

Wilfrid Laurier University

Scholars Commons @ Laurier

---

Theses and Dissertations (Comprehensive)

---

2004

## The relationship between youth involvement and the transition to university: An examination of the mediating factors

Thanh-Thanh Tieu  
*Wilfrid Laurier University*

Follow this and additional works at: <https://scholars.wlu.ca/etd>



Part of the [Psychology Commons](#)

---

### Recommended Citation

Tieu, Thanh-Thanh, "The relationship between youth involvement and the transition to university: An examination of the mediating factors" (2004). *Theses and Dissertations (Comprehensive)*. 759.  
<https://scholars.wlu.ca/etd/759>

This Thesis is brought to you for free and open access by Scholars Commons @ Laurier. It has been accepted for inclusion in Theses and Dissertations (Comprehensive) by an authorized administrator of Scholars Commons @ Laurier. For more information, please contact [scholarscommons@wlu.ca](mailto:scholarscommons@wlu.ca).

The Relationship between Youth Involvement and the Transition to University:

An Examination of the Mediating Factors

by

Thanh-Thanh Tieu

Honours Bachelor of Arts, Wilfrid Laurier University, 2002

THESIS

Submitted to the Department of Psychology

in partial fulfillment of the requirements for

Master of Arts

Wilfrid Laurier University

2004

© Thanh-Thanh Tieu, 2004



Library and  
Archives Canada

Bibliothèque et  
Archives Canada

Published Heritage  
Branch

Direction du  
Patrimoine de l'édition

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file* *Votre référence*

*ISBN: 0-612-96598-8*

*Our file* *Notre référence*

*ISBN: 0-612-96598-8*

The author has granted a non-exclusive license allowing the Library and Archives Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

**Canada**

## Abstract

Research shows that involvement in activities outside of schoolwork and paid employment predicts better adjustment to university. The purpose of this study was to determine why involvement predicts better adjustment. Literature indicates that in addition to involvement, adjustment to university may be influenced by self-esteem, stress, social support and social skills. It was hypothesized that these factors mediate the relationship between involvement and adjustment. Two studies examined this hypothesis. In study 1, two new scales (the Quality of Involvement Scale, and the Social Skills Scale) were developed and pilot tested for use in study 2. In study 2 undergraduate students completed questionnaires that measured quality and quantity of involvement, self-esteem, stress, social support, social skills, and adjustment to university. The hypotheses that self-esteem, stress, social support and social skills mediated the relationship between involvement and adjustment were tested. Results indicated that self-esteem, social support, and stress all mediate the relationship between involvement and adjustment to university. Quality, and not quantity, of involvement, was the best predictor of adjustment. Results are discussed with regard to ways in which to enhance the quality of students' involvement, and thereby enhance their adjustment to university

### Acknowledgements

First and foremost I would like to thank my advisor, Dr. S. Mark Pancer. Thank-you for supporting me through this project. I would not have been able to do this without you. You have taught me so much about psychology, and about what it means to be a good mentor.

I would like to extend gratitude to my committee members, Dr. Michael Pratt, and Dr. Mindi Foster. Thank-you for your invaluable comments and assistance. Your thoughts and ideas challenged me, and helped me take this project to the next level. I am grateful for the support that you have extended to me throughout the course of this project.

Thank-you to the amazing friends I made here in the Social-Developmental program: Gillian Macdonald, Erin Allard, Craig Ross and Jacqueline Ye. Thank-you for the advice and for all of the fun times. This year would not have been the same without you guys.

Finally, I would like to thank my family. To my parents, my sister, my brother, and my partner, Brian: thank-you for your unconditional love and support throughout this challenging year. Throughout all of the highs and lows you have all been there to nurture and help me. Thanks for putting up with me. I love you.

## Table of Contents

Abstract .....	ii
Acknowledgements .....	iii
List of Appendices .....	v
List of Tables .....	vi
List of Figures .....	viii
Literature Review .....	1
Youth Involvement and the Transition to University .....	2
Self-Esteem .....	6
Stress .....	7
Social Support .....	8
Social Skills .....	10
The Present Research .....	12
Study 1 .....	12
Method .....	14
Results .....	16
Discussion .....	18
Study 2 .....	18
Method .....	21
Results .....	27
General Discussion .....	38
References .....	101

## List of Appendices

Study 1 – Informed Consent Statement .....	55
Study 1 – Results Summary Feedback .....	58
Quality of Involvement Scale .....	60
Social Skills Scale .....	63
Youth Inventory of Involvement .....	64
Rosenberg Self-Esteem Scale .....	66
Perceived Stress Scale .....	68
Social Provisions Scale .....	69
Student Adaptation to College Questionnaire .....	71
Study 2 – PREP Informed Consent Statement .....	75
Study 2 – Project Summary Debriefing Statement .....	78
Study 2 – Mass Testing Informed Consent Statement .....	79
Study 2 – Results Summary Feedback .....	82

## List of Tables

Factor Loadings for QIS .....	84
Factor Loadings for SSS .....	85
Descriptive Statistics for Involvement Measures .....	86
Correlations between Measures of Quality and Frequency of Involvement and Measures of Adjustment .....	87
Descriptive Statistics of the YII based on Type of Activity Nominated as Most Important .....	88
Descriptive Statistics for QIS based on Type of Activity Nominated as Most Important .....	89
Descriptive Statistics for the SACQ and the SSS .....	90
Correlations between Involvement and Adjustment .....	91
Regression Analysis with Quality of Involvement and Quantity of Involvement as Predictors of Adjustment .....	92
Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Self-Esteem as the Mediator .....	93
Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Stress as the Mediator .....	94
Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Social Support as the Mediator .....	95



Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Social Skills as the Mediator .....	96
Correlations between Mediators .....	97

## List of Figures

The Relationship between Youth Involvement and Adjustment to University with Self-Esteem, Stress, Social Support and Social Skills as Mediators .....	98
Percentage of Participants that Nominated Activities in Each Category ...	99
Beta Weights Illustrating the Relationship of Self-Esteem, Stress, Social Support, and Social Skills as Mediators of the Relationship Between Youth Involvement and Adjustment to University .....	100

THE RELATIONSHIP BETWEEN YOUTH INVOLVEMENT AND THE  
TRANSITION TO UNIVERSITY:  
AN EXAMINATION OF THE MEDIATING FACTORS

Transitions are a pervasive part of life. They are generally marked by the development of new social networks, new relationships, new behaviours and new perceptions of the self (Schlossberg, 1980). The experience of a transition is generally one that is quite taxing, whether the transition is a positive, successful one or a negative, difficult one.

For many young adults the transition to university can be particularly stressful. A difficult transition can be manifested in problematic behaviour such as low grades, withdrawal from courses, depression, loneliness, and in the most extreme cases, dropping out of school. In fact, the majority of student attrition occurs during the first year of university (Gaither, 1992), with the attrition rate as high as 20% (Mallinckrodt & Sedlacek, 1987). Given that approximately 60% of North American adolescents pursue education at the postsecondary level (Steinberg, 1999), it is beneficial to examine the transition to university in order to determine what factors may facilitate or hinder successful adjustment.

Generally, adjustment involves adapting to new circumstances or new environments (Colman, 2003), or coping with a life transition. One factor that appears to facilitate adjustment to university is the individual's involvement in university and community life. The purpose of this thesis is to examine this relationship between involvement and adjustment to university more closely by asking the question: Why does involvement produce better adjustment to university? Literature on the topic of

adjustment to university has found a number of factors to be important in enhancing adaptation to university: self-esteem, stress, social support and social skills. This thesis examines whether involvement acts to increase self-esteem, social support, and social skills and decrease levels of stress, thus producing better adjustment. It is proposed that these factors, self-esteem, stress, social support, and social skills, mediate the relationship between involvement and adjustment.

#### *Youth Involvement and Transition to University*

For the purpose of this paper, youth involvement and engagement will be conceptualized as meaningful participation and involvement in an activity in which a young person participates where the focus is outside of him or herself (Pancer, Rose-Krasnor, & Loiselle, 2002).

Researchers have found that campus involvement is often associated with success in university (e.g. Terenzini, Pascarella, & Bliming, 1996). It has also been theorized that higher levels of involvement invested at the postsecondary level are related to greater levels of learning and personal development (Astin, 1999). Bradley and Graham (2000) suggest that involvement of any type is important to a student's academic and social development. They found that out-of-class involvement was a significant predictor of factors such as scientific reasoning, intellectual growth, problem-solving, and career development in undergraduate students.

Literature in the area of extra-curricular activities points to the importance of involvement outside of the classroom in academic success and success in other areas of life. Most of this research has focused on students at the high school level. For example, Zaff, Moore, Romano Papillo, and Williams (2003) found that students who were

involved in extra-curricular activities during high school were more likely to pursue postsecondary education, vote in elections and volunteer in the greater community. Participation in extra-curricular activities is also related to lower levels of drop-out in high school students (Mahoney & Cairns, 1997) and higher educational attainment (Mahoney, Cairns, & Farmer, 2003).

Another study examining links between school failure and youth engagement found that high school students who were involved in a Teen Outreach Program demonstrated lower levels of course failure and suspension during the school year compared to a control group (Allen, Philliber, Herrling, & Gabriel, 1997). These studies illustrate the idea that participation both within the school community and outside, within the larger community, are related to academic achievement.

It is apparent that there are many positive benefits to being involved. Yet, more research is needed to illustrate the benefits and impact of youth participation; for example: what does youth participation look like, how does it function, and how is involvement beneficial (O'Donoghue, Kirshner, & McLaughlin, 2002)? Since the area of youth involvement and participation is a developing field, many of these questions still need to be answered. A lack of knowledge on the area of youth involvement could possibly perpetuate myths and misconceptions about its usefulness (O'Donoghue et al., 2002). This study will assist in answering some of the questions pertaining to the benefits of youth involvement. More specifically, this study adds to the literature on the impact of youth involvement by examining why participation assists youth in making the transition to university.

The studies discussed thus far are correlational in nature; they indicate a link between involvement and adjustment, but do not necessarily point toward a causal relationship. Some evidence for a causal link comes from intervention studies, in which students are randomly assigned to a "participation" condition. In one study, Oppenheimer (1984) randomly assigned participants to either a control group or a short-term small group intervention, and assessed the adjustment of these college students in their freshman year. Participants completed four pre-test measures that assessed their levels of anxiety concerning their social adjustment to university, their social life satisfaction, anxiety, and self-esteem. Scores below the median on the social life satisfaction measure are related to feelings of concern and apprehension with respect to one's social life. Based on their scores on the social life satisfaction measure, a median split was used to categorize the participants. Individuals who scored below the median on this measure were classified as being vulnerable to transition-related stress. The participants who scored above the median were classified as being less vulnerable to stress due to the transition. Participants were then assigned to either the control condition or one of two intervention conditions. The intervention condition involved participation in small discussion groups. The participants who were assigned to the intervention conditions were put into groups of four to six students. Each group met weekly for informal, open-ended sessions from mid-October to late November. The facilitators were instructed to examine issues of problem-solving, openness, and group cohesion in their meetings. Follow-up evaluations were conducted in December and April. There were no significant differences between the groups during the December evaluation. However, during the April evaluation, the results showed that, overall, participants who were in the

intervention groups showed better adjustment than participants in the control group. Closer examination of the results revealed that the intervention only made a difference for participants who were classified as being more vulnerable to transition-related stress during the pre-test.

A similar study conducted by Pratt and colleagues (2000) examined the effects of social-support focused discussion groups. In this study students were randomly assigned to participate in discussion groups that consisted of nine sessions, and took place over the first five months of students' first year at university. Each session dealt with topics related to the transition to university that the students were experiencing. Similar to Oppenheimer's (1984) study, it was found that students who participated in the intervention showed better adjustment to university, were less likely to smoke, and skip class compared to members of the control group. Women who participated in the intervention also scored lower on measures of depression and reported greater social support compared to the control group. Yet, unlike the Oppenheimer study, the intervention effect was significant for all participants in the intervention groups, not just the students classified as being vulnerable.

The results of these intervention studies show a clear relationship between involvement in intervention groups and adjustment to university. However, these intervention studies are largely deficient in explaining what it is about involvement that predicts better adjustment. Why are these intervention groups successful in assisting students with the transition to university? Is it because of the nature of the participation; taking part in intervention groups? Or, is simply being involved in an activity enough to enhance one's adjustment? What is it about being involved that results in individuals

adjusting better to university? Though participation in small group interventions seems to assist students in making the transition to university, there are also a number of other factors that are related to a successful adjustment.

### *Self-Esteem*

One factor related to academic performance and adjustment of first year students is self-esteem. Literature on adaptation to transition indicates that how favourably one views oneself is a factor in determining how one will cope with life transitions (Schlossberg, 1980).

Thombs (1995) conducted a study that examined differences between college freshmen students who displayed problem behaviours and students who did not. Problem behaviour was defined as any behaviour that undermined students' general adjustment to college, such as skipping school, poor study habits, difficulty controlling alcohol use, and poor time management. Results showed that self-esteem and problem behaviours were negatively related; as students' self-esteem increased, the instances of problem behaviour decreased. Based on these findings, it seems that students with higher levels of self-esteem are less likely to behave in ways that will be harmful to their adjustment to university.

The work by Thombs and Schlossberg suggests that an individual's level of self-esteem is related to how well he/she will adjust to university. Yet data also suggest that self-esteem is related to involvement. Lawson and McNally (1995) found that youth who participated in Berkley Youth Alternative Programs showed increases in self-esteem along with learning job-relevant skills. It appears that being involved in activities outside



of schoolwork and paid employment is positively related to self-esteem, where greater involvement is associated with higher self-esteem.

Data seem to suggest that self-esteem is related to both involvement and adjustment to university. Therefore, it is proposed that involvement in activities outside of schoolwork and employment may serve to boost an individual's self-esteem. This increased level of self-esteem would then result in better adjustment to university.

### *Stress*

In addition to self-esteem, Schlossberg (1980) also notes that the amount of stress an individual experiences could also affect how a person copes with a life transition. Jackson, Pancer, Pratt, and Hunsberger (2000) examined students' expectations regarding the transition to university, and their subsequent adaptation. They found that students who were fearful concerning the upcoming transition to university scored higher on measures of stress and depression prior to the beginning of school. Subsequently, once school began, these same fearful students scored lower on measures of adjustment to university. Therefore, it appears that stress that students expected to experience once they entered university was negatively related to their actual adjustment. As such, a student who experiences high levels of stress may also experience greater difficulty in adjusting to university.

Research seems to support a relationship between participation in activities and reduced levels of stress. A qualitative study conducted by Kimball and Freysinger (2003) examined the experiences of undergraduate student athletes. The participants reported that being involved in athletics assisted them in coping with the stress of being an athlete as well as with the stresses associated with everyday life. Their participation allowed

them to cope with stress in many ways, such as through companionship with other teammates, as an escape from daily stressors, and through mood enhancement. Students also reported that traveling to away games reduced the stress they experienced because it allowed them to break away from the daily rigors of school.

It seems that involvement in activities outside of schoolwork and paid employment works to reduce stress students may experience through the daily pressures of school. The amount of stress students feel also appears to be related to how well they will adjust to university and their subsequent academic performance. Therefore, it is proposed that participating in activities outside of schoolwork and paid employment will reduce levels of stress that students may be experiencing. These lowered stress levels would then be beneficial for students coping with the transition to university.

### *Social Support*

Related to the impact of stress is the presence of social support networks in students' lives. Social support is conceptualized as interactions with others which facilitate greater accommodation with the surrounding environment (Caplan, 1974). Research indicates that social support networks seem to buffer the impact of stress when coping with life transitions and may be essential in successful adaptation (Schlossberg, 1980).

Schlossberg (1980) identified two types of support systems: interpersonal support systems, and institutional support systems. The interpersonal support systems can be further broken down into three different types: intimate relationships, the family unit, and the network of friends. Institutional support systems refer to more formal agencies such

as religious institutions, political groups, occupational organizations, and other such community support groups.

Research indicates that social support networks have an impact on how successful students are in making the transition to university. The presence of stable social support networks appears to be an important factor for young adults adjusting to university. This factor is of special significance considering the fact that the quality of important social relationships often decreases during the transition to university (Hays & Oxley, 1986). Yet, research shows that the amount of social support available is positively related to a student's adjustment to university and to the coping skills that they employ while making the transition (Tao, Dong, Pratt, Hunsberger, & Pancer, 2000).

Hays and Oxley (1986) found that, in general, new students adjusting to university experienced smoother transitions when their social networks included other university students. Adaptation to university life was also influenced by the size of the social support network, such that larger networks seemed to be more adaptive. This could be due to the fact that larger networks result in a greater probability of supportive resources being available should the need arise. Another interesting finding of Hays and Oxley was that social support networks that provided fun and relaxation were the most beneficial to the transition to university, because they seemed to serve a preventive function. Social support systems that provide fun and relaxation could also be negatively related to students' levels of stress, with more fun and relaxing systems of support reducing stress. As previously discussed, it appears that stress is also negatively related to the transition to university.

Research seems to suggest that social support networks can often be developed through participation and involvement in activities outside of schoolwork and paid employment. A study conducted by Dworkin, Larson, and Hansen (2003) employed focus groups to obtain high school students' accounts and descriptions of how they have changed, and growth experiences they have encountered during their participation in extracurricular and community-based activities. Several participants reported that they developed loyal and intimate relationships with other peers who also participated in their activity. Many participants also reported that the connections they developed with adults and other community members who were involved in their activity acted as a source of support.

