# Mentorship as A Career Intervention: An Evaluation of a Peer-Mentoring Program with Canadian University Psychology Students

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#### **Abstract**

This study evaluated the effectiveness of the Canadian Psychological Association (CPA) Student Mentorship Program, a formal peer-mentoring program for undergraduate students (mentees) and graduate students (mentors) studying psychology in Canada. Previous researchers have not sufficiently examined the effectiveness of formal peer-mentoring programs, particularly within the psychology discipline in higher education settings. The purpose of this investigation was to explore the program's effectiveness as a career intervention, including its acceptability, feasibility, outcomes, strengths, and limitations. One hundred and seventy-eight students participated in the program and data was collected at three time points (at baseline, three and six months). Descriptive and inferential statistics were obtained, in addition to minimally inductive content analyses for open-ended items. Results indicated that most mentors (63%) and mentees (58%) experienced the program as effective to highly effective, with 100% of participants supporting of the continuation of the program. Overall, 86% of mentors and 63% of mentees reported that participation in the program was moderately to strongly related to

the achievement of their career goals. Program strengths and limitations were identified which reinforce aspects of the program that have served participants well, in addition to areas which should be improved for future iterations of the peer-mentoring program.

Keywords: mentoring; peer-mentorship; career intervention; higher education; psychology

Many people attribute their success or accomplishments to the individuals who helped them achieve their goals (Foster & MacLeod, 2015). These individuals are typically referred to as mentors. Mentoring is an intense caring relationship in which two or more individuals come together to promote both professional and personal development. While there are various models of mentoring, the primary objective for many mentoring relationships is to help the mentee develop the knowledge and skills necessary to perform at their highest potential, leading to enhanced career development. Engaging in a mentoring relationship can serve as a valuable career intervention which elicits benefits for both mentors and mentees. In higher education settings, the guidance and support afforded to students can greatly impact their decision-making processes and self-awareness,

advancing personal and vocational growth. This paper offers a brief overview of the mentoring literature, with a specific focus on peer-mentoring, and its utility in the higher education context. Social cognitive career theory (Lent, Brown, & Hackett, 1994) is used to conceptualize the application of a peer-mentoring program, the Canadian Psychological Association (CPA) Student Mentorship Program, in the post-secondary domain. The central aim of this investigation was to explore the Program's effectiveness as a career intervention, including its acceptability, feasibility, outcomes, strengths, and areas for improvement. Study limitations and future research directions are also discussed.

## **Peer Mentorship**

Mentorship has been consistently demonstrated through research to have substantial benefits for mentees (Crisp & Cruz, 2009; Leidenfrost, Strassnig, Schabmann, & Speil, 2011) within groups (Milner & Bosser, 2005), organizations (Alan, Eby, O'Brien, & Lentz, 2008; Wanberg, Welsh, & Hezlett, 2003) and educational programs (Crisp & Cruz, 2009). Although the mentoring literature has grown steadily over the past twenty years, researchers have made

little progress in terms of implementing a consistent definition of peer-mentoring. Crisp and Cruz (2009) identified over 50 definitions which varied in breadth and scope (for more information, see Crisp & Cruz's comprehensive systematic review). For the purposes of this evaluation, we aimed to utilize a definition that accurately captured the nuances of formal peer-mentorship in a higher-education setting. Kram (1983)'s definition of peer mentoring was used which described peer-mentoring as a helping relationship in which two individuals come together, through formal mentoring schemes, in the pursuit of fulfilling some combination of functions that are career-related (e.g., information sharing, career strategizing) and psychosocial (e.g., confirmation, personal feedback). Kram's definition coincides with other seminal theorists' definitions including Levinson and colleagues' (1978) comprehensive emotional investment and Kanter's (1977) instrumental praxis. Later factor analytic studies of mentorship functions articulated two clusters of mentorship behaviour congruent with Kram's "psychosocial" and "career" functions, pointing to their relevancy in today's post-secondary context. Kram's dual-function model maps on well to higher-education domains as students' prescriptive and instructional needs parallel Kram's career function and students' facilitative needs which transcend educational variables to encounter students in all their psychosocial dimensions parallels Kram's

psychosocial function (Carden, 1990). As such, this definition was selected due to its previous applications in higher education contexts and its focus on formal peer-mentoring schemes.

Peer mentoring is a valuable alternative to the traditional concept of mentorship. Traditional forms of mentoring consist of a hierarchical relationship in which the mentor is considerably older and more experienced than the mentee (e.g., faculty-student mentorship, employer-employee mentorship). Unlike traditional mentoring, peer-mentoring pairs mentors and mentees who are generally equal in age and power to provide career-related and psychosocial support and guidance (Kram & Isabella, 1985). Mentorship between peers is thought to eliminate potential power dynamics which may exist in traditional forms of mentorship. An egalitarian stance is assumed which allows peer-mentors and mentees to utilize their shared experiences as students, freeing them to be more candid and transparent, while fostering an atmosphere conducive to collaboration. Other mentorship modalities have emerged over the years including group mentoring which involves a mentor establishing mentoring relationships with multiple protégés. When considering the desired outcomes and objectives of the current mentorship program, didactic peer-mentoring was deemed most appropriate due to its emphasis on the development of an individualized experience.

# **Functions and Formats of Peer Mentorship**

Consistent with Kram's (1983) definition, peer-mentorship typically involves a dual function of providing psychosocial support and career-related or vocational support. Recent definitions have included a third function known as role modeling. Role modeling refers to the processes whereby the mentor leads by example and the mentee respects and emulates the mentor (Pelligrini & Scandura, 2005). Role modeling was previously subsumed within the psychosocial function; however, it is now considered a distinct function according to some scholars (Ensher, Thomas, & Murphy, 2001). The degree to which the mentor actualizes the various mentoring functions is thought to influence the mentee's satisfaction with the mentoring relationship.

Important distinctions have also been made between informal and formal mentoring schemes. For example, informal mentoring relationships typically develop organically, on the basis of mutual identification, and involve a mentee actively seeking out a mentor with the aim of achieving long-term goals (Milner & Bosser, 2005). In comparison, formal mentoring relationships typically have a third-party stakeholder who matches a mentor with a mentee (e.g., organizations, educational institutions) based on some predetermined criteria or desired outcome (Crisp & Cruz, 2008). Various institutions and organizations assume that

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formal mentoring relationships are as effective as informal mentoring relationships; however, there is little research evidence which supports this claim (Milner & Bosser, 2005).

## **Peer Mentoring Programs in** the Higher-Education Context

Some post-secondary institutions establish formal mentoring programs (e.g., traditional and/or peer formats) to assist students with their professional and career development (Milner & Bosser, 2005). Peer-mentoring in higher education is widely considered to be an effective intervention to ensure the academic success and retention of students (Lankau & Scandura, 2002; Pellegrini & Scandura, 2005). Mentees in university settings have indicated increased academic performance and social integration (Leidenfrost et. al., 2011), among other positive outcomes contributing to the improvement of students' educational experiences. However, many peer-mentoring programs are offered through general student services at post-secondary institutions, often lacking the specificity needed to enhance one's experience in their area of academic major or in the domain in which they are interested in pursuing a career. The vast majority of investigations focusing on mentoring outcomes and processes have been conducted with undergraduate student populations as recipients of mentorship across a variety of higher education domains (Crip & Cruz, 2008).

Unfortunately, existing research in the higher education context has a number of limitations. Firstly, mentorship programs in university settings frequently encompass traditional (i.e., hierarchical) mentoring formats, which rely on informal mentoring schemes (e.g., they occur spontaneously), requiring prospective mentees to actively seek out a mentor who is typically older and more established in terms of their career development (e.g., a professor; a field placement supervisor), underscoring the gap in power and status. Secondly, considerably less research has centered on mentor outcomes. Over the past two decades, efforts have been made to narrow this gap in the literature (Allen, 2007; Colvin & Ashman, 2010; Ghosh & Reio, 2013; Terrion & Leonard, 2007), although it remains that research from the mentor's perspective is fragmented and still emerging (Allen et al., 2008). Finally, while an assortment of mentoring programs have been implemented in various contexts in Canada, few have systematically investigated their effectiveness.

