Development and Evaluation of a Peer Mentorship Program for Aboriginal University Students

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Abstract

Although Aboriginal students encounter educational challenges, few post-secondary mentorship programs that facilitate positive educational and mental health outcomes within this population are described in the literature. This study describes the development and evaluation of a mentorship program for Aboriginal university students. Program development was informed by a literature review and needs assessment. Using a mixed-methods

design, 12 Aboriginal students completed pre- and post-program measures of resilience and ethnic identity awareness. Post-program, improvements in social competence resiliency, other-group ethnic orientation, and school engagement were identified. Research and community stakeholders are encouraged to develop mentorship programs to improve the well-being of Aboriginal students.

Keywords: peer mentorship, post-secondary students, Aboriginal, program development, program evaluation

Résumé

Bien que les étudiants Aborigènes rencontrent des défis éducatifs, peu de programmes de mentorat postsecondaire qui facilitent les résultats positifs de santé mentale et éducatives au sein de cette population est décrits dans la littérature. Cette étude décrit l'élaboration et l'évaluation d'un programme de mentorat pour les étudiants Aborigènes. Élaboration du programme a été informée par une recherche documentaire et évaluation des besoins. À l'aide d'une conception de méthodes mixtes, 12 élèves étudiants Aborigènes terminé avant et après le programme de mesures de résistance et de l'identité ethnique. Au programme, amélioration de la résilience des compétences sociales, groupe-autres orientation ethnique et l'engagement scolaire ont été identifiées. Recherche et communauté de parties prenantes sont encouragées à élaborer des programmes de mentorat pour améliorer le bien-être des étudiants étudiants Aborigènes.

Mots-clés : mentorat par les pairs, les étudiants du postsecondaire, Aborigène, développement du programme, évaluation du programme

Introduction

Aboriginal university students often encounter many educational challenges. For example, relative to non-Aboriginal students, on average, Aboriginal students experience greater relocation from their communities that may result in lower social support, and also a delayed transition from secondary to post-secondary education (Canadian Council of Ministers of Education, 2011). This may result in lower levels of motivation and academic preparedness (Canadian Council of Ministers of Education, 2011). Moreover, compared to non-Aboriginal youth, on average Aboriginal youth have less access to funds to attend post-secondary education (Canadian Council of Ministers of Education, 2011). Aboriginal youth may also have increased stress due to lower socio-economic status and additional responsibilities of caring for family members, concerns regarding cultural safety and appropriate role models in the post-secondary environment, and a perceived lack of control over education (Canadian Council of Ministers of Education, 2011). In order to understand and address the complex needs of Aboriginal youth in post-secondary environments, it is important to acknowledge not only these current educational challenges, but also the historical context, including a long history of assimilationist education policies, chronic abusive experiences and the removal of Aboriginal children from their homes and placement in residential schools (Barnes, Josefowitz, & Cole, 2006). More specifically, due to the impact of colonialism, Aboriginals in Canada encountered cultural oppression through forced assimilation (Kirmayer, Simpson, & Cargo, 2003). Aboriginal children were separated from their families and placed in residential schools, which replaced Aboriginal religious and cultural beliefs and practices with the language, beliefs, and practices of non-Aboriginal Canadians. In residential schools, many children experienced severe discipline, and physical and sexual abuse. Later, many Aboriginal children were again removed from their homes and placed into foster care on the premise that Aboriginal parents experienced challenges providing and caring for their children (Kirmayer et al., 2003).

As a result of these historical and contemporary issues, the educational attainment of Aboriginal people is often lower than the general population. For example, in Canada, approximately 46% of Aboriginal youth complete high school, compared to 65% of the general population (Mendelson, 2006). The 2006 Canadian census revealed that 35% of Aboriginal Canadians, aged 25 to 64, have completed post-secondary education,

compared to 51% of non-Aboriginal Canadians (Statistics Canada, 2008). Among those students who continue to post-secondary education, 31% of Aboriginal youth are more likely to drop out in their first or second year and 64% live away from home, compared to 13% and 49% of non-Aboriginal youth, respectively (Finnie, Childs, Kramer, & Wismer, 2010). Thus, there is a need to develop programs that contribute to the success and meet the needs of Aboriginal students attending post-secondary institutions.

Many studies have demonstrated the academic and mental health advantages of students participating in mentorship programs, including improving self-esteem and life satisfaction (DuBois & Silverthorn, 2005; Jekeliek, Moore, Hair, & Scarupa, 2002; Kahveci, Southerland, & Gilmer, 2006). In particular, mentorship programs have been shown to be advantageous for culturally diverse students, including having a positive impact on ethnic identity awareness (Kaplan, Turner, Piotrkowki, & Silber, 2009). However, considering the large number of Canadian colleges and universities, few peer mentorship programs have been developed for Aboriginal youth in Canadian post-secondary institutions, despite the many educational challenges experienced by Aboriginal youth, compared to non-Aboriginal youth. Emerging research suggests that school (i.e., elementary and high school) and community-based mentorship programs are beneficial for Aboriginal youth. For example, participants in an after-school mentorship program for Aboriginal elementary and high school students experienced an increased sense of belonging and mastery of skills (Carpenter, Rothney, Mousseau, Halas, & Forsyth, 2008). Jackson, Smith, and Hill (2003) also found that informal peer mentors for Aboriginal students reduced isolation. Further, a community-based mentorship program for Aboriginal girls that focused on teaching sexual health education resulted in elevated social connection and sense of belonging (Banister & Begoray, 2006).

In addition to the academic and mental health benefits of mentorship programs, Aboriginal students may be particularly receptive to mentorship programs, which may counteract historical aspects of colonialism that Aboriginals have faced. For example, post-secondary experiences may be reminiscent of negative aspects of historical Aboriginal education, such as residential schools and fears of re-colonization (Kirmayer et al., 2003). Aboriginal students in Canadian post-secondary institutions may also experience a contemporary wave of assimilation through the need to fit in and acquire a sense of belonging in a predominantly Eurocentric post-secondary setting. They may attempt to assimilate to Western culture as the majority of their academic peers are from Western

communities. Both peer-to-peer and intergenerational mentoring allows for increased opportunities to preserve the Aboriginal culture, particularly as students have relocated from their reserves and communities. Consequently, having peer mentors or intergenerational mentors from an Aboriginal background becomes key to engaging Aboriginal students and addressing their needs at post-secondary institutions.