It appears that being involved in activities outside of schoolwork and employment may be beneficial in the development of additional social support networks. The presence of social support networks, particularly friendships, is related to an individual's adjustment to university. Therefore, it is proposed that involvement in activities outside of schoolwork and employment may assist individuals in developing social support networks. Thus, involvement may influence adjustment because it serves to broaden and enhance one's social support networks.

### *Social Skills*

Another factor that may influence students' adjustment to university is social skills. A social skill is any skill that facilitates or is necessary for social interaction (Colman, 2003). Research by Riggio, Watring, and Throckmorton (1993) examined whether social skills had an impact on the psychosocial adjustment of college students. They found that a positive relationship existed between social skills and psychosocial

adjustment in college students. Therefore, as students' levels of social skills and social competency rises, their psychosocial adjustment rises as well.

Research in the area of involvement seems to indicate that participation in extra-curricular activities may also allow youth to develop, refine and utilize interpersonal and social skills (Rubin, Bommer, & Baldwin, 2002). Social skills were more developed in advanced undergraduate students who had participated as members of clubs, organizations, sororities and fraternities. Rubin and colleagues also found that participation in extra-curricular activities was positively associated with development of communication skills, decision-making skills, initiative and teamwork.

When asked about their experiences as volunteers, the participants in a study conducted by Hamilton and Fenzel (1988) generally responded in a positive manner, stating that they experienced great satisfaction through their work. Many discussed the improvements they had made in existing skills, self-knowledge and knowledge of others. Specific to the development of social skills, these volunteers also talked about learning new skills, improvements in their decision-making abilities and learning to work with others.

It appears that involvement is related to the positive development of social skills, and that social skills are also a factor in determining how well a person adjusts to life transitions. Thus, it is proposed that the social skills that are developed through involvement in activities outside of class may assist students with adjusting to university by facilitating social and interpersonal interactions.

Research seems to indicate that a successful transition to university is influenced by many factors such as self-esteem, stress, social support, and social skills. It also

appears that involvement is related to adjustment to university (e.g. Terenzini, Pascarella, & Bliming, 1996). The purpose of this thesis is to determine why involvement predicts better adjustment. It is proposed that involvement and participation boosts self-esteem, reduces stress, increases social support, and allows individuals the opportunity to develop social skills. All of these, in turn, are factors that influence an individual's adjustment to university. It is these factors: self-esteem, stress, social support, and social skills that mediate the relationship between involvement and adjustment.

### The Present Research

The goal of this present research was to examine the relationship between youth involvement and engagement and the transition to university. More specifically, the research question that was being investigated was: Why is it that involvement predicts better adjustment to university? In other words, what factors mediate the relationship between involvement and adjustment?

### Study 1

Previous studies in the area of youth involvement have employed various methods to measure involvement or participation. For example, measures such as the Youth Inventory of Involvement (Pancer, Pratt, Hunsberger, & Alisat, in press) require respondents to rate the extent to which they have been involved in a number of specified activities. Other methods used include asking participants to report the number of hours they spend a week on a given activity (Bradley & Graham, 2000); having them check off activities that they have been involved in (Barber, Eccles, & Stone, 2001); examining club photographs in yearbooks (Mahoney & Cairns, 1997); using listings of club members and team rosters (Mahoney, Cairns, & Farmer, 2003), among many others.

Though a great deal of information can be garnered from these measures, they are deficient in one respect. The measures of involvement that are currently being employed do not assess the quality of a respondent's participation experience. In other words, though the measures do capture the types of activities students participate in, and the amount of time they devote to outside activities, they do not examine the depth and richness of the respondent's involvement in any given activity.

The purpose of study 1 was to collect psychometric information on the Quality of Involvement Scale (QIS) and the Social Skills Scale (SSS). These scales were later used in study 2 to measure the quality of one's involvements and social skills respectively.

#### *The Quality of Involvement Scale*

A person could spend equal amounts of time participating in two different activities, but they may experience their participation in one activity to be more fulfilling or enjoyable than the other. One may learn more and glean more knowledge from one activity than another even if the same amount of time is devoted to both. A high quality experience is one that carries meaning for the participant, to which the participant feels a sustained connection to, and one where the participant becomes easily and enjoyably absorbed in the activity (Nakamura, 2001).

The QIS was developed to examine the quality of a respondent's involvements. Questions for this scale were generated through review of literature on involvement and engagement, and what has been dubbed the experience of "flow": the subjective experience of engagement or absorption in an activity (Colby & Damon, 1992; Csikszentmihalyi, 1990, 1996; Nakamura, 2001). A review of the literature resulted in the

compilation of factors that characterize a high quality experience. The questions used in the QIS were derived from these factors.

### *The Social Skills Scale*

Unfortunately, no measure currently exists that examines the development of social skills related to involvement. The SSS was developed to assess the extent to which a respondent's social skills developed specifically as it related to his/her involvement in activities that were nominated as being important.

Questions for the scale were generated by reviewing articles such as the ones by Rubin, Bommer, & Baldwin (2002), and Hamilton and Fenzel (1988); and by brainstorming social skills that could logically be related to involvement.

## Method

### *Participants*

Participants were 55 first year undergraduate students, 24 males ( $M$  age = 19.17,  $SD$  = 1.34), and 31 females ( $M$  age = 18.97,  $SD$  = 1.22) enrolled in an introductory psychology course at Wilfrid Laurier University. Participants were recruited through a mass-testing session that took place during a regular class meeting. Students were given 0.5 course credit in exchange for their participation.

### *Measures*

*Quality of Involvement Scale (QIS)*. The first part of the QIS asks respondents to list all of the activities they have been involved in for the last 12 months, outside of coursework and paid employment, and the number of hours a week they spent participating in each activity. From the list of activities that were generated, the respondent was asked to nominate the activities that were most important, second most



important, and third most important. For each of the three activities that were nominated as being most important the respondent was asked complete 32 items that assessed the quality of their involvement experience for each activity. Responses were given on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). All items were positively worded, with no reverse-scored items included. The total score on the scale is determined by adding up the answers given for each item. Higher scores indicate a higher quality of experience.

*Social Skills Scale (SSS)*. The SSS was initially developed with 13 items. The respondent was provided with a list of skills and was asked to rate the extent to which their involvement in each of the three most important activities resulted in improvement in each of the listed skills. Responses were given on a scale ranging from 1 (not at all) to 5 (a great deal). Higher scores indicate greater improvement in social skills in relation to involvement experiences.

#### *Procedure*

Students who attended class that day were given the opportunity to participate in the study in exchange for course credit. They were each given a questionnaire package that included these two questionnaires along with three other questionnaires that were also being administered that day. The order of the questionnaires in the package was counterbalanced. Students were given an informed consent form (see Appendix A) explaining that the study was being conducted in order to obtain psychometric information for a new scale that was being developed.

Once participants completed the questionnaire package they handed them in and received a general feedback form to take with them. This form outlined the purposes of

all of the studies that were included in the questionnaire package. Students were also advised that the results of the study would be available for review at the end of the second semester. A copy of the posted results can be found in Appendix B.

## Results

### *Factor Analysis and Reliability*

*Quality of Involvement Scale (QIS)*. Results of the factor analysis of the original 32-item scale revealed that the scale was mainly being driven by three factors. One factor (items 1, 2, 3, 7, 8, 10 and 11 [item numbers are all from revised scale]) examines the meaning or importance the respondent assigns to the activity (e.g. "This activity is an important part of how I define myself"). Another factor (items 4, 5, 6, 9, 13, 14, 17, and 18) looks at affect as it relates to the activity he/she is involved in (e.g. "I care about this activity"). Lastly, the third factor (items 12, 15, and 16) addresses interpersonal or social relationships related to involvement in this activity (e.g. "I feel a sense of connection to others that also participate in this activity"). Factor loadings can be found in Table 1.

The Cronbach's alpha for the original 32 item scale was .81. Examination of the rotated component matrix and the factor loadings allowed for a total of 14 items to be dropped from the scale bringing the overall Cronbach's alpha for the entire 18 item scale to .91. The Cronbach's alpha for the three factors/subscales once the items were deleted were .90, .90, and .84, respectively. The revised version of the scale can be found in Appendix C.

*Social Skills Scale (SSS)*. Results of a factor analysis revealed that the scale was being driven by two main factors. Examination revealed that one factor (items 1, 2, 3, 4, and 8 [item numbers refer to revised scale]) assessed skills that related to working with

others (e.g. “teamwork skills”). The other factor (items 5, 6, and 7) addressed skills associated with voicing one’s opinion (e.g. “standing up for my beliefs”). Factor loadings can be found in Table 2.

The Cronbach’s alpha for the original 13 item scale was .90. Examination of the rotated component matrix and the factor loadings allowed for a total of five items to be dropped. The Cronbach’s alpha for the eight items for the overall scale is .89, with alphas of .89 and .83 for the two factors respectively. The new eight item scale is made up of two subscales. One subscale, containing five items, examines skills related to working with others. The second subscale contains three items and assesses skills associated with voicing one’s own opinion. Refer to Appendix D for a copy of the revised scale.

#### *Correlations*

*Quality of Involvement Scale (QIS)*. Correlations revealed that the total number of hours the participant spent on their activities was not correlated to their score on the QIS for the activity nominated as being most important,  $r(53) = .012, p = .93, ns$ . It was also found that the number of hours the participant spent each week on the activity nominated as being most important was not related to the score on the QIS for that activity,  $r(53) = .162, p = .243, ns$ . The same pattern was found for the second most important activity,  $r(44) = .263, p = .081, ns$ ; and for the third most important activity,  $r(34) = .030, p = .863, ns$ .

*Social Skills Scale (SSS)*. Results reveal that scores on the SSS are positively correlated with the respondent’s score on the QIS,  $r(54) = .511, p < .01$ .

## Discussion

### *Quality of Involvement Scale*

The results of the correlations seem to suggest that the quality of a person's involvement experience is independent from the amount that they participate, both in number of hours and number of activities. Further work needs to be done in order to confirm these preliminary findings. This means that what a person gets out of his or her involvement experience is not necessarily related to how much time he or she contributes to that activity.

### *Social Skills Scale*

The results of the correlation reveal that a positive relationship exists between the development of social skills and the quality of a person's involvement experiences. This seems to indicate that the value or quality of an involvement experience is related to whether it will influence the development of social skills. The more valuable the experience the more the social skills seem to develop. Further work must be done to confirm these preliminary results.

Caution should be exercised when interpreting these results due to the small sample size. The implications of these findings will be further discussed in the general discussion.

## Study 2

One aim of this present study was to utilize the QIS to explore whether it is the quality or the quantity of a student's volunteer experience that matters in relation to their adjustment to university. Is it the quality of the involvement experience that is most rewarding and beneficial, or is it simply the amount, or quantity, of participation that

matters? No specific hypothesis was made regarding whether quality or quantity of involvement experiences would be more important for the transition to university. According to Astin (1999), involvement has features of both quality and frequency or quantity. With respect to the quantity of involvement, a student could spend five hours a week volunteering at a hospital, but the quality of the experience would differ depending on whether the student was given the task of filing patient records and making beds, or whether the student was asked to visit with terminally ill patients. The amount of development and learning that a student undergoes is proportional to both the quantity and the quality of their involvement experiences (Astin, 1999), and therefore it is difficult to speculate whether only one factor, or both factors will be significantly related to students' transition to university.

With respect to the relationship between involvement and adjustment, it was hypothesized that involvement in activities outside of schoolwork and paid employment would be positively related to students' adjustment to university. This hypothesis was made based on previous research that illustrated a positive relationship between participation in activities outside of schoolwork and employment and the transition to university (e.g. Terenzini et al., 1996). Yet it was also expected that there would be a number of factors mediating this relationship.

Research shows that higher scores on measures of self-esteem seem to be related to better adjustment. It is hypothesized, then, that self-esteem would be one of the variables that could mediate the relationship between involvement and adjustment to university. It is expected that individuals who were involved in university and community

activities would experience higher levels of self-esteem, which consequently, would result in better adjustment.

Literature in this area also shows that a relationship exists between stress and adjustment to university. It was hypothesized that stress was a variable that could also mediate the relationship between involvement and adjustment. It was expected that involvement in activities outside of school and employment would reduce stress that an individual experiences. This reduced level of stress would then result in better adjustment to university.

Based on previous literature, it appears that there is a relationship between social support and success in making the transition to university. It was hypothesized that social support was one variable that would mediate the relationship between involvement and adjustment, where individuals that were involved in activities outside of school and employment would experience higher levels of social support. In turn, this increased social support should produce better adjustment.

Involvement has been found to be related to the development of social skills such as decision-making and teamwork. It was also found that social skills were related to better psychosocial adjustment in college students. Therefore, it was hypothesized that involvement in activities outside of schoolwork and paid employment would result in improved social skills. In turn, the improved social skills would result in the individual experiencing a more positive adjustment to university.

In sum, it is hypothesized that involvement will be positively related to adjustment to university. It is also hypothesized that self-esteem, stress, social support,

and social skills would mediate the relationship between involvement and adjustment (see Figure 1 for a diagram of the relationships among variables).

## Method

### *Participants*

Participants were 191 first year undergraduate students (males  $N = 81$ , females  $N = 110$ ) enrolled in Introductory Psychology at Wilfrid Laurier University. Participants' ages ranged from 18 to 31,  $M = 19.17$ ,  $SD = 1.40$ .

Participants were recruited in two ways. The Psychology Research Experience Program (PREP) was one method of recruitment that was used. This program allows students to sign up for participation in research studies on-line. The second method of recruitment involved collection of data through a mass testing session that took place during a regular class meeting. Students who were in attendance that day were invited to participate in the study. All of the participants received 0.5 course credit in exchange for their participation. It is typical for introductory psychology students to receive 0.5 credit for every half hour of research participation. Students are required to earn 4.0 credits as a requirement for their introductory psychology class. Alternatively, they may write critical reviews of scholarly journal articles in lieu of participating in research studies.

### *Measures*

All students received a questionnaire package that contained a measure of background information, and an additional seven measures which the participants were asked to complete independently. The following specific measures were administered during each testing session:

*Youth Inventory of Involvement (YII) (Pancer, Pratt, & Hunsberger, in press).*

The Youth Inventory of Involvement (see Appendix E for the scale) examines the amount of involvement the respondent had over the last year. A list of activities is provided, and the respondent must indicate on a scale ranging from 0 (never did this) to 4 (did this a lot) the extent to which they participated in the specified activity. The scale is made up of four subscales: political activities (e.g. collected signatures for a petition drive), community activities (e.g. helped organize neighbourhood or community events), passive activities (e.g. signed a petition), or helping activities (e.g. visited or helped out people who were sick). Scores on this scale range from 0 to 120 with higher scores indicating higher amounts of involvement. The Cronbach's alpha for the overall scale is .90. With respect to the scale's stability, when participants were tested again after a two year period, the correlation between the two scores was .61. Scores on this scale are correlated with measures of social support (Social Provisions Scale, Cutrona, 1989), and self-esteem (Rosenberg Self-Esteem Scale, Rosenberg, 1965).

*Quality of Involvement Scale (QIS).* This scale was developed for use in this study. This scale assesses the overall quality of the respondent's involvement in activities outside of schoolwork and paid employment that are nominated as being most important to them. In this scale the respondents are asked to list all of the activities that they have been involved in for the past year, and the number of hours spent on each activity per week. From this list they must nominate the two activities that are most important to them and answer questions pertaining to their involvement in these nominated activities. This 18 item scale contains three subscales. One subscale assesses affect associated with participation in the activity (e.g., "I care about this activity"). This subscale contains eight



items. Another factor, containing seven items, examines the meaning or importance the respondent assigns to the activity (e.g., “This activity is an important part of how I define myself”). The third factor, made up of three items, addresses interpersonal or social relationships related to involvement in this activity (e.g., “I feel a sense of connection to others that also participate in this activity”). Responses are given on a scale of 1 (strongly disagree) to 5 (strongly agree), with higher scores on the scale indicating higher quality of involvement experiences. Scores for this measure range from 18 to 90 with higher scores indicating higher quality of involvement. The Cronbach’s alpha for the overall scale is .91; the Cronbach’s alpha for the three subscales are .90, .90, and .84, respectively.

*Self-Esteem Scale (Rosenberg, 1965).* This 10-item scale (see Appendix F) examines the self-acceptance aspect of self-esteem. This scale has high reliability and a test-retest correlation over two weeks of .85 (Silber & Tippett, 1965). This scale also displays high convergent, discriminant, and predictive validity (Rosenberg, 1965; Silber & Tippett, 1965). Responses to this measure are given on a scale ranging from 1 (strongly agree) to 4 (strongly disagree). A sample item from this questionnaire is: “I feel that I have a number of good qualities”. Scores on this scale range from 10 to 40 with higher scores indicating higher self-esteem.

*Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983).* This scale (see Appendix G) contains 14 items and examines the degree to which the respondent perceives situations in his/her life as being stressful. It also examines whether levels of stress that the respondent reports are risk factors for behavioural disorders. Values obtained from three samples had Cronbach’s alpha values of .84, .85, and .86. The PSS has also been found to be correlated with life-event scores, depressive and physical

symptomatology, use of health services, and social anxiety (Cohen et al., 1983). A sample item from this questionnaire is: "In the last month, how often have you felt that things were going your way?" Responses are given on a scale ranging from 0 (never) to 4 (very often). Scores on this questionnaire range from 0 to 56 with higher total scores indicate higher levels of perceived stress.

