

EXAMINING SELF-EFFICACY, SUPPORT SYSTEMS, AND MOTIVATIONS FOR ATTENDING UNIVERSITY IN FIRST-GENERATION VERSUS CONTINUING-GENERATION STUDENTS AT AN ATLANTIC CANADIAN UNIVERSITY

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Abstract

The social cognitive career theory (SCCT) includes several models that predict career and educational choices. The current study used the SCCT framework to understand similarities and differences between first-generation students (FGS) and continuing-generation students (CGS) in their motivations for attending post-secondary education. We focused specifically on person variables (FGS versus CGS), contextual variables (role of support), and self-efficacy as predictors of motivations. In total, 122 FGS and 189 CGS participated, all of whom were current university students at a small Atlantic Canadian university. Participants completed an online survey that assessed motivations for attending university, perceptions of social and institutional support, and college-going self-efficacy. For both groups, the highest-ranked motivation for attending university was the *Career/Personal* category. First-generation students reported more *Help Family* and *Prove Worth* motivations than CGS. Continuing-generation students reported more motivations related to *Expectation* and *Encouragement* than FGS. Higher levels of self-efficacy predicted higher levels of *Career/Personal*, *Humanitarian*, and *Encouragement* motivations, and lower levels of *Default* motivations. Social support predicted higher *Career/Personal*, *Humanitarian*, and *Expectation* motivations. Generally, CGS and FGS were similar in

the predictors for each motivational category except for Career/Personal motivations, where Family and Friend Support was a stronger predictor of motivations for CGS. Overall, this study has demonstrated the applicability of SCCT in a Canadian context for FGS versus CGS. Furthermore, it highlights that, as predicted by the SCCT, environmental factors such as social support and self-efficacy have a crucial and similar impact on the motivations for students continuing to pursue higher education.

Keywords: first-generation student, academic self-efficacy, motivation, enrolment, social support, undergraduate

Résumé

La théorie socio-cognitive des carrières (TSCC) comprend plusieurs modèles permettant de prédire les choix de carrière et d'éducation. Cette recherche utilise la TSCC pour comprendre les similarités et les différences entre les étudiant[e]s de première génération (ÉPG) et les étudiant[e]s issu[e]s de milieux diplômés (ÉMD) quant à leurs motivations à poursuivre leurs études postsecondaires. Plus précisément, nous nous sommes concentrées sur les variables personnelles (ÉPG vs ÉMD), les variables contextuelles (rôle du soutien), et l'autoefficacité comme prédicteurs des motivations. Au total, 122 ÉPG et 189 ÉMD ont participé, tou[te]s des étudiant[e]s qui fréquentent une petite université située dans la région de l'Atlantique canadien. Les participant[e]s ont rempli un formulaire en ligne, évaluant leurs motivations à fréquenter l'université, leurs perceptions du soutien social et institutionnel, et leur sentiment d'efficacité personnelle quant à leurs études supérieures. Pour les deux groupes, la motivation la plus importante pour fréquenter l'université relevait de la catégorie « Carrière/Personnelle ». Les ÉPG étaient davantage motivé[e]s par « Aider sa famille » et un besoin de « Prouver sa valeur » que les ÉMD. À l'inverse, les ÉMD étaient davantage motivé[e]s par les « Attentes » et les « Encouragements ». Un niveau élevé d'autoefficacité était un indicateur de motivations accrues dans les catégories « Professionnelles/Personnelles », « Humanitaires » et « Encouragement », ainsi que des niveaux plus faibles de « Motivations par défaut ». Le soutien social était un indicateur de motivations plus élevées dans les catégories « Professionnelles/Personnelles », « Humanitaires » et « Attentes ». Les facteurs prévisionnels des ÉMD et des ÉPG étaient semblables dans chaque catégorie de motivation, à l'exception des motivations professionnelles/personnelles, où le soutien des amis et de la famille constituait un facteur prévisionnel plus important chez les ÉMD. Par ailleurs, cette recherche a démontré l'applicabilité de la TSCC dans un contexte canadien pour les ÉPG par rapport aux ÉMD. De plus, l'étude souligne que, comme le fait ressortir la TSCC, des facteurs comme le soutien social et l'autoefficacité ont un impact direct sur ce qui motive les étudiant[e]s à poursuivre des études supérieures.

Mots clés : étudiant de première génération, autoefficacité scolaire, motivation, inscription, soutien social, études de premier cycle

INTRODUCTION

First-generation students (FGS) are the first in their family to attend university. While many students at universities are continuing-generation students (CGS) whose caregivers have completed a university degree, FGS are a growing and underserved population in the university (Brookover et al., 2021). Minimal intergenerational knowledge about university and fewer available supports lead to unique challenges for FGS. In the present study, we used social cognitive career theory (SCCT; Lent et al., 1994) as a framework to examine factors contributing to motivations in post-secondary education for FGS and CGS.

Social Cognitive Career Theory (SCCT)

The SCCT proposes a model in which person variables and environmental variables influence sociocognitive variables, particularly self-efficacy (the belief in one's ability to plan and execute a set of tasks for a particular objective), and outcome expectations, which in turn affect goals related to career and academics. For the present study, we focused on self-efficacy. For person variables, we examined student status (FGS versus CGS) and for environmental variables, we chose to look at academic and social support (family and friends). We used student motivations for attending university as an indicator of their intentions/goals in the SCCT model (Lent et al., 1994).