The value of peer mentorship programs in post-secondary settings is abundant. For example, peer mentorship programs in universities have been found to enhance students' academic success (i.e., higher GPAs), collaboration with peers, communication skills, decision-making and problem-solving, acceptance of diverse cultures, and personal reflection (Posa, 2011). Research on peer mentorship programs for ethnicity groups also show promising outcomes. For instance, compared to controls, African American university students who participated in a peer mentorship program showed increased levels of help-seeking from peers, more positive problem solving strategies, and higher two-year retention rates (Schwitzer, 1998). Although there is a wealth of research on the positive effects of peer mentorship programs, there is a paucity of research pertaining specifically to Aboriginal students, even though the concept of mentoring is inherent in traditional Aboriginal activities (Klinck et al., 2005). Elders, healers, and community members act as mentors, transmitting shared traditional values, providing guidance, and modeling positive behaviours within dyadic and group contexts, which allow for the teaching and transmission of cultural values and knowledge (as cited in Banister & Begoray, 2006). Although cultural activities vary between First Nations, Métis, and Inuit peoples, some Aboriginal traditions, such as storytelling, hands-on interactive learning, and sharing circles, reinforce mentoring relationships and pass down traditional knowledge and values to younger generations (Banister & Begoray, 2006; Poonwassie & Charter, 2001).

Thus, despite the numerous advantages of mentorship programs, particularly those targeting Aboriginal students, there have been few programs developed for students attending post-secondary institutions. The purpose of this study is to describe the development and preliminary evaluation of a peer mentorship program for Aboriginal students attending a large urban Canadian university. This program aimed to address the needs of Aboriginal students attending a specific university. Through a collaboration with the program developers, it was decided that participatory action research and youth engagement approaches would be used as the theoretical frameworks of the current program, with a focus on promoting resilience and ethnic identity awareness among Aboriginal students.

Each of these domains is described in greater detail below, with an emphasis on their relevance to Aboriginal populations.

Theoretical Frameworks

This study implemented a participatory action research framework, which is often utilized in community-based research. By utilizing this framework, the researchers, Aboriginal student representatives, Centre for Aboriginal Student Services staff, and community stakeholders worked collaboratively in the process of investigation and knowledge generation to increase the benefits to the targeted community of Aboriginal students (Mordock & Krasny, 2001). This framework is often used in research involving minority and disempowered groups (e.g., Aboriginal youth) to help foster a sense of agency within the research process and ensure it positively benefits the community (Mordock & Krasny, 2001). Through interviews and participatory planning sessions, the program participants and community members assisted in designing the mentorship program, determining the program goals and activities, and deciding which evaluation outcome measures were used. Therefore, all members contributed to the decision-making for all aspects of this program and research study, thus increasing ownership over the entire endeavour. This framework allows the individuals who will be most affected directly by the research—in this study, Aboriginal students—to use their own experiences as learning and teaching opportunities to contribute to a body of research that allows for improving and evaluating current strategies implemented in the community (McTaggart, 1991). Additionally, this study's researchers were actively engaged in the implementation of this mentorship program by participating in training and program activities alongside the program participants. The researchers were identified as researchers to the program participants. However, active participation by the researchers ensured an equalitarian approach to the research that was perceived by the program participants.

Youth engagement principles, as outlined by the Ontario Ministry of Health and Long-term Care (2010), were also applied in this study. The youth engagement approach involves youth in addressing important social issues that directly affect them, and includes youth in the creation of services that can better meet their needs (Ontario Tobacco Research Unit, 2011). The principles are as follows: (1) inclusiveness—program participants were anyone of First Nations, Métis, or Inuit descent, and of any religion,

gender, sexual orientation, and age, (2) fostering positive youth development—the program focused on enhancing resilience and ethnic identity awareness, (3) accountability—researchers evaluated, monitored, and reported back to program participants, (4) commitment to operational practices that sustain meeting youth engagement needs—adults were partners with the students, peer-to-peer initiatives were implemented, youth engaged in meaningful action, mutual benefits for adults and youth were recognized, and the youth contributions were valued, (5) strengths-based approach—identifying and building upon resilience and ethnic identity awareness, (6) flexibility and innovation—being open to new youth-initiated ideas, (7) space for youth—creating caring, safe, and supportive environments, (8) transparency—being clear about the purpose of engaging youth, (9) sustainability of financial resources, (10) cross-sector alignment—the Department of Psychology, the Centre for Aboriginal Student Services, and community members worked collaboratively to implement this program, and (11) collaboration.

Elements of the aforementioned youth engagement principles follow a positive psychology framework. For example, inclusiveness, fostering positive youth development, and a strengths-based approach fall under the positive psychology approach. These elements were included in the development and execution of this study's program. The modern positive psychology movement, pioneered by Seligman and Csikszentmihalyi (2000) focuses on the study of factors that allow individuals to grow and flourish (e.g., strengths and protective factors), instead of factors that put individuals at risk for negative outcomes. Prevention is the focus of positive psychology research, as personal strengths are identified and utilized in positive psychology programming (Seligman & Csikszentmihalyi, 2000).

Resilience and Mentorship Programs

Resilience is defined as protective factors that allow for positive adjustment and coping toward stressors (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003). Among Aboriginal youth, factors that contribute to resilience include enculturation, self-esteem, subjective well-being, and social support (Stumblingbear-Riddle & Romans, 2012). Social support from friends is one of the strongest predictors of resilience among Aboriginal youth (Stumblingbear-Riddle & Romans, 2012). Specific to Aboriginal post-secondary students, factors that promoted resiliency and in turn affected retention and completion

of post-secondary education included the importance of Aboriginal traditions, developing an academic identity, and perceptions of social support systems (Montgomery, Miville, Winterowd, Jeffries, & Baysden, 2000). Informal mentoring has been identified as one method of enhancing resilience in youth, particularly within some samples of diverse (e.g., Mexican urban youth; Rutter, 1999; Stanton-Salazar & Spina, 2003) and at-risk (Southwick, Morgan, Vythilingam, & Charney, 2006) youth. Furthermore, children with learning disabilities (Werner & Smith, 1992) and children involved in the arts and sports (Gilligan, 1998) who had at least one informal mentor exhibited the highest levels of resilience. A longitudinal study of at-risk children revealed that one of the predominant features distinguishing between resilient and non-resilient children was the presence of an informal peer or adult mentor (Werner & Smith, 2001). Among Aboriginal students, there have been no published studies demonstrating an association between peer mentorship programs and improvements in resilience. In the current study, it was intended to develop a mentorship program that would foster resilience among students, given the educational challenges that some Aboriginal students face while attending university.