*Social Provisions Scale (Cutrona, 1989)*. This 24-item scale (see Appendix H) examines the six provisions of social relationships (Weiss, 1974). These six provisions are guidance, reliable alliance (tangible assistance), attachment, social integration, reassurance of worth and the opportunity to provide nurturance. Respondents are asked to consider their social support network when assessing the extent to which they believe that the six provisions are available. Each provision is assessed with four items. The reliability of the scale ranges from .87 to .91 across various samples, with extensive validity reported among adolescent and adult populations (Cutrona & Russell, 1987). The scores on the six provisions are then combined to arrive at a global support scale. Scores on this scale range from -96 to 96 where higher scores indicate higher amounts of social support available.

*Social Skills Scale (SSS)*. This scale contains items that measure the development of social skills as they specifically relate to involvement in activities outside of schoolwork and paid employment. For these questions, respondents rate the extent to which a specific skill has improved as a result of their participation in the nominated activity. Responses range from 1 (not at all) to 5 (a great deal). Higher scores on this scale point toward greater improvements in social skills due to involvement. There are two subscales in the SSS: one containing five items, that assesses skills associated with

working with others (e.g. “teamwork skills”), and a second subscale, made up of three items that assess skills related to voicing one’s opinions (e.g., “standing up for my beliefs”). Scores for the SSS range from 8 to 40 with higher scores indicating greater development of social skills in relation to participation in the nominated activities. The scale was found to have a Cronbach’s Alpha of .89, with alphas of .89 and .83, for each factor, respectively.

*Student Adaptation to College Questionnaire (SACQ)* (Baker & Siryk, 1984). This 67-item scale (see Appendix I) was designed to assess how well a student is adjusting to college or university. This self-report questionnaire is divided into four subscales that examine specific aspects of adjustment to university. The academic adjustment subscale assesses the extent to which the student is adjusting to the academic demands of university (e.g., “I have been keeping up to date on my academic work”). The social adjustment subscale refers to how the student is adjusting to the interpersonal-societal demands of university (e.g., “I feel that I fit in well as part of the college environment”). The personal-emotional adjustment subscale examines how the student feels both psychologically and physically (e.g., “I have been feeling tense or nervous lately”). Lastly, the goal commitment/institutional attachment subscale assesses the student’s feelings about being in university and also examines the specific feelings that he/she holds regarding his or her specific school (e.g., “I am pleased now with my decision to go to college”). All responses are made on a scale ranging from 1 (doesn’t apply to me at all) to 9 (applies very closely to me). Scores on the SACQ can range from 67 to 603 with higher scores indicating better adjustment to university. The Cronbach’s alphas range from .92 to .95 for the full scale. The Cronbach’s alphas for the subscales range from .82

to .89. The SACQ is also found to correlate highly (.66) with the Mental Health Inventory (Veit & Ware, 1983), another measure of adjustment.

#### *Procedure*

Participants were invited to participate in the study through the PREP website, and through a mass-testing session. Students recruited through PREP were required to sign up for a 30 minute session in exchange for 0.5 course credit. Upon arriving at the research session, participants were greeted by the experimenter. The experimenter began by distributing consent forms (see Appendix J), which also explained the nature of the study. Once the consent forms were signed and collected, the experimenter then distributed the questionnaire package. Once the participants completed the questionnaires they were thoroughly debriefed (see Appendix K). Participants were given a copy of the debriefing statement for their own reference, and they were thanked for their participation.

Students who were recruited during the mass-testing session were given a letter sized envelope upon entering the classroom. The envelope contained an informed consent letter (see Appendix L), and the questionnaire package. Students were advised that their participation was voluntary, and if they chose not to participate they could leave the questionnaires blank and return the entire envelope. Once students completed the questionnaires they brought them to the front of the classroom, and signed their name and student identification number on a separate piece of paper to ensure they received course credit. They also received the same feedback statement that the PREP participants were given which outlined the nature of the study and thanked them for their participation.

In the informed consent statement all of the participants were advised that the results of the study would be posted outside of the psychology main office for their

review. The results statement was also e-mailed to all of the students through the PREP system. Please refer to Appendix M for a copy of the results.

## Results

### *Involvement*

Participants were asked to nominate the two activities that they participated in that were most important to them. Analysis of the data revealed that 9.4% of the participants did not participate in more than one activity, and therefore were not able to nominate a second activity. As a result, the decision was made to only analyze participants' responses regarding their most important activity. Data analyses were also conducted with the scores for the second most important activity. The results garnered from these analyses all support the general trends established by the results found through analysis of the most important activity, however, the effects were found to be stronger when using the data from the most important activity. Therefore, all results reported in this section with respect to the Quality of Involvement Scale (QIS) and the Social Skills Scale (SSS) pertain to participants' most important activity.

The Youth Involvement Inventory (YII) and the QIS were used to measure involvement. The YII measures the frequency of involvement. Respondents report the extent to which they have been involved in various activities within the past year. The activities listed on the YII can be grouped into four categories: political activities, community activities, responding activities, and helping activities (Pancer, Pratt, Hunsberger, & Alisat, in press). The mean scores, standard deviations and alphas for the YII and all its subscales can be found in Table 3.

The QIS also measured frequency of involvement. Participants were asked to list any activities outside of schoolwork and paid employment that they engaged in within the previous calendar year, and the number of hours they spent each week respectively on each activity listed (see Table 3 for descriptive statistics). In addition, the QIS also examined the quality of these involvement experiences. Participants were asked to consider the activities they were involved in and to nominate the activity that was most important to them and the activity that was second most important. They were then instructed to complete questions assessing the quality of their involvement in both the activity nominated as being most important and they nominated as being second most important. Descriptive statistics for the QIS and its respective subscales can be found in Table 3.

Correlations were conducted on measures of involvement frequency (scores on the YII and its subscales, total number of hours spent on activities outside of schoolwork and paid employment, and number of hours spent on the most important activity) and measures of involvement quality (overall scores on the QIS and its subscales). Refer to Table 4 for the correlations.

Examination of the data revealed that the activities that participants listed in the QIS could be categorized into four categories: athletics (e.g. intramural sports, varsity teams, etc.); religious, arts and clubs (e.g. going to church, playing a musical instrument, student government, etc.); community service (e.g. volunteering for Habitat for Humanity, volunteering for Amnesty International, etc.); and social (e.g. hanging out with friends, going to dance clubs, etc.). As seen in Figure 2, 56.5% of the participants listed an athletic activity as being most important. Religious activities, involvement in the arts, and

clubs were reported as the most important activity by 24.6%, community service activities were most important to 12.0% of the participants, and social activities were nominated as most important by 5.2% of the participants. There were 1.6% of students who reported that they did not participate in any activities outside of schoolwork and paid employment.

A one-way analysis of variance (ANOVA) was conducted with type of activity as the independent variable and score on the YII as the dependent variable. Results revealed that scores on the YII did not differ based on type of activity nominated as most important,  $F(3, 176) = 1.64, p = 0.18, ns$ . The mean scores obtained on the YII broken down by activity can be found in Table 5.

Analysis also revealed that there was no difference in scores on the total score of the QIS based on what type of activity participants nominated as being most important,  $F(3, 184) = 1.58, p = 0.20, ns$ . Participants did not differ on their scores on the QIS meaning subscale depending on what type of activity they selected,  $F(3, 184) = 1.33, p = 0.27, ns$ . However, the groups did differ on their scores for the QIS affect subscale,  $F(3, 184) = 4.45, p = 0.005$ . The groups also differed on their scores of the QIS interpersonal-relationship subscale,  $F(3, 184) = 3.34, p < 0.05$ . Post-hoc analysis using the Least Significant Difference (LSD) procedure revealed that participants who listed an athletic activity, or an activity that was classified as being religious, artistic, or club scored higher on the affect subscale of the QIS than participants who listed community service activities as most important to them. With respect to the interpersonal-relationship subscale of the QIS, post-hoc analysis found that participants who listed social activities as most important scored significantly higher than participants who listed either athletic

activities or community service activities as most important. The means for the groups can be found in Table 6.

### *Involvement and Adjustment*

For this study, adjustment was measured using the SACQ. This questionnaire is designed to measure how well a student adjusts to college or university. Descriptive statistics for the SACQ can be found in Table 7.

A series of one-way ANOVAs was conducted with type of activity as the independent variable and scores on the SACQ and its subscales as the dependent variable. The results revealed that there was no difference in scores on the SACQ total score, or any of its subscales, due to type of activity participants were involved in: SACQ total,  $F(3, 181) = .783, p = .505, ns.$ ; academic subscale,  $F(3, 184) = .885, p = .450, ns.$ ; social adjustment subscale,  $F(3, 181) = .398, p = .398, ns.$ ; the emotional adjustment subscale,  $F(3, 184) = .743, p = .743, ns.$ ; and the goal commitment/institutional attachment subscale of the SACQ,  $F(3, 181) = .264, p = .851, ns.$

In general, it was expected that involvement would be positively related to adjustment. With respect to the frequency measures of involvement, it was found that the total number of hours that participants spent in activities outside of schoolwork and paid employment, and the number of hours they reported spending on the most important activity were not significantly correlated with the SACQ, or any of its subscales (Correlations can be found in Table 8). The overall score on the YII, which measures the frequency of involvement, was not correlated with overall scores on the SACQ,  $r(179) = .000, p = .999, ns.$  The political subscale of the YII was negatively correlated with overall scores on the SACQ,  $r(185) = -.146, p < .05,$  and with the attachment subscale of



the SACQ,  $r(185) = -.211, p < .01$ . The attachment subscale of the SACQ was also negatively correlated with the community subscale of the YII,  $r(186) = -.195, p < .01$ . The responding subscale of the YII was positively correlated with the social subscale of the QIS,  $r(187) = .144, p < .05$ .

When the quality of one's involvement was examined in relation to adjustment, assessment of the results revealed that overall, the higher the quality of one's involvement, the better a person's adjustment is. Correlations are presented in Table 8. Results show that the overall scores on the QIS were positively correlated with the overall scores on the SACQ,  $r(184) = .171, p < .05$ . The overall score on the QIS was also correlated with scores on the social subscale of the SACQ,  $r(184) = .227, p < .01$ ; and with scores on the attachment subscale of the SACQ,  $r(184) = .146, p < .05$ . Examination of the results reveals that the affect subscale of the QIS seems to be correlated with overall scores on the SACQ,  $r(184) = .215, p < .01$ . The affect subscale of the QIS was also correlated with the social subscale of the SACQ,  $r(184) = .244, p < .01$ ; and the attachment subscale of the SACQ,  $r(184) = .164, p < .05$ . In fact, the only other significant correlation for the QIS is between the meaning subscale of the QIS and the social subscale of the SACQ,  $r(184) = .181, p < .05$ .

To examine whether measures of involvement quality and involvement frequency equally influence adjustment, a regression was conducted with scores on the QIS (measure of involvement quality) and overall score on the YII, total number of hours spent on activities outside of schoolwork, and total number of hours spent on most important activity (measures of involvement frequency) predicting scores on the SACQ (adjustment). Results revealed that overall scores on QIS were the only significant

predictor of overall scores on the SACQ,  $t(172) = 2.502, p = .013$ . See Table 9 for results of the regression.

### *Mediational Analyses*

Mediation processes were analyzed using a series of multiple regressions (Baron & Kenny, 1986). In the first step of a mediation analysis, a regression is conducted with the independent variable predicting the dependent variable. Next, another regression is run with the independent variable predicting the mediator. Another regression is then conducted with the mediator as the predictor of the dependent variable, while controlling for the independent variable. Finally, a regression is conducted with the independent variable as the predictor of the dependent variable, while controlling for the effect due to the mediator. Full mediation is said to occur if the relationship between the independent variable and the dependent variable is not significant when the mediator is controlled for. For the purpose of these analyses, involvement is the independent variable, and adjustment is the dependent variable.

One of the mediators that were tested was self-esteem. The Rosenberg Self-Esteem Scale was used to measure the self-acceptance aspect of self-esteem. The mean score on the Rosenberg Self-Esteem Scale was  $M = 31.76, SD = 4.81$ .

Based on previous literature, it was expected that self-esteem would mediate the relationship between involvement and adjustment. To test this hypothesis, a mediational analysis was conducted. First, a regression was run with overall scores on the QIS predicting scores on the SACQ. This relationship was significant,  $t(183) = 2.353, p < .05$ , where higher levels of involvement were related to higher levels of adjustment. Next, another regression was conducted with scores on the QIS predicting scores on the

Rosenberg Self-Esteem Scale. This relationship was also significant,  $t(186) = 2.587, p = .01$ , such that higher levels of involvement were related to higher levels of self-esteem. Thirdly, a regression was run with the scores on the Rosenberg Self-Esteem Scale predicting scores on the SACQ, while controlling for QIS scores. This relationship was significant,  $t(182) = 8.996, p < .001$ , such that higher self-esteem is related to better adjustment to university. Finally, when scores on the Rosenberg Self-Esteem Scale were controlled for with QIS scores predicting SACQ scores, the relationship dropped to being non-significant,  $t(182) = .971, p = .333, ns$ . It was thus found that self-esteem fully mediated the relationship between involvement and adjustment (please refer to Table 10). A Sobel test was also conducted and revealed that the drop in the beta value of the involvement was significant when the effect of self-esteem was controlled for,  $Z = 2.517, p = .011$ .

Stress was also tested as a mediator. The questionnaire used to measure stress was the Perceived Stress Scale (PSS). It examines the extent to which the respondent perceives situations in his/her life as being stressful. The mean score on the PSS was  $M = 26.91, SD = 6.93$ .

It was expected that stress would mediate the relationship between involvement and adjustment. A mediational analysis was conducted to test this hypothesis. First a regression was conducted with scores on the QIS predicting scores on the SACQ. As previously found, this relationship was significant,  $t(183) = 2.353, p < .05$ , such that higher levels of involvement were related to better adjustment to university. Next, a regression was conducted with scores on the QIS predicting scores on the PSS. This relationship was also significant,  $t(186) = -2.729, p < .01$ , where higher levels of

involvement were related to lower levels of stress. Another regression was conducted with scores on the PSS predicting scores on the SACQ, while controlling for scores on the QIS. This relationship was significant,  $t(182) = -9.670, p < .001$ , where lower levels of stress are related to higher levels of adjustment. Finally, when the effect of stress was controlled for, the relationship between the scores on the QIS and scores on the SACQ dropped to being non-significant,  $t(182) = .705, p = .482, ns$ . The Sobel test showed that the drop in the beta value of involvement, when the effect of stress was controlled for, was significant,  $Z = 2.637, p = .008$ . Therefore, stress fully mediated the relationship between involvement and adjustment (see Table 11).

Another mediator that was tested was social support. The Social Provisions Scale (SPS) was used to measure social support. This scale examines whether or not the six provisions of social support are available. The mean score on the SPS was  $M = 180.84, SD = 21.33$ .

It was hypothesized that social support would mediate the relationship between involvement and adjustment. This hypothesis was tested using a mediational model. A regression revealed that scores on the QIS were a significant predictor of scores on the SACQ,  $t(181) = 2.457, p < .05$ , indicating that higher levels of involvement were related to better adjustment to university. Next, a regression was conducted with scores on the QIS predicting scores on the SPS. This relationship was significant,  $t(185) = 2.372, p < .05$ , such that higher levels of involvement were related to greater social support. A regression was then conducted with scores on the SPS predicting scores on the SACQ, while controlling for QIS scores. This relationship was significant,  $t(181) = 6.120, p < .001$ , where greater availability of social support was related to better adjustment to

university. Finally, when a regression was conducted with scores on the QIS predicting scores on the SACQ, while controlling for scores on the SPS, the relationship went from being significant to non-significant,  $t(181) = 1.656, p = .100, ns$ . A Sobel test was conducted to determine whether the drop in the beta value of involvement was significant when the effect of social support was controlled for (see Table 12). Results of a Sobel test revealed that the drop in beta value was significant,  $Z = 2.216, p = .027$ , thus indicating that social support fully mediated the relationship between involvement and adjustment.

Social skills were also tested as a mediator. The Social Skills Scale (SSS) was created for use in this thesis to assess the development of social skills as it related to the participant's involvement in nominated activities. The mean score for the SSS and its subscales can be found in Table 7.

It was hypothesized that the relationship between involvement and adjustment would be mediated by social skills. A mediational analysis was conducted to test this hypothesis. A regression was first conducted with scores on the QIS predicting scores on the SACQ, this relationship was significant,  $t(183) = 2.353, p < .05$ , indicating that higher levels of involvement were related to higher levels of adjustment. A regression was then conducted with scores on the QIS predicting scores on the SSS. This relationship was significant  $t(186) = 5.998, p < .001$ . Next, a regression was conducted with scores on the SSS predicting scores on the SACQ, while controlling for scores on the QIS. This relationship was significant,  $t(182) = -2.031, p < .05$ , such that higher levels of social skills are related to lower levels of adjustment. When a regression was conducted with scores on the QIS predicting scores on the SACQ, while controlling for SSS scores, the relationship remained significant,  $t(182) = 2.997, p < .05$ . A Sobel test was conducted and

the results revealed that the reduction in betas was significant,  $Z = -1.922$ ,  $p = .05$ .

However, the relationship between involvement and adjustment is only partially mediated by social skills since the relationship between involvement and adjustment was significant, even when the effect due to social skills was controlled for (refer to Table 13).

#### *Multiple Mediator Model*

Correlations were conducted in order to examine the relationships between the mediators (see Table 14). Examination of the correlations revealed that the mediators were correlated with one another. There was a significant negative correlation between self-esteem and stress, such that as self-esteem increases levels of stress decrease. Self-esteem was found to be significantly related to social support, where increases in self-esteem are related to increases in levels of social support. A significant negative relationship was found between stress and social support where increases in levels of stress were associated with lower levels of social support. Finally, social support was found to be significantly related to social skills, where increases in social support were related to increases in social skills.