Student Status as a Person Variable

The barriers faced by FGS compared to CGS are evident in their academic outcomes. In data drawn from the Longitudinal International Study of Adults (LISA) run by Statistics Canada, FGS were less likely to pursue a bachelor's degree compared to CGS (Chatoor et al., 2019). Of youth (ages 16–25) not enrolled in post-secondary education, 39% of FGS expected to graduate with a bachelor's degree or higher versus 68% CGS (Chatoor et al., 2019). Among stu-

dents enrolled in university, FGS were less likely to complete a bachelor's degree. In a sample of 12,000 Canadians from the LISA study, only 57% of FGS between the ages of 25–34 had completed an undergraduate degree, compared to 81% of CGS (Chatoor et al., 2019).

First-generation students struggle more in university as shown through their poorer academic performance (Byun et al., 2017; Frazier et al., 2018), higher attrition rates (Martinez et al., 2009; Pascarella et al., 2004; Radunzel, 2021), and lower self-reported self-efficacy (Inman & Mayes, 1999; Ramos-Sánchez & Nichols, 2007). While the relationship between FGS status and poorer outcomes has been demonstrated in past studies, it is important to note that these results represent the experiences of FGS once they have entered university. These data do not capture FGS who do not attend post-secondary educational programs.

Support for Students

Practical and social environmental factors aid in the development of outcome expectations and goal-directed action for students (Lent et al., 2000). These environmental factors include both practical, observable support (e.g., financial support, academic support options) and less tangible aspects (e.g., response to the environment, unseen factors that impact success and drive). In the SCCT, environmental factors are distal influences that impact goals and actions by affecting more proximal targets such as self-efficacy (Lent et al., 2000). Environmental factors such as perceived support can help facilitate the process by which individuals' conceptualization and actions toward their goals unfold. Adverse environmental factors such as barriers to education can lead to lower self-efficacy and, in turn, narrowly-focused or minimal goals/motivations (Lent et al., 2000).

One way that children learn and develop their own goals is through exposure to others. They pay attention to the interests of others, mimic their skills and behaviours, and use feedback to help them determine their self-efficacy. Children then learn to think critically about their desired goals and their capacity to achieve them based on their skillset.

Support and FGS

Social and practical support are related to success in university. Commonly, parents instill the idea of attending university in their children (Brookover et al., 2021; Byun et al., 2017; Gibbons et al., 2016; Lecy, 2021). For CGS, enrolling in an undergraduate degree may be a foregone conclusion enforced by parents (Martin et al., 2020); by seventh grade, CGS in Gibbons and Borders's (2010) study were beginning to think of graduate degrees. For FGS, according to McCarron & Inkelas (2006), parental support is the best predictor for college attendance and persistence. For CGS, parents provide a model for student behaviour and help to encourage their interests. Their students' self-efficacy is increased, and, in turn, they are more likely to pursue and realize their academic goals. First-generation students lack the same models available to CGS. Parents of FGS may possess limited knowledge of the skills needed to be accepted to and succeed in a university environment. However, FGS attend universities near their families and often cite family as motivators for attending university (Bauman et al., 2019; Van & Bui, 2002; Vega, 2017).

Peers also influence university enrolment. Peers provide encouragement and advice for enrolling to CGS (Martin et al., 2020). First-generation students frequently rely on their peers for information about university, such as assessing the quality of a university, how to apply, and where to enroll (Holland, 2020; Inman & Mayes, 1999). Dennis et al. (2005) found that peer support was the strongest predictor for college grades and adjustment. Additionally, peer support could increase self-efficacy and retention through fostering a sense of belonging (Gibbons et al., 2016; Markle & Stelzriede, 2020).

Academic support teaches FGS essential skills to flourish in university, increasing their self-efficacy (Pascarella et al., 2004; Ramos-Sánchez & Nichols, 2007; Terenzini et al., 1996). Academic support has been linked to improved academic performance and retention rates (Byun et al., 2017; Glew et al., 2019; Markle & Stelzriede, 2020). Students who participated in academic literacy support in Glew et al.'s (2019) study had higher GPAs and were

seven times more likely to stay in the program. However, FGS are less likely to use academic support; FGS reported feeling embarrassed at the prospect of reaching out to support staff for help, leading them to avoid asking (Jack, 2016; Yee, 2016).

Through the provision of support from parents, peers, and academic sources, FGS and CGS are provided a model for their behavior, helping them to determine their interests. Once interests are established, they can begin to act on them, receiving feedback and, in turn, gaining a better understanding of their self-efficacy. Both FGS and CGS can then develop goals and motivations based on what they believe they can achieve (Lent et al., 1994, 2000). Since FGS lack a model of post-secondary attendance in their immediate family, they have no direct source after which to pattern their behaviour and interests, or from which to receive feedback. As a result, FGS may struggle to have a clear vision of what they can achieve. Based on these factors, their self-efficacy would be lower on average, which could impact their motivations for attending university.

