

First-Year University Students' Adjustment to University Life
As a Function of Relationships with Parents

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by

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Abstract

Although there has been a great deal of research on students' adjustment to university, one understudied aspect has been how first-year students' relationships with their parents affects this transition. Set within the theoretical frameworks as provided by Chickering (1969), Tinto (1975, 1993), and Weidman (1989a), this study investigates the contributions that specific aspects of the relationship with parents, as well as emotional well-being and identity variables, make towards adjustment to university from both socio/emotional and academic perspectives. Specific predictor variables studied are mutual reciprocity with parents, the degree of complexity in students' thinking, the degree of discussion of university related issues with parents, psychosocial maturity (autonomy), enabled independence, parental support, depressive symptomatology experienced, self-esteem, perceived stress, and the retrospective recounting of the perception of parenting style (i.e., authoritarian, authoritative, or permissive). In addition to actual academic achievement (GPA), outcome variables included measures of perceived overall adjustment, as well as academic, social, personal/emotional adjustment, and attachment to university/goal commitment.

During the first week of classes, data were collected from a sample of 1072 (318 males and 754 females) first-year students, representing a wide range of

cultures, attending a commuter university (76% live at home) in a large metropolitan Canadian city. Data were again collected approximately six months later from a subsample of 416 students.

Results indicated that emotional well-being variables play a major role in all aspects of adjustment. Relationships with parents also contribute towards the various areas of adjustment. Parenting style was also related, both directly and indirectly. Regarding GPA, perceived academic adjustment, as well as entering OAC averages were shown to be the most important variables. Interpretation of these results, congruence within the context of the theoretical framework, extensive consideration of the demographic findings, and practical implications are discussed.

Acknowledgments

After waiting a decade to write these particular words, it is surprising how difficult it is to capture the feelings they represent on paper. This dissertation is the culmination of the combined efforts of several individuals, without whose assistance, the improbable would have remained impossible.

Primarily, I am at a loss to express the heartfelt gratitude that I have to my mentor and supervisor for the last eight years, Dr. Maxine Gallander Wintre. It was she who challenged me, overwhelmed me, and ultimately, provided me with the ability to develop the skills necessary to think critically, write coherently, and produce quality research. Neither this dissertation nor any of the other work we have accomplished together could have begun or have been completed without her guidance, patience, and wisdom.

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I am also greatly in debt to Mirka Ondrack, who provided me with invaluable and significant advice regarding the statistical analyses utilized in this study. She encouraged me when I believed I was on track and calmed me down

the many times I thought I would never be able to navigate the quagmire of SPSS.

On the several occasions this project threatened to be overwhelming, it was my peer colleagues who made the experience bearable. It is with Revital Ben-Knaz and Lorne Sugar that I shared numerous hours of deep reflective contemplation, arduous hard work, and most appreciated of all, much laughter. I consider them much more than colleagues, they are esteemed friends. I would also like to thank Oren Gelb, who greatly assisted with the coding of the data. I look forward to witnessing the future triumphs of all of the above.

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Table of Contents

Abstract.....	iv
Acknowledgments.....	vi
List of Tables and Figures.....	ix
Introduction.....	1
<u>Relationship with Parents and Adjustment to University</u>	11
<u>Mutual Reciprocity</u>	14
<u>Integrative Complexity</u>	15
<u>Autonomy</u>	17
<u>Enabling Independence</u>	19
<u>Parental Social Support</u>	20
<u>Emotional Well-Being</u>	21
<u>Parenting Style</u>	21
Method.....	28
<u>Subjects</u>	28
<u>Measures</u>	32
Results.....	43
<u>Demographics</u>	43
<u>Scoring of Measures</u>	53

<u>Descriptive Statistics</u>	54
<u>Reliability</u>	56
<u>Across-Time Variables</u>	58
<u>Analyses for Adjustment to University</u>	61
<u>Student Adaptation to College Questionnaire (SACQ)</u>	62
<u>Correlational Analysis</u>	62
<u>Multiple Regression Analyses</u>	90
<u>Overall SACQ - Males</u>	98
<u>Overall SACQ - Females</u>	99
<u>Academic Adjustment</u>	99
<u>Social Adjustment</u>	108
<u>Personal/Emotional Adjustment - Males</u>	113
<u>Personal/Emotional Adjustment - Females</u>	113
<u>Attachment to University/Goal Commitment</u>	115
<u>Indirect Effects of Parenting Style as Mediated by Other Predictor Variables</u>	123
<u>Parenting Style and Relationships with Parents</u>	124
<u>Parenting Style and Emotional Well-Being</u>	125
<u>Parenting Style and Autonomy</u>	127
<u>Academic Achievement Based on Grade Point Average (GPA)</u>	132

Discussion.....	140
<u>Demographic Data.....</u>	140
<u>Adjustment to University.....</u>	153
<u>Overall SACQ - Males.....</u>	155
<u>Overall SACQ - Females.....</u>	159
<u>SACQ - Academic Adjustment.....</u>	162
<u>SACQ - Social Adjustment.....</u>	166
<u>SACQ - Personal/Emotional - Males.....</u>	171
<u>SACQ - Personal/Emotional - Females.....</u>	174
<u>SACQ - Attachment to University/Goal Commitment.....</u>	176
<u>Indirect Effects of Parenting Style as Mediated by other Predictor Variables.....</u>	181
<u>Academic Achievement Based on Grade Point Average (GPA).....</u>	186
General Discussion and Conclusions.....	191
<u>Practical Implications.....</u>	199
<u>Limitations and Directions for Future Research.....</u>	201
References.....	208
Table of Appendices.....	230

List of Tables and Figures

Figure 1: A longitudinal model of institutional departure (Tinto, 1987).....	7
Figure 2: A Conceptual Model of Undergraduate Socialization (Weidman, 1989a).....	9
Figure 3: A Hypothetical Model for the Adjustment to University Involving Relationship with Parents.....	27
Table 1: Means, Standard Deviation, Ranges, and Valid Scores for All Scales...	55
Table 2: The Cronbach Coefficient Alpha Scores for Each of the Measures.....	57
Table 3: Significance of Changes in Means Across Time for Paired Subjects.....	59
Table 4: Intercorrelations Between Relationship with Parents and Adjustment to University.....	64
Table 5: Intercorrelations Between Emotional Variables and Adjustment to University.....	66
Table 6: Intercorrelations Between Autonomy and Adjustment to University....	69
Table 7: Intercorrelations Between Parenting Style and Adjustment to University.....	70
Table 8: Intercorrelations within the Relationships with Parents Variables.....	73
Table 9: Intercorrelations within Emotional Well-Being Variables.....	74
Table 10: Intercorrelations within Autonomy and its Subscales.....	75
Table 11: Intercorrelations within Parenting Style (PAQ).....	77
Table 12: Intercorrelations Between Relationships with Parents and Emotional Well-Being.....	78

Table 13: Intercorrelations Between Relationships with Parents and Autonomy.....	80
Table 14: Intercorrelations Between Relationships with Parents and Parenting Style.....	81
Table 15: Intercorrelations Between Emotional Well-Being and Autonomy.....	83
Table 16: Intercorrelations Between Emotional Well-Being and Parenting Style.....	84
Table 17: Intercorrelations Between Autonomy and Parenting Style.....	88
Table 18: Intercorrelations within the Student's Adjustment to College Questionnaire (SACQ) and its Subscales.....	89
Table 19: Indications of Normal Distribution for Outcome Variables and Predictor Variables.....	92
Table 20: Summary of Regression Analysis for Variables Predicting Overall Adjustment to University (Males).....	102
Table 21: Summary of Regression Analysis for Variables Predicting Overall Adjustment to University (Females).....	103
Table 22: Summary of Regression Analysis for Variables Predicting Academic Adjustment to University.....	104
Figure 4: The Interaction of Gender in the Relationship between Change in Stress from Time 1 to Time 2 and Academic Adjustment.....	105
Figure 5: The Interaction of Gender in the Relationship between Self-esteem and Academic Adjustment.....	106
Figure 6: The Interaction of Gender in the Relationship between POPRS and Academic Adjustment.....	107

Table 23: Summary of Regression Analysis for Variables Predicting Social Adjustment to University.....	110
Figure 7: The Interaction of Gender in the Relationship between Maternal Authoritarianism and Social Adjustment.....	111
Figure 8: The Interaction of Gender in the Relationship between Maternal Permissiveness and Social Adjustment.....	112
Table 24: Summary of Regression Analysis for Variables Predicting Personal/Emotional Adjustment to University (Males).....	119
Table 25: Summary of Regression Analysis for Variables Predicting Personal/Emotional Adjustment to University (Females).....	120
Table 26: Summary of Regression Analysis for Variables Predicting Goal/Institutional Adjustment to University.....	121
Figure 9: The Interaction of Gender in the Relationship between POPRS and Attachment to University/Goal Commitment.....	122
Table 27: Summary of Regression Analysis for Parenting Style Variables Predicting Relationship with Parents.....	129
Table 28: Summary of Regression Analysis for Parenting Style Variables Predicting Emotional Well-Being.....	130
Table 29: Summary of Regression Analysis for Parenting Style Variables Predicting Autonomy.....	131
Table 30: Intercorrelations Between Grade Point Average (GPA) and Predictor Variables.....	136
Table 31: Summary of Regression Analysis for Variables Predicting Academic Achievement Based on Grade Point Average.....	139

Introduction

There is a growing body of evidence suggesting that attending university for the first time entails a transition in young peoples' lives that incorporates a great deal of stress. While some students experience this transition as a challenge to personal growth, others are overwhelmed by the changes and experience emotional maladjustment and depression (Cutrona, 1982; Hammen, 1980; Lokitz & Sprandel, 1976). Pantages and Creedon (1978) found that as many as 40% of students encounter serious difficulty and fail to complete their degrees. Even students who are successful at completing their degrees may undergo significant stress during university study (Zitzow, 1984).

The primary purpose of this study is to identify some of the factors of students' lives which may facilitate adaptation to university life, and to focus on one specific area, namely, their relationships with their parents. As will be explained, there is evidence that parents continue to play an important role in the development of their children even as they enter into young adulthood. This study will investigate aspects of students' perceptions of their current relationships with their parents. It will also be determined whether their perceptions of past parenting style affect the development of these variables. In

regard to adaptation to university, this will be examined both from an academic perspective and a social/emotional one.

There have been several models proposed that generally focus on student development in university and a review of this literature will be beneficial in establishing a context for the current study. Recognizing an absence of a systematic framework for investigating student development, Chickering (1969) identified seven "vectors of development", each one possessing direction and magnitude, and involving cycles of differentiation and integration. Identity development is central to Chickering's theory, and each of the vectors expand and give greater specificity to this construct. The first vector consists of achieving a sense of competence, both intellectually and interpersonally. In later work (Thomas & Chickering, 1984), Chickering indicated that this vector should probably be given more attention than it was originally. The second vector involves the managing of emotions. Chickering felt that during this period in individuals' lives, rigid controls inculcated by parents and society are examined, understood, and eventually replaced by internally adopted behaviours and controls. The third vector is the development of autonomy. He defines autonomy as "the independence of maturity, . . . it requires both emotional and instrumental independence and recognition of one's interdependence"

(Chickering, 1969, p. 12). Disengagement from parents and the need for their approval is attained while simultaneously recognizing the importance of others. Under this vector, Chickering discusses relationships based on mutual respect and the balancing of personal independence with that of interdependence. The fourth vector is that of establishing one's own identity. He considers this vector pivotal in that it depends partly on the development of the first three vectors and facilitates changes along the remaining three. Overall, he defines this as attaining a "solid sense of self" (Chickering, 1969, p. 80). The fifth vector incorporates an increased ability to interact with others with a degree of tolerance that reflects the acceptance of the differences between oneself and others. This tolerance demonstrates greater openness and acceptance of diversity. The sixth vector is that of developing purpose. In order to facilitate expanding competencies, identity, and interpersonal relationships, there is the requirement of future direction and purpose. Finally, the seventh vector involves "the clarification of a personally valid set of beliefs that have some internal consistency and that provide at least a tentative guide for behaviour" (Chickering, 1969, p. 17). Accordingly, rules become more relativistic rather than absolute in nature and earlier accepted values are reviewed and challenged.

In his desire to integrate theory and practice, Chickering (1969) identified

six major areas in which universities exert influence on student growth along these vectors. These areas include;

- 1) clarity of the institution's objectives and the consistency of policies, practices, and activities;
- 2) size of the institution (if size restricts opportunities for involvement, influence is lessened);
- 3) flexibility in curriculum, instructional variation, learning-oriented evaluation;
- 4) impact due to the experience of living in residence;
- 5) contact with faculty and administration;
- 6) friends, groups, and student culture.

It is interesting to note that none of these areas address the continued relationships students maintain with their families. Nevertheless, some of the constructs that he identified will be incorporated into the theoretical model in the present study.