In this study, a multiple mediator model was proposed, such that self-esteem, stress, social support, and social skills all mediate the relationship between involvement and adjustment. To test this hypothesis, the mediation process was analyzed using a series of multiple regressions (Baron & Kenny, 1986). In the first step of a mediation analysis, the dependent variable (adjustment) is regressed onto the independent variable (involvement). For the second step, the mediator is regressed onto the independent variable. In the case of multiple mediators, each mediator is regressed onto the independent variable separately. In the third step, the dependent variable is regressed onto

all the mediators, so that each relationship between the mediator and the dependent variable is controlling for the other mediators. Finally in step four the dependent variable is regressed onto the independent variable, while controlling for the mediators. Full mediation is said to occur if the effect of the independent variable drops to non-significance when the mediators (self-esteem, stress, social support, and social skills are controlled for.

To test whether self-esteem, stress, social support, and social skills mediated the relationship between involvement and adjustment, a mediational analysis was conducted (Baron & Kenny, 1986) (see Figure 3). First a regression was conducted with involvement as the predictor variable, and adjustment as the outcome variable. A significant relationship was found such that the greater the quality of a person's involvement the better the adjustment to university (path c). Next, four separate regressions were conducted (paths  $a_1$ ,  $a_2$ ,  $a_3$ , and  $a_4$ ), which revealed positive relationships between involvement and self-esteem, such that the greater the quality of a person's involvement the higher the self-esteem; involvement and social support, where the higher the quality of a person's involvement the more social support they have available; and involvement and social skills, such that the higher the quality of a person's involvement, the better developed their social skills became. Lastly, a negative relationship was found between involvement and stress, where higher scores on quality of involvement were related to lower levels of stress. Therefore, as involvement increased, so did scores on measures of self-esteem, social support and social skills, while scores on measures of stress decreased. Next, a regression was conducted with the mediators predicting adjustment, while controlling for involvement and each other (paths  $b_1$ ,  $b_2$ ,  $b_3$ , and  $b_4$ ). The

relationship between self-esteem and adjustment was significant, such that the higher the self-esteem, the better the adjustment. The relationship between stress and adjustment was also significant, such that the lower the level of stress, the better the adjustment. The relationship between social support and adjustment was significant in the positive direction where higher amounts of social support were related to better adjustment. Lastly, the relationship between social skills and adjustment was found to be not significant. In the last step of the mediation analysis a regression was run with involvement predicting adjustment while controlling for all the mediators. Mediation is said to occur if the relationship between involvement and adjustment is not significant when the mediators are controlled for. The relationship between involvement and adjustment was not significant when the mediators were controlled for (path c'),  $\beta = .034, p = .572, ns$ . The Sobel test was significant indicating that self-esteem,  $Z = 2.07, p = .04$ ; stress,  $Z = 2.52, p = .01$ ; and social support,  $Z = 2.09, p = .04$ , all significantly mediated the relationship between involvement and adjustment. Therefore, being involved in activities outside of schoolwork and paid employment may assist in the adjustment to university by increasing self-esteem, reducing stress, and increasing social support networks.

## General Discussion

### *Involvement and Adjustment*

The main research question being investigated was: Why does involvement predict better adjustment to university? What factors mediate the relationship between involvement and adjustment? Based on previous literature (e.g., Terenzini et al., 1996) it was hypothesized that involvement in activities outside of schoolwork and paid employment would be positively related to students' adjustment to university.



In this study, it was found that the activities that participants nominated as most important could be grouped into four different categories: athletics; religious, arts and clubs; community service, and social. The results of this study show that scores on the YII and its respective subscales did not differ based on the type of activity nominated as most important. Overall scores on the QIS, as well as scores on the meaning subscale did not differ based on the type of activity nominated. However, scores on the affect subscale and on the interpersonal-relationship subscale of the QIS did differ based on the type of activity participants nominated as most important.

Post-hoc analysis revealed that participants who nominated athletic activities, or religious, arts or club activities as most important scored significantly higher on the affect subscale of the QIS than participants who nominated community service activities. Since the affect subscale of the QIS aims to assess how the participant feels about his/her participation in the activity it is possible to see why participants who nominated community service activities scored significantly lower. One explanation for this could be that volunteering in community agencies may not always be filled with enjoyable, fun activities. Many volunteer positions may involve working with others who are less fortunate. As such, though the work may be rewarding, it may be the case that volunteers are also forced to face difficult realities, such as poverty, or discrimination, that may not always bring about positive feelings. In contrast, participation in athletic activities, such as belonging to a sports team, could be seen as generally being more enjoyable. The same could be said in belonging to a club, or participating in the arts or in religious activities.

With respect to the interpersonal-relationship subscale of the QIS, post-hoc analysis revealed that participants who nominated social activities scored significantly

higher compared to participants who listed athletic activities or community service activities. The interpersonal-relationship subscale of the QIS examines the interpersonal relationships that the participant develops in association with their participation in the nominated activity. The reason why participants who listed social activities scored highest is likely because social activities generally require the participant to interact with others. In contrast, participation in athletic activities, such as working out, does not always require social interaction. Also, participation in community service may not always provide an environment conducive to developing relationships. Volunteers may not work with the same people steadily, or they may be required to work alone; and so they may not have the opportunity to meaningfully connect with others.

#### *Quality of Involvement versus Quantity of Involvement*

Previous research in the area of involvement and its relationship to adjustment has examined involvement using frequency or quantity measures. For example, involvement has been measured by examining the number of hours the participant spends on an activity each week (Bradley & Graham, 2000). Another method used to measure involvement is by having the participant check off activities that they have participated in (Barber, Eccles, & Stone, 2001); examining club and team photographs in yearbooks (Mahoney & Cairns, 1997), among many others.

In this study, involvement has been examined in greater detail. Not only do the measures gauge involvement quantity or frequency, through the use of the YII and by measuring frequency of participation, but they also examine the quality of the participant's involvement experience. No previous research has studied the quality of

people's involvement experiences. This study examines both the quantity and quality of involvement.

The results of this study revealed that the quality of a person's involvement experience was positively related to their adjustment to university. The higher the quality of one's involvement, the better the person's adjustment was. However, there was no correlation between quantity of involvement (e.g. number of hours spent on activities, score on the YII, etc.) and adjustment.

Based on these results, it appears that there is a difference between the quality and quantity of a person's involvement experience. These findings suggest that it is not the quantity of involvement that matters when it comes to the transition to university; rather, it is the quality of the experience. This finding is consistent with research that has been conducted on role quality. A study conducted by Baruch and Barnett (1986) examined the relationship between role quality and multiple role involvement in the psychological well-being of women. They found that overall it was the quality of roles that women engaged in that predicted psychological well-being, not simply the number of roles they occupied.

The findings of this study indicate that the quality of an involvement experience may be independent of the amount of time that a person spends on an activity. A student could spend the same amount of time volunteering at two different placements each week, but may experience one placement to be more enriching, challenging and fulfilling than the other despite the fact that the same amount of time is devote to each activity. These findings suggest that it is more about what one gets out of an experience rather than it simply being about the amount of time that one puts in.

It is possible that the amount or frequency of involvement may act as a moderating variable in the relationship between quality of involvement and adjustment to university. The results of this study demonstrate that the quality of a student's involvement experiences is related to subsequent adjustment to university. This relationship between quality of involvement and adjustment could become more robust as the frequency or quantity of involvement increases. Therefore, it is possible that the more time a person devotes to an activity that they find enriching and fulfilling, the smoother their transition to university will be.

Future research in the area of youth involvement would benefit from separately examining both the quality and quantity of a person's involvement experience, rather than measuring involvement as a uni-dimensional construct. This finding that involvement quality appears to exist independently from quantity of involvement could be cause for past research to be revisited in order to examine the influence or impact of involvement quality.

### *Self-Esteem*

Previous research has shown that higher scores on measures of self-esteem are related to better adjustment to university (Thombs, 1995). A relationship also exists between self-esteem and adjustment, such that involvement in activities is associated with higher self-esteem (Lawson & McNally, 1995). Based on these studies it was hypothesized that self-esteem would mediate the relationship between involvement and adjustment to university. It was expected that students who participated in activities outside of schoolwork and paid employment would experience higher levels of self-esteem, which would result in better adjustment.

The results of this study support this hypothesis. The mediational model that was tested demonstrated that self-esteem was a full mediator of the relationship between involvement and adjustment. It seems that being involved in these activities may serve to increase one's self-esteem and this, in turn, facilitates better adjustment. Perhaps the increase in self-esteem assists students in forming new social relationships which help with making the transition.

### *Stress*

It was hypothesized that stress would be another factor that mediates the relationship between involvement and adjustment. This hypothesis was based on research that demonstrates a relationship between stress, involvement and adjustment. Research shows that students who scored higher on measures of stress before entering university subsequently scored lower on measures of adjustment once the school year began (Jackson et al., 2000). With respect to the relationship between stress and involvement, student-athletes reported that involvement in sports has helped them cope with the everyday stressors through the formation of new relationships, mood enhancement, and escape from the daily rigors of school (Kimball & Freysinger, 2003). It was expected that involvement in activities outside of schoolwork and paid employment would reduce stress, and that this reduction in stress level would result in students experiencing a better adjustment to university.

Overall, this hypothesis was supported. Mediational analysis revealed that stress was a full mediator of the relationship between involvement and adjustment to university. One explanation for this finding is that being involved in activities reduces the stress students may experience due to the life change associated with making the transition to

university, academic obligations and burdens. This lowered level of stress may make the transition seem less daunting and more manageable. Also, it is possible that participating in these activities acts as a coping mechanism by allowing students to escape from the stress they are experiencing.

### *Social Support*

Social support was also expected to mediate the relationship between involvement and adjustment. Previous research reveals that the amount of social support available is positively related to how well a student will adjust to university (Tao et al., 2000). It was expected that involvement in activities outside of schoolwork and paid employment would result in greater amounts of social support, and that this in turn would assist students in coping with the adjustment to university.

The results of this study supported this hypothesis. A mediational model was tested and revealed that social support was a full mediator of the relationship between involvement and adjustment. Therefore, it appears that being involved in activities outside of school may result in the development of larger social support networks which assist in the transition to university. Research has found evidence that larger social support networks are more adaptive in adjusting to university (Hays & Oxley, 1986). It could be that larger networks are more adaptive because it results in a higher probability of supportive resources being available if needed.

Research has also found that the social support networks that were most beneficial were the ones that provided fun and relaxation, and therefore served a preventative function (Hays & Oxley, 1986). This finding is further supported by this study. The activities that students reported engaging in generally fell into the realm of providing fun

and relaxation, rather than acting as direct forms of social support, such as providing advice.

### *Social Skills*

Another factor that was expected to mediate the relationship between involvement and adjustment to university was social skills. It seems that participation in extra-curricular activities allows youth the opportunity to develop, refine and utilize interpersonal skills. In fact, these interpersonal skills appeared to be more developed in undergraduate students who were members of clubs, organizations, sororities, and fraternities (Rubin, Bommer, & Baldwin, 2002). Students also reported that their existing skills improved as a result of their volunteer work (Hamilton & Fenzel, 1988). Based on this previous research it was expected that students who were involved in activities outside of schoolwork and paid employment would further develop their social skills, and that these social skills would assist them in making the transition to university.

This hypothesis was not supported. Results of a multiple regression analysis revealed that social skills were a significant predictor of adjustment, when involvement was controlled for, but it was in the opposite direction from what was predicted. Results revealed that as social skills increased adjustment decreased. There are some possible explanations as to why social skills were found to be negatively related to adjustment to university. It could be that people with highly developed social skills may spend more time engaged in their social relationships, which may cause other aspects of their academic life to suffer, such as exam performance, class attendance, and course grades. Another possible explanation for these findings is that the types of social skills that were measured by the SSS were not the ones that assist students in adjusting to university;

there may be other social skills that were not assessed that are useful in assisting students with adjustment. Finally, another possible explanation for these results could be due to the questionnaire that was used to measure social skills. As this measure was new, and created for use of this study, there is the chance that it may not be adequately or correctly measuring social skills, which may explain why the results that were found lay in the opposite direction from the predictions that were made.

#### *Multiple Mediator Model*

Examinations of the correlations among the mediators led to the development and examination of a multiple mediator model. Review of relevant research also demonstrate that self-esteem, stress, social support, and social skills are related to one another. For instance, having an unstable sense of self-esteem where one's self-worth is contingent on external validation can be the cause of stress, hostility and conflict (Crocker, 2002). Research also illustrates a link between self-esteem and social skills. Riggio, Throckmorton, and DePaola (1990) found that scores on a measure of social skills were significantly positively related to measures of self-esteem. Social skills may also be related to social support. Riggio et al. (1993) propose that facility with social skills are an asset is assisting people with the development and maintenance of social support networks, and these networks in turn facilitate psychosocial adjustment.

The relationship between stress and social support is one that has been well documented. The presence of social support networks seems to reduce the negative effect of stressors through the supportive actions of members of the network, or simply through awareness that social support is available (Lakey & Cohen, 2000). A study by Dunham et al. (1998) examined participation in an on-line social support program and its effects on



young single mothers. The results of their study indicated that the young mothers who regularly participated in the program reported higher levels of social support and lower levels of stress. The relationship between stress and social support is also illustrated in a study conducted by Grant et al. (2000). These researchers found that social support networks, such as religious communities and family, were a protective factor against stress for low-income urban African-American youth.

Taken together, this body of data establishes relationships among the mediators being examined in this study. As the literature suggests, the results of this research reveal that relationships do exist between the mediators. The multiple mediator model that was tested provided stronger evidence that self-esteem, stress, and social support all mediate the relationship between involvement and adjustment, such that they continue to produce significant effects even when all the effect due to all other mediators is being controlled for. Therefore, involvement in activities outside of schoolwork and paid employment is related to an increase in self-esteem, social support, and a decrease in levels of stress, which appear to contribute distinct benefits to a student's adjustment to university.

The multiple mediator model, however, did not support the previous findings that social skills were negatively related to adjustment to university. One explanation of this finding could be that social skills simply are not an important factor in the transition to university. Social interactions with people within their social support networks may be sufficient for students making the transition; therefore the development of additional social skills may not be required or particularly useful. As previously mentioned, it is also possible that the new measure that was used to examine social skills did not adequately or correctly measure the construct. This could account for the results that were found in the

social skills mediation that were opposite to the predicted direction, and could also explain why social skills were not found to be a mediating factor in the relationship between involvement and adjustment.

### *Involvement*

Ontario students entering grade nine in 1999 were the first to experience the new high school curriculum set-up by the provincial government. Among the major changes were the abolishment of the Ontario Academic Credit (OAC) year, and the inclusion of a 40 hour mandatory community service requirement to graduate. The sample used in this study was comprised of students who experienced the new curriculum and students who graduated through the old curriculum. Therefore, some students had been required to complete 40 hours of mandatory community service to graduate, whereas some did not.

This is an important factor to consider when interpreting these results, as research seems to indicate that a large discrepancy exists between community service given voluntarily and community service that is forced, or mandatory. Research done by Stukas, Snyder, and Clary (1999) suggests that a student's future intentions to volunteer are largely contingent on their perception of control. In fact, feelings of control and volition appear to enhance the positive benefits of volunteering (Piliavin, 2003). In other words, when students felt they had a choice whether or not to volunteer their intentions to volunteer again in the future increased, as did the benefits they reaped from their volunteer experience. In contrast, when students felt they were forced to volunteer, their intentions to do so again in the future declined regardless of whether they had volunteered in the past. Also, they would not benefit as much from the volunteer experience as if they had participated on their own volition (Piliavin, 2003).

Research by Warburton and Smith (2003) also uncovered negative consequences associated with mandatory volunteer programs. In Australia many compulsory volunteer programs, such as the “Work for the Dole” program, have been instituted in order to develop “active citizenship” in its young people. An active citizen is defined as being someone who is independent and therefore less reliant on the government; he/she also engages in good citizenship behaviours (Warburton & Smith, 2003). However, it seems that mandatory volunteer programs may be more detrimental to the development of an identity as an active citizen than beneficial. The participants in Warburton and Smith’s study reported negative feelings of anger and resentment regarding their lack of choice concerning participation in the programs. They also stated that they felt exploited. With respect to the activities themselves, participants did not feel that participating in the programs benefited them in any way. They reported the activities to be mundane, boring work that failed to provide them with any practical work skills. Overall, the participants walked away from their compulsory volunteer experiences with negative views regarding volunteering in general, even for those participants who had volunteered in the past. Many felt that this mandatory volunteer work did little, if anything, to socialize them into volunteering in the future.

This backlash against compulsory volunteer work may have influenced the results that were obtained in this study. For instance, the students who listed volunteer work as their most important volunteer activity consistently scored lowest on the QIS and all of its subscales. This seems to indicate that the quality of their experiences was lower than that of students who nominated other types of activities as being most important. Since the activities coded as being community service may have been the ones that satisfied the

diploma requirements for students graduating under the new curriculum it is possible that negative experiences they may have endured during their compulsory volunteer service may be reflected in the results. This may explain why scores on the QIS and the subscales are lowest for students nominating community service as most important.

However, it is possible that the negative effects of compulsory volunteer work could be counteracted. It could be that a high quality compulsory volunteer experience could negate the harmful effects that the loss of volition causes. Future research could explore the experiences of compulsory volunteers to determine if the quality of the experience has an effect on the participant's future intentions to volunteer, and the benefits that are garnered through participation.