Likewise, the mentoring intervention literature within psychology is limited. The current evaluation aimed to address the above limitations, while focusing on mentorship in higher education settings. We implemented a formal, peer-mentoring program which pairs students at different stages in their training in psychology, namely, undergraduate and graduate students. The evaluation examined outcomes for

both mentees and mentors in an effort to contribute a more coherent understanding of the benefits of mentoring on mentors.

# The CPA Student Mentorship **Program**

The CPA Student Mentorship Program was developed as a student engagement and support initiative afforded by the CPA Section for Students in Psychology, an organized group of psychology students lead by an executive committee which offers opportunities for student engagement, professional development, and learning. The purpose of the program was to afford undergraduate psychology students (i.e., mentees) from various academic institutions in Canada the opportunity to gain career support and guidance from graduate students (i.e., mentors; also from various academic institutions in Canada) in navigating their educational training, professional development, and career decision-making. Students pursuing bachelor degrees often experience distress and uncertainty about their future careers and formal mentorship has been identified as a possible solution to reduce such concerns (Eby & Lockwood, 2005; Leidenfrost et al., 2011). While anxiety about future careers is not unique to psychology students, the field of psychology is exceptionally diverse in that there is a wide range of academic and clinical specializations that become significant considerations for students pursuing careers and/or higher education in these

areas. For example, the CPA, a national association which works to advance the science, practice, and education of psychology in Canada, supports 33 independent sections which encompass unique specializations of study and professional practice within the broad field of psychology (e.g., quantitative electrophysiology, clinical psychology; CPA, 2016). Thus, peer-mentorship can function as a much-needed career support guiding important decision-making and exploration processes for undergraduate students in psychology.

A substantive area of concern within the mentoring literature regards its constricted theoretical basis (Crisp & Cruz, 2009). The theoretical foundation which shaped the current pedagogical approach to peer-mentoring utilized principles of student-centered learning (Rogers, 1961). According to Rogers (1961), "the only learning which significantly influences behavior is self-discovered, self-appropriated learning" (p. 276). Student-centered learning is a theoretical perspective which captures how students engage in their mentoring relationships. Within the extant literature, peer-learning is thought to have greater impact on students than traditional teaching in the classroom (Colvin & Ashman, 2010). Instead of providing a highly-structured program with regimented mentee-mentor activities, the CPA Student Mentorship Program encouraged self-directed learning through its open and flexible, semi-structured format.

In this context, student-centered learning represented a de-emphasis of traditional formats of teaching and mentorship (e.g., teacher-centered learning) which typically requires mentors to serve as teachers or as the primary source of knowledge. In contrast, the CPA Student Mentorship Program placed mentees in the center of the learning process as active (versus passive) participants, while encouraging self-determined action, responsibility, and autonomy, over one's education and career development. The mentor's role in the program was conceptualized as a facilitator, rather than a teacher, with the primary goal of guiding, supporting, and providing the conditions and information necessary to initiate the mentee's self-directed learning. It was expected that, through peer-mentorship, collaborative action would lead to novel self-discoveries and an abundance of knowledge. Consistent with the peer-mentoring model as described by Kram (1983), placing a mentor closer to the level of a mentee enhances learning, benefiting both individuals in the mentoring relationship.

# Social Cognitive Career Theory (SCCT)

Alternatively, SCCT is a theoretical perspective that captures what students do in relation to their peer-mentoring relationships. SCCT seeks to explain three interrelated aspects of career development: (a) how basic academic and career

interests develop, (b) how educational and career choices are made, and (c) how academic and career success is achieved (Lent, Brown, & Hackett, 2002). An extension of Albert Bandura's general social cognitive theory, this career development theory incorporates a variety of intricately linked variables including self-efficacy beliefs, outcome expectations, and goals which play a key role in SCCT's model of educational and vocational interests development, choice-making, and performance attainment (Lent et al., 2002). Of central importance is continued activity exposure or engagement in learning activities which enable individuals to receive feedback, set goals, and refine their skills. Peer-mentorship is thought to be one method that can facilitate the development of interests, leading to increased self-efficacy and positive expectations for desired outcomes. SCCT identifies several targets at which educational and career programs can be directed, including peer-mentorship programming. These targets include efforts to expand interests and nurture career aspirations, while facilitating career goal setting and implementation. As such, the CPA Student Mentorship Program was developed to afford experiences that promoted exposure to personal mastery experiences and support, as well as access to the information needed to enhance one's career decision-making processes.

The CPA Student Mentorship Program is unique in that it is designed to target students in

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higher education settings, yet it is distinct from other peer-mentoring programs in university settings as it is housed within a large professional organization (i.e., the CPA), enabling students to connect with their peers who are enrolled in various institutions and programs located across Canada. As there is a lack of evidence investigating the utility of formal peer-mentoring programs, particularly in psychology, the purpose of this evaluation was to determine the effectiveness of the described program, exploring its outcomes, feasibility and acceptability, strengths and areas for improvement, as well as the evidence supporting the program's continuation.

## **The Current Study**

Three broad research goals guided this investigation. The first research goal was to evaluate the interest in and feasibility of the CPA Student Mentorship Program. This goal was evaluated through three exploratory, open-ended research questions: (1) to what degree did graduate and undergraduate student trainees in psychology express interest in a formal peer mentorship program? (2) to what extent did mentors and mentees express equal interest to create peer dyads (3) to what degree were participants retained throughout the duration of the mentorship program?

The second research goal was to assess participants' views of the program as a measure of program acceptability. In par-

ticular, we were interested in examining participants' perceptions of the program through two exploratory questions: (1) to what extent did participants perceive the effectiveness of the program? (2) to what degree are participants interested in the continuation of the program? To evaluate the acceptability of the program, participants were asked to list up to three strengths and three weaknesses of the program.

The third research goal was to evaluate whether involvement in the mentorship program influenced mentors' and mentees' personal and career growth, and to examine what mentorship function was most evident among mentees as a result of their participation in the program. This was examined through four, open-ended research questions: (1) To what extent do mentees and mentors experience changes in their level of self-efficacy throughout the course of the program? (2) To what degree does the peer mentorship program facilitate mentors' and mentees' personal growth? (3) To what extent does the peer mentorship program facilitate mentors' and mentees' career growth? (4) What mentorship function was most frequently elicited to support mentees' development in the program (i.e., vocational support, psychosocial support, or role modeling)?

#### Method

## **Participants**

One hundred and seventy-eight students from various Canadian post-secondary institutions consented to participate in the peer mentorship program. To be eligible as a mentee, participants were required to be: (1) a student member of the CPA; (2) currently enrolled at the undergraduate level at a Canadian post-secondary institution; (3) interested in pursuing graduate studies or a career in an area of psychology. Eligible mentors were required to meet the following criteria: (1) a student member of the CPA; (2) currently enrolled at the graduate level at a Canadian post-secondary institution or a post-doctoral fellow at a post-secondary institution or a related setting (e.g., research centre, hospital); and (3) pursuing training in an area of psychology.

#### **Measures**

The program was evaluated through the use of a number measures. Standardized measures and instruments developed for the purposes of this investigation were incorporated. Moreover, we relied on narrative responses, close-ended questions, and questions requiring Likert-style responses. The variety of question formats allowed for a more comprehensive understanding of participants' experiences.

## **Demographic** Information Questionnaire.

A demographic information questionnaire was developed to evaluate participant characteristics. The questionnaire was administered to mentees and mentors prior to beginning the program and queried participants' age, gender, university level, program of study, ethnic origin, and marital status.