In his theory of student departure, which examines the university attrition process, Tinto (1975,1993) also tapped the dynamic of student integration into the academic and social systems of university life. While Tinto was formulating a theory of student departure and students' failures to adjust to the university experience, his work is equally valuable in examining factors that contribute to

student persistence and adjustment. Tinto theorized that a variety of attributes and background characteristics (i.e., ability, gender, socio-economic status) that students bring with them into university combine with their goal commitment (levels of motivation for general academic achievement and educational/career expectations) and institutional commitment (the decision to attend a specific institution for various reasons, for example, academic reputation, financial constraints, or convenience) to provide an initial basis for integration into the university system. Intentions and commitments are subsequently modified and reformulated through their interactions within the institution. He distinguished between the academic and social domains, postulating that one may be able to achieve integration in one area without doing so in the other. Encounters that prove satisfying within both the academic and social systems of the institution should lead to greater integration within those systems (See Figure 1). Tinto's model does not consider variables that, during the interval within a university setting, are not part of either the academic system or the social system. Therefore, the only interactions that he considers either involve faculty/staff or those with the peer group. In consideration of the variable of relationship with family, Tinto regards it as one of the pre-entry attributes that comprise his model. It is only identified as family background, thus negating the possibility of any

ongoing influence. In fact, one of the attrition situations that Tinto discusses is withdrawal from a residential institution in order to attend one closer to home.

Tinto (1982) himself acknowledged that his model did not "seek to directly address the impact of financial stress or other forces external to the institution's immediate environment" (p. 688).

Tinto's theoretical model has been subject to empirical validation in several studies. These studies have examined undergraduate retention rates as a means to quantify his theoretical constructs (Munro, 1981; Pascarella, Duby, & Iverson, 1983; Pascarella, Duby, Miller, & Rasher, 1981; Pascarella & Terenzini, 1977, 1978, 1979, 1980, 1983) and emulate his model (Pascarella & Chapman, 1983a, 1983b; Stage, 1989). While this model cannot provide the full vista necessary for this study, parental input as a pre-entry variable must be included. Furthermore, Tinto's emphasis on academic and social integration, as well as goal and institutional commitment will be considered.

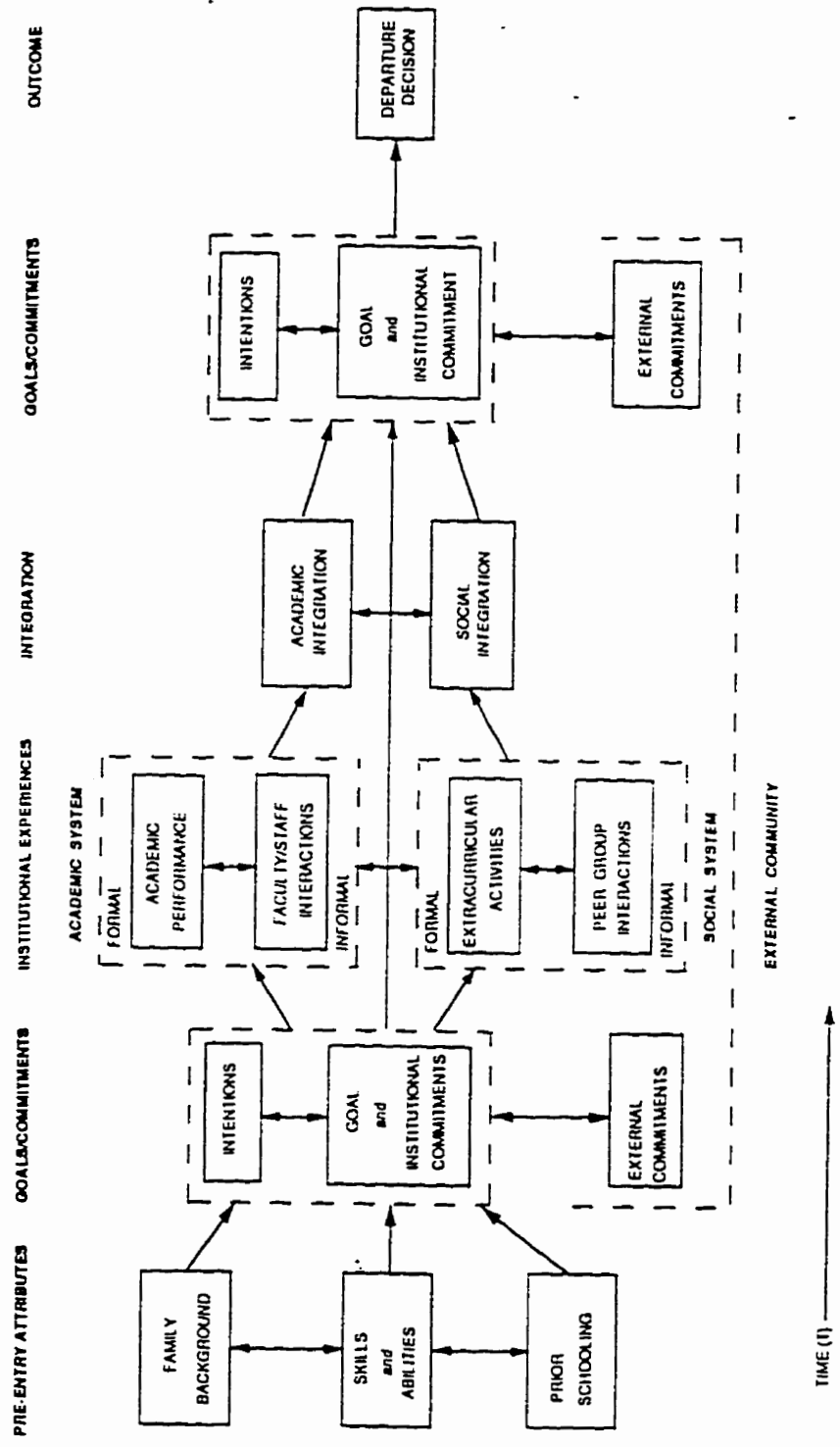


Figure 1: -A longitudinal model of institutional departure (Tinto, 1987, p.114)

Weidman (1989a) developed a more explicit model of undergraduate socialization (See Figure 2) which emphasized extra-institutional socializing forces as predisposing and, to a certain extent, constraining forces on students' choices within the university setting. Like Tinto, Weidman gave recognition to the pre-entry variables and background characteristics (i.e., socioeconomic status, aptitudes, career preferences, aspirations, and values) and incorporated his categories of academic and social integration. However, Weidman theorized a more important role for parents in a continuing socializing capacity than did Tinto, even when students live away from home. Drawing on his own work and that of others (Atkins, 1982; Bean & Metzner, 1985; Weidman & Friedmann, 1984; Weidman & White, 1985) Weidman recognized that students' performance in university may be affected by their coping with problems at home and in other community settings. As Atkins (1982) noted, dropout among first-year college students is related to concern with "family/personal problems". His model, therefore, emphasized the importance of normative pressures, both from parents and other noncollege reference groups (including peers, employers, and community organizations). "Parental Socialization", however, is incorporated as its own category "because it is assumed that such influences are present throughout the college years, even for those students who are independent

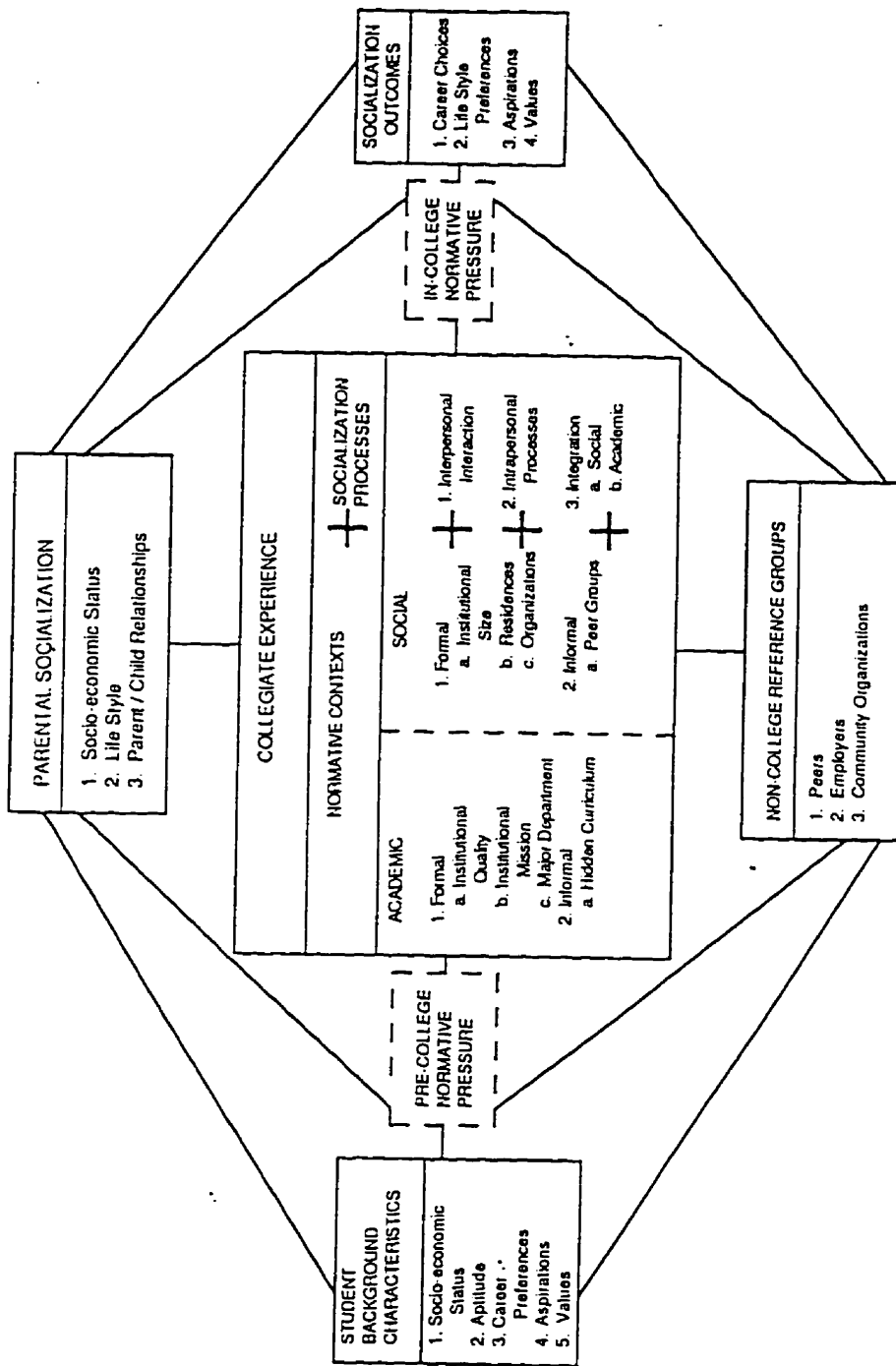


Figure 2: A Conceptual Model of Undergraduate Socialization
 (Weidman, 1989, p. 299)

householders" (Weidman, 1989a, p.300). In this category, Weidman includes the current socio-economic status provided by parents, the family life-style, and, most importantly, parent-child relationships. Of particular relevance is that Weidman views his model as a process to be seen as both longitudinal and reciprocal, whereby segments of the model vary over time, influence, and are influenced by other components.

The three theories that have been discussed so far appear to consist of an evolving process and provide the foundation for the present study. Although some of the above theory has been tested empirically (i.e., Pascarella & Chapman, 1983), Weidman (1989a) himself offered the criticism that, in this area of research, authors seldom develop conceptual frameworks or adequately operationalize them in order to provide explanations for relationships between variables. He stated that "they rely either on intuitive use of post hoc conceptual frameworks or on reference to personal experience" (p. 293). Furthermore, he felt that identifying and operationalizing the conceptual variables that mediate the influences of the college environment can inform and guide empirical research. It should be noted, however, that these theorists approach the issue from a sociological perspective in general rather than from a psychological one. Their focus, therefore, does not emphasize the underlying mechanisms by which

variables (i.e., parental relationship) function once they are differentiated.

However, none of the previous models, including Weidman's model, empirically test which specific elements of the relationship between students and parents may contribute to adaptation to university. Moreover, as sociological models, they do not identify these elements either. Therefore, certain variables have been considered and incorporated into the present study in order to address this issue. Some of these variables have been included based on findings of previous research (e.g., Wintre, Yaffe, & Crowley, 1995) and others, especially the outcome variables of adaptation, are derived from the above mentioned literature on student development.

Relationship with Parents and Adjustment to University

There has been abundant evidence to refute the early theories of adolescent development (e.g., Erikson, 1956) in which it is viewed necessarily as a period of "storm" during which parental ties are rejected. Instead, it has been demonstrated that greater independence and self-confidence are achieved by individuals who maintain a close relationship with their parents (Maccoby & Martin, 1983). Studies have shown that family support is an important buffer throughout one's life (Caplan, 1982), and particularly during the transition to university (Henton, Lamke, Murphy, & Haynes, 1980; Holohan & Moos, 1981).

Furthermore, research has shown that students adjusting to college life tend to experience more psychological problems when their family is considered to be less supportive (Hoffman & Weiss, 1987; Rice, Cole, & Lapsley, 1990).