Ethnic Identity and Mentorship Programs

Ethnic identity is defined as a part of one's self-concept, and includes the feelings attached to being a part of one or multiple social or ethnic groups (Tajfel, 1981). Ethnic identity also encompasses aspects of cultural identity. Past research has shown that a strong, positive ethnic identity is linked to increases in social connectedness, psychological well-being, self-esteem, and lower prejudice toward others (Gonzalez & Cauce, 1995; Martinez & Dukes, 1997). Furthermore, embracing one's culture increases academic success in immigrant and minority students (Castro, Boyer, & Balcazar, 2000; Qin, 2006). Specific to Aboriginal youth, those who identify closely with their own ethnic group experience higher self-esteem (Corenblum, 2014), and lower rates of depression, anxiety, and externalizing behaviors (Smokowski, Evans, Cotter, & Webber, 2014). In addition, Aboriginal urban youth who participate in cultural activities (e.g., powwows, sweat lodges, drumming groups, and roundhouse dance) self-report high levels of Aboriginal ethnic identity (Schweigman, Soto, Wright, & Unger, 2011). This association between cultural activities and identity was not found for Aboriginal youth living on reserves (Schweigman et al., 2011). When investigating the ethnic identity of Aboriginal post-secondary students, they

more strongly affirm their ethnic identity and feel closer to their ethnic group, compared to non-Aboriginal students (Okagaki, Helling, & Bingham, 2009). With respect to mentorship programs, research has shown ethnic identity awareness increased after involvement with a peer mentorship program for Latina girls in middle school and university (Kaplan et al., 2009). Additionally, middle school African American students who participated in a mentorship program reported significantly higher positive ethnic identity development and commitment, compared to non-mentored youth (Gordon, 2000). Among Aboriginal students, there have been no published studies demonstrating an association between peer mentorship programs and improvements in ethnic identity awareness. Given the historical and contemporary issues that Aboriginals have faced, preserving and strengthening their ethnic and cultural identity is crucial. Aboriginal youth with a strong sense of ethnic and cultural identity experience a wealth of positive outcomes such as higher secondary school grades (Fryberg et al., 2013) and increased self-concept clarity and self-esteem among undergraduates (Usborne & Taylor, 2010). Additionally, among Aboriginal adults in Canada, having positive feelings toward one's ethnic group was associated with decreased depression and perceived discrimination (Bombay, Matheson, & Anisman, 2010). Among mixed-race Aboriginal youth, engaging in Aboriginal cultural activities (e.g., powwows, storytelling, talking circles, sweat lodge ceremonies, and Aboriginal arts and crafts) nurtures a sense of identity, a feeling of belongingness, spirituality, and improved mental health (Iwasaki, Byrd, & Onda, 2011). Therefore, as ethnic and cultural identity is associated with the well-being of Aboriginal youth, fostering ethnic identity awareness was an important aspect considered in the program development and evaluation of the present study.

The Current Study

In this article, the term "Aboriginal" includes the worldviews of First Nations, Métis, and Inuit peoples (Aboriginal Affairs and Northern Development Canada, 2012; National Aboriginal Health Organization, 2014). This term was used as it is considered an inclusive term that refers to the diverse group of Indigenous peoples in Canada. At the post-secondary institution that developed this program, it was decided by the program stakeholders (e.g., Aboriginal students and Aboriginal staff) to use the term "Aboriginal" to describe program participants.

The first objective of this study was to describe the development and mixed-methods evaluation of the Aboriginal Leadership and Mentoring (ALM) Program, at a large, urban university. The mixed-methods program evaluation included the collection of quantitative (i.e., questionnaire ratings of resilience and ethnic identity awareness) and qualitative data obtained through interviews with program participants and stakeholders. Interviews gathered information about student engagement in the university community, strengthening Aboriginal cultural identity, important qualities for program mentors and mentees to possess, perceived program benefits (including mental health impact) for mentors and mentees, and areas of improvement. Additionally, stakeholders were specifically asked about how collaborations influenced the program. The rationale for the project was to create a program that addressed the complex needs of Aboriginal students attending a large urban university, with the aim to foster resilience and ethnic identity awareness while engaging program stakeholders, including Aboriginal students. The development of the ALM Program was informed by (a) a literature review of peer mentorship programs for Aboriginal students in English-speaking post-secondary institutions, highlighting key components of the programs that contributed to successful program development; and (b) a needs assessment involving stakeholders in order to inform the development of the ALM Program, including its structure, content, and participants.

The second objective of this study was to investigate if participation in the ALM Program improved students' resilience and ethnic identity awareness. It is hoped that sharing the development and preliminary evaluation of the program could assist others interested in developing and evaluating similar Aboriginal post-secondary mentoring initiatives.

In order to clearly describe the program development and evaluation components, each is discussed separately below.

Methods

Program Development

Literature review. Using PsycINFO and ERIC, an international systematic review of peer mentorship programs for Aboriginal students in English-speaking post-secondary

institutions was conducted. Key descriptor words used in the search were mentor, peer, school, program development, program evaluation, Aboriginal populations, Indigenous populations, and American Indians. At the time of this literature review, the descriptor "Aboriginal populations" was used, but has since been discontinued in PsycINFO. The descriptor "Indigenous populations" replaced the descriptor "Aboriginal populations." The descriptor "American Indians" encompasses the term Native Americans, and also returns results for First Nations, Métis, and Inuit peoples. Additionally, a grey literature search was carried out by visiting the websites of Canadian post-secondary institutions. Inclusionary criteria in the grey literature search were that each program (a) included a peer mentorship component, (b) targeted Aboriginal students, (c) targeted undergraduate students, (d) was available to all students regardless of major, and (e) was in an English-speaking Canadian post-secondary institution (e.g., college, university) given that the mentoring program was to be established at a Canadian university. Exclusionary criteria were programs that (a) only offered peer academic tutoring, (b) did not include a peer component, (c) targeted only graduate students, (d) were available only to specific majors, or (e) were in a non-English school. Two independent reviewers followed the inclusion and exclusion criteria to identify the final programs for inclusion in the review. When programs were reviewed, the following information that was deemed by the research team to be most useful for the current initiative was identified for each program, namely cultural program elements and types of program evaluation.