Self-Efficacy

The SCCT states that an individual's self-efficacy is a major predictor of their interests, actions, and persistence toward a given objective or goal. Self-efficacy is developed through environmental factors as well as from past achievements. These factors, including supports, help people to identify their interests and, in turn, their goals/motivations. Self-efficacy is developed through receiving support and feedback, as well as past accomplishments, which can help to create goal-directed behaviour (Lent et al., 1994).

Self-Efficacy and FGS

From the initial application to attending, FGS have trouble navigating university, contributing to lower academic self-efficacy (Brookover et al., 2021; Gibbons & Borders, 2010; Um, 2021; Vega, 2017). Vega (2017) found that many students were overwhelmed by the application process for universities. On average, FGS perform worse academically than CGS and take longer

to graduate, illustrating poorer academic self-efficacy (Gibbons et al., 2016; Inman & Mayes, 1999; Markle & Stelzriede, 2020; Terenzini et al., 1996; Van & Bui, 2002). Self-efficacy impacts students' choices for university enrolment such as where they enroll and what they pursue while there (Lohfink & Paulsen, 2006; Ramos-Sánchez & Nichols, 2007; Tate et al., 2014; Um, 2021). Continuing-generation students, who typically have higher self-efficacy, apply to and attend more selective, private institutions; in contrast, FGS are more likely to apply to larger, more affordable public universities with higher acceptance rates (Lohfink & Paulsen, 2006). First-generation students may be different from CGS because of their perceived academic self-efficacy. This difference has been reflected in the data by choice of institution but not considered when examining their goals/motivations for attending university.

Since most of the research on FGS and university has been done with students already in university, these students would have likely had higher self-efficacy than their peers who did not enroll or potentially even dropped out of university. Of course, self-efficacy is also influenced by accomplishments, and students who are high-achieving in high school could base their self-efficacy beliefs on their previous performance. While there is variability in the self-efficacy of FGS attending university, their self-efficacy is generally lower compared to CGS and, according to the SCCT, it is a major contributor to future goals.

Motivations/Goals

Lent et al. (1994) described goals as a desire to engage in a particular activity to affect a future outcome. Based on the SCCT (Lent et al., 1994), environmental factors such as support aid in the development of self-efficacy and consequently influence goals/motivations. It is through these factors that one develops knowledge about areas of interest and their skillset, and can apply feedback given from others to create and plan goals. Self-efficacy helps an individual identify likely paths and helps them understand what they can do and what they need help with to produce the desired outcome.

Motivations and FGS

Family, financial, academic, and personal reasons are common motivations for university enrolment and persistence (Bauman et al., 2019; Brookover et al., 2021; Dennis et al., 2005; Van & Bui, 2002; Vega, 2017). First-generation students in Van and Bui's (2002) study gave greater significance to gaining respect/status, making their family proud, and helping their family financially as reasons to enroll in university compared to CGS. There are mixed results in the realm of motivations and student status, however, as some studies have found there are no differences between FGS and CGS regarding familial and personal motivators (Próspero & Vohra-Gupta, 2007; Vega, 2017).

Current Study

There is evidence in the existing literature that supports the SCCT, such that academic self-efficacy and social supports influence students' motivations, enrolment, academic performance and outcomes, and retention (Dennis et al., 2005; Gibbons & Borders, 2010; Lohfink & Paulsen, 2006; Markle & Stelzriede, 2020; McCarron & Inkelas, 2006; Um, 2021). Much of the research on FGS has been conducted in the United States, but there are key differences between Canada and the United States when it comes to our FGS populations. The rates at which FGS enroll in university differ in Canada and the United States. Racialized groups in the United States are at a greater disadvantage for enrolling, and students from low-income families (which are typically first-generation) are less likely to enroll (Frenette, 2005) when compared to Canadian populations. In the present study, we sought to increase understanding of Canadian FGS' motivations for attending university and the relationship of these motivations with academic self-efficacy and environmental supports. In our model, we used motivations for the goals/intention component of the SCCT. We hypothesized that person and environmental variables predict self-efficacy, which, in turn, predicts motivations. We also expected that there would be a direct path between the person and environmental aspects and motivations. This study addressed the

following research questions at a small public liberal arts university in eastern Canada:

1. Do FGS and CGS differ on academic self-efficacy, social support, and motivations for attending university?
2. Does perceived social support and/or academic self-efficacy predict motivations for attending university?

METHOD

Participants

Participants were current undergraduate students at a small Atlantic Canadian liberal arts university. Students were recruited to participate in this study through an email that was sent

to the entire campus. A follow-up email was sent to a list of FGS to balance the numbers of FGS and CGS in the sample. Participants were also recruited through SONA, a website that manages Introductory Psychology student participation for studies. In total, 341 people began the survey, a 16% response rate on a campus of 2,200 students. Thirty participants ($n = 11$ FGS; $n = 19$ CGS) were removed from analysis for not completing the key questionnaires for the study, leaving us with a final sample of 311. Of the 311 remaining participants, 60.8% were CGS and 39.2% were FGS. At the time, 27% of the student body had self-identified as FGS. Demographic information for FGS versus CGS is presented in Table 1.

