

EXPLORING STRESS AND SOCIAL SUPPORT IN ABORIGINAL STUDENTS AT THE UNIVERSITY OF GUELPH¹

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ABSTRACT

Aboriginal students are enrolling in Canadian universities in increasing numbers yet their completion rates are lower than non-Aboriginal students. University students experience a variety of stressors, and these have been shown to correlate with social support and life satisfaction. The purpose of this study was to explore stress and social support in Aboriginal students attending the University of Guelph. All University of Guelph students on an Aboriginal student list-serve maintained by the Aboriginal Resource Centre were invited to participate via email. Interested students were directed to an online survey containing standardized measures of stress, social support, and life satisfaction. Twenty-two (response rate 22%) students responded. Their mean age was 24 years (*SD* 6.18), and most (40%) were single or (40%) dating. Students reported normal levels of social support (5.29) and stress (122.32), most indicated a moderate amount of satisfaction with life (19.55) which was less than the norm. The highest levels of stress were reported for future uncertainty and academic performance.

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In Canada, the number of Aboriginal students enrolling in postsecondary education programs continues to increase (Malatest, 2004). Although enrolment rates are on the rise, retention rates for Aboriginal students remain significantly lower than the non-Aboriginal population (Malatest, 2004). Little research has explored factors that may directly and indirectly influence Aboriginal students' experiences of university and affect retention rates.

Students attending postsecondary education are much more likely to experience a variety of stressors than nonstudents (Crandall, Priesler, and Aussprung, 1992). These stressors may include doing homework, studying for tests, writing term papers, and balancing classes with everyday life. Students are also faced with a number of changes and responsibilities (Greenberg, 1996), such as changes in their living arrangements, friends, and overall environment. Aboriginal students at postsecondary institutions may face additional stressors that are unique to their population, including historical, social, financial and cultural barriers. For example, past government policies used education to assimilate Aboriginal people into the dominant society (Morrisette, 1994). These policies may influence the attitudes of Aboriginal people, making them distrust the educational system (Malatest, 2004). Aboriginal students also may not be able to integrate their cultural knowledge, traditions, and values into their university experience. Universities typically have practices and programs that serve the values and cultural norms of the dominant, non-Aboriginal society (Indian and Northern Affairs Canada, 1996). Aboriginal students may also face geographic challenges. Most postsecondary programs are offered in urban areas and require students to move long distances from their home communities and support network (Malatest, 2004). These unique circumstances combined with academic demands may increase stress levels, with many negative implications for the personal and academic experience of individuals.

Research suggests that stress poses a major health concern for younger adults in higher education (Deckro et al., 2002). Stress can be defined in many different ways, although most researchers agree that stress, as part of a transactional process between the person and the environment (Aherne, 2001), is a normal part of life. While a certain degree of stress is necessary and can improve performance, too much stress may have negative consequences (Deckro et al., 2002). When stress starts to overpower and exhaust an individual's resources, it becomes problematic. Excessive stress levels may be associated with a variety of negative outcomes, including fatigue, negative thinking, poor academic and work performance, school dropout, burnout,

depression, sleep disturbances and addictions (Abouserie, 1994; Dusselier et al., 2005; Garden, 1991; Sadava and Pak, 1993; Deckro et al., 2002). Several studies have explored levels of stress and social support within a variety of college student populations (Roberti, Harrington, and Storch, 2006; Segrin, 1999; Towbes and Cohen, 1996). It has been suggested that social support and a sense of purpose and meaning of life can act as buffers against stress (Jenkins and Elliot, 2004).

Satisfaction with life is one of the many factors that contributes to subjective well-being. Subjective well-being has been conceptualized as emotional and cognitive evaluations of life (Diener, Oishi, and Lucas, 2003). A number of components are thought to contribute to life satisfaction, including social relationships, work/school performance, and personal (self, leisure, religious) factors (Diener et al., 1985). Individuals are unlikely to assign the same values to each component and may have standards for “success” in each of these areas. For this reason, Diener and colleagues (1985) argued that it is necessary to measure satisfaction of life on a global scale, which allows participants to weigh domains in life according to their own values and beliefs.