Although there has been research into parental contribution to adaptation to university (i.e., Cutrona, Cole, Colangelo, Assouline, & Russell, 1994; Holohan, Valentiner, & Moos, 1994), these investigations have tended to reflect more generalized constructs (e.g., parental support) or focus on specific issues, such as attachment (Rice & Whaley, 1994; Kenny & Donaldson, 1991), ego identity status (Frank, Pirsch, & Wright, 1990), and religion (Hunsberger, Pancer, Pratt, & Alistat, 1995). Furthermore, while models of parental facilitation of academic achievement in younger students have been developed (i.e., Steinberg, Lamborn, Dornbusch, & Darling, 1992), an overall model illustrating components of parent contributions to academic achievement and social\emotional well-being of university-age students has not been formulated. Also, there are certain factors unique to a publicly funded, commuter university, which may distinguish the role of relationship with parents from that in a typical primarily residential, private university. In studies describing student population demographics, Grayson (1993, 1994) found that the vast majority of York students come from families where the parents have less than a Bachelor of Arts

degree, that 22% of Arts students identify themselves as being part of a visible minority, that substantial numbers of entering students come from families with incomes lower than the Provincial average, and perhaps most distinguishing, that 76% of Arts students live at home with their families. Also, Grayson's studies have shown that 43% experienced family interference as a salient problem (the most highly rated problem identified).

It would seem that parents can be either an additional major source of stress or a buffer against the stress experienced during the difficult transition to university life, particularly in a commuter student population where there is regular parental contact. Therefore, it is important to identify those variables in parent-student relationships which may serve to enhance the ease of this transition. There are other variables that reflect constructs which, although they are not direct indices of the parent-student relationship, should be theoretically related to it. The variables to be considered will be examined in the following order: mutuality, degree of complexity in students' thinking, psychosocial maturity (autonomy), independence, parental support, a selection of emotional well-being factors (including the degree of depressive symptomatology being experienced, self-esteem, and perceived stress), and a retrospective recounting of the perception of parenting style.

Mutual Reciprocity

Research has shown that mutual reciprocity is an important factor in relationships between parents and their offspring (Kafka & London, 1991; White, Speisman, & Costos, 1983; Youniss & Smollar, 1985). In this context, mutual reciprocity is used to describe relationships wherein individuals perceive each other as relative equals, respect each other's point of view, and are involved in on-going and open communication.

Pilot research (Wintre, Yaffe, & Friedman, 1996) in a study of York undergraduate students has indicated that 23% scored as experiencing elevated levels of distress as measured by the Beck Depression Inventory (BDI) (Beck, Ward, & Mendelson, 1961). Using a cutoff of 16 (the criterion used in the above figure), the BDI has been found to be 100% sensitive in identifying a Major Depressive Episode (Barrera & Garrison-Jones, 1988). Using a less stringent, yet acceptable criterion (see Barrera & Garrison-Jones, 1988), 41% of the students could be identified as experiencing elevated levels of distress. Using the Perception of Parental Reciprocity Scale, or POPRS (Wintre, et al., 1995), designed to tap the developmental transformation in parent-child relations as predicted by the social relations theory of Youniss (1980), the relationship between perceived reciprocity and depression was examined. The relevant scales

were administered to 129 undergraduate students at York. The results demonstrated a statistically significant relationship between the POPRS and the BDI, with an explained variance of 15.55% using the overall POPRS. Specifically, it was found that students who perceived greater degrees of mutuality in their relationships with their parents were less likely to be identified as depressed. Conversely, greater frequency and severity of depression symptoms were found among students with less mutual relationships with parents. The construct of mutual reciprocity is consonant with aspects of Chickering's (1969) third vector in which he identifies the emergence of relationships based on mutual respect and the recognition of the importance of interdependence. It is also implied in the fifth vector which accentuates the ability to act with tolerance and the acceptance of differences between oneself and others.

Integrative Complexity

Another salient factor demonstrated to facilitate the adjustment to university is "integrative complexity", or the complexity of expectations of students entering university. Integrative complexity itself is a construct that is comprised of two distinct cognitive stylistic variables. The first is differentiation, which has been described as referring to "the number of dimensions of an issue that are taken into account in evaluating or interpreting events" (Tetlock, 1985b,

p. 268). The second is integration which refers to "the development of complex connections among differentiated characteristics" (Tetlock, 1985b, p. 269). Therefore, in order to be considered as achieving integrative complexity, an opinion concerning an issue would not only need to reflect multidimensionality, but would also have to define guidelines for coping with tensions between various dimensions or to compare them. Pancer, Pratt, Hunsberger, and Alistat (1995) found that students entering university with a high level of stress would adjust better if their thinking was more complex about the possibilities they would encounter. In relation to the present discussion, they also found that integrative complexity of expectations was significantly correlated with the extent to which students had discussed issues with their parents and with parental style. Therefore, although integrative complexity is in itself a measure of a specific cognitive ability, it is hypothesized that the significant correlation with extent to which issues are discussed with parents will be reconfirmed, thus representing an enhanced communication of parents and their children. It would appear that identity development as conceptualized by Chickering is, in the least, very similar to the construct of integrative complexity. In describing this cycle of differentiation and integration, Kniefelkamp, Widick, and Parker (1978) stated: "These more differentiated perceptions and behaviors are subsequently integrated

and organized so that a coherent picture of himself is established" (p.21).

Autonomy

A construct that has been demonstrated to be related to relationship with parents is the attainment of psychological autonomy from others. Steinberg, Elmen, & Mounts (1989) formulated a model demonstrating that authoritative parenting has a positive impact on psychosocial maturity (which, as they conceptualize it, is largely rooted in a healthy sense of autonomy), which in turn increases the likelihood of school success, specifically, creating a healthy orientation towards work. However, there are some limitations in regard to this study. First, the sample in this study was composed of 10-16 year olds, and therefore the subjects are at a different developmental stage and not undergoing the transition to university. Second, research has indicated that students at this age may or may not yet be undergoing a transition in their relationships with parents which could occur at a later developmental stage (Wintre, et al., 1995). Furthermore, this model is limited to predicting academic success and does not consider emotional/social well-being. Also, it does not take the construct of reciprocity into consideration, which, as noted above, should function as an important variable predicting adjustment.

It is proposed that autonomy, as defined in this context, will function as

contributing variables to adjustment. As stated previously, Steinberg et al.'s (1989) model incorporated psychosocial maturity (representing autonomy), which, in turn, increases the likelihood of school success, specifically, creating a healthy orientation towards work. This research was derived mainly from the work of Greenberger (1982) in which she elucidated her conceptualization of the dimensions of psychosocial maturity. One requirement for psychosocial maturity is the capacity of a person to function adequately as an individual, separate from the influence of parents. From a psychological perspective, this is the emergence of autonomy in the individual. She considered this, in turn, to be indicated by three components; self-reliance, a healthy sense of identity, and work orientation. Self-reliance, in this context, taps into the characteristics of having a sense of control over one's life, the absence of excessive dependence on others, and taking initiative. Identity assesses internalization of values and clarity of self-concept. Work orientation refers to aspirations for competent work performance, actual work skills, and the capacity to experience pleasure from work. Although Steinberg et al. (1989) found that work orientation specifically could predict academic success, it is hypothesized here that the other components would impact on emotional/social adjustment and possibly on academic achievement as well in this older sample. The usage of autonomy in this sense is central to

Chickering's (1969) theory. In general, the construct of identity development is reflected in all seven of his vectors, and his third vector, specifically that of autonomy, is congruent with the conceptualization by Greenberger. Therefore, while this is not strictly a "parenting" variable, it should have great impact on the overall model.

Enabling Independence

Another variable that is related to autonomy is independence or a sense of self-governance (Grotevant & Cooper, 1985; White, Speisman, & Costos, 1983). While these two constructs are linked, nevertheless, a person can be dependent on a provider without necessarily lacking autonomy (Memmi, 1984). In fact, as Bretherton (1987) has stated, a provider can even support autonomy while still caring for a dependent. Therefore, the independence that will be examined here is encouraged independence within the context of continued connection to parents (Cooper, Grotevant, & Condon, 1983; Hill & Holmbeck, 1986; Ryan & Lynch, 1989), and thus, separate from autonomy. While Flanagan, Schulenberg, and Feligni (1993) found that university students who continued to live at home experienced less independence than those who left the home to attend school, it is predicted that those who enjoy greater enabled independence will experience a greater degree of adjustment to university. This again is

reflected in Chickering's third vector when he discussed the "independence of maturity" (Chickering, 1969, p.12).

Parental Social Support

In assessing perceived parental social support, Cutrona (1984) adopted the conceptual framework of Robert Weiss (1974), comprising six "provisions". These provisions include guidance (advice and information), reliable alliance (tangible assistance), attachment (caring), social integration (similarity of interests and concerns), reassurance of worth (positive evaluation of skills and abilities), and opportunity to provide nurturance (providing support to others). Cutrona, Cole, Colangelo, Assouline, & Russell (1994) found that parental support in general is related to a higher grade point average in university. Specifically, they demonstrated that university students whose parents expressed belief in their competence and abilities (reassurance of worth) were likely to perform better in university. In one study, there was also an indication that having parents who shared their interests and concerns (social integration) contributed to better academic results, while another linked opportunity to provide nurturance to higher grade point average. Interestingly, they also found that only parental social support, and not that of either friends or romantic partners, contributed to higher academic achievement in university. It can be

hypothesized that parental social support would also contribute to greater emotional/social adjustment as well. The positive outcome associated with parents' expressed belief in their children's competence and abilities, or what is termed as reassurance of worth, clearly is reflected in Chickering's first vector. Intuitively, parental support should facilitate the emergence of one's own identity.

Emotional Well-Being

Especially regarding the emotional adjustment component, it will also be important to ascertain the subjects' degree of depressive symptoms they are undergoing, their overall self-esteem, and the amount of stress that they are experiencing at the time of testing. Aside from the intuitive value of this information, it also addresses Chickering's second vector of managing emotions. This information will also enable the verification of changes in the levels of these factors over time.

Parenting Style

There is emerging evidence of the indirect links between earlier experiences and later adjustment outcomes, including such areas as education, career, choice of life partner, life chances, and satisfaction (Maughan & Champion, 1990). Certainly, this has been the premise by which Tinto and Weidman included family background as a pre-entry to college variable in their theories. A pilot

study has been conducted on the link between parenting style and the development of mutual reciprocity (Yaffe & Wintre, 1996). Baumrind (1967, 1971a) identified a typology that separates parenting style into three distinct categories: authoritative parents (who are both demanding and responsive to their children), authoritarian parents (who are demanding but unresponsive), and permissive or laissez-faire parents (who do not place high demands, but are responsive). Several positive outcomes have been associated with authoritative parenting, including, for example, better academic performance (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Lamborn, Dornbusch, & Darling, 1992), and increased competence, autonomy, and self-esteem (Baumrind 1989, 1991b; Buri, 1989; Steinberg, Elmen, & Mounts, 1989). However, these studies were conducted with younger, elementary and high school students and not with undergraduates. Furthermore, in Lewis' (1981) reinterpretation of Baumrind's theory, she suggested that it is not the high control found in authoritative families that creates an independent sense of self, but rather the reciprocal communication typical of authoritative families. Yaffe and Wintre (1996) administered POPRS to university students along with the Parental Authority Questionnaire (PAQ, Buri, 1991), a measure devised to assess perceived parenting style across the three parenting prototypes for mother and

father separately. The findings indicated that POPRS scores had a significant positive correlation with authoritative parenting, a significant negative correlation with authoritarian parenting, and were not significantly correlated with permissive parenting. This finding strongly supports Lewis' theory, and may also indicate a potential pathway for predicting positive academic and emotional/social outcomes of undergraduate students. In addition to this being a direct factor in adjustment, it is hypothesized that parenting style is indirectly predictive of academic and social/emotional well-being. Specifically, it is predicted that an authoritative parenting style will facilitate the establishment of mutuality, integrative complexity, autonomy, enabled independence, and increased parental social support. As such, authoritative parenting should directly and indirectly predispose adjustment to university both academically and from an emotional/social perspective. This should address how one aspect of the family background component that Tinto identified in his model could impact on the separately identified domains of the academic and social systems.

According to the proposed model, in addition to positive intercorrelations among the predictor variables identifying current circumstances (i.e., reciprocity and integrative complexity, parental social support and independence), it is hypothesized that the degree of perceived reciprocity in the parent-student

relationship, as well as integrative complexity, autonomy, independence, parental social support, and emotional well-being would also mediate the relationship between parenting style and the outcome measures. Therefore, the degree to which these variables predict both academic success and emotional/social well-being in the transition to university will be investigated. It is hypothesized that students who enjoy transformed, mutual relationships with their parents, have greater integrative complexity, maintain a degree of independence and autonomy while benefiting from their parents' social support, and experience emotional well-being will also adapt more easily and successfully to the rigours and challenges of university.

Regarding the outcome of how the above variables impact on academic and social/emotional adjustment to university, Tinto's general division of two separate systems has clearly been reflected. As noted above, however, central to Tinto's model was also the commitments that students demonstrate to both their own personal goals and to the institution. While he viewed these two factors as an initial pre-entry to college predictor for integration into the university system and an outcome measure of success of this integration, it is possible to view them as independent measures of adjustment within the system itself. Therefore, as will be demonstrated, it will be meaningful to view adaptation to university as

adjustment academically, socially, and from the perspective of goal/ institutional commitment.

Finally, while Weidman established the theoretical connection between parental socialization and its effects on student change within the university setting, he did not elaborate on the specific variables that would contribute to adaptation to this novel setting. The investigation of the effects of the variables discussed above should provide some clarification in this regard.