Table 1

Demographic Information for First-Generation vs. Continuing-Generation Students

	FGS ($n = 122$)	CGS ($n = 189$)
Mean age in years (SD)	21.32 (5.17)	20.14 (3.41)
Gender %		
Female	73.0	67.7
Male	19.7	22.2
Non-Binary	4.1	4.8
Other	3.2	1.5
No Answer	--	3.7
Ethnicity %		
Black/African/Caribbean	4.9	3.2
Asian	9.8	13.2
White/European	73.0	74.6
Indigenous	4.9	2.1
Latinx	0.8	2.1
Other	2.4	0.5
No Answer	9.0	9.0
Year of study %		
1	31.1	34.9
2	27.9	19.6
3	15.6	20.1
4	18.9	23.3
5	4.9	2.1
6+	1.6	--

Participation was voluntary and participants were offered an incentive to win one of five \$50 gift cards to the campus bookstore or, if they were in the Introductory Psychology classes, they could opt for partial course credit.

Materials

Demographics and Education Questionnaire

Demographic information was collected via a questionnaire that included questions about participants' age, gender, ethnic background, current year of study, current GPA, and current financial support (personal, familial, and/or government student loans). Additional questions included whether they were mature students, had previously taken a gap year, or had college preparatory classes (e.g., Advanced Placement, International Baccalaureate Program, etc.). To identify whether they were FGS or CGS (student status), participants indicated the highest education level their parent(s)/caregiver(s) had completed. We use the term *caregiver* throughout the manuscript to be more inclusive of students who were not raised by their parents.

The education questions provided insight into the educational motivations and career goals of these students when attending university. Participants were also asked about their current goals for their education, with options ranging from obtaining part of a bachelor's degree to completing post-graduate degrees. Participants indicated whether their education or career goals had shifted, if they had ever dropped out of university, or if they had considered dropping out.

College-Going Self-Efficacy Scale

The College-Going Self-Efficacy scale (CGSE) measured participants' perceived self-efficacy at a four-year institution (Gibbons, 2005). The scale is made up of two subscales, Attendance ($\alpha = .81$) and Persistence ($\alpha = .92$). For this study, only the Persistence subscale, which consisted of 16 items, was used (subsequently referred to as Self-Efficacy). It measures students' perceived self-efficacy if they attended university. The scale includes questions that ask students

about their perceived abilities that would lead them to succeed in a college environment such as getting good grades, having a support network, maintaining finances, and graduating from their chosen institution. For the present study, because students were already in university, the wording was switched from "I could" to "I can" to better reflect their experiences. Items consisted of statements such as "I can get A's and B's in college" and "I can finish college and receive a college degree." In the current sample, the Cronbach's $\alpha = .86$. Participants ranked each item on a scale from one (*Not at all sure*) to four (*Very sure*). Scores were summed and ranged from 16 to 64, with higher scores indicating greater perceived self-efficacy for university.

Student Motivations for Attending University Scale

Participants completed the revised Student Motivations for Attending University scale (SMAU) by Phinney et al. (2006). The items on this scale were assessed from one (*Strongly disagree*) to five (*Strongly agree*) and indicated whether an item influenced a student's decision to attend university. Scores were averaged and ranged from one to five, with higher scores indicating a stronger motivator for attending. This measure consists of seven subscales with a total of 33 items. The Career/Personal subscale ($\alpha = .87$, current sample $\alpha = .76$), includes items such as "To help me earn more money." The Humanitarian subscale ($\alpha = .80$, current sample $\alpha = .89$) lists altruistic motivations. The Default subscale ($\alpha = .71$, current sample $\alpha = .58$) assesses whether participants enroll in university due to seeing no other option. The Expectation subscale ($\alpha = .73$, current sample $\alpha = .86$) has items such as "There were pressures on me from parents or family." The Prove Worth subscale ($\alpha = .73$, current sample $\alpha = .86$) has items focused on participants' desire to prove they can succeed in university. The Encouragement subscale ($\alpha = .73$, current sample $\alpha = .72$) includes items about positive encouragement to attend university. The final subscale is Help Family ($\alpha = .73$, current sample $\alpha = .86$), which includes items related to participants supporting their family (Dennis et al., 2005).

Perceived Environmental Support Scale

The final scale included in the survey was the Perceived Environmental Support scale (PESS) revised by Garriott and Nisle (2018). This scale measures the perceived support from both the academic institution (Institutional Support, $\alpha = .78$, current sample $\alpha = .79$) and family and friends (Family and Friend Support, $\alpha = .81$, current sample $\alpha = .76$). This scale has a total of nine items. The Institutional Support subscale includes items such as “I have received helpful assistance from my advisor.” The Family and Friend Support subscale consists of items such as “I feel that my family members support my decision to go to college” and “I have received encouragement from my friends for pursuing college.” Items are assessed on a scale from one (*Strongly disagree*) to five (*Strongly agree*) and measure the degree of perceived support students feel. Scores were averaged and ranged from one to five, with higher scores indicating greater perceived support.

Procedure

Participants completed an anonymous online survey hosted on LimeSurvey. After providing consent to participate, participants responded to the questionnaires in the order listed above. After completing the survey, participants viewed a feedback form that shared wellness resources available to them and allowed them to enter their name for entry into the draw or to receive Introductory Psychology course credit.