## **Career Goals**

Questionnaire. The career goals questionnaire was developed for the purposes of this investigation. A version of this questionnaire, with slight modifications, was administered to mentees and mentors at each time point. The purpose of the career goals questionnaire was to assess confidence in obtaining career goals and to track whether confidence, among other variables, increased as a result of being a mentor/ mentee in the peer mentorship program.

Mentor version. Using a 4-point Likert-style scale, mentors were asked to rate: their confidence in their mentoring abilities (0 = "extremely unconfident"; 4 = "extremely confident"), the effect that serving as a mentor would have/was having on their career development (0 = "no effect; 4 = "substantial effect"), the effect that serving as a mentor would have/was having on their personal growth (0 = ``no effect'' to 4 = ``substantial effect"), and the degree to which serving as a mentor was important to achieving career and

education goals (0 = ``extremely')unimportant" to 4= "extremely important"). Higher scores on this measure suggest greater mentor self-reported confidence.

Mentee version. The mentee version of the Career Goals Questionnaire was similar to the mentor version, with minor adaptations to address the mentee status. Using a Likert-style scale, mentees were asked to rate: their confidence that they would achieve their current career goals (0 = "extremely unconfident";4 = "extremely confident"), the degree to which they were sure of the steps to take to be successful in achieving career goals (0 = "extremely unsure"; 4 = "extremely sure"), and the degree to which having a mentor was important to achieving career and education goals (0 = ``extremely')unimportant"; 4 = "extremely important"). Higher scores on this measure are indicative of greater mentee self-reported confidence.

## New General

**Self-Efficacy Scale.** The New General Self-Efficacy Scale (NGSE; Chen, Gully, & Eden, 2001) assesses self-efficacy to mobilize oneself to meet career/ education demands. It consists of 8-items to which respondents answered using a 5-point Likert-style scale (0= "strongly disagree"; 5= "strongly agree"). Higher scores are indicated of greater perceived self-efficacy. The NGSE has been demonstrated to have strong internal consistency among undergraduate students ( $\alpha = .86$ ) and among

students completing professional degrees ( $\alpha = .85$ ).

**Mentoring Functions** Questionnaire-9. The Mentoring Functions Questionnaire-9 (MFQ-9; Castro & Scandura, 2004) is a questionnaire that assesses mentees' perception of benefits from mentorship and is one of the most reliable measures assessing mentoring functions (Wanberg et al., 2003). The MFQ-9 is a shortened version of the 20-item MFQ (Scandura, 1992) and is comprised of 9 items which respondents answered using a 5-point Likert-style scale (0 = "strongly disagree"; 4 = "strongly agree"). Higher scores on this measure suggest greater perceived benefit. The measure consists of three subscales (three items per subscale), assessing psychosocial support, vocational support, and role modeling achieved during the mentoring relationship. Cronbach's alpha coefficients for the whole scale, vocational support, psychosocial support, and role modeling were .86, .84, .77, and .80, respectively, for male mentees and .93, .88, .90, and .89, respectively, for female mentees (Hu, 2008).

## **Program Strengths and** Weaknesses Questionnaire.

The Program Strengths and Weaknesses Questionnaire was administered at the 3-month and 6-month follow-ups. Using two open-ended questions, mentees and mentors were asked to list up to three program strengths and up to three program weaknesses at each time-point.

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## **Procedure**

**Recruitment.** Prospective participants completed an online application form which included items soliciting demographic information, areas of interest in psychology, previous mentorship experiences, and goals for the mentoring relationship. Prospective participants then submitted their completed applications to the program coordinators who engaged in a predetermined matching procedure to pair undergraduate students (n = 97) with graduate students (n = 81) in a peer mentoring dyad. The matching procedure aimed for three primary criteria to be met across participants to be paired in a dyad: (a) area of interest in psychology, (b) goals for the program, and (c) gender (Kao, Rogers, Spitzmueller, Lin, & Lin, 2014; Mitchell, Eby, & Ragins, 2015). To meet demand, several mentors (n = 16) were engaged in more than one peer-mentoring relationship. Upon agreeing to the program's Terms and Conditions, participants provided consent for participation in the program evaluation and completed a baseline measure. Subsequently, participants were sent a program manual which was customized to educate them on their specific role (i.e., mentor or mentee).

**Peer matching.** Mentor/ mentee dyads were matched primarily on shared areas of interest in psychology, rather than geographical location. Once participants expressed interest in the program and a sufficient match

was identified by the program coordinators, prospective mentors and mentees were connected by e-mail. Within a dyad, participants identified modes of communication which were best suited to their unique relationship (e.g., telephone, e-mail, video conferencing). Dyads were encouraged to "meet" bi-weekly and, although content was limited to professional subject matter as per the Program's Terms and Conditions, the topics of discussion were determined by the two individuals in the relationship so as to individualize the experience.

Program evaluation. The 2015-2016 peer-mentoring program lasted six months (October, 2015-March, 2016), paralleling the academic school year. Upon being matched in a peer-mentoring dyad, participants completed the baseline questionnaires (T1), which included the demographics information questionnaire, the Career Goals Questionnaire, and the NGSE. Three months (T2) and six months (T3) into the peer-mentoring relationship, dyads were contacted and asked to complete follow-up questionnaires. At T2 and T3, all participants completed the Career Goals Questionnaire, the NGSE, and the Program Strengths and Weaknesses Questionnaire. Additionally, mentees completed the MFQ-9.

Data analyses. Program interest, feasibility, and acceptability were examined using descriptive statistics. Strengths

and weaknesses of the program identified through open-ended questions at T2 were examined through a simple, minimally inductive content analysis which generated response frequency (Mandich, Miller, & Law, 2002). The second author examined participant responses and developed thematic categories based on the responses. Next, the first author reviewed the proposed themes and made recommendations. The thematic categories were finalized once a consensus was reached between the first and second author. Each response was subsequently classified into one of the thematic categories. To establish reliability of thematic coding, the third author independently coded a random 25% of the data. A final consensus regarding the classification of responses was achieved among all authors.

Examination of changes in mentee and mentor self-efficacy as a result of participation in the program was conducted using repeated-measures analyses. Initially, we intended to conduct an analysis comparing outcomes across T1, T2, and T3. However, due to a decrease in responsiveness between T2 and T3, we chose to focus on changes occurring in the three-month period between T1 and T2, using a paired-samples t-tests. Descriptive statistics were used to evaluate participants' ratings of personal growth and career growth, and mentorship functioning.

#### Results

## **Program Interest and Participant Demographic** Characteristics

Following three months of advertising the program (July to September, 2015), 117 prospective mentees and 93 prospective mentors expressed interest in participating in the peer mentorship program. Of these, 97 mentees and 81 mentors chose to participate. A total of 97 dyads were formed, with 16 mentors matched to more than one mentee.

Mentee and mentor demographic characteristics are summarized in Table 1. Both mentees and mentors were more likely to be female, which is consistent with the current composition of psychology students at the undergraduate and graduate level in Canada (American Psychological Association, 2014). Participating mentees varied in year and discipline of study, while mentors were more likely to be Master's-level students and nearly 50% were in a clinical psychology program.

## **Program Retention**

Over the course of the six months during which participants worked together in peer-mentoring dyads, a decrease in completion of measures was observed (i.e., from T1to T3). All participating mentees and mentors completed measures at T1. At T2, only 27 mentees (28%) and 43 mentors (52%) completed

measures, whiles at T3 these rates dropped to 14 (14%) and 36 (44%) for mentees and mentors, respectively. It is difficult to determine whether these individuals were no longer engaged in their peer-mentoring relationships, or whether they were participating in the program, but were choosing not to complete the measures.