#### *Limitations*

One limitation of the present study is that the results are correlational. Though this study demonstrates that involvement is related to adjustment, it does not prove that being involved in activities outside of schoolwork and paid employment will cause one to experience a smoother transition to university. Rather, it is possible that students who have an easier time adjusting to university, or who possess qualities or characteristics that allow them to adjust better are also the students who tend to become involved in activities outside of school. As such, no inferences on causality and direction can be made from these results.

When interpreting these results it is also important to consider the fact that the significant correlations found in this study are relatively low. Though the results are statistically significant they are not especially strong.

Another factor that needs to be considered is the fact that students in this sample were made up of two different cohorts. Some students graduated after five years of high school under the old curriculum, whereas other students graduated after four years of high school under the new curriculum, which included 40 hours of mandatory community service as a graduation requirement. There may be differences in the two cohorts, such as age, and the compulsory volunteer requirement, that may have influenced the results.

The fact that students were only tested once during the academic year is another limitation that needs to be addressed. It is possible that students' adjustment to university would have varied over the course of the year (Hays & Oxley, 1986). Students were tested towards the end of their first year. It is possible that they may have fully adjusted to university life by the time they participated in the study. It may have been beneficial to have also tested the students earlier on in the year to see whether there was a change in how well they adjusted as the school year progressed, and whether that was a function of their involvement.

Testing the students at different times throughout the year would also address concerns with respect to the mediational analysis that was conducted. Using multiple data points would have clarified the temporal structure and therefore would have allowed for greater insight into the causal processes that contributed to the results found (Holmbeck, 1997; Rose, Holmbeck, Coakley, & Franks, 2004). This also would have allowed bidirectional pathways to be ruled out. In Study 2 all data were collected at one time. Given the importance of temporal structure within mediation, it would have been beneficial to have collected data throughout the school year.

Also, students were asked to recall activities they had been involved in over the last year including ones they may have been involved in when they were in high school. It is possible that the students' memories of their activities may not have been accurate. This may have caused them to miss reporting other activities they may have engaged in, or to include activities that they may have participated in longer than a year ago.

Students may also differ in the way they each define involvement. The questionnaire they received was broad and asked them to list any activities they were involved in over the course of the last year outside of schoolwork and paid employment. Many students chose to include activities such as hanging out with friends, whereas other students may not have classified that as an activity that was appropriate to list. As such, it may have been helpful if a more descriptive and specific definition of involvement was provided for the participants. Alternatively, future research could examine whether there is a difference in the level of benefit garnered from structured activities, such as belonging to a club or a sports team, compared to more casual, unstructured activities, such as spending time with friends and family.

#### *Contributions and Applications*

Regardless of the limitations of this study, the results were useful in providing some explanation as to why involvement in activities outside of schoolwork and paid employment may predict better adjustment. It appears that self-esteem, stress and social support all mediate the relationship between involvement and adjustment.

The results of this study add to the literature on the area of youth involvement and the transition to university. The development of the QIS will allow future researchers to examine both the quality and the quantity of involvement. Future research could now aim

to explore the quality and quantity of involvement more closely. The QIS extends previous research which, until this point, has only examined involvement quantity in terms of number of hours of participation and number of activities.

The results of this research may be beneficial in addressing the issue of student attrition in university. Given that the majority of student attrition occurs during the first year of university (Gaither, 1992), it is important to determine what can be done to lower these occurrences. One important application of these results is in the development of prevention programs aimed at reducing student attrition. For instance, programs could be developed that help students increase their self-esteem, and social support, and also reduce levels of stress. Another possibility would be to create campaigns aimed at encouraging first year undergraduates to get involved in extracurricular activities or community service.

Given that the Ontario students must now complete 40 hours of mandatory community service in order to graduate, the results of this study could also be used in the development of volunteer programs. This information could be useful in developing programs that will enhance students' experiences and benefit them in the future. For example, agencies could institute buddy programs that match up new volunteers with experienced volunteers to develop social support. Social support could also be developed through holding weekly meetings that allow volunteers to discuss issues they may be experiencing or accomplishments they may have achieved. These meetings could also be beneficial in developing higher self-esteem. To further enhance self-esteem, weekly or monthly awards could be handed out to volunteers to highlight their accomplishments. Stress could be further buffered through buddy systems, or regular meetings. Since

research shows that activities or support systems that are fun and relaxing are the most beneficial (Hays & Oxley, 1986), regular social outings could also be planned for the volunteers.

The results of this study could also be used by high school students when selecting future volunteer placements. Knowing that volunteer experiences that enrich people's self-esteem, buffer their stress and enhance their social support systems are most beneficial, students could search for volunteer programs that place emphasis on the personal development of the volunteer as well. For instance, students could seek out agencies that hold regular team meetings, or that provide a network for all volunteers to interact with one another in order to share experiences. Armed with this information, students could be more conscientious in selecting placements that maximize their time and experience, and also be most beneficial to them in the future.



Appendix A

***INFORMED CONSENT STATEMENT***

WILFRID LAURIER UNIVERSITY  
INFORMED CONSENT STATEMENT  
The Relationship between Youth Involvement and Transition to University:  
An Examination of the Mediating Factors  
Principal Investigator: Thanh-Thanh Tieu  
Supervisor: S. Mark Pancer

You are invited to participate in a research study. The purpose of this study is to pretest a new measure that examines the students' participation in various activities and the quality of their experiences. It also examines the social skills that students develop as a result of their participation in various activities.

This research is being conducted by Thanh-Thanh Tieu, a first year Masters student in the social-developmental psychology program. This study is being conducted as part of her Masters thesis.

**INFORMATION**

In this study you will be asked to complete one questionnaire. You are asked to complete this questionnaire on your own.

The questionnaire you will receive will take approximately 20 minutes to complete. The questionnaire asks you to list activities that you have been involved in outside of school, coursework and paid employment for the last six months. You will then be asked to select the three activities that mean the most to you, and to rate them in order of importance. Finally, you will be asked to answer questions with respect to each of these three activities. These questions address the quality of your experience in each of the three activities, and also the social skills that you may have developed during the course of these activities.

All students in this class will be invited to participate in this study. It is anticipated that there will be approximately 300 participants.

**RISKS**

The risks associated with this study include emotional distress you may experience as a result of recalling a negative activity you may have participated in. If you experience stress due to participation in this study you may leave any questions blank.

**BENEFITS**

By participating in this study you will be contributing to the body of research on the areas of youth involvement and transition to university. More specifically your participation will assist in the development of a new questionnaire that examines quality of involvement. Also, you will have the opportunity to directly observe and learn about how researchers design studies to address psychological issues, thus enhancing your understanding of research methods.

Participant's Initials \_\_\_\_\_

### **CONFIDENTIALITY**

You are asked NOT to provide your name or student number on the questionnaire. Also, consent forms and questionnaires will be collected and stored separately, therefore there is no way to link your name to your completed questionnaire. All of the responses you give will remain completely confidential. Only the principal investigator, Thanh-Thanh Tieu, and the advisor, Dr. Pancer, will see the questionnaires. All data collected from this study will be stored in filing cabinets in a locked office. Only the principal researcher, Thanh-Thanh Tieu, and the thesis advisor, Dr. Pancer, will have access to the questionnaires.

In accordance with guidelines set out by the American Psychological Association, all data will be destroyed seven years after the completion of this study. Data from this study may be presented in professional conferences and academic publications. Participants will not be individually identified in reports of the research findings; only aggregated data (group means) will be presented.

### **COMPENSATION**

For participating in this study you will receive 0.5 credit. If you choose to withdraw from the study prior to its completion, do not complete the questionnaire, or ask to have your responses deleted, you will still receive the 0.5 research credit.

Other ways for PS100 students to earn the same amount of credit are by completing critical reviews of journal articles. More information regarding this option can be obtained through the Psychology Main Office at N2006.

### **CONTACT**

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com) and (519) 884-0710 ext. 2950. You may also contact the supervisor, Dr. S. Mark Pancer at the Psychology Department, Wilfrid Laurier University, Office N2021, at (519) 884-0710 ext. 3149 or at [mpancer@wlu.ca](mailto:mpancer@wlu.ca). This project has been reviewed and approved by the University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Bill Marr, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 2468.

### **PARTICIPATION**

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed. You have the right to omit any question(s)/procedure(s) you choose.

### **FEEDBACK AND PUBLICATION**

The results of this study will be used in the principal investigator's Masters' thesis. Also, the results may be presented in professional conferences and academic publications in the future.

The results of this study will be e-mailed to you through the PREP system. These results will be available by April 15, 2004.

**CONSENT**

I have read and understand the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Investigator's signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix B

### The Relationship between Youth Involvement and the Transition to University: An Examination of the Mediating Factors Quality of Involvement Scale and Social Skills Scale Validation

Principal Investigator: Thanh-Thanh Tieu  
Supervisor: Dr. S. Mark Pancer  
Research Project Number: 1847

#### *Quality of Involvement Scale*

Previous studies in the area of youth involvement have employed various methods to measure involvement or participation. For example, measures such as the Youth Inventory of Involvement require respondents to rate the extent to which they have been involved in a number of specified activities. Other methods used include asking participants to report the number of hours they spend a week on a given activity; to check off activities that they have been involved in; examining club photographs in yearbooks; using listings of club members and team rosters, among many others.

Though a great deal of information can be garnered from these measures, they are deficient in one respect. The measures of involvement that are currently being employed do not assess the quality of a respondent's participation experience. In other words, the measures do not examine the depth and richness of the respondent's involvement in any given activity. It is quite possible that one may spend equal amounts of time on two activities, but one activity may be experienced as being more rewarding, fulfilling, or enjoyable than the other. The Quality of Involvement Scale (QIS) was developed in order to examine the quality of a respondent's volunteer experience.

Participants were asked to list all of the activities they were involved in for the last six months. They were then asked to select the three most important activities and rank them. Participants then completed a series of questions pertaining to their involvement in each of the three nominated activities. The QIS was initially developed with 32 items. Responses were given on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). All items were positively worded, with no reverse-scored items included. The total score on the scale is determined by adding up the answers given for each item. Higher scores indicate a higher quality of experience.

The questionnaire was administered to 106 students during two mass testing sessions in the winter semester. The data collected revealed that activities that students were involved in could be divided into seven categories. Athletic activities (e.g. intramural sports, working out, etc.) were reported as being most important to 54.7% of the participants; religious activities (e.g. attending church, attending mosque, etc.) were listed by 3.8%; arts (e.g. theatre, music, etc.) was listed by 13.2%; clubs (e.g. student government, business clubs, etc.) were most important to 14.2%; community service (e.g. volunteer work) was listed as most important by 3.8%; social activities (e.g. hanging out with friends, etc.) were ranked as most important by 6.6%; and hobbies (e.g. working with computers, reading, etc.) were rated as most important by 3.8% of the participants.

Analysis of the data showed a marginally significant positive correlation between the number of hours participants spent on the most important activity and the score the participant obtained on the QIS for that activity. This suggests that as the number of hours spent on an activity increases, the quality of the involvement increases, yet it is uncertain what the direction of the relationship is, or whether there is a third unmeasured variable that accounts for these results.

### *Social Skills Scale*

Research shows that involvement in activities outside of schoolwork seem to improve the social skills of youth. Studies have found that advanced undergraduate students that participated in clubs, sororities, fraternities, and other organizations, seem to possess interpersonal skills that were more developed compared to their peers that did not participate in these activities. Overall, it seems that participation in extra-curricular activities was positively associated with communication skills, decision-making skills, initiative and teamwork.

Unfortunately, no measure currently exists that examines the development of social skills related to involvement. The Social Skills Scale (SSS) was developed to assess the extent to which a respondent's social skills developed specifically as it related to his/her involvement in activities that were nominated as being important.

The original scale contained a list of 13 social skills (e.g. communication skills) and asked participants to rate the extent to which their involvement in the nominated activity has resulted in an improvement in each skill. Responses were given on a scale ranging from 1 (not at all) to 5 (a great deal).

The results of the SSS reveal that participants' scores on the QIS are positively correlated with the development of their social skills in relation to their involvement. Yet, the number of hours spent on the activity is not correlated with the participants' scores on social skill development. This suggests that it is the quality of the participant's involvement that affects how their social skills develop, not the amount of time devoted to an activity. If involvement in the activity is experienced as being enriching and satisfying, a participant's social skills are more likely to further develop, regardless of the amount of time the participant devotes to the activity.

The data that was collected allowed for refinement of the QIS and the SSS. Analysis of the QIS resulted in the exclusion of 14 items. The current scale now contains 18 items and has a Cronbach alpha score of .91. Factor analysis revealed that there were three main factors being tested by the questionnaire. One factor explored the meaning that respondents' assigned to their involvement in the nominated activities. Another factor looked at affect as it related to the respondents' involvement. Finally, a third factor examined interpersonal connectedness or social relationships the respondent has developed through their involvement in the nominated activity.

Analysis of the participants' responses to the SS allowed for the exclusion of five items from the final version of the SSS. The Cronbach's alpha for this eight item scale is .89. A factor analysis was conducted on the data and revealed two factors within the questionnaire. The first factor examined skills that related to respondents' ability to work with others. The second factor addresses skills that tapped into the respondents' ability to voice and articulate their opinions and beliefs to others.

The final version of the two scales were used in a second study for the principal investigator's masters thesis, which examined why involvement is positively related to student's adjustment to university. Future areas of research include examination of attrition in university, and whether involvement may assist with the prevention of attrition.

Thank-you very much for your participation in this study. You have contributed to the development of two new scales that address topics that have not been previously examined.

If you have any further questions or comments about the research, you may contact the principal investigator, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com).

Appendix C

Quality of Involvement Scale

Please provide the following information about yourself:

Gender: \_\_\_\_\_

Age, in Years: \_\_\_\_\_

Please list all activities that you have been involved in for the last twelve (12) months, outside of coursework and any paid employment, and the number of hours you spend on it in one week. Please include activities such as athletics, campus clubs, student government, volunteering, social activism, involvement in the arts, music, politics, religious organizations, etc.

<u>Activity</u>	<u>Hours per Week</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Of the activities you have listed on the previous page, please select the **two (2)** that mean **the most** to you and rank them in order of importance.

Most Important Activity: \_\_\_\_\_

Second Most Important Activity: \_\_\_\_\_

Please read the following statements and rate the extent to which you feel each statement describes you and your involvement in the activity you listed as **most important** on the previous page. Please rate how much you agree with each statement on a 5 point scale with 1 meaning "strongly disagree" and 5 meaning "strongly agree". Please answer as honestly as possible.

Most Important Activity: \_\_\_\_\_

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

1. \_\_\_\_\_ This activity is an important part of how I define myself.
2. \_\_\_\_\_ This activity is very important to me.
3. \_\_\_\_\_ I take my participation in this activity very seriously.
4. \_\_\_\_\_ I care about this activity.
5. \_\_\_\_\_ Participating in this activity makes me happy.
6. \_\_\_\_\_ I feel that this activity challenges me.
7. \_\_\_\_\_ This activity provides me with direction in my life.
8. \_\_\_\_\_ Participation in this activity is very meaningful to me.
9. \_\_\_\_\_ I enjoy participating in this activity.
10. \_\_\_\_\_ My participation in this activity is a high priority in my life.
11. \_\_\_\_\_ I believe that I will participate in this activity throughout my life.
12. \_\_\_\_\_ I feel a sense of connection to others that also participate in this activity.
13. \_\_\_\_\_ I easily become absorbed when engaged in this activity.
14. \_\_\_\_\_ No one has to push me to participate in this activity.
15. \_\_\_\_\_ I feel a sense of belonging from participating in this activity.
16. \_\_\_\_\_ I enjoy talking about this activity with others.
17. \_\_\_\_\_ I feel pride when I achieve in this activity.
18. \_\_\_\_\_ I feel competent when participating in this activity.

Please read the following statements and rate the extent to which you feel each statement describes you and your involvement in the activity you listed as **second most important**. Please rate how much you agree with each statement on a 5 point scale with 1 meaning "strongly disagree" and 5 meaning "strongly agree". Please answer as honestly as possible.

Second Most Important Activity: \_\_\_\_\_

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

1. \_\_\_\_\_ This activity is an important part of how I define myself.
2. \_\_\_\_\_ This activity is very important to me.
3. \_\_\_\_\_ I take my participation in this activity very seriously.
4. \_\_\_\_\_ I care about this activity.
5. \_\_\_\_\_ Participating in this activity makes me happy.
6. \_\_\_\_\_ I feel that this activity challenges me.
7. \_\_\_\_\_ This activity provides me with direction in my life.
8. \_\_\_\_\_ Participation in this activity is very meaningful to me.
9. \_\_\_\_\_ I enjoy participating in this activity.
10. \_\_\_\_\_ My participation in this activity is a high priority in my life.
11. \_\_\_\_\_ I believe that I will participate in this activity throughout my life.
12. \_\_\_\_\_ I feel a sense of connection to others that also participate in this activity.
13. \_\_\_\_\_ I easily become absorbed when engaged in this activity.
14. \_\_\_\_\_ No one has to push me to participate in this activity.
15. \_\_\_\_\_ I feel a sense of belonging from participating in this activity.
16. \_\_\_\_\_ I enjoy talking about this activity with others.
17. \_\_\_\_\_ I feel pride when I achieve in this activity.
18. \_\_\_\_\_ I feel competent when participating in this activity.