RESULTS

RQ 1: “Do FGS and CGS differ on academic self-efficacy, social support, and motivations for attending university?”

To compare FGS and CGS on self-efficacy, we first ran a *t*-test with CGSE-Persistence scale scores (*Self-Efficacy*) as the dependent variable. Continuing-generation students ($M = 49.13$, $SD = 8.27$) had greater perceived Self-Efficacy

in their ability to succeed at university than FGS ($M = 46.95$, $SD = 8.66$), $t(309) = 2.22$, $p = .03$, $d = .26$, although with a small effect size.

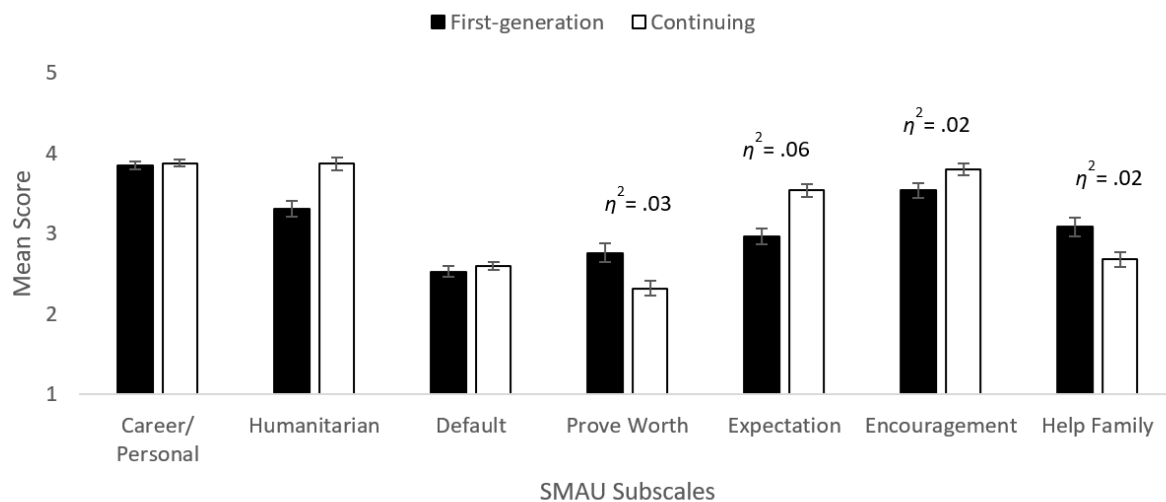
Continuing-generation students also perceived greater Family and Friend Support than FGS. A multivariate analysis of variance (MANOVA) was conducted with student status (FGS versus CGS) as the independent variable and the PESS subscales as the dependent variables. The overall MANOVA was significant, $F(2, 308) = 3.24$, $p = .04$, $\eta^2 = .02$. Post-hoc tests showed there was no significant difference between CGS ($M = 3.50$, $SD = 1.28$) and FGS ($M = 3.50$, $SD = 1.28$) scores on the Institutional Support subscale, $F(1, 309) = .001$, $p = .97$; but CGS ($M = 4.50$, $SD = 1.03$) perceived significantly more support than FGS ($M = 4.30$, $SD = 1.03$) on the Family and Friend Support subscale, $F(1, 309) = 5.14$, $p = .02$, $\eta^2 = .02$.

A MANOVA was also used to assess differences between FGS' and CGS' motivations for attending university. Student status was the independent variable (FGS versus CGS) and all the subscales of the SMAU (motivation) were the dependent variables. The means are presented in Figure 1. The overall MANOVA was significant, showing a main effect of student status on motivations, $F(7, 300) = 5.71$, $p < .001$, $\eta^2 = .12$. Motivations for Prove Worth ($p = .003$) and Help Family ($p = .01$) were significantly higher among FGS compared to CGS. For CGS, motivations based on Expectation ($p < .001$) and Encouragement from others ($p = 0.03$) were significantly higher. There were no significant differences between the groups for the Career/Personal, Humanitarian, and Default motivations.

We also assessed motivation in terms of intention to complete their current degree. More FGS overall (40.2% “yes”) reported thinking of dropping out of university than CGS (21.7% “yes”). A chi-squared analysis revealed that this was a significant difference, $X^2(2, 311) = 13.37$, $p < .001$. However, it was only during the first two years of university that more FGS reported considering dropping out. Of note, in this study we were only assessing students who were currently in university, so we missed those who had already dropped out.

Figure 1

Means Scores for Continuing-Generation Students vs. First-Generation Students on Student Motivations for Attending University (SMAU) Subscales (Mean +/- SEM)



Based on these differences, it is apparent that the person variable of student status is related to student self-efficacy, perceived support, and motivations to attend university.

RQ 2: “Does perceived social support and/or academic self-efficacy predict motivations for attending university?”