# Participants' Evaluation of the Program

Ratings of program acceptability. Program acceptability was evaluated through participants' rating of program effectiveness and whether the program should continue. Among both mentors and mentees, the program was generally rated as effective at T2, although just over a third of mentees and mentors rated the program as neutral. Effectiveness ratings are summarized in Table 2. All mentees and mentors indicated that the peer mentorship program should continue.

#### **Program strengths.**

Across the responses provided by mentors and mentees at T2, eight themes emerged that summarized the participants' perceived program strengths. Identified strengths are summarized in Table 3.

Among mentees, the most commonly noted strength was having the opportunity to learn from someone more senior than them or from someone who had experience pursing advanced education and training in psychology. Similarly, as described

by one mentee, the "ability to discuss matters specific to psychology with someone who completely understands what you're talking about" was beneficial to participants. Paralleling this strength which was identified by mentees, many mentors noted that having the opportunity to pass on their knowledge or contribute to the discipline was a strength of the program. For instance, one participant described that she "[felt] like [she] was contributing to someone's life goals," while other mentors described "knowledge sharing," "supporting the psychology community," and "allow[ing] mentees to access knowledge from mentors already enrolled in programs of interest" as positive aspects of the program.

Mentors and mentees highlighted a number of similar strengths. In particular, the opportunities provided by the program for networking or creating connections nationwide with individuals in the discipline was noted by just under half of participants. Many participants identified the administrative aspects of the program, such as the peer matching, the manual and documents provided, and the general organization, as a strong aspect of the program. Mentors and mentees also reported that the personal growth or skills that they developed as a result of their participation was a positive aspect of the program. For instance, one mentee indicated that the program "promote[ed] self-discovery and personal development," while a mentor

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Table 1

Demographic Characteristics of Mentors and Mentees

Characteristic	Mentees $(n = 97)$	Mentors $(n = 81)$
Age, X(SD)	22.15(5.16)	26.20 (3.03)
Sex, n (%)		
Female	87 (90%)	61 (24.7)
Male	10 (10%)	20 (75.3)
Ethnic Background, n (%)		
African Canadian/Black	9 (9.3%)	0
Asian/Pacific Islander	16 (16.5%)	6 (7.5%)
Caucasian/White	48 (49.5%)	64 (80.0%)
Latino	2 (2.1%)	1 (1.3%)
Middle Eastern	12 (12.4%)	6 (7.5%)
Other	10 (10.2%)	3 (3.8%)
Marital Status, n (%)		· , ,
Single, Never Married	89 (91.8%)	53 (67.9%)
Married or Common Law	6 (6.2%)	25 (32.1%)
Prefer Not to Disclose	2 (2.1%)	23 (32.170)
Year of Study, <i>n</i> (%)		
Undergraduate Year 1	6 (6.2%)	_
Undergraduate Year 2	32 (33.0%)	_
Undergraduate Year 3	23 (23.7%)	_
Undergraduate Year 4	23 (23.7%)	_
Undergraduate Year 5+/Graduated	7 (7.2%)	_
Master's Year 1	<del>-</del>	9 (11.1%)
Master's Year 2	-	25 (30.9%)
Master's Year 3+	-	5 (6.2%)
Ph.D. Year 1	-	14 (17.3%)
Ph.D. Year 2	-	10 (12.3%)
Ph.D. Year 3	-	7 (8.6%)
Ph.D. Year 4	-	5 (6.2%)
Ph.D. Year 5	-	2 (2.5%)
Post-Doctoral Fellow	-	2 (2.5%)
Other	6 (6.2%)	2 (2.5%)
Program of Study		
Bachelor of Arts in Psychology	28 (28.9%)	-
Bachelor of Science in Psychology	59 (60.8%)	-
Clinical Psychology	-	41 (50%)
Counselling Psychology	-	11 (13.6%)
School or Educational Psychology	-	4 (4.9%)
Industrial/Organization Psychology	-	10 (12.3%)
Experimental or Applied Psychology	-	12 (14.8%)
Other	7 (10.3%)	3 (3.7%)

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Table 2

Mentee and Mentor Program Effectiveness Ratings at 3-month Follow-up

			n (%) of Participant	S	
	Highly Ineffective	Ineffective	Neutral	Effective	Highly Effective
Mentees $(n = 26)$	1 (3.8%)	1 (3.8%)	9 (34.6%)	10 (38.5%)	5 (19.2%)
Mentors $(n = 43)$	0	1 (2.3%)	15 (34.9%)	23 (53.5%)	4 (9.3%)

described benefiting from "gaining mentorship/leadership experience."

Although identified less frequently, other strengths that emerged through the analysis of narrative responses included mentee or mentor characteristics, such as mentors' enthusiasm, or the mentees' readiness for mentorship; and the flexibility allowed by the program in terms of the modest time commitment and ability to communicate through methods and at times that were convenient for both members of the dyad. A number of mentees also noted that mentors were very responsive and available to answer their questions quite rapidly.

**Program weaknesses.** A total of 10 program weaknesses es emerged when categorizing mentor and mentee T2 responses. Weaknesses are summarized in Table 4.

Mentees and mentors alike identified that the geographic distance between dyads and the reliance on email rather than face-to-face meetings was a challenge. For instance, one participant reported that it was "hard to communicate very

well via e-mail," while another respondent indicated that "cross-country distance can make it difficult to form relationships." Several mentors and mentees also felt that the lack of guidance or structure to the program was a weakness. One mentor described feeling that she "would have liked more information on mentoring functions; the guide is a good start, but more detail would be helpful," a thought similarly echoed by a second mentor who indicated "a lack of structure means there is not much communicating going on between mentor/mentee[s]." Mentees reported similar concerns regarding the lack of structure identified by the mentors, with mentees highlighting that "there is no set guideline about the information mentors can provide" and suggesting that "there could be a workshop organized and certain exercises or tasks so that people can get to know each other better and learn things." Several participants also identified the matching or fit of the peer-mentorship relationship as a weakness of the program. One mentor indicated that the "match between areas of knowledge/interest of mentor

and mentee is not close enough at times," while a mentee felt that her mentor was not providing the information she needed.

Several mentors identified a lack of engagement on the part of the mentee, or a lack of clarity from mentees in terms of career goals as a challenge to the program. Mentors felt that the timing of the program was a challenge, noting that many of the major concerns for mentees (i.e., graduate school applications and funding applications) occur early in the academic year, leaving little time to prepare for these events, and little to speak about after these deadlines have passed. As well, several mentors felt that the program administration was a weakness, with respondents citing the speed of the matching process and infrequent contact from program administrators as problematic.

Lack of training in mentorship was a weakness noted by both mentees and mentors, although it was more commonly noted by mentees. For instance, one mentee stated "mentors could be better trained to give specifics on how to achieve career goals." Similarly, several mentees noted

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Table 3

Program Strengths Identified by Mentors and Mentees at 3-month Follow-up

Themes	% of Participants Identifying Strength		fying	Sample Participant Quotations	
	Total $(n = 64)$	Mentors $(n = 39)$	Mentees $(n = 25)$		
Networking/Connecting with Others in Discipline	45	56	28	<ul> <li>"Ability to work with someone outside your own discipline" [mentor]</li> <li>"learning about another person's area of interest and the stage they are at in their academic (or professional) career" [mentee]</li> </ul>	
Personal Growth/Skill Development	38	46	24	<ul> <li>"The mentor can develop their leadership skills" [mentor]</li> <li>"helps to motivate me to achieve my goals" [mentees]</li> </ul>	
Program Administration (e.g., matching, follow-up by administrators) and Nature (e.g., peer-to-peer, nationwide)	33	31	36	<ul> <li>"mentor guide was comprehensive and helpful" [mentor]</li> <li>"matching people with their program goals" [mentor]</li> </ul>	
Pass on Knowledge and Contribute/Support Others	30	49	0	<ul> <li>"Offer opportunity to share knowledge" [mentor]</li> <li>"being able to share experiences for students who may not have had a lot of contact with grad students" [mentor]</li> </ul>	
Access to Knowledge/Support from Someone Who Has Gone Through the Process	28	0	68	<ul> <li>"Provides a good contact for questions about applications" [mentee]</li> <li>"Getting research advice" [mentee]</li> </ul>	
Mentor Availability/Responsiveness	16	0	40	<ul> <li>"get answers to questions quickly" [mentee]</li> <li>"my mentor was always available to set up a chance to talk" [mentee]</li> </ul>	
Flexibility of Program (e.g., time commitment)	13	3	28	<ul> <li>"Independence when meeting with mentees" [mentor]</li> <li>"flexible and easy to coordinate" [mentor]</li> </ul>	
Mentee/Mentor Characteristics	6	5	8	"student readiness for mentorship" [mentor]  "awesome mentor" [mentee]	

Note. Several respondents are counted under more than one theme as respondents could list up to three strengths.

that graduate programs differed across post-secondary institutions as well as across the country which made it difficult for mentors to provide specific advice. Other themes that emerged from mentor and mentee responses, although infrequently, included the limited frequency of contact with mentor/mentee, and the lack of networking opportunities beyond the peer dyad.