To summarize, previous theorists' conceptions of the contribution of parents towards their children's adaptation to entering university can be considered as an evolving process toward comprehensiveness. This study has identified theoretically related variables that may impact both on academic and social/well-being adjustment and will proceed to test them empirically. It is hypothesized that mutual reciprocity, integrative complexity and the degree of discussion with parents, autonomy from parents, enabled independence from parents, and parental social support will directly contribute to adjustment of first-year university students (academically, socially, emotionally, and in regard to commitment to their goals and attachment to the institution). In addition, it is postulated that the initial emotional state of the students entering university, their state after a period of exposure to the university experience, and the change

over time will also affect their ability to adapt to this new transition. Finally, it is predicted that the style of parenting conducted during development according to the students' perceptions will impact on adjustment, both directly and as mediated by the other current-relationship variables. A graphical representation of the theoretical model is presented in Figure 3.

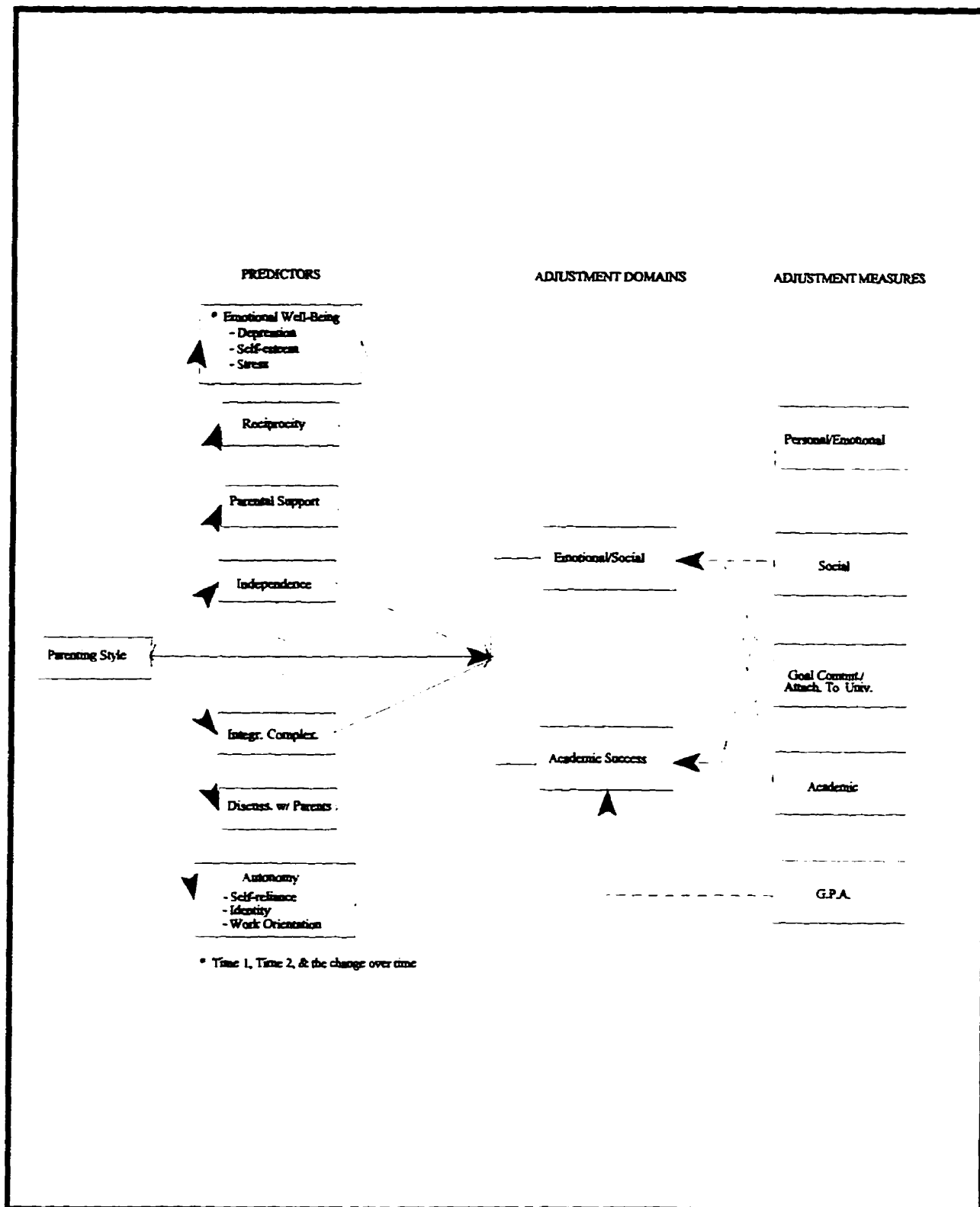


Figure 3: A Hypothetical Model for the Adjustment to University Involving Relationship with Parents

Method

Subjects

All subjects included in this study attended York University in the Autumn/Winter term of 1995-1996. York University is a large commuter university comprised of approximately 26,000 full-time, 15,000 part-time, and 3,500 graduate students. It is located on the suburban fringe of Metropolitan Toronto and while it has public transit access, it is not as conveniently situated as the other two universities in the city (University of Toronto: approximately 50,000 students and Ryerson Polytechnic University: approximately 40,000 students). Roughly 10% of undergraduate students live in residence on campus (Grayson, 1994).

The student body of the university represents, and is comprised of, a diverse range of cultures and ethnic backgrounds. According to Grayson (1994), approximately 21% of students are of visible minority groups. In consideration of race, Grayson (1994) found that 74% of all students could be viewed as of European origin. This is representative of the multicultural policy of Canada in general and, specifically, the makeup of the Toronto area, where it was assessed that in 1991 25% of the population of Metro Toronto was comprised of "visible minorities" (Grayson, 1993; 1994). It has been estimated that by the year 2001,

the figure will be 45% (Samuel, 1992). This radical increase in the number of immigrants is specific to Canada as opposed to the United States and Europe. Between 1981-1991 the numbers of immigrants to the latter two have remained relatively constant. In Canada, on the other hand, the numbers of African and Middle Eastern immigrants to Canada has increased by approximately 400%, Asian/Pacific immigrants by 300%, and Central/South American immigrants by 200% (Grayson, 1994). As will be described, the composition of the sample of this study is consistent with the above.

Subjects were obtained from a potential sample of approximately 3000 students enrolled in eleven of the Introductory Psychology sections offered by the Faculty of Arts of York University. The initial data collection was carried out during the first week of classes in the Autumn term during the first Psychology class. Subjects were allowed class time to complete the questionnaire which took between forty-five minutes and an hour. A minority of students who were unable to complete the protocols in the allotted time were allowed to complete them at their leisure to be returned at the next session of the class. A standardized set of instructions (see Appendix A) was delivered to each class. At this time, confidentiality was ensured and informed consent was obtained. Incentives of a lottery of a grand prize of \$100.00 and four prizes of \$50.00 were offered to

those students who agreed to participate in both phases of the study, except in one course, where an incentive of two bonus marks were offered if students agreed to participate in filling out a number of various questionnaires throughout the term. Of this potential subject pool, 1340 students participated. In applying selection criteria of utilizing only the data obtained from first-year students who were 27 years old or less (the cutoff age used in other studies involving POPRS), an initial sample of 1072 (318 males and 754 females) subjects remained. While the full demographic depiction of this sample is found in Appendix B, a summary is as follows. These subjects ranged in age from 17 to 27 years old ($M=19.25$, $SD=1.34$), 99.3% ($N=1063$) were never married, 79.3 % ($N=837$) of their families were intact, 74.5% ($N=785$) lived at home with their families, and 18.1% ($N=191$) lived in residence. This sample was representative of a wide range of students. There were 88 various areas of study identified as majors by the subjects (of which 24.1% declared psychology as their major). Culturally, while 76.9% ($N=823$) of the subjects were born in Canada, the remainder identified 63 countries of origin. In regard to parents' countries of origin, only 27.8% ($N=296$) of the fathers and 30.4% ($N=325$) of the mothers were born in Canada. In total, 92 and 94 different countries of origin were identified respectively. Although 69.9% ($N=934$) of the sample's primary language spoken

at home was English, there were 74 different languages and combinations of languages spoken at home identified. Finally, while 202 different cultures were mentioned by subjects, 68.7% ($N=723$) of the subjects indicated that they did not consider themselves to be members of a visible minority.

As mentioned previously, all of the original classes from which data were first obtained were visited a second time sometime during the months of February and March. Again, standardized instructions were utilized (see Appendix A), providing assurances of confidentiality and informed consent. Using the same criteria for inclusion as before, a subsample of 416 subjects (119 males and 297 females) who had also filled out the first questionnaire as well was obtained. These subjects also ranged in age from 17 to 27 years old, 99.0% ($n=411$) were never married, 79.3 % ($n=326$) of their families were intact, 75.6% ($n=306$) lived at home with their families, and 17.3% ($n=70$) lived in residence. There were 60 various areas of study identified as majors by the subjects (of which 22.4% declared psychology as their major). Culturally, while 77.8% ($n=323$) of the subjects were born in Canada, the remainder identified 41 countries of origin. In regard to parents' countries of origin, 29.4% ($n=121$) of the fathers and 30.8% ($n=127$) of the mothers were born in Canada. In total, 66 countries of origin were identified for both fathers and mothers. Although

69.2% ($n=287$) of the subsample's primary language spoken at home was English, there were 42 different languages and combinations of languages that were identified. Finally, while 117 different cultures were mentioned by subjects, 70.2% ($n=287$) of the subjects indicated that they did not consider themselves to be members of a visible minority. From the close mirroring of the representative percentages between the larger sample and the subsequent subsample, it is apparent that the latter data collection yielded a subsample comparable to the former.

A third collection of data was obtained at the conclusion of the academic term. Using student records (for which the subjects had provided informed consent) of all subjects who participated in even the first data collection only, various academic information (as will be described) was acquired.

Measures

In order to be able to determine the relative contribution towards the outcome measures of adjustment and potential changes that may have occurred during the interval between the two data collections, the following measures were administered for both data collections. The first three address emotional attitudes which could reflect change over time. Regarding the fourth measure, since one of the basic purposes of this study was to ascertain the contribution of

perceived reciprocity with parents to adjustment, it was also important to administer the POPRS in both data collections (in order to clarify this measure's stability over time and the possible effects of changes in the parent-child relationship on adjustment).

The specific measures are as follows:

a) Beck Depression Inventory (BDI) (Beck, Ward, & Mendelson, 1961). The BDI was developed as a scale for assessing the presence of depressive symptoms and their depth or severity. Its 21 items cover the range of affective, behavioural, cognitive, and somatic symptoms that commonly are thought to constitute unipolar depression. The BDI has been demonstrated to be reliable ($\alpha=.9$) and validity tests have shown that the BDI is correlated with numerous self-report measures of depression (Beck & Beamesderfer, 1974), as well as clinical judgments of depression severity (Beck, 1967; Bumberry, Oliver, & McClure, 1978; Hammen, 1980).

In research settings, screening measures are used to identify subjects who are comparable to individuals who would receive psychiatric diagnoses. However, it is important to guard against false positives so that the identified 'depressed' group does not include subjects who would not meet diagnostic criteria for depression. Although Barrera and Garrison-Jones (1988) demonstrated that a

score of either 16 or 11 would be an acceptable cutoff point for the categorization of subjects as depressed, others have disputed this (cf. Coyne, 1994). Therefore, the more rigorous criterion will be used in identifying depressive symptoms (see Appendix C).

b) Self-esteem Scale (Rosenberg, 1965). This widely used scale taps into the self-acceptance aspect of self esteem. It consists of 10 items and is scored on a 4-point Likert scale ranging from “strongly agree” (1) to “strongly disagree” (4). This scale has been reported to have high reliability and a test-retest correlation over two weeks of .85 (Silber & Tippett, 1965). Substantial convergent, discriminant, and predictive validity have also been reported (Rosenberg, 1965; Silber & Tippett, 1965; Tippett & Silber, 1965) (see Appendix D).

c) Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983). This 14-item scale is a measure of the degree to which situations in one’s life are appraised as stressful. Perceptions concerning the frequency of various feelings of stress during the previous month are scored on a 5-point Likert scale ranging from “never” (0) to “very often” (4). Cronbach coefficient alpha values obtained in three samples were .84, .85, and .86. Cohen et al., maintain that since appraised stress should be influenced by daily hassles, major events, and changes in coping resources, the predictive validity of the PSS should fall off rapidly in

four to eight weeks. The test-retest correlation of a sample after a two-day interval was .85, whereas in a sample that was retested after six weeks, the correlation was .55. Regarding validity, the PSS correlated with life-event scores, depressive and physical symptomatology, utilization of health services, social anxiety, and smoking-reduction maintenance (see Appendix E).

d) The Perception of Parental Reciprocity Scale (POPRS) (Wintre, et al., 1995).

This 43-item measure examines the degree of perceived reciprocity in the parent-child relationship from the offspring's perspective and is based on the theoretical work of Youniss (1980; Youniss & Smollar, 1985). In addition to an overall scale ($\alpha=.95$), POPRS consists of three subscales; a 9-item general subscale ($\alpha=.83$), a 17-item mother subscale ($\alpha=.92$), and a 17-item father subscale ($\alpha=.92$). Each item is scored on a six-point Likert scale ranging from strongly agree (1) to strongly disagree (6). Indications of construct validity were provided by significant correlations with measures of self-esteem, internal locus of control, consulting with familiar adults, attachment with parents, and private personal authority. Evidence of discriminant validity was provided by the lack of significant correlation with global statements concerning a problem with academic work and love relationships. Finally, criterion validity was demonstrated by strong positive correlations between POPRS scores and an open-

ended interview (see Appendix F).