To assess the second research question, we first examined the correlations between Self-Efficacy, Family and Friend Support, and Institutional Support subscales with motivations for the entire sample. Results are shown in Table 2. Self-Efficacy was positively correlated with both Institutional Support, $r(309) = .51, p < .001$ and Family and Friend Support, $r(309) = .44, p < .001$, indicating a relationship between perceived support and Self-Efficacy. Self-Efficacy and both Support subscales were positively correlated with Career/Personal, Humanitarian, and Encouragement motivations. Self-Efficacy and Institutional Support were negatively correlated with Default motivations, indicating that students rating higher in Self-Efficacy and Insti-

tutional Support were less likely to report they were going to university as a default. Family and Friend Support was positively correlated with reporting being motivated by Expectation, which makes sense if family and friends are expecting and supporting students to go to university. Prove Worth did not correlate with either Self-Efficacy or either support subscale.

To test the SCCT-influenced model that student status (person variable), support (environmental variable), and Self-Efficacy predict motivations, we conducted a series of hierarchical regressions. Each regression had a different motivation subscale as the dependent variable. Since Institutional Support was not significantly different between CGS and FGS in RQ1, we only included Family and Friend Support in the regressions. For each regression, Self-Efficacy (centred), Family and Friend Support (centred), and student status were entered as predictors in Step 1, and the interaction between student status and Self-Efficacy and student status and Family and Friend Support were added as predictors in Step 2 to test if student status was a moderator in the relationship between Self-Efficacy, support, and motivation. When controlling for Self-Efficacy and Family and Friend

Support, student status predicted a difference in motivations for Prove Worth and Help Family, which were significantly higher for FGS, and for Expectation, which was significantly higher for CGS. Higher levels of Self-Efficacy predicted higher levels of Career/Personal, Humanitari-

an, and Encouragement motivations, and lower levels of Default motivations. Family and Friend Support predicted higher Career/Personal, Humanitarian, and Expectation motivations. Results are shown in Table 3.

Table 2

Pearson's Correlations of the College-Going Self-Efficacy Scale (CGSE) and Perceived Environmental Support Scale (PESS Scores) to the Student Motivations for Attending University (SMAU) Subscales

	Career/ Personal	Humanitarian	Default	Prove Worth	Expectation	Help Family	Encour agement
CGSE Score	.39**	.17**	-.36**	-.01	-.05	-.05	.26**
Family and Friend Score	.36**	.20**	-.08	-.07	.14*	.06	.41**
Institutional Score	.34**	.25**	-.23**	.11	-.01	.003	.37**

Note. * $p \leq .05$ ** $p \leq .01$

Table 3

Hierarchical Regression Analyses for the Relationship Between College-Going Self-Efficacy (CGSE) and Student Motivations (SMAU)

Variable	b	SE b	β	Adj. R^2	ΔR^2	F
Career/Personal						
Step 1				.14	.15	27.13***
CGSE	.03	.01	.39***			
First-Generation Status	.03	.07	.02			
Step 2				.15	.01	18.85***
CGSE	.03	.01	.45***			
First-Generation Status	.03	.07	.02			
CGSE * First-Generation Status	-.01	.01	-.10			
Humanitarian						
Step 1				.03	.03	5.16**
CGSE	.02	.01	.18**			
First-Generation Status	.12	.13	.05			
Step 2				.04	.01	4.90**
CGSE	.04	.01	.30***			
First-Generation Status	.11	.13	.05			
CGSE * First- Generation Status	-.03	.02	-.15*			

Variable	b	SE b	β	Adj. R ²	ΔR^2	F
Encouragement						
Step 1				.07	.08	12.51***
CGSE	.03	.01	.24***			
First-Generation Status	-.21	.12	-.10			
Step 2				.07	.004	8.80***
CGSE	.04	.01	.30***			
First-Generation Status	-.22	.12	-.10			
CGSE * First- Generation Status	-.02	.01	-.08			
Default Motivations						
Step 1				.14	.14	25.25***
CGSE	-.03	.004	-.38***			
First-Generation Status	-.14	.08	-.09			
Step 2				.15	.01	17.57***
CGSE	-.04	.01	-.44***			
First-Generation Status	-.14	.08	-.09			
CGSE * First- Generation Status	.01	.01	.10			
Expectation						
Step 1				.07	.07	11.75***
CGSE	-.01	.01	-.08			
First-Generation Status	-.62	.13	-.26***			
Step 2				.06	>.001	7.82***
CGSE	-.01	.01	-.10			
First-Generation Status	-.62	.13	-.26***			
CGSE * First- Generation Status	.002	.02	.01			
Prove Worth						
Step 1				.02	.03	4.53**
CGSE	.002	.01	.01			
First-Generation Status	.45	.15	.17**			
Step 2				.15	.01	3.20*
CGSE	-.003	.01	-.02			
First-Generation Status	.45	.15	.17**			
CGSE * First- Generation Status	.01	.02	.05			
Help Family						
Step 1				.02	.02	4.06*
CGSE	-.01	.01	-.04			
First-Generation Status	.40	.15	.15**			
Step 2				.02	.001	2.84*
CGSE	-.01	.01	-.07			
First-Generation Status	.41	.15	.16**			
CGSE * First- Generation Status	.01	.02	.05			

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

There was only one significant interaction, which was between Family and Friend Support and student status as a predictor of Career/Personal motivations. A post-hoc regression revealed that Family and Friend Support was a stronger predictor for CGS than FGS. Family and Friend Support accounted for 24% of the variance for CGS, $R^2 = .24$, $F(1, 187) = 60.62$, $\beta = .48$, $p < .001$, versus only accounting for 3% for FGS, $R^2 = .03$, $F(1, 120) = 5.31$, $\beta = .16$, $p = .02$.