The relationship between having a social support network and health has been well documented (Cassel, 1976). There are two main theories of how social support reduces the effects of stress. In the direct/main effects theory, social support contributes to an overall increased well-being by providing a sense of belonging, security, and affection (House, 1981). In the stress buffering theory, real or perceived social support helps to protect or insulate people from the harmful effects of stress by various mechanisms such as providing the opportunity to talk about stressful situations (Cohen and Wills, 1985). Because students experience an array of stressors (academic and personal), social support may be especially important in buffering these stressors. Despite this importance, little research has examined Aboriginal students’ perceptions of stress, social support, and life satisfaction.

ABORIGINAL PEOPLE IN CANADA AND THE CURRENT POSTSECONDARY SITUATION

Almost one million people self-identify as Aboriginal in Canada, including First Nations, Métis, and Inuit, representing approximately 3.3% (Statistics Canada, 2001) of the population. There is a great deal of diversity in beliefs, languages and cultural practices that exist both between and within these

groups. For example, a First Nations student may have lived on a reserve, whereas another may have grown up in an urban centre. Other differences may exist in family structure, geographic distance of their hometowns, and in the degree of academic preparedness. The Aboriginal population is significantly younger than the Canadian population (mean age of 25.5 versus 35.4 years), with over one-third of the population under the age of 15 years (Kirmayer, Simpson, and Cargo, 2003). It is also expected to grow at an average of 1.8%, more than twice the rate of the general population, with the current birth rate being 1.5 times the overall Canadian rate (Statistics Canada, 2005). The significant percentage of Aboriginals under the age of 15 implies that a large percentage of this population attends school, and that the percentage of Aboriginals attending postsecondary education will continue to rise over the years. However, despite the large number of school-aged Aboriginal children, the gap in education attainment between Aboriginal people and non-Aboriginal people continues to widen. Compared to non-Aboriginal Canadians, Aboriginals aged 18–20 are significantly less likely to be without a high school diploma (42.5% versus 23.5%) (Maxim and White, 2006); Aboriginal high school graduates are almost twice as likely as other Canadian students to drop out of postsecondary education or skip it all together (Parkin and Baldwin, 2009); and few (7%) obtained a university degree compared to 14% of their non-Aboriginal counterparts (INAC, 1996). It is evident that the Aboriginal population is lagging far behind the rest of the Canadian population. Although many reasons may account for this gap, the history of colonialism and assimilation has played a significant role in lives of Aboriginal families, and may still influence current educational experiences.

EARLY CONTACT

When Aboriginal people and Europeans first came into contact, so did two different cultures. History tells us many stories of the government's countless attempts to assimilate Aboriginal people into a newly evolving Canada. The historical events and experiences of Aboriginal people that had negative effects on individuals and their families are well documented (Lafrance et al., 2006; Neckoway, Brownlee, and Castellan, 2007; Indian and Northern Affairs (INAC), 1996). Aboriginal peoples of Canada have encountered cultural oppression since the earliest periods of contact with European Canadians (Kirmayer et al., 2003). From the beginning, Europeans assumed superiority over Aboriginal people, ignoring and violating their values and cultures (Bennett, Blackstock, and De La Ronde, 2005). In the early 1900s,

after teaching European settlers about the land and hunting practices, Aboriginal people were forced to migrate and leave their homelands for new and unfamiliar territories (Denov and Campbell, 2002). This relocation had a number of implications for Aboriginal people. For example, the land is a central component of Aboriginal culture, identity and well-being. It is part of their existence, as it guides their daily lives, sustains their spirits and bodies, and connects them to the available environment and natural resources (Denov and Campbell, 2002). Therefore, when Aboriginal people were displaced, they were disconnected from the spiritual relationship with the land and cut off from their hunting grounds. The cultural-based knowledge that once made them self-sufficient was not applicable to their new homeland (Denov and Campbell, 2002). This loss of knowledge gave the government more power and control over Aboriginal people.

In 1876, the government created the *Indian Act* without any consideration or consultation with the people to whom it was directed. The main principle of this act was that Aboriginal people were to be created as wards or children of the state (Bennett et al., 2005). This allowed the government to influence Indian identity, creating policies and requirements to define "Indian." Furthermore, this new act gave the government power over structures, landholding patterns, resources, and control of economic development of reserves (Bennett et al., 2005; Denov and Campbell, 2002).