In addition to the measures mentioned above, the initial data collection included the following measures:

1) Parental Authority Questionnaire (PAQ) (Buri, 1991). Three 10-item scales were constructed based on Baumrind's (1971a) definitions of authoritarian, authoritative, and permissive prototypes. Two forms of the scale are used, one to evaluate parenting style provided by the mother, and the other to evaluate the parenting style provided by the father. Items are scored on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Test-retest reliabilities over a two-week period were reported to range between .77 and .92. The following Cronbach coefficient alpha values were reported for each of the six scales: .85 for Mother's Authoritarianism, .82 for Mother's Authoritativeness, .75 for Mother's Permissiveness, .87 for Father's Authoritarianism, .85 for Father's Authoritativeness, and .74 for Father's Permissiveness. Discriminant validity was indicated by statistically significant divergent responses between the scales. Indications of criterion related validity were supported by the positive correlation between authoritativeness and a measure of parental nurturance, a negative correlation between authoritarianism and parental nurturance, and no correlation between permissiveness and nurturance. This held true for both

maternal and paternal parenting style (see Appendix G).

2) Integrative complexity is measured by six open-ended questions asking students to describe their expectations about different aspects of university life. These questions are coded according to the 7-point scoring system developed by Baker-Brown, Ballard, Bluck, De Vries, Suedfeld, and Tetlock (1992). As is explained by Pancer, Pratt, Hunsberger, and Alistat (1995), two aspects of a response are to be assessed. One is differentiation, or the extent to which different perspectives or relevant dimensions are addressed in the response. The second is integration, in which a response reflects the extent to which distinct perspectives or dimensions are related to one another. A score of 1 is to be given to responses that reflect neither differentiation nor integration. Responses that demonstrate differentiation, but not integration, are coded as 3. When both aspects are exhibited in the response, a score of 5 is given, and only responses that reflect a very high degree of integration are awarded a score of 7. These scores are used as “anchor” scores and the values in between them lie at intermediate points. A score of total complexity is determined by summing the codes for all six responses (see Appendix H).

The accepted practice in establishing reliability for this measure is for at least one individual to learn the scoring system from someone who has already

achieved an acceptable level of interrater reliability with one of the original developers of the scoring system (Pratt, personal communication, August, 1996). An interrater correlation of .80 has been the acceptable level considered to be reliable (Pancer, Pratt, Hunsberger, and Alistat, 1995). In this case, reliability was established between the primary researcher and Dr. Michael Pratt of Wilfred Laurier University, who had previously met the required criterion. Subsequently, reliability between the primary researchers and three other assistants was achieved with periodic rechecks to ascertain an absence of a drift in scoring.

In addition, subjects were asked to rate the extent to which they had discussed what university life would be like with their parents. Aspects such as classes and social life were included, and responses were obtained on a 5-point Likert scale ranging from “not at all” (1) to “a lot” (5) (see Appendix H). As was suggested by one of the original authors of these questions (Pratt, personal communication, August, 1996), the reliability between these items would also be assessed, and upon meeting acceptable criteria, could be used as a short scale to assess the degree to which these issues are discussed with parents.

3) Social Provisions Scale - Parent Version (SPS-P) (Cutrona, 1989). This scale was designed to tap the six provisions of social relationships as theorized by Weiss (1974). Included are guidance (advice and information), reliable alliance

(tangible assistance), attachment (caring), social integration (similarity of interests and concerns), reassurance of worth (positive evaluation of skills and abilities), and opportunity to provide nurturance (providing support to others). Each provision is assessed by two items, one describing the presence, and one describing the absence of the provision in the students' relationships with their parents, a total of 12 items. Subjects indicate their answers on a 3-point scale (no, sometimes, yes). Cutrona (1989) reports reliability for the scale from .81 to .91 across a range of samples and extensive evidence for validity among both adult and adolescent populations (see Appendix I).

4) Enabling Independence subscale of the Late Adolescents' Relationships with Parents (LARP) Scale (Flanagan, Schulenberg, & Fuligni, 1993). This is a 4-item measure of self-determination in the context of parental encouragement. Each item is scored on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). The Cronbach coefficient alpha for this subscale is .80 (see Appendix J).

5) Autonomy scale of the Psychosocial Maturity Inventory (Greenberger, Josselson, Knerr, & Knerr, 1974). This measure is composed of three 10-item subscales which reflect self-reliance, a healthy sense of identity, and work orientation. The self-reliance subscale taps the absence of excessive dependence

on others, a sense of control over one's life, and initiative. The identity subscale assesses the student's sense of self-esteem, concern with life goals, internalization of values, and clarity of self-concept. The work orientation subscale assesses work skills, aspirations for competent work performance, and capacity to experience joy in work. Each item is scored on a 4-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (4). Cronbach coefficient alphas for these subscales are .76, .81, and .78 respectively. Greenberger et al. (1974) cite several studies which offer indications of divergent validity, concurrent validity, and construct validity. Although the scale was developed to be used with younger populations (e.g., Steinberg et al., 1989), Greenberger (personal communication, 1995) herself has stated: "In principle, the scales could still be useful at this (*a sample from first year university students*) age. There are numerous people who have used it with this age group, but I have not kept track of their findings. I have used it myself, but this is recent and so I can not yet relate my findings" (see Appendix K).

6) Various demographic information regarding background, parental background, living circumstances, attitudes towards university, concerns, and expectations from it (similar to that employed by Grayson, 1993, 1994) was elicited (see Appendix M).

In addition to the previously mentioned scales that were to be administered a second time (BDI, Self-Esteem Scale, PSS, and POPRS), the second data collection also included the following outcome measures:

1) Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1986). This 67-item scale, measuring the quality of adaptation to university life, assumes that adjustment to university is multifaceted in that it requires adaptation to a variety of demands. As such, there are four subscales of distinct adjustment. The academic adjustment subscale consists of 24 items referring to various educational demands. The social adjustment subscale has 20 items which are relevant to various facets of the interpersonal-societal demands inherent in the university experience. The personal/emotional subscale contains 15 items and taps both psychological distress and accompanying somatic symptoms. The goal commitment/institutional attachment subscale consists of 15 items which relate to students' feelings about attending university in general, and particularly the institution of attendance. Specifically, it taps the extent of the bond that has been established between the student and the university. The attachment subscale contains eight items that are also on the social adjustment subscale. Each item, in which the students are asked to indicate the degree to which that statement applies to themselves, is assessed on a 9-point Likert scale, with higher

scores reflecting better adjustment. In addition to the individual subscale scores, the SACQ also yields a full-scale score as an index to overall adjustment to university.

On two separate samples, Cronbach coefficient alpha values, respectively, are full scale, .91 and .92; academic adjustment, .82 and .87; social adjustment, .88 and .88; personal/emotional adjustment, .82 and .79; and attachment, .89 and .86. Except for the social adjustment and attachment subscales, which have overlapping items (which show an intercorrelation of .87), the subscale intercorrelations range from .36 to .64.

Convergent validity has been demonstrated through the statistically significant correlations that have been established between the subscales and variables considered to be differentially relevant to the subscales (Baker & Siryk, 1984). These include attrition, appeals for services from a psychological clinic, grade point average, election to an academic honour society, involvement in social activities, and outcome of application for dormitory assistant positions (see Appendix M).

2) Though not part of the actual study, data were collected regarding a number of university related issues. Questions that examined the degree to which the students' expectations of university had been met, their satisfaction with their

performance, and the degree of contact with faculty and staff they have been able to establish during this semester were included (see Appendix N).

The final data collection entailed accessing the subjects' student records and obtaining their GPA, their grade in this particular psychology course, the number of courses in which they had been enrolled, and the number of courses completed and passed.

Results

Demographics

Without delving further, a rich descriptive illustration regarding the composition of first-year students at York University is provided. In fact, studies have been conducted regarding these demographic variables exclusively (i.e., Grayson, 1993; 1994). As mentioned, the sample represents a wide cross-section of various cultures, languages, countries of origin, and academic interests. Furthermore, subjects' initial and subsequent (after six months) attitudes towards a variety of variables, including expected level of academic success, the perceived quality of York University, academic and emotional preparedness for university, various areas of worry, and perspectives on professors and teaching assistants were examined. Although the full results of this area of the study can be found in Appendix B, a summary of the findings will be presented.

As stated previously, the initial sample consisted of 1072 (318 males and 754 females) first-year undergraduate students, and the demographics of the subsequent subsample ($N=416$) closely mirrored those of the larger sample. Subjects in the first sample were between the ages of 17 and 27 years old ($M=19.25$, $SD=1.34$). The vast majority (99.3%, $N=1063$) were never married, 79.3 % ($N=837$) of their families were intact. 74.5% ($N=785$) lived at home with their families, 18.1% ($N=191$) lived in residence, and while 43.9 % ($N=350$) of the students had been offered placements to live in residence, only 9.3% ($N=79$) had actually applied to live there. There were 88 various areas of study identified as majors by the subjects. The largest group (24.1%) declared psychology as their major. This was not unusual given that the study was conducted in psychology classes.

Culturally, while 76.9% ($N=823$) of the subjects were born in Canada, the remainder identified 63 countries of origin. Each of the other countries identified represented less than 1% of the total sample with the exception of four countries, and each of them comprised between only 1.2% to 3.0% of the sample. In regard to parents' countries of origin, only 27.8% ($N=296$) of the fathers and 30.4% ($N=325$) of the mothers were born in Canada. This still represented the largest single country of origin for both parents. Following Canada, Italy was most

frequently identified as country of origin by both fathers and mothers (10.8%, $N=115$ and 9.3%, $N=99$, respectively). In total, 92 and 94 different countries of origin were identified respectively.

Also, a variable was constructed that identifies the subjects' "Immigrant Generational Status - Canadian" (IGS-C) (Wintre, Yaffe, Sugar, Ben-Knaz, Costin, Griffin, & Balaban, 1997). The IGS-C illustrated four categories of subjects. It assesses whether subjects are immigrants to Canada, whether they are born in Canada of two immigrant parents, whether they are born in Canada of one immigrant and one Canadian-born parent, or whether the subjects are (at least) second-generation Canadians. Of the 1062 subjects who responded to this question, 22.9% ($N=243$) were immigrants to Canada themselves, 42.2% ($N=447$) were Canadian-born children of two immigrant parents, 11.7% ($N=124$) were Canadian-born children of one immigrant parent, and 23.2% ($N=246$) were (at least) second-generation Canadians.

Although 69.9% ($N=934$) of the sample's primary language spoken at home was English, there were 74 different languages and combinations of languages spoken at home identified. Finally, while 202 different cultures were mentioned by subjects, 68.7% ($N=723$) of the subjects indicated that they did not consider themselves to be members of a visible minority.

Regarding parental education, 35.7% ($N=380$) of fathers and 46.6% ($N=495$) of mothers did not progress past a post-secondary education. In terms of family finances, 61.9% ($N=661$) of the students considered their family to be of average means, and a further 29.2% ($N=312$) considered their families to be above or well above average means. Approximately half of the sample (48.5%, $N=517$) either had a family member who attended university in the past or was currently attending. 50.3% ($N=539$) of the sample reported that if they had needed to attend university outside of Toronto, they could or at least probably could pay the costs.

The mean OAC marks (Ontario Academic Credits) reported by the students was 79.75%. While in the Autumn term, 86.3% of the students expected to receive a "B" or better average, during the Winter, this figure dropped to 67.3%. On a comparison of paired samples ($N=402$), this difference was found to be significant ($t [401] = -7.65, p < .0005$). While expected average assessed in the Autumn term was not strongly correlated with eventual obtained GPA, there was a moderately strong correlation between expected average in the Winter term and GPA ($r [357] = .6166, p < .0005$).

Regarding how important others were in making the decision to come to York, the following people were considered: parents, other family members,

friends, teachers, guidance counsellors, current York students, former York students, and York representatives. Parents were most highly rated as being important or very important in making this decision (45.7%). There was quite a gap between this and the next highest category, namely friends (28.6%).

There were several attitudinal issues that were explored during both data collections. It should be noted that although frequencies are reported on the entire sample of each data collection, the comparisons between the two are performed as a paired sample for those subjects who responded on both occasions. Regarding feeling academically prepared for university, in the Autumn term, 56.3% of respondents either agreed or agreed strongly and in the Winter term, 58.9% felt the same way. Paired sample analysis revealed no significant difference between the two. In the Autumn term, 56.6% respondents either agreed or agreed strongly that they felt emotionally prepared for university and in the Winter term, 63.9% felt the same. The paired sample comparison demonstrated a significant increase ($t [383] = 2.46, p = .014$). In terms of work habits and study skills, 46.5% of respondents agreed or strongly agreed that they were prepared, but over the course of the Winter term, this number fell to 41.1% of the respondents. In addition, on the paired sample comparison, there was significant decline in the mean ($t [394] = 3.51, p < .0005$). Initially, 73.4% either

agreed or strongly agreed that they possessed the personal drive and energy to succeed in university, but this declined to 62.0% over the second term. During this same period, those who disagreed or strongly disagreed increased from 3.7% to 8.8% of respondents. This was reflected in the significant decline in means between the two terms ($t [380] = 5.04, p < .0005$). A total of 79.3% of the subjects reported that they agreed or strongly agreed that they could have achieved higher grades had they worked to their full ability in high school. This figure remained at 76.7% for respondents regarding their first term in university.