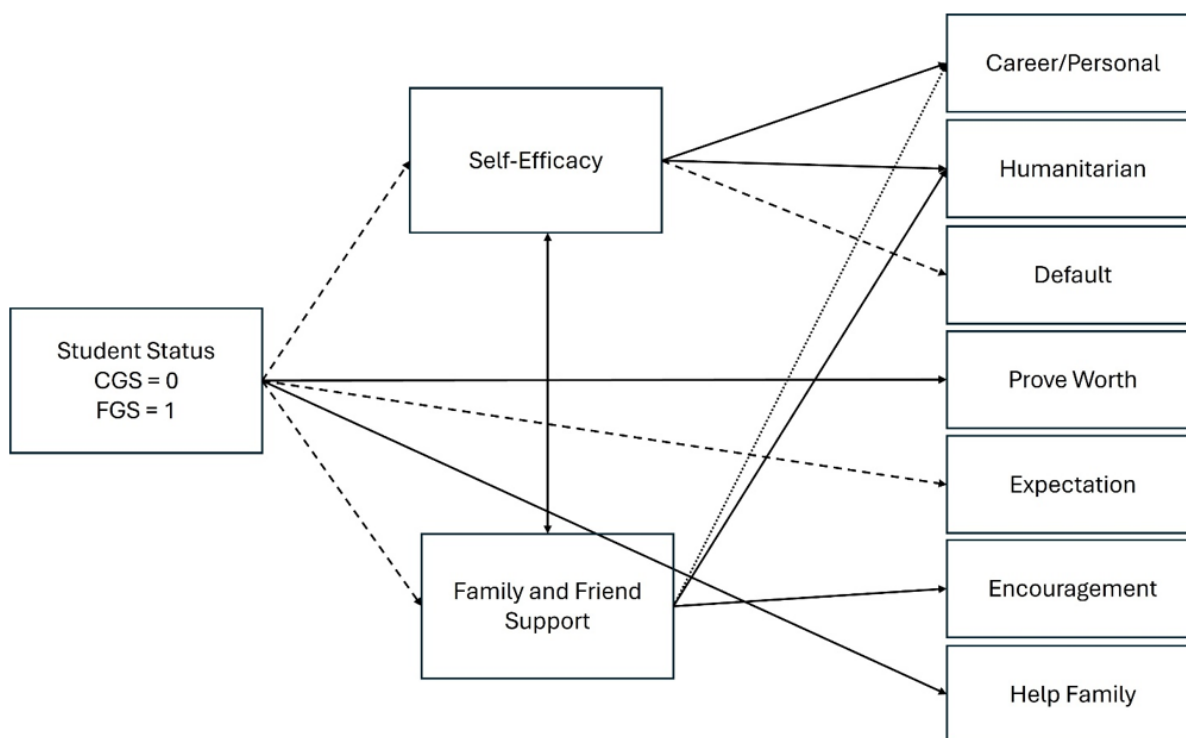
Figure 2 is a visual representation of the connections between each of the components of the full model.

DISCUSSION

The present study examined the motivations for FGS versus CGS for attending university, and how factors identified in the SCCT (academic self-efficacy and social support) influence motivations. The results indicated differences between FGS and CGS regarding their perceived self-efficacy, family and friend support, and motivations for enrolling in university. In support of the SCCT, self-efficacy and social support predicted select motivations similarly for both CGS and FGS participants, except for Career/Personal motivations, where Family and Friend support was more important for CGS.

Figure 2

Visual Representation of the Full Model Predicting Student Motivations for Attending University (SMAU)



Notes.

— Positive relationship

- - - - Negative relationship

..... Positive relationship for CGS students only

Our findings align with research in the following ways: FGS tended to have lower self-efficacy (Inman & Mayes, 1999; Ramos-Sánchez & Nichols, 2007) and lower family and friend support (Gibbons & Borders, 2010; Martin et al., 2020; Um, 2021; Vega, 2017) than CGS. Past research has shown CGS are better equipped to succeed at university. Through past experiences such as their academic performance and support from parents that helps to foster their knowledge about university, CGS develop greater self-efficacy and, in turn, may strive for greater goals (Gibbons & Borders, 2010; Gibbons et al., 2016; Markle & Stelzriede, 2020; Martin et al., 2020; Um, 2021; Vega, 2017). For FGS, having fewer foundational/environmental supports can impact their self-efficacy and can affect their outcomes, as shown through their poorer academic performance and retention rates (Byun et al., 2017; Frazier et al., 2018; Martinez et al., 2009; Pascarella et al., 2004; Radunzel, 2021). Our data do not speak to the direction of the relationship between social support and self-efficacy, but they are correlated and the direction has been demonstrated in past studies.