## **Mentee and Mentor Outcomes**

Self-efficacy. A paired sample t-test comparing NGSES scores at T1 and T2 was conducted to evaluate the influence of the program on participants' self-reported self-efficacy. Mentors and mentee self-efficacy ratings were compared separately. Changes in self-efficacy were not observed in either group between T1 and T2.

# Peer mentorship and achievement of career goals.

Mentees were asked to rate how important they believed their mentor was in relation to achieving their career goals. At T2, the majority of mentees (63%) rated their mentor as being "somewhat important" or "extremely important" in relation to achieving careers goals, while 26% provided a neutral rating and 11% identified their mentor as "somewhat" or "extremely" unimportant. When mentors rated the impact of their mentorship on their mentees' career goals at T2, 30% believed that they had neither a positive or negative effect, 67% reported having a somewhat positive effect, and 2% reported

having an extremely positive effect.

Mentors overwhelmingly identified serving as a mentor as being "somewhat important" or "extremely important" to achieving career goals, with 86% of respondents providing ratings in one of these two categories. Of the remaining mentors, 11.6% provided a neutral rating and only one mentor felt that the program was "somewhat unimportant" in achieving career goals.

Peer mentorship and **personal growth.** Both mentors and mentees were asked to indicate the degree to which they felt that being involved in the mentorship program fostered their personal growth. Among the 27 mentees who provided ratings at T2, 59% rated their mentor as "important" or "extremely important" in fostering personal growth, 26% provided a neutral rating, and 15% rated their mentor as "somewhat unimportant" or "extremely unimportant" in fostering personal growth.

Mentors were also asked to evaluate the degree to which their mentorship affected their mentees' personal growth. Mentors tended to underestimate the influence they were having on their mentees, when compared to mentee ratings. None of the 43 mentors who provided responses at T2 felt that they had no effect on their mentees' personal growth; however, 37% felt that they had neither a positive or negative effect on their mentees' personal growth. Only 2% reported having an extremely

positive effect and 61% reported having a somewhat positive effect on their mentees' personal growth.

Mentors were asked to rate the effect that serving as a mentor had on their personal growth. None of the mentors reported a negative effect, 33% reported a neutral effect, and 67% reported a "somewhat positive" or "positive" effect on their personal growth.

## Mentorship function-

ing. Domains of mentorship functioning were examined at T2 among mentees. In general, mentees reported receiving high vocational support, psychosocial support, and good role modeling in their mentorship relationship. Within these areas, the vocational support domain was rated most highly, which is consistent with the aim of the peer-mentoring program as a career intervention.

#### Discussion

Peer-mentorship provides an excellent opportunity for professional development within the higher education context. The **CPA Student Mentorship Pro**gram was created to enhance the career trajectories of psychology students in Canada. The purpose of the program was to afford undergraduate students the opportunity to gain support and guidance from graduate students in navigating and negotiating important career decisions. This investigation aimed to address limitations identified in previous research (e.g., insufficient evidence sup-

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Table 4

Program Weaknesses Identified by Mentors and Mentees at 3-month Follow-up

Thomas	%	of Participants Weakness	Identifying	Sample Porticinant Overstier
Themes	Total $(n = 54)$	Mentors $(n = 34)$	Mentees $(n = 20)$	Sample Participant Quotations
Distance/Email Communication	31	29	35	"mentorship through e-mail isn't successful" [mentor]      "proximity to mentor (maybe would have been nice to meet them in person)" [mentee]
Lack of Program Structure/Guidance	30	29	30	"some sample topics of discussion would be great" [mentor]      "not a lot of activities for the mentormentee pair to do" [mentee]
Matching Fit/Relationship Development	20	21	20	"Potential for lack of fit between mentor and mentee (e.g., my mentee is not interested in a career in psychology, thereby limiting my ability to use my graduate school experience to assist her)" [mentor]      "mentor does not tell me what they
Lack of Mentor Support/Mentorship Training	11	6	20	whished they knew" [mentee]  "Mentors could be better trained to give specifics on how to achieve career goals" [mentee]  "Could provide some basic info to mentors if mentees have questions outside of our area (e.g., other grad programs besides clinical psychology" [mentor]
Programming Differences Across the Country	9	3	20	"not in the same program" [mentee]      "since my mentor did not graduate from the same university as me it is a bit hard to get specific advice about the honours thesis pertaining to my school" [mentee]
Limited Mentee Engagement or Awareness of Career Goals	9	15	0	"mentee only contacted me once" [mentor]      "mentees may change their focus to non-psych programs/careers" [mentor]
Timing of Mentorship Program	9	12	5	"If it started earlier in the year there would be more time to help mentees prepare for applications/GREs/etc." [mentor]      "started late so less time to mentor students prior to applications being submitted" [mentor]
Program Administration	7	12	0	"no reply from the program assistant" [mentor]      "more reminders would be helpful" [mentor]
Infrequent Contact with Paired Peer	7	9	5	"could be more ongoing – mentors should check in more often" [mentee]      "my mentee was relatively low-maintenance, therefore would have been nice to have more mentees to work with"
Lack of Networking Opportunities	6	6	5	"provide more networking opportunities" [mentor]      "a chance for mentors to speak and share resources would be useful" [mentor]

Note. Several respondents are counted under more than one theme as respondents could list up to three weaknesses.

porting the effectiveness of formal, peer-mentoring programs in psychology; limited research on mentor outcomes), in addition to exploring participants' interest in and feasibility and acceptability of the program, as well as its strengths, limitations, and outcomes. Consistent with research which suggests that peer-mentoring is beneficial for both mentors and mentees (Allen, 2007; Eby, Durley, Evans, & Shockley, 2005), many themes emerged in the present evaluation which supported the effectiveness of the program. While most mentors (63%) and mentees (58%) reported that the peer-mentoring program was effective, 100% of participants were supportive of the continuation of the program. Overall, mentors (86%) and mentees (63%) reported that participation in the program was positively related to the achievement of their career goals and personal growth.

The CPA Student Mentorship Program, a national program which spurred student interest and participation from across Canada, is a valuable resource for emerging psychologists at various stages in their educational training. Psychology students are faced with a plethora of challenging decisions and, through peer-mentorship, this program aimed to address a current gap in vocational supports which are often unavailable to university student populations. The need for a formal program which was individualized for psychology students was demonstrated through the substantive number

of participants who expressed interest in and who were matched in the mentoring program. Supported with theoretical underpinnings, the program was designed to reach and pair a wide range of students with diverse interests in psychology in peer-mentoring relationships. In addition to providing growth and exploration opportunities to mentees (e.g., information-sharing, role modeling), the program also offered mentors similar professional development experiences (e.g., self-discovery, networking). This evaluation makes an important contribution to the peer-mentoring literature, particularly for those individuals or groups who are interested in developing similar programs to affect positive outcomes for post-secondary students.

