmental deficits than the Czech while the trend was reversed on Social marginality. Analyses were conducted to examine whether men and women within each culture had scored differently. A MANOVA for the Czech and a MANCOVA for Canada indicated significant differences between the scores only in the Czech
Republic. Overall men of the two cultures differed significantly in their mean scores only on Personal inadequacies, while the women differed on Personal inadequacies and on Social marginality.

DISCUSSION

Results of the present study indicate that the causes of loneliness of Canadian adolescents differs significantly from those of Czech youth. In the present study we examined each of the five factors which comprise the causes of loneliness, as participants of the two cultural groups endorsed it. Canadians scored lower than the Czech on Personal inadequacies and on Developmental deficits, while the trend was reversed on Social marginality.

Loneliness is a distressing, painful experience which humans, by- and- large, want to avoid (Kraus, Davis, Bazzini, Church & Kirchman, 1993; Rokach & Brock, 1997). As noted earlier (Rokach & Brock, 1997) loneliness is a multidimensional experience which is universal among all humans, and as a unique subjective experience one’s personality, history, and background variables affect it.

While adolescents living in different countries have a number of common characteristics which are related to the developmental tasks facing them, their lives are also shaped by cultural influences within which this process is evolving.

The Personal inadequacy subscale addressed the enduring personal characteristics and/or previous aversive experiences which result in low self-esteem, mistrust, fear of intimacy, and feeling socially ill-at-ease. The American culture stresses individual achievement and competitive impersonal social relations and as such it makes alliances with others difficult, particularly for adolescents (Medora, Woodward & Larson, 1987). In such cultural “atmosphere” where social support is not readily available and the existing ones may be shallow and unfulfilling (Weintrob.
1987) it is reasonable to expect that the emotional distress of the North American adolescents, who are struggling to define their self-identity, achieve independence and gain social status will result in more pronounced feelings of personal inadequacy and being socially ill-at-ease, than their Czech counterparts. However, the present data shows it not to be the case.

Macek & Rabusic (1994) observed that following the political change in 1989, there was a significant increase of deviance among adolescents. Feelings of anomie, fear of failure and a loss of meaningfulness in their lives are coupled with cognitive chaos and emotional anxiety. North American adolescents, on the other hand, face problems such as the changing family structure, pollution, overcrowding, and a nuclear war. Given the sheer volume and complexity of the issues facing the average adolescent of today, it is no wonder that they are not attributing their loneliness to Personal inadequacies and to their shortcomings as much as the Czech youth do (see Nexhipi, 1983). It is, thus, not surprising that Czech youth scored significantly higher on Personal inadequacies.

The Developmental deficits subscale addressed the developmental and familial antecedents of loneliness such as growing up in an inadequate or dysfunctional home that is characterized by emotionally distant or rejecting parents, psychological or physical abuse, and/or home atmosphere that is generally marred by upset and unhappiness. Adolescence and young adult years is a period of breaking the ties with family of origin, and it thus provides young adults the perspective of time and geographical distance to reflect on their growing up years and notice its imperfections. Starting their own romantic relationship, marriages and families (Roediger, Capaldi, Paris & Polivy, 1991) they may be acutely aware of their parents mistakes, their dissatisfaction at home and thus have the usual expectation that they would not allow such conditions to be repeated in families which they themselves created. Consequently, it may be expected that they would attribute any loneliness, alienation and unfavorable social conditions which they may experience, not only to their own shortcomings but to their imperfect beginning as well.

Although almost all adolescents and young adults may look back at their families of origin with some regrets, the situation is more sharply focused in the Czech republic. Life in the 1990s for today's adolescents was sharply in contradiction to that of their childhood. The open society, with its educational alternatives, Western influences and less rigid family dynamics.
coupled with the economic and political “shock therapy” (Macek et al., 1998: p. 549) could have contributed to a higher degree of “regret” over an unhappy and deficient past in the Czech republic, than that experienced by North American youth.