Appendix D

Social Skills Scale

Please carefully consider your involvement in the activity you listed as important and note, based on the following scale, the extent to which your involvement has resulted in an improvement in each of the following:

	1	2	3	4	5
	Not at all	Slightly	Moderate Amount	Very Much	A Great Deal
Team work skills .....	1	2	3	4	5
Communication skills .....	1	2	3	4	5
Interpersonal skills .....	1	2	3	4	5
Leadership skills .....	1	2	3	4	5
Voicing my opinion .....	1	2	3	4	5
Standing up for my beliefs .....	1	2	3	4	5
Public speaking .....	1	2	3	4	5
Ability to make friends .....	1	2	3	4	5

Appendix E  
Youth Inventory of Involvement

The following is a list of school, community and political activities that people can get involved in. For each of these activities, please use the following scale to indicate whether, in the last year:

- |           | 0  | 1                             | 2                           | 3                          | 4                     |
|-----------|--|-------------------------------|-----------------------------|----------------------------|-----------------------|
|           | You never<br>did this  | You did this<br>once or twice | You did this<br>a few times | You did this<br>a fair bit | You did this<br>a lot |
| 1. _____  | visited or helped out people who were sick   |                               |                             |                            |                       |
| 2. _____  | took care of other families' children (on an unpaid basis)   |                               |                             |                            |                       |
| 3. _____  | participated in a church-connected group   |                               |                             |                            |                       |
| 4. _____  | participated in or helped a charity organization   |                               |                             |                            |                       |
| 5. _____  | participated in an ethnic club or organization   |                               |                             |                            |                       |
| 6. _____  | participated in a political party, club or organization  |                               |                             |                            |                       |
| 7. _____  | participated in a social or cultural group or organization (e.g., a choir)                                       |                               |                             |                            |                       |
| 8. _____  | participated in a school academic club or team   |                               |                             |                            |                       |
| 9. _____  | participated in a sports team or club  |                               |                             |                            |                       |
| 10. _____ | led or helped out with a children's group or club  |                               |                             |                            |                       |
| 11. _____ | helped with a fund-raising project   |                               |                             |                            |                       |
| 12. _____ | helped organize neighbourhood or community events (e.g., carnivals, hot dog days, potluck dinners, etc.)         |                               |                             |                            |                       |
| 13. _____ | helped prepare and make verbal and written presentations to organizations, agencies, conferences, or politicians |                               |                             |                            |                       |
| 14. _____ | did things to help improve your neighbourhood (e.g., helped clean neighbourhood)                                 |                               |                             |                            |                       |
| 15. _____ | gave help (e.g., money, food, clothing, rides) to friends or classmates who needed it                            |                               |                             |                            |                       |
| 16. _____ | served as a member of an organizing committee or board for a school club or organization                         |                               |                             |                            |                       |
| 17. _____ | wrote a letter to a school or community newspaper or publication   |                               |                             |                            |                       |
| 18. _____ | signed a petition  |                               |                             |                            |                       |
| 19. _____ | attended a demonstration   |                               |                             |                            |                       |
| 20. _____ | collected signatures for a petition drive  |                               |                             |                            |                       |
| 21. _____ | contacted a public official by phone or mail to tell him/her how you felt about a particular issue               |                               |                             |                            |                       |
| 22. _____ | joined in a protest march, meeting or demonstration  |                               |                             |                            |                       |
| 23. _____ | got information about community activities from a local community information centre                             |                               |                             |                            |                       |
| 24. _____ | volunteered at a school event or function  |                               |                             |                            |                       |
| 25. _____ | helped people who were new to your country   |                               |                             |                            |                       |
| 26. _____ | gave money to a cause  |                               |                             |                            |                       |
| 27. _____ | worked on a political campaign   |                               |                             |                            |                       |

28. \_\_\_\_\_ ran for a position in student government
29. \_\_\_\_\_ participated in a discussion about a social or political issue
30. \_\_\_\_\_ volunteered with a community service organization

Appendix F

## Self-Esteem Scale

Please strongly agree, agree, disagree, or strongly disagree with the following items:

1. I feel that I'm a person of worth, at least on an equal plane with others.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree  
4 \_\_\_\_\_ Strongly disagree

2. I feel that I have a number of good qualities.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree  
4 \_\_\_\_\_ Strongly disagree

3. All in all, I am inclined to feel that I am a failure.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree  
4 \_\_\_\_\_ Strongly disagree

4. I am able to do things as well as most other people.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree  
4 \_\_\_\_\_ Strongly disagree

5. I feel I do not have much to be proud of.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree  
4 \_\_\_\_\_ Strongly disagree

6. I take a positive attitude toward myself.

1 \_\_\_\_\_ Strongly agree  
2 \_\_\_\_\_ Agree  
3 \_\_\_\_\_ Disagree

4 \_\_\_\_\_ Strongly disagree

7. On the whole, I am satisfied with myself.

1 \_\_\_\_\_ Strongly agree

2 \_\_\_\_\_ Agree

3 \_\_\_\_\_ Disagree

4 \_\_\_\_\_ Strongly disagree

8. I wish I could have more respect for myself.

1 \_\_\_\_\_ Strongly agree

2 \_\_\_\_\_ Agree

3 \_\_\_\_\_ Disagree

4 \_\_\_\_\_ Strongly disagree

9. I certainly feel useless at times.

1 \_\_\_\_\_ Strongly agree

2 \_\_\_\_\_ Agree

3 \_\_\_\_\_ Disagree

4 \_\_\_\_\_ Strongly disagree

10. At times I think I am no good at all.

1 \_\_\_\_\_ Strongly agree

2 \_\_\_\_\_ Agree

3 \_\_\_\_\_ Disagree

4 \_\_\_\_\_ Strongly disagree

Appendix G

Perceived Stress Scale

The questions in this scale ask how often you felt or thought certain things during the last month. Answer each question fairly quickly with the alternative that seems like a reasonable estimate, using the following scale:

0	1	2	3	4
never	almost never	sometimes	fairly often	very often

In the last month, how often have you:

1. \_\_\_\_\_ Been upset because of something that happened unexpectedly?
2. \_\_\_\_\_ Felt that you were unable to control the important things in your life?
3. \_\_\_\_\_ Felt nervous and "stressed"?
4. \_\_\_\_\_ Dealt successfully with irritating life hassles?
5. \_\_\_\_\_ Felt that you were effectively coping with important changes that were occurring in your life?
6. \_\_\_\_\_ Felt confident about your ability to handle your personal problems?
7. \_\_\_\_\_ Felt that things were going your way?
8. \_\_\_\_\_ Found that you could not cope with all the things that you had to do?
9. \_\_\_\_\_ Been able to control irritations in your life?
10. \_\_\_\_\_ Felt that you were on top of things?
11. \_\_\_\_\_ Been angered because of things that happened that were outside of your control?
12. \_\_\_\_\_ Found yourself thinking about things that you have to accomplish?
13. \_\_\_\_\_ Been able to control the way you spend your time?
14. \_\_\_\_\_ Felt difficulties were piling up so high that you could not overcome them?

## Appendix H

### The Social Provisions Scale

Below you will find a number of statements about your relationships with other people, your ways of coping with day to day events, and your personal attitudes. Please indicate your agreement or disagreement with each statement using the following scale:

- |                                |                          |
|--------------------------------|--------------------------|
| -4 = very strongly disagree    | +4 = very strongly agree |
| -3 = strongly disagree         | +3 = strongly agree      |
| -2 = moderately disagree       | +2 = moderately agree    |
| -1 = slightly disagree         | +1 = slightly agree      |
| 0 = neither agree nor disagree |                          |

1. \_\_\_\_\_ There are people I can depend on to help me if I really need it.
2. \_\_\_\_\_ I feel that I do not have any close personal relations with other people.
3. \_\_\_\_\_ There is no one I can turn to for guidance in times of stress.
4. \_\_\_\_\_ There are people who depend on me for help.
5. \_\_\_\_\_ There are people who enjoy the same social activities I do.
6. \_\_\_\_\_ Other people do not view me as competent.
7. \_\_\_\_\_ I feel personally responsible for the well-being of another person.
8. \_\_\_\_\_ I feel part of a group of people who share my attitudes and beliefs.
9. \_\_\_\_\_ I do not think other people respect my skills and abilities.
10. \_\_\_\_\_ If something went wrong, no one would come to my assistance.
11. \_\_\_\_\_ I have close relationships that provide me with a sense of emotional security and well-being.
12. \_\_\_\_\_ There is someone I could talk to about important decisions in my life.
13. \_\_\_\_\_ I have relationships where my competence and skills are recognized.
14. \_\_\_\_\_ There is no one who shares my interest and concerns.
15. \_\_\_\_\_ There is no one who really relies on me for their well-being.

16. \_\_\_\_\_ There is a trustworthy person I could turn to for advice if I were having problems.
17. \_\_\_\_\_ I feel a strong emotional bond with at least one other person.
18. \_\_\_\_\_ There is no one I can depend on for aid if I really need it.
19. \_\_\_\_\_ There is no one I feel comfortable talking about problems with.
20. \_\_\_\_\_ There are people who admire my talents and abilities.
21. \_\_\_\_\_ I have a feeling of intimacy with another person.
22. \_\_\_\_\_ There is no one who likes to do the things I do.
23. \_\_\_\_\_ There are people I can count on in an emergency.
24. \_\_\_\_\_ No one needs me to care for them anymore.



Appendix I

Student Adaptation to College Questionnaire

The 67 items included in this survey are statements that describe university experiences. Read each one and decide how well it applies to you at the present time (within the last few days). For each item, record the appropriate number in the space next to that item.

	1	2	3	4	5	6	7	8	9
	Doesn't apply To me at all								Applies very closely To me
1.	_____	I feel that I fit in well as part of the university environment.							
2.	_____	I have been feeling tense or nervous lately.							
3.	_____	I have been keeping up to date on my academic work.							
4.	_____	I am meeting as many people, and making as many friends as I would like at university.							
5.	_____	I know why I'm at university and what I want out of it.							
6.	_____	I am finding academic work at university difficult.							
7.	_____	Lately I have been feeling blue and moody a lot.							
8.	_____	I am very involved with social activities in university.							
9.	_____	I am adjusting well to university.							
10.	_____	I have not been functioning well during examinations.							
11.	_____	I have felt tired much of the time lately.							
12.	_____	Being on my own, taking responsibility for myself, has not been easy.							
13.	_____	I am satisfied with the level at which I am performing academically.							
14.	_____	I have had informal, personal contacts with university professors.							
15.	_____	I am pleased now about my decision to go to university.							
16.	_____	I am pleased now about my decision to attend this university in particular.							

17. \_\_\_\_\_ I'm not working as hard as I should at my course work.
18. \_\_\_\_\_ I have several close social ties at university.
19. \_\_\_\_\_ My academic goals and purposes are well defined.
20. \_\_\_\_\_ I haven't been able to control my emotions very well lately.
21. \_\_\_\_\_ I'm not really smart enough for the academic work I am expected to be doing now.
22. \_\_\_\_\_ Lonesomeness for home is a source of difficulty for me right now.
23. \_\_\_\_\_ Getting a university degree is very important to me.
24. \_\_\_\_\_ My appetite has been good lately.
25. \_\_\_\_\_ I haven't been very efficient in the use of study time lately.
26. \_\_\_\_\_ I enjoying living in a university residence. (Please omit if you do not live in a residence; any university housing should be regarded as a residence.)
27. \_\_\_\_\_ I enjoy writing papers for courses.
28. \_\_\_\_\_ I have been having a lot of headaches lately.
29. \_\_\_\_\_ I really haven't had much motivation for studying lately.
30. \_\_\_\_\_ I am satisfied with the extracurricular activities available at university.
31. \_\_\_\_\_ I've given a lot of thought lately to whether I should ask for help from the Psychological/Counseling Services Centre or from a counselor outside of university.
32. \_\_\_\_\_ Lately I have been having doubts regarding the value of a university education.
33. \_\_\_\_\_ I am getting along very well with my roommate(s) at university. (Please omit if you do not have a roommate.)
34. \_\_\_\_\_ I wish I were at another university.
35. \_\_\_\_\_ I've put on (or lost) too much weight recently.

36. \_\_\_\_\_ I am satisfied with the number and variety of courses available at university.
37. \_\_\_\_\_ I feel that I have enough social skills to get along well in the university setting.
38. \_\_\_\_\_ I have been getting angry too easily lately.
39. \_\_\_\_\_ Recently I have had trouble concentrating when I try to study.
40. \_\_\_\_\_ I haven't been sleeping very well.
41. \_\_\_\_\_ I'm not doing well enough academically for the amount of work I put in.
42. \_\_\_\_\_ I am having difficulty feeling at ease with other people at university.
43. \_\_\_\_\_ I am satisfied with the quality or calibre of courses available at university.
44. \_\_\_\_\_ I am attending classes regularly.
45. \_\_\_\_\_ Sometimes my thinking gets muddled up too easily.
46. \_\_\_\_\_ I am satisfied with the extent to which I am participating in social activities at university.
47. \_\_\_\_\_ I expect to stay at this university for a bachelor's degree.
48. \_\_\_\_\_ I haven't been mixing too well with the opposite sex lately.
49. \_\_\_\_\_ I worry a lot about my university expenses.
50. \_\_\_\_\_ I am enjoying my academic work at university.
51. \_\_\_\_\_ I have been feeling lonely a lot at university lately.
52. \_\_\_\_\_ I am having a lot of trouble getting started on homework assignments.
53. \_\_\_\_\_ I feel I have good control over my life situation at university.
54. \_\_\_\_\_ I am satisfied with my program of courses for this term.
55. \_\_\_\_\_ I have been feeling in good health lately.
56. \_\_\_\_\_ I feel I am very different from other students at university in ways that I don't like.
57. \_\_\_\_\_ On balance, I would rather be home than here.

58. \_\_\_\_\_ Most of the things I am interested in are not related to any of my course work at university.
59. \_\_\_\_\_ Lately I have been giving a lot of thought to transferring to another university.
60. \_\_\_\_\_ Lately I have been giving a lot of thought to dropping out of university altogether and for good.
61. \_\_\_\_\_ I find myself giving considerable thought to taking time off from university and finishing later.
62. \_\_\_\_\_ I am very satisfied with the professors I have now in my courses.
63. \_\_\_\_\_ I have some good friends or acquaintances at university with whom I can talk about any problems I may have.
64. \_\_\_\_\_ I am experiencing a lot of difficulty coping with the stresses imposed on me in university.
65. \_\_\_\_\_ I am quite satisfied with my social life at university.
66. \_\_\_\_\_ I am quite satisfied with my academic situation at university.
67. \_\_\_\_\_ I feel confident that I will be able to deal in a satisfactory manner with future challenges here at university.

## Appendix J

### ***INFORMED CONSENT STATEMENT***

WILFRID LAURIER UNIVERSITY

The Relationship between Youth Involvement and Transition to University:

An Examination of the Mediating Factors

Principal Investigator: Thanh-Thanh Tieu

Supervisor: S. Mark Pancer

You are invited to participate in a research study. The purpose of this study is to examine the relationship between involvement and the transition to university. More specifically, the study will be examining why involvement is beneficial to adjustment. This study will be examining factors that are believed to be related to involvement and adjustment. The factors that will be examined are self-esteem, social support, stress, and social skills.

This research is being conducted by Thanh-Thanh Tieu, a first year Masters student in the social-developmental psychology program. This study is being conducted as part of her Masters thesis.

### **INFORMATION**

In this study you will be asked to complete one questionnaire. You are asked to complete a questionnaire package on your own. Please answer the questions honestly, and to the best of your ability.

The questionnaire package you will receive will take approximately 20 minutes to complete. The measures included in the package assess factors that may be related to adjustment to university.

Approximately 150 students will be asked to participate in this study.

### **RISKS**

The risks associated with this study may include emotional distress you may experience as a result of completing scales about yourself or your experiences at university. If you experience stress due to participation in this study you may leave any questions blank. At the end of the testing session you will be provided with the phone number for counseling services at Wilfrid Laurier University in the event that you are experiencing difficulty with your adjustment to university, or if you experience emotional distress through your participation in this study.

### **BENEFITS**

By participating in this study you will be contributing to the body of research on the areas of youth involvement and transition to university. More specifically your participation will assist in determining what factors are related to involvement and its relationship with adjustment to university. Also, you will have the opportunity to directly observe and learn about how researchers design studies to address psychological issues, thus enhancing your understanding of research methods.

### **CONFIDENTIALITY**

You are asked NOT to provide your name or student number on the questionnaire. All of the responses you give will remain completely confidential. Only the principal investigator,

Participant's Initial \_\_\_\_\_

Thanh-Thanh Tieu, and the advisor, Dr. Pancer, will see the questionnaires. All data collected from this study will be stored in filing cabinets in a locked office. Only the principal researcher, Thanh-Thanh Tieu, and the thesis advisor, Dr. Pancer, will have access to the questionnaires. In accordance with guidelines set out by the American Psychological Association, all data will be destroyed seven years after the completion of this study. Data from this study may be presented in professional conferences and academic publications. Participants will not be individually identified in reports of the research findings; only aggregated data (group means) will be presented.

### **COMPENSATION**

For participating in this study you will receive 0.5 credit. If you choose to withdraw from the study prior to its completion, do not complete the questionnaire, or ask to have your responses deleted, you will still receive the 0.5 research credit.

Other ways for PS100 students to earn the same amount of credit are by completing critical reviews of journal articles. More information regarding this option can be obtained through the Psychology Main Office at N2006.