HISTORY OF EDUCATION

Education was one of the earliest federal government attempts to assimilate Aboriginal people to the culture and values of the dominant society. Original government attempts targeted adults, but in 1856 this approach changed. With the growing belief that "adult Indians were hopeless and could not be changed," policy shifted to emphasize the education of children (Kirmayer et al., 2003). This prompted the government and various religious institutions to unite together to create residential schools (Morrisette, 1994), which removed several generations of children from their communities, in an attempt to integrate Aboriginal children into Canada's new nation. Quality of education was at best mediocre, leaving many children with limited skills that they could contribute to the mainstream communities. Children were educated exclusively to white norms and were harshly reprimanded for practicing any part of their Aboriginal culture (Bennett et al., 2005). Furthermore, the *Indian Act* prohibited parents from visiting their children or intervening to take their children home (INAC, 1996). This led

to significant disruptions in the intergenerational relationships between children and their Aboriginal culture, families, and community. The last of these institutions did not close until the early 1970s (Frideres and Gadacz, 2004). Unfortunately, the closure of residential schools did not mean the end of assimilation for Aboriginal people. The effects carried over from generation to generation and continue to affect families today.

The past history of education for Aboriginal people in Canada cannot be erased, but the future of education can be improved. The importance of education for Aboriginal people cannot be overlooked. Canada's growing economy demands higher levels of formal education for employment. Moreover, the association between educational attainment and employment, as well as between economic well-being and health is well documented (Malatest, 2004). Improving educational experiences increases the likelihood that Aboriginal students will finish their academic studies, thus improving educational outcomes. This would provide a source of skilled workers to fuel the Canadian economy (Brunnen, 2004), result in better social conditions for Aboriginal people and their communities, and improve the overall state of Aboriginal society's wealth, health, and well-being (Malatest, 2004).

A significant amount of research has explored stress, social support, and satisfaction with life amongst postsecondary students (Robotham and Julian, 2006); however, researchers have not yet explored the current experiences of Canadian Aboriginal students or the stressors that they face in their present lives. The purpose of this study was to explore stress, social support, and satisfaction with life in Aboriginal students enrolled at the University of Guelph in Ontario, Canada.

METHODS

PARTICIPANTS

The study was conducted in Guelph, a medium-sized city in Ontario, Canada, and received institutional approval from the University of Guelph's Research Ethics Board. The Aboriginal Resource Centre at the University of Guelph maintains a list serve of Aboriginal students. All Aboriginal students who appeared on this list serve were sent an email message from the centre's Director describing the study and inviting interested participants to complete an online, anonymous survey. Inclusion criteria were: self-identify as Aboriginal (First Nation, Métis, or Inuit), registered student at the University of Guelph, and at least 18 years of age. Informed consent was obtained prior to completion of the survey.

MEASURES

In addition to demographic questions, participants were asked to indicate their experience or their parents' or grandparents' experiences with adoption, residential school or relocation, and the barriers they overcame to attend university. Three standardized scales were administered. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is 12-item scale that uses a 7-point Likert scale, from (1) "very strongly disagree" to (7) "very strongly agree" to assess perceived social support with three separate sources of support: family, friends, and significant other. Reliability and validity of the MSPSS have been demonstrated among a number of university students (Dahlem, Zimet, and Walker, 1991; Kazarian and McCabe, 1991; Zimet et al., 1988). The MSPSS is scored by calculating a mean score for each subscale and a total mean score, with a higher score indicating a higher amount of perceived support.

The Adolescent Stress Questionnaire (ASQ; Byrne, Byrne, and Reinhart, 1995) is a 58-item scale that uses 5-point Likert-type scale, with responses ranging from "a little stressful (or irrelevant)" to "very stressful." Higher scores indicate higher levels of stress. There are ten subscales, including home life, school performance, school attendance, romantic relationships, peer pressure, teacher interaction, future uncertainty, school-leisure conflict, financial pressure, and emerging adult responsibility (Byrne et al., 1995). Four items (compulsory school attendance, living at home, teachers harassing you about the way you look, and parents hassling you about the way you look) were removed from the ASQ to better suit the needs of this university population. To account for this omission, a mean score based on the subscale was substituted for each item. The ASQ is expressed as summative score.