Needs assessment for the ALM Program. Following a participatory research framework, a needs assessment involving university-based program stakeholders was conducted via an online survey. The survey was developed by the program creators. Eleven stakeholders completed the online survey (M_{age} = 34.36, SD_{age} = 10.38, range = 20-48; 91% female). Eight respondents were First Nations, while two self-identified as "Mixed" and one as "Other." There were eight undergraduate students, two graduate students, and one staff member. Participants were asked questions regarding the expected main goals and components of a peer mentorship program, important qualities for a mentor to possess, program length, frequency of mentorship gatherings, recruitment, and how best to engage Aboriginal male students. There was a focus on engaging male students as past Canadian research highlights gender differences in post-secondary education attainment: Aboriginal males are less likely to complete college or university (Canadian Council of Ministers of Education, 2011).

Description of the ALM Program. During the 2010–2011 academic year, a pilot version of the ALM Program was implemented. The program was developed in partnership between the university's Centre for Aboriginal Student Services and the Research on Emerging Adults, Adolescents and Children (REACh) Lab in the Department of Psychology. The program was co-developed with equal input from both departments. However, the evaluation component of the program was spearheaded by the research lab, with input from the Centre for Aboriginal Student Services. Program funding was provided by the Centre for Aboriginal Student Services. The development of the pilot program involved recruitment of mentors and mentees (via posters posted around campus, university webpages, and the Aboriginal student listserv), the creation of a mentor's manual, and the delivery of a training session for mentors. Mentors and mentees were recruited mainly by the Centre for Aboriginal Student Services' Program Coordinator, who was able to individually approach prospective participants, as well as the general Aboriginal community at the university.

The training manual covered the following topics: an introduction to mentoring, roles and responsibilities of mentors and mentees, building a mentoring relationship, the importance of culture, successful communication, ideas for the first session and subsequent sessions, on- and off-campus resources, and problem-solving through training scenarios. The training manual was adapted from two sources: *The Fourth R: A Relationship-Based Program for Aboriginal Students—Mentor's Manual* (Crooks & Hughes, 2005) and the *York Lions in Training (Y-LIT) Program Mentor Manual* (Sieukaran, 2008). Although both documents were not peer-reviewed, they were created by the Centre for Addiction and Mental Health Centre for Prevention Science and the York University Centre for Student Leadership and Community Development, respectively. The training also included the following cultural components: traditional prayers, opening and closing circles, tobacco ties, and a smudging ceremony. An Aboriginal Elder participated in the training session, and led all cultural components of the session. Six mentors were trained. Mentors received training certificates after successfully completing the training session.

Mentors enjoyed the following aspects of training: the ice-breakers, the organization of the session, that program staff encouraged feedback from mentors, the many opportunities for mentors to ask questions, that program staff were welcome to different viewpoints, and the link between Western mentoring and traditional Aboriginal culture. Mentors suggested the following areas of improvement for the training session: provide

more details about the program, extend the length of the training session, and focus more on training scenarios.

Six mentor-mentee pairs were established that met during the winter academic term. During the term, two mentees dropped out of the program, stating that they would prefer to return to the program the following year as mentors. These mentees were subsequently replaced. Mentors were upper-year (i.e., third or fourth year undergraduate or graduate-level) students, and mentees were lower-year (i.e., first and second year) students. All mentors and mentees signed informal contracts that outlined the program values, goals, and guidelines. Each month, mentors and mentees were invited to attend a group activity (e.g., a meet and greet, bowling, a group dinner). In addition, mentors and mentees had at least one individual one-on-one mentorship session per month. One-on-one session activities were determined by each mentor-mentee pair. Activity examples include sharing study tips, going to the bookstore or library, or having lunch together. An activity toolkit with games was also made available to mentors and mentees, for use during one-on-one sessions.

An online e-mentoring community was set up for mentors and mentees as well, to provide another outlet to organize group activities, seek guidance, and to express their thoughts about the program. Three mentors and one mentee utilized this component of the program. At the end of the academic year, participants were given program completion certificates, reference letters, and small tokens of appreciation.

Program Evaluation

The evaluation of the current mentorship program consisted of quantitative (survey) and qualitative (interview) components, which targeted both program participants and stakeholders. Specifically, ALM mentors and mentees completed pre- and post-program self-report measures and interviews at Time 1 (February 2011) and Time 2 (April 2011). The program duration was three months. Each participant completed an informed consent form, an individual interview, and an online survey. Interviews focused on participants' expectations (Time 1) and experiences (Time 2) of the ALM Program. Participants were specifically asked questions regarding program benefits to mentors and mentees and the importance of Aboriginal culture in the program. Interviews were audiotaped. Online

questions consisted of questions from the original needs assessment, as well as measures of resilience and ethnic identity awareness.

Qualitative data were analyzed using the interpretative phenomenological analysis (IPA) approach, which emphasizes how each interviewee interprets their respective experiences (Smith, 2004). This analysis is a "bottom-up" approach, meaning that themes were generated from the data, instead of having a hypothesis with pre-existing codes that were later applied to the data. As this program was a pilot project, it was determined that this would be a suitable methodology as the collection of data was exploratory. Initially, connections and annotations were recorded within each interview, thus creating initial codes. Patterns in these initial codes developed into preliminary theme codes. Then, comparisons were made across interviews, which allowed for expanding and merging theme codes. Identified themes were patterns that appeared repeatedly across multiple interviews.

ALM Program stakeholder evaluation. Program stakeholders, specifically the program developers (n = 3; 67% female), completed interviews at the end of the program. They were asked questions about their collaboration experiences, factors that led to the success of the ALM Program, the emphasis of culture in the program, benefits to the mentors and mentees, program challenges, areas of improvement, and lessons learned from the pilot program. They also completed a Collaboration Checklist that identified the presence of sustainers/facilitators and barriers to collaboration and program success (Rawana & Nguyen, 2010).

Measures

Collaboration Checklist. The Collaboration Checklist (Rawana & Nguyen, 2010) was developed as part of a process framework for developing collaborations in school-based mental health programs targeting Aboriginal children and adolescents, with the goal of moving toward more integrated levels of collaboration between stakeholders. This measure allows program developers to determine if factors that promote collaboration are present in their program development and if barriers to collaboration are absent. The Collaboration Checklist was developed by conducting an international literature review of school-based mental health prevention programs that targeted Aboriginal children and adolescents. Then, programs were critically reviewed for collaborative strategies used

among program stakeholders, specifically focusing on integrative elements and the extent of reciprocity. The evidence of collaboration was examined in program development, implementation, and evaluation of identified programs. Sustainers/facilitators to collaboration are (a) a long history of partnership, (b) an agreed upon goal that is mutually beneficial to all stakeholders, (c) resources that were shared between all stakeholders, (d) a dedicated group of leaders that consists of representatives from all stakeholder groups, (e) all stakeholders invested equivalent resources and received equivalent benefits, (f) collaborations were evident at all stages of program delivery, and (g) lines of communication were open and honest between stakeholders. Barriers to collaboration are (a) an overpowering agenda imposed by one or more stakeholder groups, (b) competing and/or incompatible priorities or mandates, (c) program elements and content that are inflexible to feedback, (d) roles of stakeholders that are strictly defined, and (e) rigid and immutable contracts are in place. The presence of sustainers or barriers is indicated by a positive response to any of the aforementioned items. There is no psychometric data for this measure. In this current study, using the Collaboration Checklist helped the developers of this program adhere to a participatory action framework, which fostered collaborations.