### **CONTACT**

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com) and (519) 884-0710 ext. 2950. You may also contact the supervisor, Dr. S. Mark Pancer at the Psychology Department, Wilfrid Laurier University, Office N2021, at (519) 884-0710 ext. 3149 or at [mpancer@wlu.ca](mailto:mpancer@wlu.ca). This project has been reviewed and approved by the University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Bill Marr, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 2468.

### **PARTICIPATION**

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed. You have the right to omit any question(s)/procedure(s) you choose.

### **FEEDBACK AND PUBLICATION**

The results of this study will be used in the principal investigator's Masters' thesis. Also, the results may be presented in professional conferences and academic publications in the future.

The results of this study will be posted on a bulletin board outside of the psychology main office on the second floor of the science building. These results will be available by April 15, 2004. These results will also be e-mailed to you through the Psychology Research Experience Program (PREP) system.

**CONSENT**

I have read and understand the above information. I have received a copy of this form. I agree to participate in this study.

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

Investigator's signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix K

### WILFRID LAURIER UNIVERSITY PROJECT SUMMARY

PROJECT: The Relationship between youth involvement and the transition to university: An examination of the mediating factors

PRINCIPAL INVESTIGATOR: Thanh-Thanh Tieu

Thank you for taking part in this study! Your participation is sincerely appreciated, and we hope that you have found your experience to be interesting.

This study examines the relationship between involvement and adjustment to university. Past research indicates that there is a positive relationship between involvement and adjustment, such that students that are involved in more activities outside of schoolwork and employment appear to have an easier time adjusting to university. Yet, no research has examined why this is the case. For this study, it is proposed that involvement in activities outside of coursework and employment may benefit adjustment to university in many different ways. One way is by boosting self-esteem; participation in activities may enhance a person's self-esteem, which may assist them in dealing with the adjustment to university. It is also proposed that being involved in activities allows students to meet more people, thus developing larger social support networks. The presence of social support networks may be beneficial in coping with the adjustment to university. Involvement may also allow people the opportunity to develop their social skills. These social skills may be beneficial for adjustment by facilitating interpersonal relationships people develop while making the transition to university. Also, being involved may act as a stress reliever, which may make it easier for students to deal with their adjustment to university. These hypotheses are based on literature that illustrates a connection between self-esteem, social support, social skills and stress and involvement and adjustment to university.

It may be the case that answering questions about yourself and/or your experiences may cause emotional distress. If this is the case, Wilfrid Laurier University offers confidential counseling services to its students. An appointment with Counseling Services can be made either by calling (519) 884-0710 extension 2338, or by going to their office located in the Student Services building across from Health Services. You can also contact Counseling Services about a wide array of materials and workshops that they offer which may provide assistance for you in coping with the adjustment to university.

If you have any further questions or concerns regarding the study you may contact the researcher, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com) and (519) 884-0710 ext. 2950. You may also contact the supervisor, Dr. S. Mark Pancer at the Psychology Department, Wilfrid Laurier University, Office N2021, at (519) 884-0710 ext. 3149 or at [mpancer@wlu.ca](mailto:mpancer@wlu.ca).

The results of this study will be posted on a bulletin board outside of the psychology main office on the second floor of the science building. These results will be available by April 15, 2004. These results will also be e-mailed to you. If you are interested in learning more about the relationship between involvement and adjustment to university, the following paper may be of interest to you:

Pratt, M. W., Hunsberger, B., Pancer, S. M., Alisat, S., Bowers, C., Mackey, K., et al. (2000). Facilitating the transition to university: Evaluation of a social support discussion intervention program. *Journal of College Student Development*, 41, 427-440.

Thank-you again for participating!



Appendix L

***INFORMED CONSENT STATEMENT***

WILFRID LAURIER UNIVERSITY

The Relationship between Youth Involvement and Transition to University:

An Examination of the Mediating Factors

Principal Investigator: Thanh-Thanh Tieu

Supervisor: S. Mark Pancer

You are invited to participate in a research study. The purpose of this study is to examine the relationship between involvement and the transition to university. More specifically, the study will be examining why involvement is beneficial to adjustment. This study will be examining factors that are believed to be related to involvement and adjustment. The factors that will be examined are self-esteem, social support, stress, and social skills.

This research is being conducted by Thanh-Thanh Tieu, a first year Masters student in the social-developmental psychology program. This study is being conducted as part of her Masters thesis.

**INFORMATION**

In this study you will be asked to complete one questionnaire. You are asked to complete a questionnaire package on your own. Please answer the questions honestly, and to the best of your ability.

The questionnaire package you will receive will take approximately 20 minutes to complete. The measures included in the package assess factors that may be related to adjustment to university.

Approximately 150 students will be asked to participate in this study.

**RISKS**

The risks associated with this study may include emotional distress you may experience as a result of completing scales about yourself or your experiences at university. If you experience stress due to participation in this study you may leave any questions blank. At the end of the testing session you will be provided with the phone number for counseling services at Wilfrid Laurier University in the event that you are experiencing difficulty with your adjustment to university, or if you experience emotional distress through your participation in this study.

**BENEFITS**

By participating in this study you will be contributing to the body of research on the areas of youth involvement and transition to university. More specifically your participation will assist in determining what factors are related to involvement and its relationship with adjustment to university. Also, you will have the opportunity to directly observe and learn about how researchers design studies to address psychological issues, thus enhancing your understanding of research methods.

**CONFIDENTIALITY**

You are asked **NOT** to provide your name or student number on the questionnaire. All of the responses you give will remain completely confidential. Only the principal investigator, Thanh-Thanh Tieu, and the advisor, Dr. Pancer, will see the questionnaires. All data collected from this

study will be stored in filing cabinets in a locked office. Only the principal researcher, Thanh-Thanh Tieu, and the thesis advisor, Dr. Pancer, will have access to the questionnaires.

In accordance with guidelines set out by the American Psychological Association, all data will be destroyed seven years after the completion of this study. Data from this study may be presented in professional conferences and academic publications. Participants will not be individually identified in reports of the research findings; only aggregated data (group means) will be presented.

### **COMPENSATION**

Participation in mass-testing is typically given at half the rate of other research participation. For participating in this study through the mass testing session, you will receive 0.25 credit. If you choose to withdraw from the study prior to its completion, do not complete the questionnaire, or ask to have your responses deleted, you will still receive the 0.25 research credit.

Yet, in the event that this questionnaire is the only one being administered in the mass testing session, you will receive 0.5 credit. If you choose to withdraw from the study prior to its completion, do not complete the questionnaire, or ask to have your responses deleted, you will still receive the 0.5 research credit.

Other ways for PS100 students to earn the same amount of credit are by completing critical reviews of journal articles. More information regarding this option can be obtained through the Psychology Main Office at N2006.

### **CONTACT**

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study) you may contact the researcher, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com) and (519) 884-0710 ext. 2950. You may also contact the supervisor, Dr. S. Mark Pancer at the Psychology Department, Wilfrid Laurier University, Office N2021, at (519) 884-0710 ext. 3149 or at [mpancer@wlu.ca](mailto:mpancer@wlu.ca). This project has been reviewed and approved by the University Research Ethics Board. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Bill Marr, Chair, University Research Ethics Board, Wilfrid Laurier University, (519) 884-0710, extension 2468.

### **PARTICIPATION**

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed. You have the right to omit any question(s)/procedure(s) you choose.

### **FEEDBACK AND PUBLICATION**

The results of this study will be used in the principal investigator's Masters' thesis. Also, the results may be presented in professional conferences and academic publications in the future.

The results of this study will be posted on a bulletin board outside of the psychology main office on the second floor of the science building. These results will be available by April 15, 2004.

These results will also be e-mailed to you through the Psychology Research Experience Program (PREP) system.

---

### CONSENT

You may take this consent form with you for your records.

Note that instead of providing a signature, you may indicate your consent by completing the following questionnaire.

Completing the questionnaire will indicate that you have read and understood the above information, and you agree to participate in the study. If you choose not to consent, simply leave the questionnaire blank.

## Appendix M

### The Relationship between Youth Involvement and the Transition to University: An Examination of the Mediating Factors

Principal Investigator: Thanh-Thanh Tieu  
Supervisor: Dr. S. Mark Pancer  
Research Study Number: 1868

Research indicates that involvement in activities outside of coursework and paid employment predicts better adjustment to university. Yet, why does involvement predict better adjustment? The purpose of this study was to examine factors that may mediate the relationship between involvement and adjustment. Based on previous research, it was hypothesized that the relationship between involvement and the transition to university was mediated by self-esteem, social support, social skills, and stress. It was proposed that involvement in activities outside of school work would boost self-esteem. This increase in confidence would assist students in adjusting to university. It was also proposed that involvement in activities would increase the amount of social support available, which would provide students with assistance in adjusting to university. Involvement in activities was also predicted to improve students' social skills. This improvement would assist students in the development of interpersonal relationships, which would contribute to a smoother transition to university. Lastly, it was proposed that participation in activities outside of schoolwork and employment would act as a stress reliever. This decreased amount of stress would allow students to better cope with the transition to university.

Data for this project was collected through the Psychology Research Experience Program (PREP), and through one mass testing session. A total of 191 students participated in this study.

Analysis showed that self-esteem was a successful mediator of the relationship between involvement and adjustment. Therefore, participation in activities outside of schoolwork and paid employment serve to boost a person's self-esteem. This boost in self-esteem seems to be beneficial for students making the transition to university.

It was found that social support was a factor that also mediated the relationship between involvement and adjustment. Being involved in activities outside of school appears to provide students with additional social support. The availability of social support seems to be an asset for students adjusting to university.

Data analysis revealed that though social skills were positively correlated with the quality of participants' involvement, they were not related to scores of adjustment. As such, mediational analyses could not be conducted on the measures of social skills.

Lastly, stress was also found to mediate the relationship between involvement and adjustment. Participating in activities outside of coursework and paid employment is correlated with lower levels of stress. These lower amounts of stress appear to assist students with coping with the adjusting to university.

In conclusion, it appears that participating in activities outside of coursework and employment is beneficial for students making the transition to university. The reason this may be the case is because involvement boosts self-esteem, increases available social support and reduces stress. All of these factors contribute to a smoother transition to university.

The results of this study could be used in the creation of prevention programs for first year students. Programs could be created that foster the development of self-esteem, social support and stress reduction. These programs could be valuable tools in preventing attrition.

Thank-you very much for your participation in this study. You have contributed to research in the area of youth involvement and the transition to university. The results of this research may be useful in addressing issues of adjustment to university, which also provides some insight into our understanding of the student experience. If you have any further questions or comments about the research, you may contact the principal investigator, Thanh-Thanh Tieu at [thanher@hotmail.com](mailto:thanher@hotmail.com).

Table 1

*Factor Loadings for the Quality of Involvement Scale*

Item	Factor Component						
	1	2	3	4	5	6	7
1	.745	-.072	.258	-.035	.153	.366	-.0006
2	.062	.586	.456	-.032	.121	-.100	-.112
3	.752	.412	.030	.205	-.026	-.071	-.025
4	.666	.356	-.111	.216	.232	-.060	-.045
5	.375	.452	-.139	-.0009	-.208	.452	-.471
6	.516	.620	.121	.148	.046	.083	.024
7	-.081	.702	.112	.102	.297	.197	.102
8	.352	.610	.026	.056	.061	.239	-.041
9	.734	.019	.189	.198	-.095	-.216	.170
10	.870	.198	.214	.134	.045	.015	-.008
11	.267	.772	.143	.005	-.066	.050	.073
12	.739	.410	.227	-.005	-.058	-.021	-.043
13	.668	.153	-.152	.228	-.330	-.013	.221
14	.158	.111	.071	-.066	.114	.116	.825
15	.652	.061	.070	-.081	.591	.037	.028
16	.280	.750	.227	.097	.151	-.004	.043
17	.068	.546	.596	.094	.113	.074	.030
18	.454	.415	.199	.282	.054	.122	.055
19	.144	.804	.216	.214	-.016	-.064	.047
20	.114	.475	.340	.401	-.104	-.047	.317
21	.223	.122	.235	.780	.096	-.096	-.163
22	.176	.268	.390	.595	.135	.222	.270
23	.715	.131	.141	.255	.314	.101	.019
24	.497	.229	.005	.630	.147	.145	-.063
25	.726	.075	.127	.015	.421	-.078	.084
26	.179	.099	.850	.148	-.099	.068	.071
27	.244	.134	.745	.368	.127	.115	-.022
28	.117	.437	.736	-.023	-.114	-.039	.122
29	.131	.604	-.039	.307	.388	.252	-.042
30	.125	.611	.132	.252	.529	.110	.051
31	-.049	.174	.112	.061	-.044	.908	.117
32	.152	.274	-.159	.203	.741	-.150	.180

Note: Varimax rotation method used

Table 2

*Factor Loadings for the Social Skills Scale*


---

Item	Factor Component		
	1	2	3
1	.867	.016	.247
2	.831	.304	-.119
3	.806	.374	.040
4	.540	.468	.362
5	.377	.764	.045
6	.059	.883	.175
7	.200	.749	.023
8	.568	.515	.243
9	.770	.241	.190
10	.155	-.010	.864
11	.298	.580	.184
12	.410	.456	.352
13	.055	.324	.854

---

*Note:* Varimax rotation method used

Table 3  
*Descriptive Statistics for Involvement Measures*

Involvement Measure	<i>N</i>	<i>M</i>	<i>SD</i>	$\alpha$
YII Overall	183	31.74	17.42	.855
YII Political Activities	189	0.32	0.47	.721
YII Community Activities	190	0.74	0.66	.683
YII Responding Activities	191	2.03	0.85	.535
YII Helping Activities	186	1.39	0.86	.821
QIS Overall	188	74.92	9.24	.895
QIS Affect Subscale	188	34.90	3.84	.782
QIS Meaning Subscale	188	27.77	4.84	.857
QIS Interpersonal-Relationship Subscale	188	12.24	2.17	.751
Total number of activities reported	190	3.93	2.19	-
Total number of hours spent on activities	190	27.66	36.83	-
Hours spent on most important activity	189	9.06	17.00	-
Hours spent on second most important activity	191	6.41	13.46	-



Table 4

*Correlations between Measures of Quality and Frequency of Involvement and Measures of Adjustment*

	YII overall	YII political	YII community	YII responding	YII helping	Total hours	Hours 1 <sup>st</sup> activity	QIS overall	QIS affect	QIS meaning	QIS relationship
YII overall	---	.677**	.831**	.717**	.924**	.171*	.248**	.279**	.246**	.282**	.129
YII political		---	.582**	.304**	.462**	.190**	.283**	.090	.087	.096	.015
YII community			---	.398**	.695**	.125	.218**	.173*	.096	.218**	.080
YII responding				---	.595**	.117	.152*	.212**	.238**	.171*	.101
YII helping					---	.153*	.168*	.319**	.279**	.324**	.145
Total hours						---	.618**	.193**	.190**	.158*	.134
Hours 1 <sup>st</sup> activity							---	.179*	.167*	.139	.156*
QIS overall								---	.861**	.898**	.734**
QIS affect									---	.606**	.547**
QIS meaning										---	.520**
QIS relationship											---

\* Correlation significant at the 0.05 level (2-tailed)

\*\* Correlation significant at the 0.01 level (2-tailed)

Table 5

*Descriptive Statistics of the Youth Involvement Inventory Based on Type of Activity Nominated as Most Important*

Type of Activity	YII Overall		YII Political		YII Community		YII Responding		YII Helping	
	N	M	N	SD	N	SD	N	SD	N	SD
Athletics	103	31.00	107	0.50	107	0.63	108	0.82	105	0.83
Religious, Arts, Clubs	45	32.94	46	0.44	47	0.61	47	0.81	46	0.78
Community Service	23	37.57	23	0.43	23	0.83	23	0.99	23	1.09
Social	9	23.78	10	0.23	10	0.51	10	0.46	9	0.86

Table 6

*Descriptive Statistics for the Quality of Involvement Scale Based on Type of Activity Nominated as Most Important*

Type of Activity	QIS Score		QIS Affect		QIS Meaning		QIS Relationship					
	N	M	SD	N	M	SD	N	M	SD			
Athletics	108	75.04	9.12	108	35.56 <sup>a</sup>	3.48	108	27.44	4.80	108	12.04 <sup>a</sup>	2.27
Religious, Arts, Clubs	47	76.28	8.26	47	34.76 <sup>a</sup>	3.67	47	28.93	4.17	47	12.57 <sup>ab</sup>	1.80
Community Service	23	71.26	11.69	23	32.57 <sup>b</sup>	5.23	23	26.91	5.77	23	11.78 <sup>a</sup>	2.35
Social	10	75.70	7.56	10	33.80 <sup>ab</sup>	2.25	10	27.90	5.70	10	14.00 <sup>b</sup>	1.15

*Note:* QIS Affect and QIS Relationship means with the same superscript do not differ significantly ( $p < .05$ ) from one another, respectively.