## **Positive Global Experiences**

Results determined that there was sufficient interest from both mentors and mentees for a formal, peer-mentoring program for psychology students. Program participation appeared to be largely feasible for students, as per the successful matching of students with shared goals and interests in psychology. While nearly three quarters of them discontinued their participation prior to the cessation of the program (i.e., did not complete T3 measures), the program's acceptability was demonstrated through participants' unanimous support of its continuation at T2. Additionally, the program was deemed effective by nearly two thirds of

mentors and mentees.

In terms of the program's general impact, mentors and mentees did not report a positive change in self-efficacy throughout the duration of the program; however, both groups reported an improvement in their achievement of career goals and personal growth. Notably, a significant percentage of mentors (86%) reported that their role as a mentor was central to achieving career goals, suggesting that service as a mentor is a desirable leadership experience enhancing graduate student training in psychology. Sixty-seven percent of mentors reported that their service as a mentor positively influenced their own personal growth. In contrast, 63% of mentees reported that mentors played a significant role in relation to achieving their career goals, while 59% reported that mentors facilitated their personal growth. Interestingly, mentors rated the program more positively and consistently reported advances in the areas of career goals and personal growth, in comparison to mentees. While these findings are in line with the programs' intended objectives of advancing career and personal development, this program may offer more benefits than expected for mentors, contributing an important result to the limited mentor outcome literature.

Mentees reported receiving all three types of mentorship support including those pertaining to the career, psychosocial, and role modeling functions. As per the nature of the peer-mentoring program as a career inter18

vention, vocational support was experienced most frequently.

Findings indicate that the program had positive implications for both mentors and mentees. The top three program strengths identified by mentors included the opportunity to connect and network with peers in psychology, contribute knowledge and support to others, and advance personal and professional skills. These findings support previous research which suggested that mentors achieve personal satisfaction from passing knowledge on to others (Milner & Bosser, 2005), improved professional skills and personal growth (Allen, 2007; Crisp & Cruz, 2009; Kram, 1985). The top three strengths identified by mentees included the opportunity to connect with and learn from a mentor who had increased knowledge and experience in psychology, mentors' availability and openness, and the administration and nature of the program. These findings corroborate Ehrich, Hansford, and Tennent's (2004) results which suggest that discussion with mentors (e.g., sharing information, receiving advice) and positive mentor characteristics (e.g., warmth, openness) are common mentee outcomes resulting from mentorship programs in educational settings.

It is important to note that, in addition to the mentor functions described above, mentoring is a relationship which develops over time and each relationship is unique to the individuals involved. According to Keller (2005), there are five stag-

es through which the mentoring relationship evolves including contemplation, initiation, growth and maintenance, decline, and redefinition. In the present investigation, each mentoring dyad likely worked in the various stages of the mentoring relationship, with some progressing farther than others, thereby impacting the mentoring outcomes. While the degree to which this occurred in the present study is unknown, future research examining the stages of development regarding the mentoring relationship and the associated outcomes is warranted.

## Aspects to Improve

A number of challenges with the program were found. The high dropout rate, particularly amongst mentees, was an area of concern. The narrative finding through which participants identified the timing of the program as problematic may help explain the degree of attrition which occurred. It is possible that mentees utilized their peer-mentoring relationships up until the time of multiple important academic deadlines (e.g., graduate school applications, funding applications), while subsequently disengaging from mentorship activities. This perspective is further elucidated by the result which identified the most common mentoring function utilized within the peer-mentoring dyads (i.e., career support), suggesting that, after career support around specific goals or deadlines was received, mentees may no longer require

or benefit from mentorship that was necessary or advantageous to their career and personal development. A possible solution to address program retention may entail commencing the program at an earlier time during the academic year (e.g., prior to the fall semester when graduate school and funding applications are typically due) so that participants are afforded sufficient time to prepare for these important deadlines. Additionally, due to substantial attrition, the peer-mentoring program may benefit from decreasing its duration (e.g., from six months to three months) which may positively influence program retention.

Whereas some participants reported strengths of the program (i.e., gaining mentorship in an area of high importance) and the program's administration (e.g., matching, level of administrator involvement), others felt that the program was lacking structure, guidance, and support from program administrators. The latter findings support Vance and Olson's (1998) results from an evaluation of a formal peer-mentoring program with a sample of nursing students and graduates, suggesting a need to improve the fit between mentors and mentees, as well as a need to increase program structure and institutional (administrative) support. Possible program modifications to the CPA Student Mentorship Program may include optional components (available but not mandatory for participation) which offer more structure including worksheets/activities to be completed in dyads to facilitate the peer-mentoring relationship and to serve as a springboard for discussion, in addition to webinars or in-person mentorship trainings (e.g., at the CPA Annual Convention).

Additionally, the predetermined matching procedure may have to be reconsidered to include criteria such as geographical location, the possibility of in-person meetings, and academic program similarities, as these were also identified as program weaknesses which may be improved through more efficacious matching processes. Particularly, qualitative responses from mentees pointed to a discomfort with the semi-structured program format, suggesting that the student-centered learning approach (Rogers, 1961) which encouraged dyads to individualize and self-direct their peer-learning, may not translate well to a formal program which does not occur in a face-to-face capacity or relies more deeply on directive tasks (e.g., information giving). Alternatively, this finding may reflect mentees' resistance to self-initiating their learning or a lack of engagement in the mentoring process, as reported by mentors.

# **Implications for the Broader Peer-mentoring Context**

Universities and colleges across North America are increasingly seeking alternative approaches to learning and education which supplement traditional classroom learning (Colvin & Askman, 2010). A common

method utilized by post-secondary institutions involves mentorship, including formal and informal, traditional (hierarchical) and peer mentoring pairings and programs, yielding a host of benefits for those involved (Crisp & Cruz, 2009; Leidenfrost, et al., 2011). The CPA Student Mentorship Program offered a unique opportunity for undergraduate students to be paired with graduate students in formal, peer-mentoring relationships. Findings from the present study confirm the need and desire for a formalized mentorship program in the higher education context which neutralizes power dynamics through peer collaboration, enhancing student-centered learning, career development, and personal growth. Furthermore, peer-mentoring, as demonstrated by the CPA Student Mentorship Program, served as an important career intervention which assisted diverse individuals to explore personally meaningful and professionally relevant career decisions.

The program's focus on advanced training and career opportunities in psychology made it a novel and valuable resource for students. Given the high degree of interest for a program in the psychology domain, it is likely that students in related disciplines (e.g., sociology, occupational therapy) may also be keen to pursue participation in a similar program aimed at improving student outcomes and career development in their chosen field of study. Indeed, findings from the present study suggest that formalized peer mentorship

may be beneficial for mentees in receiving vocational and psychosocial support as they progress to the next stage in their training or career; however, peer-mentoring programs should also consider individual academic deadlines within a given field to allow participants the opportunity to engage in mentorship to their full potential. Results also revealed that serving as a mentor appeared to be of particular interest to graduate students in the higher education context and that this experience was considered to be an important training/growth opportunity for individuals prior to entering the job market.

Developing and evaluating a mentorship program is a complex task. A plethora of factors must be considered and challenging decisions about the objectives of the program should be established in advance. Methodological rigor is required to advance our understanding of the impact of formal peer-mentoring programs, but this, in itself, is not sufficient (Jacobi, 1991). An additional problem pertains to the fact that many mentoring programs are so diverse that they may have little in common. Characteristic of the present evaluation was its focus on mentoring functions; however, there are many other variables that could be addressed when assessing the relative success of a mentoring program. Some of these factors include the characteristics of mentor-mentee relationships such as differences or similarities in participants' age, gender, and ethnicity, as well as the duration, in20

timacy or intensity, and format of the mentoring relationship. The mentor-mentee matching process and subsequent relationship is immensely complex and a good "fit" likely influences participants' experiences and outcomes. Until we observe greater consistency in the definitions, objectives, and components of mentoring programs, it is unlikely that we can weave together a coherent thread of research supporting the use and effectiveness of mentorship programs. Nevertheless, continuous efforts, including the present investigation, are being made to better identify what works about peer-mentoring, what doesn't, and why, affording a valuable contribution to mentorship literature.