Overall, self-efficacy and environmental factors such as support from family and friends predicted students' motivations regardless of student status. These findings align with SCCT as self-efficacy and social support influenced Career/Personal, Humanitarian, Encouragement, Expectation, and Default motivations in similar ways. This demonstrates the influence of both social support and self-efficacy on university goals and motivations. Environmental factors such as support aid in students' development and pursuit of various interests. Furthermore, their self-efficacy helps them determine what they are capable of and aim for motivations in line with their interests and beliefs (as influenced by environmental factors). For example, the relationships between Career/Personal motivations, self-efficacy, and social support are supported by the literature; students—usually CGS—who have greater self-efficacy and perceived supports aim for goals that could lead to further advancement in their careers (Gibbons & Borders, 2010; Lohfink & Paulsen,

2006; Martinez et al., 2009; Tate et al., 2014). Continuing-generation students perceive greater support from family and friends, and their self-efficacy is higher than for FGS; therefore, they may be more inclined to have more advantageous Career/Personal motivators in comparison to FGS, according to the SCCT.

Our findings on the specific motivations for university by student status echo previous research. Continuing-generation students were more likely to endorse expectation to attend university as a motivation (Gibbons & Borders, 2010; Martin et al., 2020). These findings fit under the SCCT. Environmental factors such as support and learning from family members help children to develop their own interests by following the example of those around them. As shown by Gibbons and Borders (2010) as well as Martin et al. (2020), parents of CGS place a significant emphasis on the role of higher education. Family members and peers provide scaffolding by which CGS learn to understand what is important and to model their behaviour after those around them. As a result, CGS may be more inclined to attend university due to the role of environmental variables, such as familial expectation, and their influence on self-efficacy.

Separately, FGS endorsed proving their worth and helping their family as motivators to enroll in university at a higher rate than CGS (Bauman et al., 2019; Byun et al., 2017; Dennis et al., 2005; Van & Bui, 2002). Prove Worth as a motivator indicates that students may see university as defining themselves, thus placing a great deal of pressure on themselves to succeed in university. Findings from Flom et al. (2021) support this result. They noted that amongst high-achieving youth, fear of failure/punishment and distributive justice (being compared to other students' academic performance) positively impacted academic performance. These students may be using fear or anxiety as a motivator to help them achieve their goals. Strack et al. (2017) noted that students who are aware of their feelings can use this anxiety around performance to achieve their goals. In doing so, however, students are likely placing a significant amount of stress on themselves to succeed (Frazier et al., 2018).

In the context of SCCT, Prove Worth and Help Family motivations may develop due to person and environmental variables such as students' socio-economic status, and support (or lack of support) could play a significant role in determining students' motivations/goals for attending university. First-generation students perceived lower familial and peer support, which could explain their lower academic self-efficacy, as they had no one to help guide them. As a result, they may have placed significant amounts of pressure on themselves to succeed (Flom et al., 2021). Furthermore, the interdependent nature of FGS families (Lecy et al., 2021; Van & Bui, 2002) could have influenced their motivations, as their families also rely on them for support.

The current study focused on FGS at a small, rural, university campus in Atlantic Canada. When considering other institutions across Canada, we believe that similar trends would still be observed. Furthermore, there may be greater variation in college-going self-efficacy and perceived institutional support between FGS and CGS, especially when factoring in institution size. The university used in the current study had many unique resources available to FGS and had relatively accessible academic supports. Across Canada, however, the same supports may not exist for FGS, and they may experience a harder time navigating university and accessing academic supports. On larger campuses, feelings of belonging may be lower simply because there is an overwhelming amount of information that could be difficult to adjust to for students with limited or no guidance. Additionally, there may be greater disparities amongst White FGS versus racialized FGS, especially in more urban areas where there is greater diversity. The current sample was primarily White and thus did not account for the student experience of marginalized racial groups.

Limitations

The current study had several limitations. University environments are not interchangeable. Students at a smaller university will not face the same challenges as students at a larger institution. Smaller universities may offer more per-

sonal support compared to larger institutions, where more resources are available, but student support is less personalized. This study should be replicated at universities of varying sizes, and with different supports for students—including FGS-specific supports—to assess the impact on the results.

Using current undergraduate university students could have impacted the results. Participants would have relied on retrospective recall to assess their motivations for enrolling in university; thus, validity could be compromised. Furthermore, students would already have higher self-efficacy than age-equivalent peers from being in university, and it is possible their support networks would have adapted to become supportive. As a result, the differences between GGS and FGS may not be as pronounced compared to younger students or those not enrolled in university.

CONCLUSION

Overall, this study implies that while FGS and CGS may have different motivations, the SCCT model finds that several motivations are predicted by self-efficacy and social support in the same way. In our study, FGS reported lower self-efficacy and social support than CGS, which, in turn, influenced their motivations. This model can help us better understand where FGS may need more support and suggests more interventions are needed to increase self-efficacy prior to entering university. The current study added to the knowledge by affirming that FGS' motivations for enrolling in university are similar in a Canadian context to an American context and differ in some categories from their CGS peers. Moreover, to the best of our knowledge, this was the first study to examine the impact of self-efficacy and social support on motivations for attending university. The results found in this study will play an important role in establishing the use of the SCCT model for FGS in Canada and better understanding their motivations for continuing through higher education.

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