In terms of English language skills, over 93% of subjects either agreed or strongly agreed that they felt they could speak, read, and follow a conversation with ease. This figure dropped to 78.1% in regard to writing in English.

Students were asked about their attitudes towards academic standards at York, their perspectives regarding professors, teaching assistants, and their degree of contact with them. Regarding the academic quality of York, 98.7% reported it as at least average in the Autumn term, and 87.6% still felt this way after their first term. It should be pointed out, however, that the percentage of students who reported this as good or very good dropped from 77.4% to 59.3% over the same period and this was significant ($t [376] = -8.08, p < .0005$). Reflecting the academic quality of the Faculty of Arts at York specifically, 98.1% (Term 1) and

86.4% (Term 2) of students reported at least an average assessment. This too was significantly different ($t [336] = -9.14, p < .0005$). Regarding the academic quality of students attending York University, while initially 95.4% provided average or above ratings, this decreased to 88.6% in the Winter term, and the overall mean declined significantly ($t [340] = -5.31, p < .0005$). Regarding courses providing a real intellectual challenge, initially 76.5% either agreed or agreed strongly. This figure dropped dramatically to 54.5% in the Winter term. The paired sample means were significantly different ($t [378] = 9.84, p < .0005$). In the Autumn term, 18.1% of respondents either agreed or agreed strongly that professors will go out of their way to be helpful, and 23.3% felt this way in the Winter term. The difference in means was not significant. Regarding students' opinions being valued, 39.5% agreed or strongly agreed in the Autumn term, and 44.9% felt the same in the Winter term. Here as well, the difference in means was not significant. In response to the statement that professors put a lot of effort into teaching, initially 57.8% either agreed or agreed strongly. In the Winter term, 51.3% still felt this way, but there was a significant drop overall in paired sample means ($t [335] = 3.24, p < .001$). In terms of professors being interested in their students' academic development, 28.8% of respondents either agreed or agreed strongly in the Autumn and 24.8% responded this way in the

Winter. The difference in the paired sample means, however, was not significant. In response to the statement that professors do not make unrealistic academic demands on students 33.9% initially either agreed or agreed strongly, but this increased to 46.1% in the Winter term. The paired sample means demonstrated a significant increase as well ($t [316] = -2.86, p < .005$).

During the second data collection, students were asked to estimate the number of out-of-class contacts of at least 10 minutes duration that they had with members of the faculty and with teaching assistants each month concerning a number of issues. Regarding course related problems, only 32.4% had spoken directly with the professor, and similarly, 31.5% had ever spoken with them about basic information regarding the academic programme. Concerning the discussion of intellectual issues, campus issues, future occupation, personal problems, or socializing informally, the percentage of students who had never done so ranged from 86.9% to 94.7% of the respondents. With teaching assistants, 44.9% of the respondents had one or more contacts with them about course related problems, and 26.6% had spoken with them about basic information regarding the academic programme on at least one occasion. In regard to all the other issues mentioned before, the percentage of students who had never spoken with them even once ranged from 84.4% to 95.2%.

Finally, during both data collections, students were asked to rate the degree of concern they felt about a variety of issues in their environment. In this context, reports of being worried include those respondents who either identified themselves as being "worried" or "very worried". In terms of concern about being able to achieve good grades, initially, 54.8% were worried, and this figure was 52.2% in the second term. However, the difference in paired sample means decreased significantly ($t [403] = 2.43, p < .016$). Similarly, regarding being able to handle the work load, an initial 58.4% were concerned, this decreased to 48.6%. and the difference in paired sample means decreased significantly as well ($t [402] = 5.14, p < .0005$). While in the Autumn term, 42.7% expressed concern about their ability to get into their chosen programmes or courses, this increased to 56.2% in the Winter term. The paired sample means were significantly different as well ($t [379] = -6.03, p < .0005$). In terms of concern over stress, 49.8% were worried about being able to handle it in the Autumn term. and 45.4% felt the same way in the Winter. The paired sample mean significantly decreased as well ($t [393] = 2.73, p = .007$). Worries about not having enough money increased from 48.9% to 57.9% during this time period and increased significantly in paired sample means ($t [399] = -6.47, p < .0005$). In terms of being worried about having to take a part-time job during the semester in order

to meet expenses, 36.6% reported concern in the Autumn term and this declined to 32.3% in the Winter term. Comparisons of paired sample means showed that this was not significant. It should be noted, however, that while 50.2% of respondents actually acquired part-time work during the year, 42.1% did not, and only 7.7% did not want any. Concern over finding work during the summer increased from 29.0% to 45.0%. Statistical tests of paired sample means yielded a significant difference ($t [365] = -5.68, p < .0005$). There was no change in the concern over finding suitable accommodations in both terms (10.6%), and the statistical tests of paired sample means showed no significant difference as well. In the Autumn term, 25.8% were worried about not being able to make friends at university. This figure dropped to 16.5% in the second term. The difference in paired sample means was significant ($t [392] = 6.87, p < .0005$). Concern over doing well enough in university to satisfy the expectations of family and friends included 39.9% in the Autumn term and 41.8% in the Winter term. The difference in paired sample means was not significant. Concern over family related problems interfering with work remained relatively minimal and consistent across both terms (25.8% and 23.9%) and there was no significant difference in paired sample means. Finally, only 19.9% of respondents reported worry over family meddling into academic decisions in the Autumn term, and

15.5% were concerned in the Winter term. The difference in paired sample means showed a significant decline ($t [372] = 2.26, p = .025$).

Scoring of Measures

The scores for all of the scales were calculated according to their respective accepted criteria. All scores were based on a minimum 80% response on the total scale. Pro-rated scores were computed for each scale as long as 80% of the measure was completed by the subject. In this manner, a greater number of questionnaires were able to be used in the study (Kohn, personal communication, 1990).

As stated, the procedure for computing integrative complexity scores required a more intricate process. Initial reliability in scoring was established between the primary researcher and Dr. Michael Pratt of Wilfred Laurier University. Twenty protocols (each one consisting of the six separate open-ended questions for a total of 120 questions) were scored by both the present researcher and M. Pratt, and an interrater reliability coefficient of .92 was established. This enabled the establishment of reliability with the three other raters (two graduate students and one undergraduate student). After an initial scoring of twenty protocols yielded an interrater reliability coefficient of .98 between the primary researcher and each of the other three scorers, they

proceeded to code the protocols for the entire sample. Periodic rechecks in which all four scorers rated the same protocols were accomplished to ascertain that scoring practices were not drifting from the original criteria. In addition, all of the scoring was done in a group setting so that whenever a rater had a doubt on a particular item, it was assessed by the group and a consensus was achieved to determine the appropriate score. Ultimately, 110 protocols (660 individual items) were scored by members of the group and interrater reliability coefficients between the primary researcher and the other three were .91, .91, and .94. Between the other three scorers themselves, coefficients ranging between .89 to .91 were achieved.

Descriptive Statistics

The means, standard deviations, attained ranges, and the possible range of scores for each of the variables can be found in Table 1. All of the scales demonstrated means and variability that were consistent with past norms. Also, as can be observed from Table 1, comparison of the possible range of scores and the range of obtained scores demonstrates varying responses. Finally, as will be discussed subsequently, none of the variables were skewed significantly, and normal distribution can be assumed.

Table 1
Means, Standard Deviation, Ranges, and Valid Scores for All Scales

Scale	Mean	Std Dev	Range	Valid Scores	n
BDI - Fall	8.42	6.70	0 - 51	0 - 63	1071
BDI - Winter	9.92	7.57	0 - 48	0 - 63	407
Self-Esteem - Fall	32.48	5.33	10 - 40	10 - 40	1071
Self-Esteem - Winter	36.88	5.35	10 - 40	10 - 40	405
PSS - Fall	25.16	8.08	2 - 54	0 - 54	1070
PSS - Winter	27.33	8.09	5 - 54	0 - 54	408
POPRS					
Overall - Fall	127.51	35.85	19 - 215	0 - 215	1007
Overall - Winter	128.27	34.02	12 - 211	0 - 215	367
General - Fall	27.74	8.73	1 - 45	0 - 45	1068
General - Winter	28.11	8.28	0 - 45	0 - 45	408
Mother - Fall	53.38	16.94	0 - 85	0 - 85	1061
Mother - Winter	53.64	15.55	6 - 85	0 - 85	395
Father - Fall	46.48	17.54	0 - 85	0 - 85	1003
Father - Winter	46.53	16.27	0 - 83	0 - 85	370
PAQ - Mother					
Authoritarian	29.03	7.55	10 - 50	10 - 50	1049
Authoritative	33.51	7.23	10 - 50	10 - 50	1049
Permissive	24.14	5.53	10 - 46	10 - 50	1049
PAQ - Father					
Authoritarian	31.59	8.62	10 - 50	10 - 50	988
Authoritative	31.37	7.90	10 - 50	10 - 50	988
Permissive	24.05	6.00	10 - 49	10 - 50	988
Integrative Complexity	14.01	3.03	6 - 23	6 - 42	992
Speaking w/ Parents	11.70	4.48	4 - 20	4 - 20	1015
SPS (Parental Support)	28.55	4.43	14 - 36	0 - 56	1063
Independence	17.60	5.94	0 - 24	0 - 24	1071
Autonomy	94.90	12.43	42 - 120	30 - 120	1056
- Self Reliance	32.87	4.48	13 - 40	10 - 40	1056
- Identity	32.23	5.33	11 - 40	10 - 40	1057
- Work Orientation	29.82	4.79	11 - 40	10 - 40	1057
SACQ	383.54	65.01	117 - 546	67 - 603	407
- Academic	130.96	25.85	52 - 204	24 - 216	407
- Social	103.46	22.72	34 - 157	18 - 162	407
- Emotional	83.17	21.80	15 - 135	15 - 135	407
- Goal/Institutional	92.16	18.63	20 - 126	14 - 126	407
GPA	5.25	1.72	0 - 8.6	0 - 9	892

Reliability

Although internal reliability had previously been established for each of the measures, for the purpose of being rigorous, it was decided to reexamine their reliability for this sample of subjects. Both Cronbach (1970) and Nunnally (1978) regard coefficient alpha as the most important index of reliability. In addition, Nunnally (1978) considers a coefficient of .70 to be adequate in basic research. Furthermore, according to Briggs and Cheek (1986), mean inter-item correlation is a measure of item homogeneity that is uninfluenced by test length. Briggs and Cheek asserted that the optimal level of homogeneity occurs when this value ranges from .2 to .4. If homogeneity would be lower than .1, then it would seem that the complexity of the items could not be represented by a single score; and if higher than .5, items would appear to be overly redundant. As can be observed from Table 2, all measures met the coefficient alpha criterion of .70 with the exception of the measure of integrative complexity, which is not, however, low enough to invalidate its inclusion in the study. Also, as can be demonstrated from Table 2, 25 of the mean inter-item correlation scores ranged between the optimum .2 and .4. The values of the remaining eight scores were also not extreme values. Finally, in keeping with the methodology suggested by Jackson (1970), reliability analysis revealed that the item means

Table 2
The Cronbach Coefficient Alpha Scores for Each of the Measures

Scale	Alpha	n	Mean Inter-Item Correlation	No. of Items
BDI - Fall	.8450	1048	.21	21
BDI - Winter	.8774	401	.25	21
Self-Esteem - Fall	.8791	1057	.43	10
Self-Esteem - Winter	.8920	399	.46	10
PSS - Fall	.8097	1055	.27	14
PSS - Winter	.8735	399	.33	14
Overall POPRS - Fall	.9461	945	.29	43
Overall POPRS - Winter	.9500	349	.31	43
General POPRS - Fall	.8282	1019	.35	9
General POPRS - Winter	.8517	394	.40	9
Mother POPRS - Fall	.9172	1032	.40	17
Mother POPRS - Winter	.9160	383	.40	17
Father POPRS - Fall	.9178	973	.40	17
Father POPRS - Winter	.9166	355	.39	17
PAQ - Mother				
Authoritarian	.8649	1033	.39	10
Authoritative	.8624	1032	.38	10
Permissive	.7339	1030	.21	10
PAQ - Father				
Authoritarian	.9033	981	.48	10
Authoritative	.8865	972	.43	10
Permissive	.7776	967	.26	10
Integrative Complexity	.5668	951	.18	6
Speaking w/ Parents	.8948	1015	.68	4
SPS (Parental Support)	.8518	1051	.29	14
Enabling Independence	.8660	1071	.62	4
Autonomy	.8889	995	.21	30
- Self-reliance	.7377	1037	.22	10
- Identity	.8219	1026	.32	10
- Work Orientation	.7385	1036	.22	10
SACQ	.9278	307	.17	67
- Academic	.8573	370	.20	24
- Social	.8636	374	.26	18
- Emotional	.8535	381	.28	15
- Goal/Institutional	.8466	379	.29	14

demonstrate values in the mid-range and the item variances indicate reasonable variability.