## **Limitations and Future Directions**

The purpose of this evaluation was to assess the effectiveness of a formal peer-mentoring program which was exploratory in nature. Because this program was focused in psychology in Canada, its findings may not generalize to other disciplines or professional associations. Limitations of the current study pertain to the absence of information regarding the online mediums used for communication purposes among mentoring dyads, the types of activities that participants pursued, the time spent engaged in these activities, and the mentorship functions associated with them. Additionally, process variables related to the mentoring relationship were not explored

in depth. Strayhorn and Terrell (2007) suggested that research should continue to assess the impact of specific characteristics, namely the nature of mentoring relationships (e.g., length of time spent with a mentor). While we know that the mentoring function most commonly utilized in the program regards the career support function, it would be helpful to learn what types of conversations or activities were discussed and implemented. Other curious considerations regard the trend that more mentees dropped out of the program than mentors, possibly suggesting that mentors were benefiting more from the program or that they sustained increased commitment to their peer-mentoring relationship. Future research investigations should address these discrepancies in more detail, in addition to exploring the sizable personal growth experienced by mentors, as described in their qualitative responses.

# **Links to Social Cognitive** Career Theory

According to SCCT, individuals' must have articulated interests in order to acquire a meaningful career. Interests are best realized through engaging in significant learning experiences which can contribute to individuals' sense of personal effectiveness and competence. SCCT assumes that individuals acquire interest in, choose to pursue, and perform better at activities in which they hold strong self-efficacy beliefs. Consequently, as

individuals develop interest in an activity or career, they tend to develop goals for maintaining or increasing their involvement in it. Further engagement in activities of interest enable subsequent mastery or failure experiences, which impact individuals' self-efficacy and outcome expectations, ultimately leading to the revision of one's career interests. The CPA Student Mentorship Program aimed to facilitate unique learning experiences which provided opportunities to explore career interests, form positive expectations, and develop greater self-efficacy within a collaborative and supportive peer-mentoring relationship. The social nature of this career intervention allowed mentors to provide individualized feedback about mentees' personal accomplishments, vicarious experiences, and emotional states, thereby affording a compelling source of self-efficacy information.

Opportunities to explore outcome expectations including the consequences of pursing particular behaviours or actions were also provided. Participants were invited to explore their intentions to engage in specific actions or activities which would enhance their career development, including goal-setting. By setting collaborative goals, participants were better able to organize their behaviour and plan steps towards achieving their personal career objectives. Although participants' in the current investigation did not demonstrate statistically significant changes in self-efficacy, both mentors and mentees

reported improvements in their achievement of career goals and personal growth. From the SCCT perspective, participants may not have engaged in experiences that were potent enough for them to alter their sense of self-efficacy, although they were able to take steps towards achieving their personal and professional goals. In order for participants to form enduring interests leading to shifts in self-efficacy, it will be important to increase opportunities within the mentoring dyad for them to view themselves as competent. Modifying the structure of the program to include more learning experiences aimed at exploring and strengthening one's self-efficacy is paramount. Finally, highlighting the positive possibilities associated with one's career interests will also likely influence participants' expectations that the activity will produce or be related to affirmative outcomes.

## **Conclusions**

The CPA Student Mentorship Program offered a worthwhile experience for students, affording novel opportunities to gain career and psychosocial support in an expansive and diverse field that is psychology. While many previously developed peer-mentorship programs are a-theoretical, the present investigation aimed to contribute new knowledge about a formal peer-mentoring program for psychology students which had a strong theoretical foundation (i.e., student-centered learning,

SCCT), drawn from the broader humanistic psychology and career development literature. Practical implications of this research suggest that, overall, mentors and mentees found that the peer-mentorship program was a valuable and positive experience, was effective in enhancing career and personal growth, and should be continued. University administrators, psychology departments or other professional associations wishing to develop their own peer-mentoring programs can benefit from this investigation which offers results unique to psychology students pursuing higher education in Canada.

Consistent with the mentoring literature, most mentors and mentees derived some benefits associated with their participation in the program. The formal peer-mentoring model was perceived as useful to participants and reflected gains by mentors (and mentees), advancing knowledge on mentor outcomes. The strengths and limitations which were identified serve as a gauge of the program's current functioning, pointing to an array of modifications which could improve future iterations of the program. In summary, this research makes an important contribution to the peer-mentoring literature, while providing a feasible career intervention for psychology students who are seeking support and guidance in navigating essential career decision-making and personal and professional development.

#### References

Allen, T. D. (2007). Mentoring relationships from the perspective of the mentor. The handbook of mentoring at work: Theory, research, and practice. Thousand Oaks, CA: Sage.

Allen, T. D., Eby, L. T., O'Brien, K. E., & Lentz, E. (2008). The state of mentoring research: A qualitative review of current research methods and future research implications. Journal of Vocational Behavior, 73(3), 343-357. doi: 10.1016/j. jvb.2007.08.004

American Psychological Association. (2014). Commission on Accreditation 2014 Annual Report Online Summary Data: Doctoral Programs. Washington, DC. Retrieved from: https://www.apa.org/ ed/accreditation/about/research/2014-internship-summary.pdf. Accessed on 08. 29.16.

Canadian Psychological Association. (2016). http://www.cpa. ca/aboutcpa/cpasections/. Accessed 12. 22. 2016

Carden, A. D. (1990) Mentoring and adult career development: The evolution of a theory. The Counseling Psychologist, 18(2), 275-99.

Castro, S. L., & Scandura, T. A. (2004, November). The tale of two measures: Evaluation and comparison of Scandura's (1992) and Ragins and McFarlin's (1990) mentoring measures. Paper presented at the Southern Management

CANADIAN JOURNAL OF CAREER

**REVUE** CANADIENNE DE **DÉVELOPPEMENT** DEVELOPMENT DE CARRIÈRE

- Association Meeting, San Antonio, TX.
- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. Organizational Research Methods, 4, 62-83. doi:10.1177/109442810141 004
- Colvin, J. W., & Ashman, M. (2010). Roles, risks, and benefits of peer mentoring relationships in higher education. Mentoring & Tutoring: Partnership in Learning, 18(2), 121-134. doi: 10.1080/136112610036 78879
- Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. Research in Higher Education, 50(6), 525-545. doi: 10.1007/s11162-009-9130-2
- Eby, L. T., Durley, J., Evans, S. C., & Shockley, K. (2005, April). What predicts the benefits of mentoring for mentors? Paper presented at the 20th Annual Conference of the Society for Industrial and Organizational Psychology, Los Angeles, CA.
- Eby, L. T., & Lockwood, A. (2005). Protégés' and mentors' reactions to participating in formal mentoring programs: A qualitative investigation. Journal of Vocational Behavior, 67, 441–458. doi: 10.1016/j. jvb.2004.08.002
- Ehrich, L. C., Hansford, B. C., & Tennent, L. (2003, September). Mentoring in medical