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item scale that uses a 7-point Likert scale from 1 ("very strongly disagree") to 7 ("very strongly agree"). It measures participants' global cognitive judgments of satisfaction with their lives (Diener et al., 1985). The SWLS has strong internal reliability and moderate temporal reliability (Pavot and Diener, 1993). To score the SWLS, all items are summed.

DATA ANALYSIS

Demographic data and scales were analyzed with descriptive statistics, and relationships among measures were analyzed with Pearson's Product-Moment Correlation. T-tests were used to compare the total MSPSS mean

score of the normative population and the stress levels of female Aboriginal students to the Bryne's (1995) sample. Similar analyses were not conducted for males due to a low participation rate. Qualitative data were examined with thematic analysis (Braun and Clarke, 2006).

RESULTS

A total of 22 Aboriginal students (77% females and 23% males) participated in the study, representing a 22% participation rate. The age of participants ranged from 18–43 years ($M=24$, $SD=6.18$), and 40% of participants were single, while another 40% were currently dating someone (Table 1). The mean distance between the participant's hometown and the University of Guelph was 782 kilometres. Level of educational attainment by participants' parents varied widely with the majority (52%) of participants' mothers having completed college or university, while 5% had completed a Doctoral degree. Compared to mothers, fewer fathers (46%) had completed college or university and 5% had some college or university education. The number of fathers who did not complete high school was 18%, significantly higher than mothers of the participants (5%). Regarding family history, 9% of participants reported that their parents have been exposed to residential schools and an additional 36% had at least one grandparent who also attended.

Table 1 Participant Characteristics
Relationship status, n,%

Single	9	(40%)
Dating	9	(40%)
Married	2	(9%)
Separated	1	(5%)
Common-law	1	(5%)
<i>Mothers' Education</i>		
Less than high school	1	(5%)
High school	3	(14%)
Some college/university	5	(24%)
College/university	11	(52%)
Doctoral	1	(5%)
<i>Fathers' Education</i>		
Less than high school	4	(18%)
High school	3	(14%)
Some college/university	1	(5%)
College/university	10	(46%)
Masters	2	(9%)

The total summative scores for all measures appear in Table 2. Aboriginal students' overall mean stress score was 2.12, indicating a "moderately low" level of stress. Stress levels were highest ($M=3.43$) in the "future uncertainty" subscale, followed by "academic performance" with a mean of 2.77. The lowest stress scores were found in peer pressure ($M=1.79$) and teacher interaction ($M=1.79$). There were no significant differences between Aboriginal students and the normative population in financial pressure, emerging adulthood, and school performance. Significant differences were found between Aboriginal students and the normative sample in home life, $t(16)=-5.4$, $p<.001$; school attendance, $t(16)=-3.86$, $p<.001$; and romantic relationships, $t(16)=-2.59$, $p<.02$. Differences in levels of stress were found in peer pressure, $t(16)=-3.40$, $p<.004$; teacher interaction, $t(16)=-2.51$, $p<.02$; school and leisure conflict, $t(16)=-2.84$, $p<.02$; and future uncertainty, $t(16)=-3.20$, $p<.006$. The present study found no significant differences between Aboriginal students and the normative population in the financial pressure, emerging adulthood, and school performance subscales.

The total mean score for perceived social support was 5.29, ($SD 1.28$). There was no significant difference between Aboriginal students and the normative population (5.58; Zimet et al., 1988) in the amount of perceived

Table 2 Stress, social support and satisfaction with life, Mean (standard deviation)