Across-Time Variables

In addition to the inclusion of the variables already mentioned, since data were collected for four of the measures during both administrations of questionnaires, it was also possible to study the changes in these variables across time. The variables, as mentioned previously, were mutual reciprocity (POPRS), depressive symptomatology (BDI), self-esteem, and perceived stress (PSS). In order to ascertain the appropriateness of the contribution of change over time, it was first determined if, in fact, there had been statistically significant changes in the means of these variables across the two administrations. On matched subjects, there were no significant difference in POPRS. The other three measures, however, yielded significant changes over time. These results can be found in Table 3. In order to maximize the data, and upon statistical consultation, it was decided to use an average of the two POPRS scores for each subject. Since there was no significant difference between these scores, it was felt that the average would be the most accurate representation of the mutuality in relationships with parents. Since there were statistically significant differences for the other variables, however, new variables for each were calculated. By

Table 3
Significance of Changes in Means Across Time for Paired Subjects

Variable		<u>n</u>	<u>M</u>	<u>SD</u>	t-value	df	2-tail Sig
POPRS	Time 1	364	127.19	35.31	-1.24	363	.215
	Time 2		128.60	33.72			
BDI	Time 1	407	8.38	6.47	-5.57	406	<.0005
	Time 2		9.92	7.57			
Esteem	Time 1	405	32.33	5.20	2.21	404	.028
	Time 2		31.91	5.36			
PSS	Time 1	407	25.16	8.00	-6.60	406	<.0005
	Time 2		27.38	8.03			

subtracting the Time 1 value from the Time 2 value, variables representing the change across time were obtained. Therefore, analyses utilizing these variables would now be able to investigate whether the scores at Time 1, Time 2, and/or the change in scores from Time 1 to Time 2 tend to affect outcome.

It should be noted at this time that there are authors who are critical of using difference scores in assessing change, primarily because such scores are systematically related to any random error in measurement (Cronbach & Furby, 1970). Two suggested solutions to this problem are either to use residual scores instead of the raw change, or to reformulate the problem entirely (i.e., to use the Time 2 data as a dependent variable). Upon statistical consultation, these suggested solutions were rejected. First, this information (namely, change of emotional reaction over time) is useful within the model being developed as predictors for the outcome measures. Second, it is difficult to interpret residuals in this context, whereas difference scores lend themselves to practical interpretation. Finally, as the critics themselves point out, this is more of a major problem when difference scores are used to make decisions about individuals, but not such a major issue otherwise (Cronbach & Furby, 1970; Linn, 1986). Therefore, it was decided to retain this method of investigation with the understanding of the caution that must be utilized in interpretation.

Analyses for Adjustment to University

The overall purpose of this study was to investigate a variety of factors which were thought to contribute to first-year university students' adjustment to this new environment from both social/emotional and academic perspectives. Accordingly, as described earlier, the overall SACQ, as well as the subscales (as subjectively perceived by the subject) of academic adjustment, social adjustment, personal/emotional adjustment, and goal commitment/attachment to institution were used to assess adjustment. The outcome variable for determining actual academic adjustment was subjects' grade-point average (GPA) at the end of their first year at university. Therefore, from the outset, it was necessary to construct six separate multiple regression models to address these issues (i.e., one for each of the following: overall SACQ, academic adjustment, social adjustment, personal/emotional adjustment, and goal commitment/attachment to institution, and GPA). First, adjustment to university as measured by the SACQ and its subscales is examined, followed by a separate analysis of the actual academic adjustment variable, as measured by GPA.

It should be noted that the SACQ academic adjustment scale and GPA represent distinct constructs. The former is a subjective measurement of students' perceptions of their ability to adapt to the academic rigours of university. GPA,

however, provides an objective measurement of students' actual academic achievement. Although intuitively these two should be related, it is entirely possible that the relationship is far from strong, possibly because of such factors as self-esteem and defensiveness.

To begin, it was first necessary to examine the intercorrelations between predictor variables and outcome variables. It was also imperative to explore the strength of relationships between the various predictor variables themselves. In addition, the intercorrelations between the outcome measures was examined in order to ascertain the uniqueness of each of these subscales.

Student Adaptation to College Questionnaire (SACQ).

Correlational Analysis

The variables were arranged into categories of "Relationship with Parents" variables, "Emotional Well-Being" variables, "Autonomy" variables, and "Parenting Style" variables in order to organize this information into conceptually manageable units. As will be demonstrated, this division will also be pertinent to the development of the actual regression models.

It should be noted that when the sample size is quite large, as it is for several of the variables, statistical significance can be achieved even though the magnitude of the finding is itself quite trivial. Although this is not as much of a

concern regarding the data from the second data collection and, therefore, to the intercorrelations between the predictor variables and the adjustment to university outcome variables, it does apply to several of the intercorrelations between predictors themselves. Therefore, interpretation of relationships between such variables was predicated on a minimum r of .30 (Cohen, 1969; Cowles, 1974; Haggard, 1958), which would account for 9% of explained variance. All correlations that have been examined and considered significant are two-tailed correlations significant at a two-tailed alpha of .05.

The intercorrelation between the "relationships with parent variables" and adjustment to university can be found in Table 4. As predicted, POPRS correlated significantly and positively with both the overall SACQ and its subscales. Smaller, yet significant, positive correlations were found between the Social Provisions Scale - Parental Version (SPS-P) scores and the SACQ measures. Regarding the independence scale, while only the goal commitment/attachment to institution subscale yielded a nonsignificant correlation, the correlations with the other SACQ measures was rather small. The largest of these was between independence and the overall SACQ (r [407] = .1437) which produced only approximately 2% explained variance. Interestingly, there were no significant correlations between integrative

Table 4
Intercorrelations Between Relationship with Parents and Adjustment to University

	SACQ	ACAD	SOCIAL	EMOT	GOAL
POPRS	.3652 (384) p<.0005	.2782 (384) p<.0005	.3176 (384) p<.0005	.3075 (384) p<.0005	.2397 (384) p<.0005
SUPPORT	.2596 (405) p<.0005	.1803 (405) p<.0005	.2484 (405) p<.0005	.2210 (405) p<.0005	.1563 (405) p=.002
INDEP	.1437 (407) p=.004	.1197 (407) p=.016	.1151 (407) p=.020	.1192 (407) p=.016	.0874 (407) p=.078
IC	-.0130 (387) p=.800	-.0239 (387) p=.639	.0609 (387) p=.232	-.0705 (387) p=.166	.0296 (387) p=.562
PARENT	.2099 (394) p<.0005	.1669 (394) p=.001	.2318 (394) p<.0005	.0854 (394) p=.090	.2114 (394) p<.0005

		<u>SACQ</u>	
POPRS	=Parental Reciprocity	SACQ	=Overall Score
SUPPORT	=Parental Support	ACAD	=Academic Subscale
INDEP	=Enabling Independence	SOCIAL	=Social Subscale
IC	=Integrative Complexity	EMOT	=Personal/Emotion Subscale
PARENT	=Discussion with Parents	GOAL	=Attachment to Institution/ Goal Commitment Subscale

complexity and any of the SACQ scales. In addition, integrative complexity correlated rather weakly with the measure that assessed the degree to which students discussed university issues with their parents ($r [990] = .1196$). Discussion with parents itself, however, demonstrated small, yet significant and positive correlations with all of the SACQ scales except the personal/emotional adjustment subscale. Therefore, although the original premise for the "discussion with parents" scale's inclusion was its relationship to integrative complexity, it now became a pertinent variable to be examined in its own right. Furthermore, since the link of integrative complexity to discussion with parents is so minimal, it will be important to observe this variable's relationship with other parenting variables. Although integrative complexity would seem to be independent of the "Relationship with Parents" category, it will continue to be included within this context because of its historical conceptualization.

The intercorrelation between the category of "emotional well-being" and adjustment to university can be found in Table 5. The "emotional well-being" category includes the variables of depressive symptomatology (BDI scores), self-esteem (Rosenberg self-esteem scale scores), and perceived stress (PSS scores). As stated, these measures were observed at Time 1 and Time 2, and the differences between them were calculated. For BDI scores, both Time 1 and

Table 5

Intercorrelations Between Emotional Variables and Adjustment to University

	SACQ	ACAD	SOCIAL	EMOT	GOAL
<u>BDI</u>					
Time 1	-.5188 (407) p<.0005	-.3500 (407) p<.0005	-.3937 (407) p<.0005	-.5139 (407) p<.0005	-.3796 (407) p<.0005
Time 2	-.7050 (407) p<.0005	-.5282 (407) p<.0005	-.4566 (407) p<.0005	-.7274 (407) p<.0005	-.4473 (407) p<.0005
Difference	-.3554 (407) p<.0005	-.3113 (407) p<.0005	-.1631 (407) p=.001	-.3915 (407) p<.0005	-.1669 (407) p=.001
<u>SELF-ESTEEM</u>					
Time 1	.4224 (407) p<.0005	.3222 (407) p<.0005	.3216 (407) p<.0005	.3843 (407) p<.0005	.2767 (407) p<.0005
Time 2	.5895 (404) p<.0005	.4584 (404) p<.0005	.4431 (404) p<.0005	.5178 (404) p<.0005	.4037 (404) p<.0005
Difference	.2497 (404) p<.0005	.1996 (404) p<.0005	.1855 (404) p<.0005	.2023 (404) p<.0005	.1911 (404) p<.0005
<u>PERCEIVED STRESS</u>					
Time 1	-.5383 (406) p<.0005	-.3759 (406) p<.0005	-.3916 (406) p<.0005	-.5528 (406) p<.0005	-.3327 (406) p<.0005
Time 2	-.6987 (407) p<.0005	-.5675 (407) p<.0005	-.4153 (407) p<.0005	-.7505 (407) p<.0005	-.3484 (407) p<.0005
Difference	-.1891 (406) p<.0005	-.2228 (406) p<.0005	-.0255 (406) p=.608	-.2381 (406) p<.0005	-.0126 (406) p=.800

Time 2 correlations were negative and significant with all SACQ scales, with correlations ranging from $-.3500$ to $-.7274$. The change over time was also negatively significant with all SACQ scales, but the correlations with the social subscale and attachment to institution/goal commitment subscale were smaller ($r [407] = -.1631, p = .001$ and $r [407] = -.1669, p = .001$, respectively). All self-esteem scale correlations were significant and positive at both Times 1 and 2, ranging from $.2767$ to $.5895$. Change over time correlations were also all significant and positive, ranging from $.1855$ to $.2497$. Perceived stress as well yielded all significant, negative correlations ranging from $-.3327$ to $-.7505$. Following the pattern of the BDI differences scores, the smallest correlations were with the social subscale and attachment to institution/goal commitment subscale. In this instance, however, the correlations did not achieve significance. The other three correlations ranged from $-.1891$ to $-.2381$. It should be noted that the direction of the relationships between all three emotions measures and the SACQ were as predicted. Namely, depressive symptomatology and perceived stress were negatively correlated with adjustment to university overall and self-esteem was positively correlated. Furthermore, in each instance, the relationship was weakest with the measure of attachment to institution/goal commitment. Finally, it should be noted that the strongest correlations between the emotional well-being

variables and the outcome variables were when they were measured contemporaneously at Time 2.

Correlations between the Psychosocial Maturity Inventory (Autonomy subscales) and the SACQ were done in two ways (see Table 6). First, the relationship between the overall autonomy scale (i.e., the combination of the self-reliance, identity, and work orientation subscales) and the SACQ was assessed. Subsequently, the relationship between each of the autonomy subscales and the SACQ scales were examined. Even though in the regression analysis the intention was to analyze this category using the subscales, it was still worthwhile to examine the suitability of the overall scale as well and identify its appropriateness as a single scale. Of course, it is not possible to do both in the same analysis since the overall scale is merely a summing of the three subscales. All correlations yielded significant, positive relationships. The strongest correlation of any of the variables in this category was between both overall scales ($r [404] = .4898$, $p < .0005$). Among the individual subscales, both Self-reliance and Identity correlated most strongly with the social adjustment subscale ($r [404] = .3300$, $p < .0005$ and $r [404] = .4300$, $p < .0005$), and as would be expected, Work Orientation correlated most strongly with academic adjustment ($r [404] = .3709$, $p < .0005$).