- contexts. Paper presented at British Education Research Association Conference, Edinburgh, United Kingdom.
- Ensher, E. A., Thomas, C., & Murphy, S. E. (2001). Comparison of traditional, step-ahead, and peer mentoring on protégés' support, satisfaction, and perceptions of career success: A social exchange perspective. Journal of Business and Psychology, 15(3), 419-438. doi: 10.1023/A:1007870600459
- Foster, S. & MacLeod, J. (2015). The role of mentoring relationships in the career development of successful deaf persons. Journal of Deaf Studies and Deaf Education, 9 (4). 442-458. doi: 10.1093/ deafed/enh053
- Ghosh, R., & Reio, T. G. (2013). Career benefits associated with mentoring for mentors: A meta-analysis. Journal of Vocational Behavior, 83(1), 106-116. doi: 10.1016/j. jvb.2013.03.011
- Hu, C. (2008). Analyses of measurement equivalence across gender in the Mentoring Functions Questionnaire (MFQ-9). Personality and Individual Differences, 45(3), 199-205. doi: 10.1016/j. paid.2008.03.016
- Jacobi, M. (1991). Mentoring and undergraduate academic success: A literature review. Review of Educational Research, 61(4), 505-532. doi: 10.3102/ 00346543061004505.
- Kao, K. Y., Rogers, A., Spitzmueller, C., Lin, M. T., &

- Lin, C. H. (2014). Who should serve as my mentor? The effects of mentor's gender and supervisory status on resilience in mentoring relationships. Journal of Vocational Behavior, 85(2), 191-203. doi: 10.1016/j. jvb.2014.07.004
- Kanter, R. (1977). Men and women of the incorporation. New York, NY: Basic Books.
- Keller, T.E. (2005). The stages and development of mentoring relationships. In D.L. DuBois & M. Karcher (Eds.), The handbook of youth mentoring (pp. 82–99). Thousand Oaks, CA: Sage.
- Kram, K. (1983) Phases of the mentor relationship. Academy of Management Journal, 26, 608-625. doi: 10.2307/255910
- Kram, K. & Isabella, L. (1985). Mentoring alternatives: The role of peer relationships in career development. Academy of Management Journal, 28, 110-132. doi: 10.2307/256064
- Lankau, M. J., & Scandura, T. A. (2002). An investigation of personal learning in mentoring relationships: Content, antecedents and consequences. Academy of Management Journal, 45, 779-791. doi: 10.2307/3069311
- Leidenfrost, B., Strassnig, B., Schabmann, A., Spiel, C., & Carbon, C. C. (2011). Peer mentoring styles and their contribution to academic success among mentees: A person-oriented study in higher education. Mentor-

- ing & Tutoring: Partnership in Learning, 19(3), 347-364. doi: 10.1080/13611 267.2011.597122
- Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown (Eds.), Career choice and development (pp. 255-311). San Francisco, CA: John Wiley & Sons, Inc.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance [Monograph]. Journal of Vocational Behavior, 45, 79-122.
- Levinson, D. J., Darrow, C., Klein, E., Levinson, M. H., & McKee, B. (1978). The seasons of a man's life. New York: Ballantine Books.
- Mandich, A., Milller, L., & Law, M. (2002). Outcomes in evidence- based practice. In M. Law (Ed.), Evidence-based rehabilitation: A guide to practice (pp. 49-69). Thorofare, NJ: Slack.
- Milner, T., & Bossers, A. (2005). Evaluation of an occupational therapy mentorship program. Canadian Journal of Occupational Therapy, 72(4), 205-211. Retrieved from: http://search.proquest.com. ezproxy.library.ubc.ca/doc view/212952687?pq-origsite=360link&accountid=14656
- Mitchell, M. E., Eby, L. T., & Ragins, B. R. (2015). My mentor, my self: Antecedents and outcomes of perceived similarity in mentoring rela-

- tionships. Journal of Vocational Behavior, 89, 1-9. doi: 10.1016/j.jvb.2015.04.008
- Pellegrini, E. K., & Scandura, T. A. (2005). Construct equivalence across groups: An unexplored issue in mentoring research. Educational and Psychological Measurement, 65(2), 323-335. doi: 10.1177/0013164404268665
- Rogers, C. (1961). A therapist's view of psychotherapy: On becoming a person. London, Constable.
- Scandura, T. A. (1992). Mentorship and career mobility: An empirical investigation. Journal of Organizational Behavior, 13, 169–174. doi: 10.1002/job.4030130206
- Strayhorn, T. L., & Terrell, M. C. (2007). Mentoring and satisfaction with college for black students. The Negro Educational Review, 58(1– 2), 69–83. Retrieved from: http://web.b.ebscohost.com. ezproxy.library.ubc.ca/ehost/ pdfviewer/pdfviewer?vid=1 &sid=2ffeff71-4d9b-4295-9 c02-00ce8f46da7c%40sessionmgr1.
- Terrion, J. L., & Leonard, D. (2007). A taxonomy of the characteristics of student peer mentors in higher education: Findings from a literature review. Mentoring & Tutoring: Partnership in Learning, 15(2), 149–164. doi:10.1080/13611260601 086311
- Vance, C. N., & Olson, R. K. (1998). The mentor connection in nursing. New York: Springer Publishing.

- Wanberg, C. R., Welsh, E. T., & Hezlett, S. A. (2003). Mentoring research: A review and dynamic process model. Research in Personnel and Human Resources Management, 22, 39-124. http://dx.doi.org/10.1016/ S0742-7301(03)22002-1080/13611267.2011.597122
- Lent, R. W., Brown, S. D., & Hackett, G. (2002). Social cognitive career theory. In D. Brown (Eds.), Career choice and development (pp. 255-311). San Francisco, CA: John Wiley & Sons, Inc.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance [Monograph]. Journal of Vocational Behavior, 45, 79-122.
- Levinson, D. J., Darrow, C., Klein, E., Levinson, M. H., & McKee, B. (1978). The seasons of a man's life. New York: Ballantine Books.
- Mandich, A., Milller, L., & Law, M. (2002). Outcomes in evidence-based practice. In M. Law (Ed.), Evidence-based rehabilitation: A guide to practice (pp. 49-69). Thorofare, NJ: Slack.
- Milner, T., & Bossers, A. (2005). Evaluation of an occupational therapy mentorship program. Canadian Journal of Occupational Therapy, 72(4), 205-211. Retrieved from: http://search.proquest. com.ezproxy.library.ubc.ca/ ocview/212952687?pq-orig-

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- site=360link&accountid=14656
- Mitchell, M. E., Eby, L. T., & Ragins, B. R. (2015). My mentor, my self: Antecedents and outcomes of perceived similarity in mentoring relationships. Journal of Vocational Behavior, 89, 1-9. doi: 10.1016/j. jvb.2015.04.008
- Pellegrini, E. K., & Scandura, T. A. (2005). Construct equivalence across groups: An unexplored issue in mentoring research. Educational and Psychological Measurement, 65(2), 323-335. doi: 10.1177/0013164404268665
- Rogers, C. (1961). A therapist's view of psychotherapy: On becoming a person. London, Constable.
- Scandura, T. A. (1992). Mentorship and career mobility: An empirical investigation. Journal of Organizational Behavior, 13, 169–174. doi: 10.1002/job.4030130206
- Strayhorn, T. L., & Terrell, M. C. (2007). Mentoring and satisfaction with college for black students. The Negro Educational Review, 58(1– 2), 69–83. Retrieved from: http://web.b.ebscohost.com. ezproxy.library.ubc.ca/ehost/ pdfviewer/pdfviewer?vid=1 &sid=2ffeff71-4d9b-4295-9 c02-00ce8f46da7c%40sessionmgr1.
- Terrion, J. L., & Leonard, D. (2007). A taxonomy of the characteristics of student peer mentors in higher education: Findings from a literature review.

- Mentoring & Tutoring: Partnership in Learning, 15(2), 149–164. doi: 0.1080/13611260601086311
- Vance, C. N., & Olson, R. K. (1998). The mentor connection in nursing. New York: Springer Publishing.
- Wanberg, C. R., Welsh, E. T., & Hezlett, S. A. (2003). Mentoring research: A review and dynamic process model. Research in Personnel and Human Resources Management, 22, 39-124. http:// dx.doi.org/10.1016/S0742-7301(03)22002-8