<i>ASQ scale</i>	<i>Total (Mean)</i>	<i>Total (Sum)</i>	<i>Females (n=17)</i>	<i>t</i>
Home life	2.06 (0.91)	20.64 (9.08)	20.59 (8.36)	-5.4**
School performance	2.77 (0.91)	19.41 (6.45)	—	NS
School attendance	2.41 (1.15)	7.23 (3.50)	7.12 (3.31)	-3.86**
Romantic relationships	2.03 (0.94)	10.14 (4.72)	9.24 (4.21)	-2.59*
Peer pressure	1.79 (0.63)	12.55 (4.43)	13.18 (4.77)	-3.40***
Teacher interaction	1.79 (0.60)	12.55 (4.19)	12.71 (4.22)	-2.51*
Financial pressure	2.50 (1.06)	10.00 (4.16)	—	NS
School and leisure conflict	2.29 (0.97)	11.94 (4.84)	11.45 (5.14)	-2.84*
Future uncertainty	3.44 (1.05)	10.32 (3.15)	10.35 (2.89)	-3.20****
Emerging adulthood	2.08 (0.80)	6.23 (2.39)	—	NS
TOTAL	2.14 (0.54)	122.32 (31.26)		
<i>Social support</i>				
Family	5.19 (1.33)			
Friends	5.23 (1.38)			
Significant others	5.44 (1.68)			
TOTAL	5.29 (1.28)			
Satisfaction with Life	19.55 (5.71)			

* $p<.02$; ** $p<.001$; *** $p<.004$; **** $p<.006$

social support, $t(21)=-1.065$, $p>.05$, although Aboriginal students reported less support, but not statistically different than the norm. The mean total score for satisfaction of life was $M=19.55$, which falls below the neutral satisfaction level ($M=20-24$).

Stress scores were not correlated with the amount of perceived support, $r(20)=-.398$, $p>.05$, indicating no significant relationship between the amount of stress and the amount of perceived support. By contrast, stress was found to be negatively correlated with satisfaction with life, $r(20)=-.448$, $p<.05$, suggesting that as levels of stress increased, students' satisfaction decreased. A statistically significant correlation between satisfaction with life and the amount of perceived support was evident, $r(20)=0.576$, $p<.01$, indicating a positive correlation. Significant positive correlations were found between satisfaction with life and each of the specific subscales of the MSPSS: significant others, $r(20)=.432$, $p<.05$; family, $r(20)=.475$, $p<.05$; and friends, $r(20)=.609$, $p<.01$. The strongest association was a positive correlation between perceived social support of friends and satisfaction of life.

Thirty-six percent of participants ($n=8$) said they had to overcome a barrier to begin their postsecondary education. Of these participants, 63% ($n=5$) identified finances as a barrier. One student said: "I had no financial assistance. This required me to apply for OSAP and work multiple part time jobs." An additional 38% of participants noted that lack of support from their families was a significant barrier; in the words of one participant: "Inability of parents to provide ANY financial support for university (throughout 3 degrees, BSc, MSc, PhD). Inability of parents to help me arrange flights (or any travel) to/from university." Another student indicated: "Family — father not seeing the value of a post-secondary education, financial — no assistance required me to apply for OSAP and work multiple part-time jobs, personal — being disconnected from family and friends." Familial obligation and fear of leaving home community were identified as barriers by 25% of participants. One student noted: "As a parent with dependent children, it is difficult to attend school. It's about being short on money and time." These students expressed considerable challenges with attending university. Many faced financial difficulties and a lack of support from family to pursue higher education.

DISCUSSION

The present study supports the relationship between social support and well-being. Satisfaction with life and the amount of perceived social sup-

port were shown to be positively correlated among Aboriginal students. As the amount of perceived social support increased, so did satisfaction of life. Furthermore, each perceived social support subscale (significant other, family, and friends) was found to be positively correlated with satisfaction with life. The strongest association was found between perceived social support of friends and satisfaction with life. Friends may play a significant role during this time because university students are typically located away from their hometown (families) and a number of participants were currently not involved in a relationship, thus not having a significant other for support.

Consistent with previous research, a significant negative correlation was found between satisfaction of life and stress. This negative correlation suggests that as stress increases, satisfaction of life decreases. In addition, the relationship between stress and perceived social support was found to be nonsignificant. Thus, the stress buffering theory — that social support is essential in helping protect against stress — was not supported. It would be interesting in further research to examine self-esteem levels in addition to social support and stress. A larger sample size would have strengthened the power of this study, and increased the ability to see a true significant relationship between stress and perceived social support.