Resilience Scale for Adults. Resilience was measured by scores on the Resilience Scale for Adults (RSA; Friborg et al., 2003). The RSA consists of 33 items, each rated on a 7-point scale ranging from 1 (*less resilient*) to 7 (*more resilient*). The scale contains six subscales that measure various aspects of resilience: (1) perception of self, which is defined as personal competence and encompasses an individual's self-esteem, self-efficacy, self-liking, optimism, determination, and realistic attitudes toward life (e.g., "My judgements and decisions, I often doubt or I trust completely"); (2) planned future, which is the views of the future (e.g., "My goals for the future are unclear or well thought through"); (3) social competence, which is defined as an individual's communication skills, outgoing nature, and skill in starting and engaging others in social activities (e.g., "Meeting new people is difficult for me or something I am good at"); (4) family cohesion, which is features of the family such as conflict, warmth, support, and cooperation (e.g., "My family's understanding of what is important in life is quite different or very similar"); (5) social resources, which is defined as one's support given and received from family and friends (e.g., "When needed, I have no one who can help me or always someone who can help me"); and (6) structured style, which includes the ability to create and stick to daily schedules and routines (e.g., "Rules and regular routines are absent in my everyday life or

are a part of my everyday life"). Subscales scores were calculated by obtaining the mean of the responses on the subscale items. Higher subscale means reflected higher levels of resilience. Researchers have found that the internal consistency for the various subscales ranges from a = .67 to .90, and the four-month test-retest reliability for each subscale ranges from .69 to .84 (Friborg et al., 2003). Cronbach's alpha for the entire scale for this current sample is .83 at Time 1, and .91 at Time 2.

Multigroup Ethnic Identity Measure. Ethnic identity awareness was defined as participants' scores on the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992). The MEIM consists of 24 items, each rated on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The scale consists of five subscales that measure various aspects of ethnic identity: (1) ethnic identity total (e.g., "I have a clear sense of my ethnic background and what it means for me"); (2) affirmation and belonging, which measures one's sense of ethnic pride and belonging (e.g., "I feel a strong attachment toward my own ethnic group"); (3) ethnic identity achievement, which is defined as a person's attempts to form an ethnic identity, by investigating and committing to the culture (e.g., "I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups"); (4) ethnic behaviours, which includes socializing with members of one's ethnic group as well as engaging in cultural activities (e.g., "I participate in cultural practices of my own group such as special food, music, or customs"); and (5) other-group orientation, which is defined as a person's attitudes and interactions with other ethnic groups (e.g., "I like meeting and getting to know people from ethnic groups other than my own"). Subscale scores were calculated by obtaining the mean of the subscales items. Higher subscale means were associated with greater ethnic identity awareness. Internal consistency for the entire scale has been shown to be a = .90 (Phinney, 1992). Cronbach's alpha for the entire scale for this current sample is .45 at Time 1, and .86 at Time 2.

Results

Literature Review

No peer mentorship programs for Aboriginal students in English-speaking post-secondary institutions in Canada were identified via PsycINFO. One American-based program was found through ERIC (The Peer Mentoring Retention Program at the University of Central Florida; Shotton, Oosahwe, & Cintron, 2007). Due to the dearth of published literature on Aboriginal mentorship programs in North America and the specific emphasis of focusing on support for Aboriginal students in Canada, an international literature review on Aboriginal mentorship programs was not conducted.

After conducting the grey literature search, 22 Aboriginal peer mentorship programs (in 24 institutions) were identified in English-speaking Canadian post-secondary institutions (see Figure 1).

Of the 131 English-speaking Canadian colleges, only three (2%) have an Aboriginal peer mentorship program, while 21 of the 73 (29%) English-speaking Canadian universities do. Of the 22 programs identified, there are 12 in Ontario, four in British Columbia, two in Manitoba, and one each in: Alberta, Nova Scotia, Quebec, and Saskatchewan. There are no programs identified online in New Brunswick, Newfoundland, Prince Edward Island, or the three territories (i.e., Northwest Territories, Nunavut, & Yukon).

Cultural program elements. Of the 22 programs, four (18%) incorporated cultural elements. The LE,NONET Peer Mentor Program hosted a preparation seminar focusing on Aboriginal history and culture, provided access to Elders to program participants, hosted culturally themed craft nights, and showed films with Aboriginal themes. The Nanabijou Aboriginal Graduate Enhancement Program hosted sharing circles, and involved Elders. The Peer Support Program described the inclusion of general cultural events. The ALM Program's mentor training and group activities included a portion delivered by an Elder including traditional prayers, opening and closing circles, tobacco ties, and a smudging ceremony.

Program evaluations. Four programs, including the ALM Program, included an evaluation component. Evaluations were usually completed at the beginning and at the

end of program participation. Two programs completed needs assessments, and three programs explicitly stated that a mixed-methods evaluation was completed.

Qualitative Results from the Needs Assessment for the ALM Program

Existing Aboriginal peer mentorship programs in English-speaking Canadian post-secondary institutions placed less emphasis on certain components that this current program incorporated. Although the programs were created primarily for Aboriginal students, the majority of Aboriginal peer mentorship programs did not contain specific cultural activities or traditions. Cultural activities and traditions were considered to be any activity that fostered the Aboriginal identity, and included, but are not limited to: storytelling, sharing/talking circles, powwows, smudging ceremonies, sweat lodge ceremonies, and Aboriginal arts and crafts. Additionally, most programs did not have an evaluation component. This current program incorporated cultural aspects and an evaluation component.