Table 7

*Descriptive Statistics for the SACQ and the SSS*

---

Measure	<i>N</i>	<i>M</i>	<i>SD</i>	$\alpha$
SACQ Overall	188	402.34	58.70	.908
SACQ Academic Subscale	191	134.13	23.57	.834
SACQ Social Subscale	188	125.89	23.01	.855
SACQ Personal-Emotional Subscale	191	82.62	21.43	.791
SACQ Institutional Attachment Subscale	188	105.22	18.29	.848
SSS Overall	188	27.74	7.13	.874
SSS Working With Others Subscale	188	18.68	4.87	.867
SSS Voicing One's Opinions Subscale	188	9.06	3.17	.801

---

Table 8

*Correlations between Involvement and Adjustment*

Involvement	Adjustment				
	SACQ total	SACQ academic	SACQ social	SACQ emotional	SACQ attachment
YII	.000	.030	.069	-.004	-.103
YII political	-.146 *	-.059	-.072	-.122	-.211 **
YII community	-.061	.028	-.044	-.035	-.195 **
YII responding	.002	-.058	.144 *	-.025	.010
YII helping	.091	.113	.104	.064	-.018
QIS overall	.171 *	.045	.227 **	.096	.146 *
QIS affect	.215 **	.096	.244 **	.132	.164 *
QIS meaning	.136	.024	.181 *	.082	.113
QIS relationship	.044	-.034	.130	-.008	.077
Total hours	-.093	-.115	-.018	-.021	-.114
Hours-1 <sup>st</sup> activity	-.016	-.052	.060	-.050	.036

\* Correlation significant at the 0.05 level (2-tailed)

\*\* Correlation significant at the 0.01 level (2-tailed)

Table 9

*Regression Analysis with Quality of Involvement and Quantity of Involvement as Predictors of Adjustment*

Predictor	B	$\beta$	t	Significance
QIS Overall	1.251	.196	2.502	.013
Total number of hours	-.279	-.173	-1.803	.073
Number of hours-1 <sup>st</sup> activity	.245	.073	.748	.455
YII Overall	-.145	-.043	-.542	.589

*Note:* The dependent variable is the overall score on the SACQ

Table 10

*Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Self-Esteem as the Mediator*

Predictor	DV	$\beta$	t	Significance
Involvement	Adjustment	.171	2.353	.020
Involvement	Self-Esteem	.186	2.587	.010
Self-Esteem	Adjustment *	.558	8.996	.000
Involvement	Adjustment **	.060	0.971	.333

\* controlling for involvement

\*\* controlling for self-esteem

Table 11

*Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Stress as the Mediator*

Predictor	DV	$\beta$	t	Significance
Involvement	Adjustment	.171	2.353	.020
Involvement	Stress	-.196	-2.729	.007
Stress	Adjustment *	-.588	-9.670	.000
Involvement	Adjustment **	.043	0.705	.482

\* controlling for involvement

\*\* controlling for stress



Table 12

*Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Social Support as the Mediator*

Predictor	DV	$\beta$	t	Significance
Involvement	Adjustment	.179	2.457	.015
Involvement	Social Support	.172	2.372	.019
Social Support	Adjustment *	.413	6.120	.000
Involvement	Adjustment **	.112	1.656	.100

\* controlling for involvement

\*\* controlling for social support

Table 13

*Mediational Analysis with Involvement as the Independent Variable, Adjustment as the Dependent Variable, and Social Skills as the Mediator*

Predictor	DV	$\beta$	t	Significance
Involvement	Adjustment	.171	2.353	.020
Involvement	Social Skills	.403	5.998	.000
Social Skills	Adjustment *	-.161	-2.031	.044
Involvement	Adjustment **	.237	2.997	.003

\* controlling for involvement

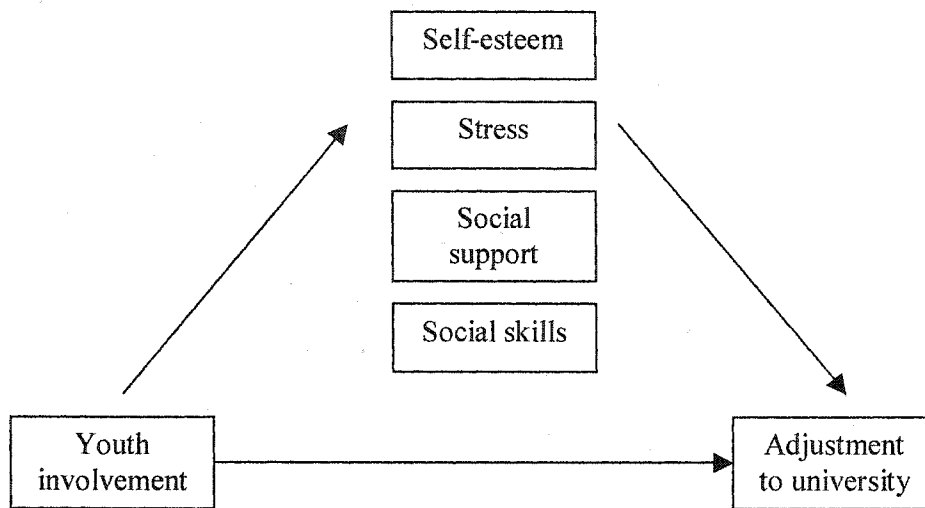
\*\* controlling for social skills

Table 14  
*Correlations between Mediators*

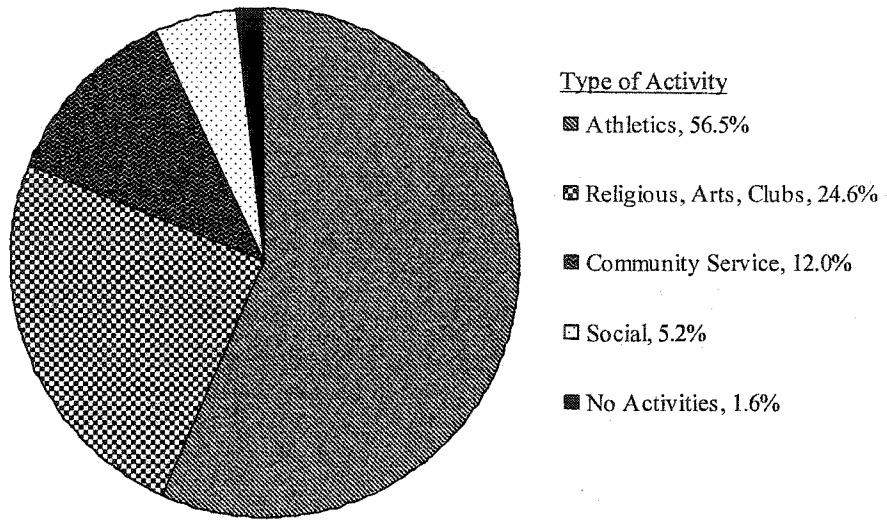
	Self-Esteem	Stress	Social Support	Social Skills
Self-Esteem	---	-.548**	.401**	-.037
Stress		---	-.234**	-.020
Social Support			---	.152*
Social Skills				---

\* Correlation significant at the 0.05 level (2-tailed)

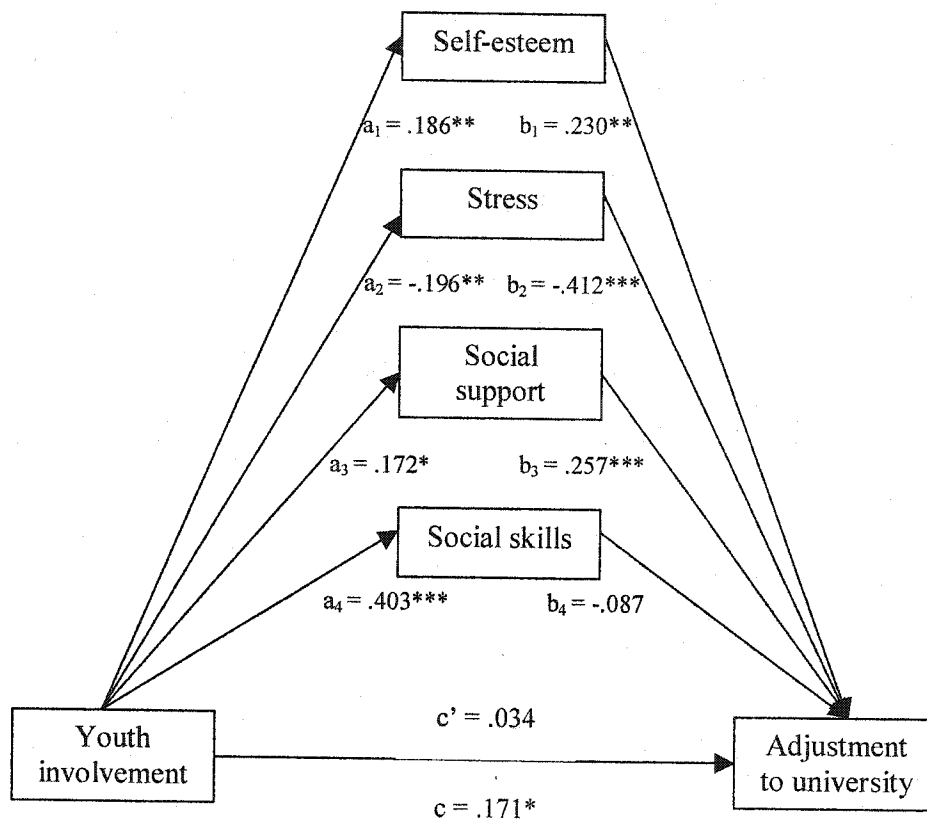
\*\* Correlation significant at the 0.01 level (2-tailed)



*Figure 1.* The relationship between youth involvement and adjustment to university, with self-esteem, stress, social support, and, social skills as mediating variables.



*Figure 2:* Percentage of participants that nominated activities in each category



- \*  $p < .05$
- \*\*  $p < .01$
- \*\*\*  $p < .001$

Figure 3: Beta weights illustrating the relationship of self-esteem, stress, social support, and social skills as mediators of the relationship between youth involvement and adjustment to university.

### References

- Allen, J. P., Philliber, S., Herrling, S., & Gabriel, K. P. (1997). Preventing teen pregnancy and academic failure: Experimental evaluation of a developmentally based approach. *Child Development, 64*, 729-742.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*, 518-529.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology, 31*, 179-189.
- Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*, 429-455.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Baruch, G. K., & Barnett, R. (1986). Role quality, multiple role involvement, and psychological well-being in midlife women. *Journal of Personality and Social Psychology, 51*, 578-585.
- Bradley, J. S., & Graham, S. W. (2000). The effect of educational ethos and campus involvement on self-reported college outcomes for traditional and nontraditional undergraduates. *Journal of College Student Development, 41*, 488-502.
- Caplan, G. (1974). *Support systems and community mental health*. New York: Behavioral Publications.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress.

- Journal of Health and Social Behavior*, 24, 385-396.
- Colby, A., & Damon, W. (1992). *Some do care: Contemporary lives of moral commitment*. New York: Free Press.
- Colman, A. M. (2003). *Oxford Dictionary of Psychology*. New York: Oxford University Press.
- Crocker, J. (2002). The cost of seeking self-esteem. *Journal of Social Issues*, 58, 597-615.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: HarperCollins.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: HarperCollins.
- Cutrona, C. E. (1989). Ratings of social support by adolescents and adult informants: Degree of correspondence and prediction of depressive symptoms. *Journal of Personality and Social Psychology*, 57, 723-730.
- Cutrona, C. E. & Russell, D. (1987). The provisions of social relationships and adaptation to stress. In W. H. Jones & D. Perlman (Eds.), *Advances in personal relationships: Vol. 1* (pp. 37-68). Greenwich, CT: JAI Press.
- Dunham, P. J., Hurshman, A., Litwin, E., Gusella, J., Ellsworth, C., & Dodd, P. W. D. (1998). Computer-mediated social support: Single young mothers as a model system. *American Journal of Community Psychology*, 26, 281-306.
- Dworkin, J. B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence*, 32, 17-26.
- Gaither, G. H. (1992). Persistence patterns in public higher education: The case of Texas. *College and University*, 67, 245-252.



- Grant, K. E., O'Koon, J. H., Davis, T. H., Roache, N. A., Poindexter, L. M., Armstrong, M. L., et al. (2000). Protective factors affecting low-income urban African-American youth exposed to stress. *Journal of Early Adolescence, 20*, 388-417.
- Hamilton, S. F., & Fenzel, L. M. (1988). The impact of volunteer experience on adolescent social development: Evidence of program effects. *Journal of Adolescent Research, 3*, 65-80.
- Hays, R. B., & Oxley, D. (1986). Social network development and functioning during a life transition. *Journal of Personality and Social Psychology, 50*, 305-313.
- Hinderlie, H. H., & Kenny, M. (2002). Attachment, social support, and college adjustment among black students at predominantly white universities. *Journal of College Student Development, 43*, 327-340.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.
- Jackson, L. M., Pancer, S. M., Pratt, M. W., & Hunsberger, B. E. (2000). Great expectations: The relation between expectancies and adjustment during the transition to university. *Journal of Applied Social Psychology, 30*, 2100-2125.
- Kimball, A., & Freysinger, V. J. (2003). Leisure, stress, and coping: The sport participation of collegiate student-athletes. *Leisure Sciences, 25*, 115-141.
- Krull, J. L., & MacKinnon, D. P. (1999). Multilevel mediation modeling in group based intervention studies. *Evaluation Review, 23*, 418-444.
- Lakey, B., & Cohen, S. (2000). Social support theory and measurement. In S. Cohen, L.

- G. Underwood., & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 29-52). New York: Oxford University Press.
- Lawson, L., & McNally, M. (1995). Putting teens at the center: Maximizing public utility of urban space through youth involvement in planning and employment. *Children's Environments, 12*, 209-221.
- Mahoney, J. L., & Cairns, R. B. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology, 33*, 241-253.
- Mahoney, J. L., Cairns, R. B., & Farmer, T. W. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology, 95*, 409-418.
- Mallinckrodt, B., & Sedlacek, W. E. (1987). Student retention and the use of campus facilities by race. *NASPA Journal, 24*, 28-32.
- O'Donoghue, J. L., Kirshner, B., & McLaughlin, M. (2002). Introduction: Moving youth participation forward. *New Directions for Youth Development, 96*, 15-26.
- Oppenheimer, B. T. (1984). Short-term small group intervention for college freshmen. *Journal of Counseling Psychology, 31*, 45-53.
- Pancer, S. M., Pratt, M. W., Hunsberger, B., & Alisat, S. (in press). Community and political involvement in adolescence: What distinguishes the activists from the uninvolved? *Journal of Community Psychology*.
- Pancer, S. M., Rose-Krasnor, L., & Busseri, M. (in preparation). *Engagement and well-being in youth*.
- Pancer, S. M., Rose-Krasnor, L., & Loiselle, L. (2002). Youth conferences as a context

- for engagement. In B. Kirshner, J. L. O'Donoghue, & M. McLaughlin (Eds.). *New directions for youth development: No. 96. Youth participation: Improving institutions and communities*. San Francisco: Jossey Bass.
- Pratt, M. W., Hunsberger, B., Pancer, S. M., Alisat, S., Bowers, C., Mackey, K., et al. (2000). Facilitating the transition to university: Evaluation of a social support discussion intervention program. *Journal of College Student Development, 41*, 427-440.
- Piliavin, J. A. (2003). Doing well by doing good: Benefits for the benefactor. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 227-247). Washington DC: American Psychological Association.
- Riggio, R. E., Throckmorton, B., & DePaola, S. (1990). Social skills and self-esteem. *Personality and Individual Differences, 11*, 799-804.
- Riggio, R. E., Watring, K. P., & Throckmorton, B. (1993). Social skills, social support and psychosocial adjustment. *Personality and Individual Differences, 15*, 275-280.
- Rose, B. M., Holmbeck, G. N., Coakley, R. M., & Franks, E. A. (2004). Mediator and moderator effects in developmental and behavioral pediatric research. *Journal of Developmental and Behavioral Pediatrics, 25*, 58-67.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rubin, R. S., Bommer, W. H., & Baldwin, T. T. (2002). Using extracurricular activity as an indicator of interpersonal skill: Prudent evaluation or recruiting malpractice? *Human Resources Management, 41*, 441-454.
- Silber, E., & Tippett, J. (1965). Self-esteem: Clinical assessment and measurement

- validation. *Psychological Reports*, *16*, 1017-1071.
- Schlossberg, N. K. (1980). A model for analyzing human adaptation to transition. *The Counseling Psychologist*, *9*, 2-18.
- Steinberg, L. (1999). *Adolescence* (5<sup>th</sup> ed.). Boston: McGraw-Hill.
- Stukas, A. A., Snyder, M., & Clary, E. G. (1999). The effects of "mandatory volunteerism" on intentions to volunteer. *Psychological Science*, *10*, 59-64.
- Tao, S., Dong, Q., Pratt, M. W., Hunsberger, B., & Pancer, S. M. (2000). Social support: Relations to coping and adjustment to university in the People's Republic of China. *Journal of Adolescent Research*, *15*, 123-144.
- Terenzini, P. T., Pascarella, E. T., & Bliming, G. S. (1996). Students' out-of-class experiences and their influence on learning and cognitive development: A literature review. *Journal of College Student Development*, *37*, 149-162.
- Thombs, D. L. (1995). Problem behavior and academic achievement among first-semester college freshmen. *Journal of College Student Development*, *36*, 280-288.
- Veit, C. T., & Ware, J. E. (1983). The structure of psychological distress and well-being in general populations. *Journal of Consulting and Clinical Psychology*, *51*, 730-742.
- Warburton, J., & Smith, J. (2003). Out of the generosity of your heart: Are we creating active citizens through compulsory volunteer programmes for young people in Australia? *Social Policy and Administration*, *37*, 772-786.
- Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17-26). Englewood Cliffs, NJ: Prentice Hall.
- Zaff, J. F., Moore, K. A., Romano Papillo, A., & Williams, S. (2003). Implications of

extracurricular activity participation during adolescence on positive outcomes.

*Journal of Adolescent Research, 18, 599-630.*