The social marginality subscale addressed the actual or perceived social rejection and distancing which criminals, the unemployed and the chronically ill commonly experience. The occurrence of criminality in North America is the highest during late adolescence and early adulthood years (Calabrese & Adams, 1990; Rokach & Cripps, 1999; Salmen, 1986). Consequently the age group that would most probably have the most frequent and intimate knowledge of social marginality would be young adults. It thus stands to reason that in the young adults age group, unemployment, criminality and other marginalizing life events would be perceived as causing loneliness to a greater extent than in any other age group.

The youth who grew up in the Czech republic and who have been free of the communist rule for a little more than a decade, have still grown up in a more cohesive, defined, structured and traditional environment than their North American counterparts. As such we can expect a diminished perception of social marginality than that found in North America.

The Unfulfilling intimate relationships subscale addresses the impact of disappointing, hurtful or emotionally abusive intimate friendships on the development of loneliness. The Relocation/significant separations subscale captured the effects of changes and often loss of important relationships, that occur as a consequence of mobility or relocation. North American and Czech youth did not score significantly different on these two subscales.

Arnett (1999) contends that going through a period which is rife with conflicts with parents, mood disruptions, engaging in risk behaviours and establishing one’s identity, adolescence does indeed appear to be a stressful, uneasy conflictual period. Clearly, during such a turbulent period, although dating and acquiring intimate relationships are seen as important, the adolescent less than people of other ages, does not attribute his or her loneliness to unfulfilling intimate relations. Lacking maturity, and judging the relationships by different standards than older individuals, the youth is either less concerned with the fulfilment which intimate relationships may bring, or attribute their loneliness to any of the myriad inner experiences and events which he or she must handle.

Young adult life is characterized by leaving one’s family of origin (Coon, 1992), building a
career- which in our day and age may necessitate relocation (Dworetzky, 1991), marital vulnerability and the possibility of divorce (Roediger et al., 1991), parental death or the dispersement of the extended family (Brown, 1996). It is, thus, of little surprise that young adults in both cultures- who, as Coon (1992) indicated are in the midst of striving for accomplishments and reaching out to others- would be similarly affected by those significant separations, relocations, and changes and be equally aware of their contributions to their loneliness. It appears that these two features of youth, i.e. intimate relationships with their deficiencies and disappointments, and separation from significant others, are so central to the experience of adolescence and young adulthood, that they transcend culture, geography and tradition.

To conclude, the present study found that culture does affect the perceived causes of loneliness of adolescents and young adults. Future research may compare the causes of loneliness in the two cultures under study, across all age groups. It may be of particular interest to compare the causes of loneliness in these two cultures to other post-communist societies such as Poland, for instance. Further research is also needed in order to examine the ways in which young adults cope with loneliness in both cultures.
REFERENCES


Appendix A

Perceived Causes of Loneliness - Sample Items

1. Personal inadequacies

   Feeling I lacked personal courage (.64)*
   Often feeling that I didn’t “fit in” (.65)
   Frequently experiencing strong feelings of inadequacy (.65)
   Being intimidated by people who appear more socially capable than me (.67)

2. Developmental deficits

   A home life marked with upset and unhappiness (.58)
   Having emotionally distant parents (.69)
   Feeling rejected by my family (.63)
   Not having an emotionally close family (.64)

3. Unfulfilling intimate relationships

   Being emotionally abused by my partner (.67)
   Not being regarded as a unique individual by my partner (.60)
   Feeling there were things more important to my partner than I was (.66)
   Experiencing a complete breakdown of my intimate relationship (.71)

4. Relocation significant separations

   Having to adjust to new surroundings as a result of relocation (.80)
   Feeling isolated from my friends due to relocation (.79)
   Being separated from those who formed my emotional support system due to relocation (.70)
   Feeling homesick for my previous environment after relocating (.68)

5. Social marginality

   Being arrested (.83)
   Being unemployed (.46)
   Being incarcerated (.82)
   Feeling that people do not trust me because I have been convicted of a criminal offence (.77)

*The factor loading of the item.
### Table 2: Comparing Mean Subscale Scores of Causes of Loneliness by Culture