The results of the needs assessment indicate that the ALM Program goals should provide, in decreasing order of preference: academic support, social activities with non-Aboriginal students, orientation to the university for students who may be coming from far away, academic and professional workshops, and Aboriginal-focused cultural activities or socials. Suggested important program components were prioritized as individual mentoring, workshops on university procedures that are specific to Aboriginal students, information on non-university resources, tutors for academic support, and an overview of campus resources.
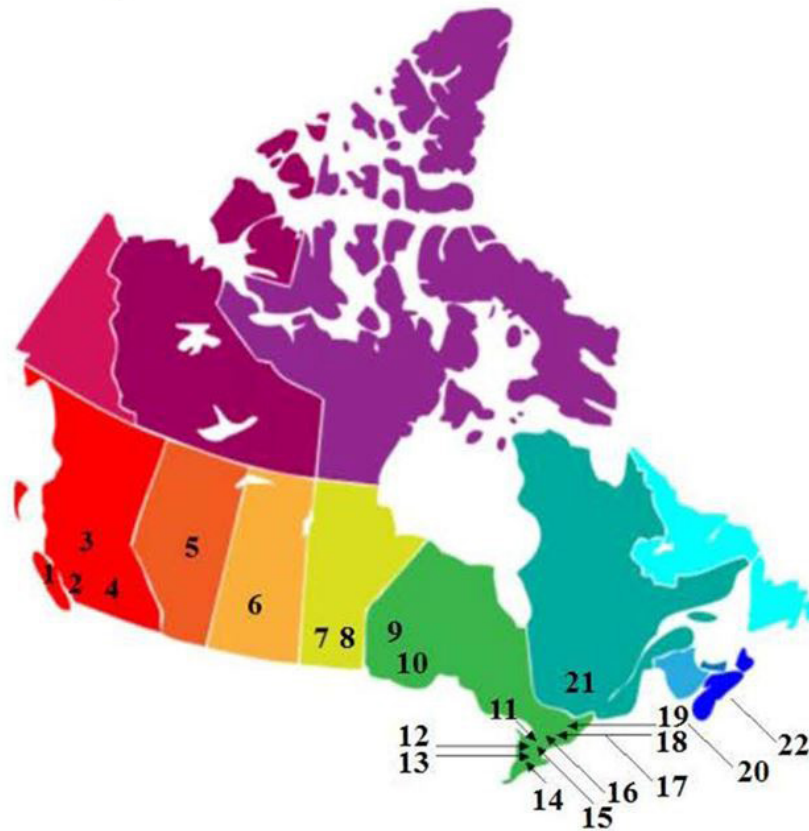
Figure 1. Locations of Aboriginal peer mentorship programs in English-speaking post-secondary institutions in Canada.

Notes: 1 = Aboriginal Mentorship Outreach Program (Vancouver Island University, Vancouver Island, BC); 2 = LE,NONET Peer Mentor Program (University of Victoria, Victoria, BC); 3 = Supporting Aboriginal Graduate Enhancement for Undergraduate Students – SAGE-U (University of British Columbia, Simon Fraser University, Thompson Rivers University, University of Northern British Columbia, University of Victoria, Vancouver Island University, BC); 4 = Student Peer Mentors (Okanagan College, Kelowna, BC); 5 = Mentoring Aboriginal Peers Program (University of Alberta, Edmonton, AB); 6 = Student Ambassadors (University of Saskatchewan, Saskatoon, SK); 7 = Transition Year Mentor Program (University of Winnipeg, Winnipeg, MB); 8 = Promoting Aboriginal Community Together – PACT (University of Manitoba, Winnipeg, MB); 9 = Aboriginal Student Mentoring Program (Lakehead University, Thunder Bay, ON); 10 = Nanabijou Aboriginal Graduate Enhancement Program (Lakehead University, Thunder Bay, ON); 11 = Niwi Jiagan My Friend Peer Mentor Program (Georgian College, Barrie, ON); 12 = Mentoring Program (University of Waterloo, Waterloo, ON); 13 = Peer Mentoring (Wilfred Laurier University, Waterloo, ON); 14 = Peer Helper Program (Fanshawe College, London, ON); 15 = Peer Support Program (Ryerson University, Toronto, ON); 16 = Aboriginal Leadership and Mentoring Program (York University, Toronto, ON); 17 = Naadimaagewin The Art of Helping Program (Trent University, Peterborough, ON); 18 = Peer Helper Program (Queen's University, Kingston, ON); 19 = Aboriginal Enriched Support Program (Carleton University, Ottawa, ON); 20 = Aboriginal Student Mentors (University of Ottawa, Ottawa, ON); 21 = Mentoring Program (McGill University, Montreal, QC); 22 = Aboriginal Student Support Peer Coaches (Dalhousie University, Halifax, NS).

In decreasing order of preference, qualities for mentors to possess were approach-ability, strong leadership abilities, knowledgeable about university resources, a caring and compassionate attitude, and being an upper-year student. It was suggested that the program length be, in decreasing order of preference: more than one academic year, a calendar year, and one semester. The majority of participants (78%) believed that one-on-one sessions should occur once a week, and 80% believed that group mentoring should happen once a month.

The majority of respondents (55%) suggested that the best way to recruit and retain program participants was to offer information sessions. Additionally, 36% believed that course credit should be offered, while 27% thought that financial incentives should be provided to program participants. It was also suggested to offer reference letters. The majority of participants (73%) believed that the most effective way to engage male students in the program would be to offer opportunities to participate in recreational activities. Sixty-four percent of respondents believed that social outings would help to engage male students, while 36% believed intermural sports teams would be helpful. Twenty-seven percent of participants believed that music and drama would help to engage Aboriginal males.

The ALM Program was developed taking into consideration these qualitative results from the needs assessment.

Demographics from the ALM Program Evaluation

For the pre- and post-program evaluations, eight participants (M_{age} = 32.25, SD_{age} = 9.93; range 22–45, 100% female) completed qualitative interviews and quantitative surveys. Of the eight participants, one was a first year student, two were second year students, four were fourth year students, and one was a graduate student. Three participants were mentees, while five were mentors. Six participants identified themselves as First Nations (with one specifically identifying as Upper Mohawk Six Nations), one as Mixed, and one as Other.

Qualitative Themes from the ALM Program Evaluation

Engagement in the university community. Mentors thought that the program was a "good endeavour," "a good starting point," and that it "fosters multiculturalism and inclusion." Mentees expressed their desire for the program to continue and further "enhance university life." One mentee said that the program made her feel like she was "not in a canoe all on [her] own," while another mentee believed that the program "creates a positive image of [Aboriginals] among non-Aboriginals." One mentor explained that ALM "helps increase the likeliness that [students] stay in school [because students] feel like they are welcome."