The mean total stress score among Aboriginal students fell in the “a little stressful” range. Taking into account financial, historical, and past education histories, this score was lower than predicted. A significant difference between this Aboriginal sample and Byrne’s sample was found in the majority of the ASQ categories. Two variables that may have influenced these scores were age and ethnicity. This sample ($M=24$ years) was significantly older than Byrne’s sample of adolescents; thus, our sample may have had more experience in dealing with stress. Furthermore, Aboriginal students come from unique backgrounds and histories that influence the types and levels of stress in their lives. Further research should be conducted to explore these variables and any relation to different perceptions of stress. Also important to note is that although significant differences were not found in the emerging adulthood, financial pressure, and school performance subscales, it is likely that the experiences of the two groups are different. For example, Aboriginal students and the normative population may experience similar levels of stress with regard to financial pressure, but the worry and stressors associated with these subscales may be different. This area should be explored in depth in future research. Among the ASQ subscales, the two highest stress scores were found in “future uncertainty” ($M=3.44$),

followed by “academic performance” ($M=2.77$). This is consistent with the concept of educational attainment and future employment. Aboriginal students, like many students, face tremendous pressures to succeed in postsecondary education in order to obtain a well-paying job in the future. This area should be explored in future research to determine students’ meanings of “the future.” With the exception of the two subscales above, all mean scores ranged in the “a little stressful” category to “not at all stressful or irrelevant.” However, these scores should be interpreted with caution. In the ASQ, the number “1” is defined as “not at all stressful” — or “irrelevant.” This creates a problem because it is not apparent if the item is applicable and produces minimal stress, or if it is completely irrelevant to the participant. Furthermore, if a number of items are indeed irrelevant, this may have significantly lowered the results, thus skewing the data. Thus, while the ASQ was chosen because it addressed stress resulting from school issues, it may not have best captured the experiences of Aboriginal students.

LIMITATIONS

Interpretations of this study should be made in the context of its limitations. The sample size of Aboriginal students was small ($N=22$); thus, comparisons between these students and the normative population should be made with caution. Moreover, a low percentage of males participated in the study. In almost all cases, participants had some contact with the Director (Jaime Mishibinijima), the Aboriginal Student Advisor. These participants were likely aware of the support and services available to them as Aboriginal students, possibly affecting their stress scores. Additionally, the responses to the questions regarding families’ experiences of adoption, residential school, or relocation may not accurately represent the true experiences of participants and their families. It is possible that participants were not aware of their families experiences, or that the design of this question was confusing, which led to many participants not answering the question properly, if at all. The measure of stress (ASQ) employed in this study is a well-validated tool; however, it may not have been culturally sensitive for the Aboriginal community. Future research could be focussed on specific stressors in Aboriginal communities and the development of an appropriate stress scale.

IMPLICATIONS

This study provided only a snap-shot of potential stressors in the lives of Aboriginal students. In future studies investigators might aim to compare different Aboriginal populations from a number of universities in Ontario.

Especially interesting would be to compare a northern university, such as Lakehead in Thunder Bay, to a southern university like the University of Guelph. Moreover, an exclusive qualitative approach might allow investigators to gain experiential and contextual data, which this study was not able to provide. This method would be especially beneficial in asking about family histories. A scale should be adapted that better suits the needs of university students. This scale might include specific subscales of academic life: life away from home, paying rent, assessing resources, social life, academic programs, etc. It should address culturally relevant issues, such as racism, feelings of social exclusion, and accessibility of culturally relevant services. To ensure that scales are appropriate (e.g., adolescent stress questionnaire), a feedback box would allow participants to share their experiences.

CONCLUSION

Aboriginal students at the University of Guelph appear to be experiencing normative levels of stress and support according to standardized measures; however, their qualitative personal experiences reflect many challenges, particularly financial difficulties and a lack of support for higher education from parents. Research that measures stress, social support, and satisfaction among Aboriginal university students is important and warrants more attention. With the Aboriginal population young in comparison to the general Canadian population — it is essential to address these areas further. The relationship between stress and health makes it essential to continue assessing the sources of stress, perceived social support, and satisfaction among Aboriginal students as a whole.

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