<table>
<thead>
<tr>
<th>Population</th>
<th>N</th>
<th>Personal Inadequacies</th>
<th>Developmental Deficits</th>
<th>Unfulfilling Intimate Relationships</th>
<th>Relocation/Significant Separations</th>
<th>Social Marginality</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<tr>
<td>Canada</td>
<td>80</td>
<td>2.10</td>
<td>1.70</td>
<td>0.86</td>
<td>1.35</td>
<td>0.70</td>
</tr>
<tr>
<td>Males</td>
<td>33</td>
<td>1.85</td>
<td>1.60</td>
<td>0.64</td>
<td>1.34</td>
<td>0.58</td>
</tr>
<tr>
<td>Females</td>
<td>47</td>
<td>2.28</td>
<td>1.75</td>
<td>1.02</td>
<td>1.34</td>
<td>0.79</td>
</tr>
<tr>
<td>MANCOVA¹ F(1,72)=1.17</td>
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| Czech Rep. | 168 | 3.36  | 1.63 | 1.39  | 1.55 | 0.81  | 1.29 | 0.85  | 1.32 | 0.18  | 0.55 |
| Males      | 75  | 3.33  | 1.55 | 1.00  | 1.38 | 0.97  | 1.52 | 0.92  | 1.19 | 0.25  | 0.74 |
| Females    | 93  | 3.38  | 1.71 | 1.70  | 1.63 | 0.88  | 1.08 | 0.78  | 1.41 | 0.13  | 0.33 |
| MANOVA F(5,162)=2.80* |

| Total      | 248 | 2.95  | 1.75 | 1.22  | 1.51 | 0.77  | 1.23 | 0.93  | 1.39 | 0.25  | 0.58 |
| Males      | 108 | 2.88  | 1.70 | 0.89  | 1.36 | 0.85  | 1.37 | 0.85  | 1.16 | 0.32  | 0.76 |
| Females    | 140 | 3.00  | 1.79 | 1.47  | 1.56 | 0.71  | 1.11 | 0.99  | 1.55 | 0.19  | 0.40 |
| MANOVA 2 populations F(5,246)=8.29** |

| MANOVA Men F(5,100)=5.82*** |
| MANOVA Women F(1,138)=4.28*** |

| MANCOVA¹ Women F(1,138)=12.67** |
| MANCOVA¹ Men F(1,138)=6.06* |

| MANCOVA¹ F(1,138)=0.31 |

### Notes:
- *p < .05
- **p < .01
- ***p < .001
- ¹Age and education were covaried
Table 1: Demographics

<table>
<thead>
<tr>
<th>Population</th>
<th>N 1</th>
<th>Marital Status</th>
<th>Education</th>
<th>Age</th>
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<tr>
<td></td>
<td></td>
<td>Single</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Canada N1</td>
<td>80</td>
<td>Single</td>
<td>11.11</td>
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<td>Males</td>
<td>33</td>
<td>10.24</td>
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<td>Females</td>
<td>47</td>
<td>11.72</td>
<td>2.00</td>
<td></td>
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<tr>
<td>Czech Rep N1</td>
<td>168</td>
<td>Single</td>
<td>10.95</td>
<td>0.88</td>
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<tr>
<td>Males</td>
<td>75</td>
<td>10.84</td>
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<tr>
<td>Females</td>
<td>93</td>
<td>11.03</td>
<td>0.91</td>
<td></td>
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<tr>
<td>Total</td>
<td>248</td>
<td>Single</td>
<td>11.00</td>
<td>1.52</td>
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<tr>
<td>Males</td>
<td>108</td>
<td>10.66</td>
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<tr>
<td>Females</td>
<td>140</td>
<td>11.26</td>
<td>1.41</td>
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1 N's and percentages may not add up due to missing data.  
2 In parenthesis = range

* p< .05  ** p< .01

$X^2 (1,1) (\text{gender by culture}) = .25 \text{ n.s.}$

$F(1,248) (\text{educ by culture}) = .64 \text{ n.s.}$

$F(1,248) (\text{age by culture}) = 1.05 \text{ n.s.}$

$F(1,138) (\text{educ, men across})= 3.26$

$F(1,138) (\text{educ, women across})= 7.91^*$

$F(1,106) (\text{age, men across})= 1.15$

$F(1,138) (\text{age, women across})= 4.87^*$
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University of North Carolina at Greensboro  
201 Ferguson Building  
PO Box 26171  
Greensboro, NC 27402-6171