Strengthening Aboriginal cultural identity. A mentee stated that she felt she was "leaving behind" her culture when she started university, as she had to "re-orient [herself] into a new environment, when [she was] missing everything from where [she] came from." Having a mentorship program specifically focused on Aboriginal culture provided her with a "connection to back home." Another mentee reiterated this point by stating that the ALM Program "reminds us of our traditions and cultures." A mentor expressed that she "doesn't think [she] would join a mentorship program unless it was Aboriginal [focused]." She explained that, "[Being Aboriginal is an] all-encompassing way of being. [I] can't imagine stepping outside of that." Mentors also said that ALM makes them "more appreciative and more conscious" of their culture, and "having that element of culture makes it easier to share." A mentee elaborates by commenting that ALM "reminds us of our traditions and cultures." One mentor said that the program makes them "proud of [their] heritage and uniqueness in an understanding environment."

Qualities of ALM mentors. All interviewees identified the following important qualities of mentors: (1) approachability—"We do not want to carry masks because we do not want people to see who we really are" (Mentor, Time 1); (2) good listening skills—"[Mentors] must be able to listen to things that aren't being said. The body does speak" (Mentor, Time 2); and (3) responsibility—"[Mentors should] have the right study habits and lifestyle choices…. [For example], drinking is fine, [but] binge drinking is not" (Mentee, Time 1). Participants described a mentor's responsibilities of being a positive role model for their mentee, as well as being an ambassador for the university.

The majority of interviewees (75%) mentioned that mentors should be knowledgeable about academic resources and Aboriginal culture. Time management and

organization skills were each mentioned by 38% of interviewees. Twenty-five percent of interviewees listed the following qualities as important: leadership, trustworthiness, supportiveness, and patience.

Perceived program benefits for mentors. Interviewees listed the following benefits for ALM mentors: networking, helping others, gaining leadership experience and confidence, and developing skills for future careers. Mentors also listed the following benefits: "examination of your own ideology and way of socialization," "finding [one's] strengths and weaknesses," "finding talents and gifts [that] you didn't know you had," "getting to impart some of your wisdom that you gained," and "sharing a relationship and seeing [mentees] grow."

Perceived program benefits for mentees. Interviewees listed the following benefits for ALM mentees: meeting new friends, finding people to connect with, getting to know the school and culture better, and receiving peer support. All interviewees agreed that the ALM Program would increase mentees' knowledge of university services and resources, which will be beneficial. One mentor explains, "If a student is not aware of these services, it is actually a barrier." Also, all interviewees agreed that the ALM Program would encourage mentees to participate more in university clubs and teams. One mentee explains that "being a part of one group makes you feel more included, and [then] makes it easier to join other groups."

Mental health impact on program participants. Interviewees stated the following emotional and psychological effects of the program on participants: preventing isolation, providing an opportunity to "fit into a smaller community," becoming more culturally aware, relieving stress, and increasing self-esteem and confidence. One mentor stated that participants feel more proud of their Aboriginal culture, because it is "exciting to see people of your background doing positive things." Specific to mentors, benefits include a sense of accomplishment because of helping others, increased self-worth, and an opportunity to give back to one's community.

Interviewees also described the following benefits of ALM, outside of education and university experience: effectively dealing with the pressures of living in an urban area, creating friendships, gaining social skills, building connections and networks for future employment, gaining leadership and confidence, and eradicating stereotypes. One mentor said that she developed "better personal relationships [because she] learned about mentoring relationships". Another mentor explained that ALM "gives a better grasp of

your identity, [which] makes your experience more positive. Having a sense of who you are [makes] you better equipped to approach situations." A mentee summed up the benefits by stating that "everything you do here [with the program], you take with you in your life."

Areas of program improvement. General areas of improvement identified by interviewees were broadening recruitment strategies; having a longer program duration; having more program structure; and offering workshops on health and mental health issues, time and stress management, crisis prevention, and intervention, and how to establish boundaries in the mentoring relationship.

Qualitative Trends from Pre- and Post-Interview Data

After completing the program, mentors and mentees rated social activities with other Aboriginal students and Aboriginal-focused cultural activities or socials as program goals more highly. Sessions with Elders and other Aboriginal community members as a program component was also ranked more highly after program participation. This may be explained by the increased exposure to Aboriginal culture in the program (students came into the program with varying levels of knowledge for their own culture), and increased interactions with other Aboriginal peers. Participants ranked group mentoring over individual mentoring as an important program component after the program ended because the group activities allowed them to socialize and network with more students like themselves. Tutoring was ranked more highly as a program component post-program, possibly because it was the end of the academic year, and students were more focused on academic achievement.

After program participation, participants rated leadership skills and being an upper-year student more highly for qualities of mentors. Post-program, they also believed that financial incentives rather than course credit were a better way to recruit and retain mentors. These two trends may be present because participants obtained a better understanding of the high level of dedication and commitment that being a mentor entails.

Stakeholder Evaluations

According to the three primary program stakeholders (i.e., the program developers), stakeholder collaborations were critical to program success. This included leveraging the expertise of the researchers in mentorship programs, building on the university's priority to support Aboriginal students, developing a unique program for Aboriginal students at this specific university (informed by a needs assessment), and fostering student leadership and program management skills. Furthermore, following the participatory action framework, collaborations were built between researchers, university administration, Aboriginal staff and students, and a community Elder during all stages of program development and evaluation.

From the interviews with the stakeholders (i.e., program developers), it was determined that the single most important factor to the success of the ALM Program was its collaborations. One stakeholder explained that he had "so much on [his] plate, [that he] couldn't give 100%" to the program. Another stakeholder explained that the collaborations allowed the workload to be shared, and each person's expertise to be tapped into.

All stakeholders identified the presence of every sustainer/facilitator from the Collaboration Checklist: (a) a long history of partnership, (b) an agreed upon goal that is mutually beneficial to all stakeholders, (c) resources that were shared between all stakeholders, (d) a dedicated group of leaders that consists of representatives from all stakeholder groups, (e) all stakeholders invested equivalent resources and received equivalent benefits, (f) collaborations were evident at all stages of program delivery, and (g) lines of communication were open and honest between stakeholders. All stakeholders identified that no barriers to collaboration existed. The absent barriers were (a) an overpowering agenda imposed by one or more stakeholder groups, (b) competing and/or incompatible priorities or mandates, (c) program elements and content that are inflexible to feedback, (d) roles of stakeholders are strictly defined, and (e) rigid and immutable contracts are in place.

Quantitative Results from the ALM Program Evaluation

Using paired samples *t* tests, preliminary findings from this pilot program indicate that there was a significant effect for social competence resiliency, $t(4) = -2.79$, $p < .05$. Participants had higher social competence resiliency at Time 2 ($M = 5.77$; $SD = 0.80$) than

Time 1 (M = 5.17; SD = 1.15). There was also a significant effect for other-group orientation, $t(4)$ = -11.00, p < .001. Participants had higher other-group orientation at Time 2 (M = 3.77; SD = .28) than Time 1 (M = 3.40; SD = .25).

Discussion

Lessons Learned

Importance of collaborations. According to key stakeholders, one of the main factors related to the ALM Program's success in its pilot year was developing collaborations among researchers, university administration, and Aboriginal staff and students at the university. In particular, it is noteworthy that this mentorship program was established at the same time that the university established a mandate to develop a mentorship program for Aboriginal students, and in turn, partial funding to support the program was provided via internal university funds. This contributed to having program staff responsible for the program's development and evaluation. Researchers that became involved in the program brought expertise in Aboriginal mentorship programs. Further, through regular program meetings with stakeholders, including program participants, it was prioritized to incorporate cultural components into the program, including the regular involvement of an Aboriginal Elder, who offered Aboriginal cultural activities within the program and discussions of Aboriginal identity. Indeed, successful school-based programs are based on effective collaborations among stakeholders (Rawana & Nguyen, 2010).

Student engagement from a strengths-based perspective. From the onset, the ALM Program adopted a strengths-based perspective in order to engage and empower students throughout the development of the program. A core group of Aboriginal students from a variety of discipline backgrounds (e.g., history, law, psychology) were recruited based on their interest in supporting other Aboriginal students attending the university. Students then undertook an active role in recruiting mentees, and deciding upon the program content and evaluation process.

Funding. Financial resources were critical to the program's success, particularly to initiate student engagement. It was imperative to offer meals at mentor and mentee

recruitment sessions, as well as tokens of appreciation for student and stakeholder participation. Research staff were hired to develop program materials, including mentor manuals, and to undertake the preliminary program evaluation.

Future Directions and Implications

This article has provided some practical suggestions for post-secondary institutions, program developers, researchers, and policy analysts involved in Aboriginal education. Although this current study's pilot data shows preliminary positive effects of peer mentoring for Aboriginal students, colleges and universities are encouraged to develop and evaluate Aboriginal peer mentorship programs to further determine the effectiveness of this type of programming. Program developers are encouraged to share information about their program successes and challenges, and to incorporate cultural elements and stakeholder collaborations into program development. By conducting program evaluations, program developers can help inform post-secondary education and research trends, as well as policies that target the recruitment and retention of Aboriginal students in Canadian colleges and universities. Specific program outcomes that can be investigated in the future are educational outcomes and cultural identity outcomes (using more culturally appropriate measures and measures that also account for mixed ethnic identities), particularly with larger sample sizes. Researchers are also encouraged to publish program information in peer-reviewed formats to assist in knowledge mobilization.

Programs should contain cultural and evaluation components and collaborations with the Aboriginal community. This recommendation is based on the participatory action framework, and the importance placed on collaborations by the three primary program stakeholders. Additionally, including collaborations with the Aboriginal community will allow for more cultural activities (e.g., involvement of an Aboriginal Elder) and more opportunities to strengthen students' Aboriginal identity, which program participants considered to be important focuses for an Aboriginal peer mentorship program. Moreover, youth engagement principles should be implemented to ensure that program participants reap the greatest benefits from programming. Finally, it is recommended that policy-makers should prioritize initiatives and efforts to increase retention for Aboriginal post-secondary students, including mentorship programs. This can be achieved by building collaborations and increasing funding. Increased funding can be obtained from government and

community agencies (e.g., Ontario Ministry of Training, Colleges, and Universities). Additional funding for Aboriginal peer mentorship programs can be used for program activities and stipends, and to hire program staff to support program development. Increased funding can also be used to hire researchers to support program evaluation and for dissemination of program findings.

Conclusion

Aboriginal students encounter many challenges throughout their academic careers, resulting in lower graduation rates compared to their non-Aboriginal peers (Mendelson, 2006; Statistics Canada, 2008). Despite these challenges, many Aboriginal students attend post-secondary institutions. This study's pilot data supports the positive effects of peer mentorship programs for Aboriginal post-secondary students. In sum, the purpose of this study was to adopt a positive psychology approach to guide the development, implementation and evaluation of a peer mentorship program for Aboriginal post-secondary students attending a large, urban university. In order to develop a mentorship program for Aboriginal students, the program team adopted participatory research and youth engagement frameworks that also emphasized the importance of positive outcomes and a collaborative approach. A literature review and needs assessment informed program components; these components were based on reviewing existing mentorship programs, particularly those in Canada. The findings from the pilot data indicated that over time, participants experienced an increase in social competence resiliency and an appreciation of the ethnic identity of non-Aboriginal students. The increase in social competence resiliency is supported by previous research that shows that urban minority at-risk youth who were mentored by adults experienced an increased ability to make friends, and high school and elementary students who participated in six months of mentoring experienced an increase in social skills (Johnson, Holt, Bry, & Powell, 2008; Karcher, 2005). Existing research also supports mentoring contributing to increased other-group orientation. For example, Diversi and Mecham (2005) have shown that a mentorship program for Latino youth resulted in an increase in positive cross-cultural relations and an increased interest of learning about other cultures. The non-significant quantitative results may have been due to low power, as the pilot data consisted of a small sample size. However, other

mentorship pilot programs have had similarly low sample sizes (e.g., Banister & Begoray, 2006). The results of the qualitative component illustrated that the ALM Program had a positive impact on students' adjustment to university and their sense of belonging and community. These benefits are supported by previous research that shows that peer mentoring served as a catalyst for African American male students in adjusting and transitioning to a predominantly Caucasian university environment (Wilson, 1999).

This study has some limitations. In terms of informing program development, the literature review only identified Canadian programs in English-speaking institutions. Additionally, the grey literature search may have excluded new programs that might not have had a website yet. Moreover, the ALM Program evaluation did not include a control group, and the duration between pre- and post-measures was only one academic term. Future research in this area should use a participatory framework to engage key stakeholders in the development of Aboriginal post-secondary mentoring programs and adopt best practices of evaluation and student success and retention.

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