Table 7 shows the intercorrelation between "Parenting Style" (as measured

Table 6
Intercorrelations Between Autonomy and Adjustment to University

	SACQ	ACAD	SOCIAL	EMOT	GOAL
Autonomy (Overall scale)	.4898 (404) p<.0005	.4069 (404) p<.0005	.4052 (404) p<.0005	.3677 (404) p<.0005	.3617 (404) p<.0005
Self- reliance	.3796 (404) p<.0005	.3062 (404) p<.0005	.3300 (404) p<.0005	.2637 (404) p<.0005	.2970 (404) p<.0005
Identity	.4886 (404) p<.0005	.3405 (404) p<.0005	.4300 (404) p<.0005	.4218 (404) p<.0005	.3602 (404) p<.0005
Work Orientation	.3519 (404) p<.0005	.3709 (404) p<.0005	.2493 (404) p<.0005	.2230 (404) p<.0005	.2461 (404) p<.0005

Table 7
Intercorrelations Between Parenting Style and Adjustment to University

	SACQ	ACAD	SOCIAL	EMOT	GOAL
MRIAN	-.1366 (398) p=.006	-.1084 (398) p=.031	-.1211 (398) p=.016	-.1479 (398) p=.003	-.0043 (398) p=.931
MTIVE	.2016 (398) p<.0005	.1415 (398) p=.005	.2097 (398) p<.0005	.1795 (398) p<.0005	.0914 (398) p=.068
MPERM	.0255 (398) p=.612	.0379 (398) p=.450	.0442 (398) p=.380	.0074 (398) p=.883	-.0332 (398) p=.509
FRIAN	-.1569 (378) p=.002	-.1305 (378) p=.011	-.1310 (378) p=.011	-.1795 (378) p<.0005	-.0162 (378) p=.753
FTIVE	.1977 (379) p<.0005	.1171 (379) p=.023	.2288 (379) p<.0005	.1701 (379) p=.001	.1377 (379) p=.007
FPERM	.0639 (377) p=.216	.0582 (377) p=.260	.0839 (377) p=.104	.0631 (377) p=.222	-.0097 (377) p=.851

PAQ

MRIAN =Mother Authoritarian
 MTIVE =Mother Authoritative
 MPERM =Mother Permissive
 FRIAN =Father Authoritarian
 FTIVE =Father Authoritative
 FPERM =Father Permissive

SACQ

SACQ =Overall Score
 ACAD =Academic Subscale
 SOCIAL =Social Subscale
 EMOT = Personal/Emotional
 Subscale
 GOAL =Attachment to
 Institution/Goal
 Commitment Subscale

by the PAQ) and the SACQ scales. Although significance was found in many of the relationships among the variables, none of their magnitude exceeded .2288. Neither of the permissive scales correlated with any SACQ scale. Also, with the exception of father authoritativeness, the Attachment to Institution/Goal Commitment subscale remained uncorrelated with any of the other variables. As expected, both the mother and father authoritarian scales correlated negatively with the SACQ overall scale and with the Academic, Social, and Personal/Emotional subscales. Reciprocally, both the mother and father authoritative scales were positively correlated with the SACQ and these three subscales. The negative relationship of authoritarianism, the positive relationship of authoritativeness, and the nonsignificant findings of permissiveness are consistent with previous findings (Yaffe & Wintre, 1996).

Next, the intercorrelations within each of the categories is examined. First, the intercorrelations within the relationship of the "Parents" category can be found in Table 8. Within this category, there are only three correlations of import; POPRS with SPS-P ($r [1005] = .7647, p < .0005$), POPRS with Discussion with Parents ($r [959] = .5153, p < .0005$), and SPS-P with Discussion with Parents ($r [1009] = .5119, p < .0005$). All other correlations did not approach the .30 cutoff criterion. Once again, it is notable that integrative

complexity failed to correlate with other variables.

In considering the "Emotional Well-Being" variables, which can be found in Table 9, all correlations were found to be significant with correlations ranging from $-.4334$ to $.7366$. All correlations were in the expected direction; BDI scores and PSS scores were negatively correlated with Self-esteem scores, and positively correlated with each other. This includes comparison of measures between Time 1 and Time 2. The correlations within each measure between the two times yielded positive, moderately strong correlations. The correlation between BDI scores at the two times was $r(407) = .6960, p < .0005$, between the Self-esteem scores at the two times was $r(405) = .7366, p < .0005$, and between PSS scores at the two times was $r(407) = .6403, p < .0005$. The absence of a higher correlation between these variables is an indication of how feelings of individual subjects must have changed over time. Again, it should be noted that correlations are uniformly higher between variable pairs measured contemporaneously than noncontemporaneously.

As shown in Table 10, intercorrelations among the "Autonomy" variables were positive and significant. Although the strongest correlations were between the overall Autonomy scale and the subscales, this is confounded by the fact that each of the subscales accounts for 1/3 of the total scale. Nevertheless, the strong

Table 8
Intercorrelations within the Relationships with Parents Variables

	POPRS	SUPP	INDEP	IC	PARENT
POPRS	1.0000 (1010)	.7647 (1005) p<.0005	.1884 (1010) p<.0005	.0224 (938) p=.494	.5153 (959) p<.0005
SUPP		1.0000 (1063)	.1293 (1063) p<.0005	.0296 (986) p=.354	.5119 (1009) p<.0005
INDEP			1.0000 (1071)	-.0215 (991) p=.499	.0834 (1015) p=.008
IC				1.0000 (992)	.1196 (990) p<.0005
POPRS	=Parental Reciprocity				
SUPP	=Parental Support				
INDEP	=Enabling Independence				
IC	=Integrative Complexity				
PARENT	=Discussion with Parents				

Table 9
Intercorrelations within Emotional Well-Being Variables

	BDI	BDI2	Esteem	Esteem2	Stress	Stress2
BDI	1.0000 (1071)	.6960 (407)	-.5868 (1070)	-.5412 (405)	.6509 (1069)	.4893 (408)
BDI2		1.0000 (407)	-.4511 (407)	-.6100 (404)	.5358 (406)	.7020 (407)
Esteem			1.0000 (1071)	.7366 (405)	-.5708 (1069)	-.4334 (408)
Esteem2				1.0000 (405)	-.5651 (404)	-.6027 (405)
Stress					1.0000 (405)	.6403 (407)

BDI = Depressive Symptomatology (Time 1)
 BDI2 = Depressive Symptomatology (Time 2)
 Esteem = Self-esteem (Time 1)
 Esteem2 = Self-esteem (Time 2)
 Stress = Perceived Stress (Time 1)
 Stress2 = Perceived Stress (Time 2)

All "p"-values <.0005

Table 10
Intercorrelations within Autonomy and its Subscales

	Autonomy	Self-Reliance	Identity	Work Orientation
Autonomy	1.0000 (1056)	.8612 (1056)	.8646 (1056)	.8265 (1056)
Self-Reliance		1.0000 (1056)	.6391 (1056)	.5876 (1056)
Identity			1.0000 (1057)	.5335 (1057)

All "p" values <.0005

relationships indicate how the three subscales contribute to formulate a unified construct. Also, there were moderate correlations among the three subscales themselves, thereby affording each variable its own unique contribution.

In considering the intercorrelations between Parenting Style variables, as demonstrated in Table 11, the interrelationships among the mother scales paralleled those of the father scales. Specifically, authoritarianism was negatively correlated with authoritativeness and with permissiveness, and authoritativeness was positively correlated with permissiveness. There were positive correlations between the responses about mothers and fathers for each of the parenting styles, authoritarianism ($r [983] = .5134, p < .0005$), authoritativeness ($r [984] = .5039, p < .0005$), and permissiveness ($r [982] = .5531, p < .0005$). Furthermore, the magnitude of these correlations were higher for congruent parenting styles than noncongruent parenting styles across variables.

In addition, intercorrelations among the other variables are recorded according to category. Table 12 describes the correlation between the Relationship with Parents and Emotional Well-Being measures. First, it should be noted that none of the correlations involving difference scores were significant. Also, the direction of each of the correlations between Relationship with Parents and each of the three emotions indices was consistent with expectation and the results of the

Table 11
Intercorrelations within Parenting Style (PAQ)

	MRIAN	MTIVE	MPERM	FRIAN	FTIVE	FPERM
MRIAN	1.0000 (1049)	-.4876 (1048) p<.0005	-.5342 (1046) p<.0005	.5134 (983) p<.0005	-.1762 (984) p<.0005	-.2466 (983) p<.0005
MTIVE		1.0000 (1049)	.3060 (1047) p<.0005	-.2949 (983) p<.0005	.5039 (984) p<.0005	.1392 (983) p<.0005
MPERM			1.0000 (1049)	-.3030 (982) p<.0005	.0983 (982) p=.002	.5531 (982) p<.0005
FRIAN				1.0000 (988)	-.5163 (987) p<.0005	-.5676 (987) p<.0005
FTIVE					1.0000 (988)	.3433 (986) p<.0005

MRIAN = Mother Authoritarian
 MTIVE = Mother Authoritative
 MPERM = Mother Permissive
 FRIAN = Father Authoritarian
 FTIVE = Father Authoritative
 FPERM = Father Permissive

Table 12

Intercorrelations Between Relationships with Parents and Emotional Well-Being

<u>BDI</u>	*POPRS	SUPPORT	INDEP	IC	PARENT
Time 1	-.3567 (1009) p<.0005	-.3188 (1062) p<.0005	-.1608 (1070) p<.0005	-.0030 (991) p=.925	-.2163 (1014) p<.0005
Time 2	-.3636 (384) p<.0005	-.2862 (405) p<.0005	-.1432 (407) p<.0005	-.0438 (387) p=.390	-.1569 (394) p=.002
Difference	-.1146 (384) p=.025	-.0811 (405) p=.103	-.0234 (407) p=.638	-.0487 (387) p=.339	-.0355 (394) p=.483
<u>SELF-ESTEEM</u>					
Time 1	.3207 (1009) p<.0005	.2940 (1062) p<.0005	.1726 (1070) p<.0005	-.0299 (992) p=.346	.1875 (1014) p<.0005
Time 2	.3165 (382) p<.0005	.2290 (403) p<.0005	.2096 (405) p<.0005	.0087 (385) p=.865	.1737 (392) p=.001
Difference	.0713 (382) p=.164	-.0132 (403) p=.791	-.0266 (405) p=.593	.0917 (385) p=.072	.0301 (392) p=.553
<u>PERCEIVED STRESS</u>					
Time 1	-.3362 (1009) p<.0005	-.2975 (1062) p<.0005	-.2064 (1069) p<.0005	.0141 (991) p=.656	-.1917 (1013) p<.0005
Time 2	-.3551 (385) p<.0005	-.2446 (406) p<.0005	-.2101 (408) p<.0005	.0213 (388) p=.676	-.1145 (395) p=.023
Difference	-.0842 (385) p=.099	.0156 (406) p=.755	.0430 (408) p=.387	-.0611 (388) p=.230	.0643 (394) p=.203

*See Table 8 for key to headings

correlations between emotions and the SACQ scales examined earlier. Specifically, BDI scores and PSS scores correlated negatively with these variables, and Self-esteem scores correlated positively. This was particularly the case for correlations with POPRS scores and SPS-P scores both at Time 1 and Time 2. Likewise, Independence scores and Discussion with Parents scores followed this pattern, but with weaker correlations, all less than .30. No significant correlations were found between any of the emotion scales and integrative complexity.

As shown in Table 13, in regard to Relationship with Parents variables and Autonomy variables, only POPRS and the SPS-P correlated (positively) beyond the .30 cutoff (all n 's ≥ 988) with overall Autonomy scores and with the Identity scale scores. Both Independence scores and Discussion with Parents scores failed to meet this criterion. Once again, correlations with integrative complexity were trivial.

As shown in Table 14, the association between Relationship with Parents variables and Parenting Style is as would be expected. Neither mother or father permissiveness correlated at $|\geq .30|$ or higher with any other measure. POPRS and SPS-P scores correlated in the same way with parenting style variables. Both were negatively correlated with mother and father authoritarianism and positively

Table 13
Intercorrelations Between Relationships with Parents and Autonomy

	POPRS	SUPPORT	INDEP	IC	PARENT
Autonomy	.3576 (996) p<.0005	.3328 (1050) p<.0005	.1935 (1055) p<.0005	.0931 (988) p=.003	.2786 (1010) p<.0005
Self- Reliance	.2567 (996) p<.0005	.2292 (1050) p<.0005	.1943 (1055) p<.0005	.0907 (988) p=.004	.2073 (1010) p<.0005
Identity	.3813 (996) p<.0005	.3786 (1050) p<.0005	.1613 (1056) p<.0005	.0906 (988) p=.004	.2802 (1011) p<.0005
Work Orientation	.2669 (996) p<.0005	.2280 (1050) p<.0005	.1353 (1056) p<.0005	.0554 (988) p=.082	.2144 (1011) p<.0005

POPRS = Parental Reciprocity
 SUPPORT = Parental Support
 INDEP = Enabling Independence
 IC = Integrative Complexity
 PARENT = Discussion with Parents

Table 14
Intercorrelations Between Relationships with Parents and Parenting Style

	POPRS	SUPPORT	INDEP	IC	PARENT
MRIAN	-.4254 (993) p<.0005	-.3619 (1044) p<.0005	-.0849 (1049) p=.006	.0158 (982) p=.620	-.2456 (1003) p<.0005
MTIVE	.6540 (993) p<.0005	.5857 (1044) p<.0005	.1738 (1049) p<.0005	.0395 (981) p=.216	.4364 (1002) p<.0005
MPERM	.2183 (993) p<.0005	.1682 (1044) p<.0005	.0622 (1049) p=.044	-.0243 (981) p=.446	.1068 (1002) p=.001
FRIAN	-.4608 (962) p<.0005	-.3854 (983) p<.0005	-.0675 (988) p= .034	.0450 (930) p= .171	-.2319 (947) p<.0005
FTIVE	.6287 (961) p<.0005	.5278 (983) p<.0005	.0826 (988) p=.009	.0045 (930) p=.891	.3675 (947) p<.0005
FPERM	.2049 (962) p<.0005	.1483 (983) p<.0005	.0746 (988) p=.019	-.0563 (930) p=.086	.0800 (947) p=.014

PAQ

MRIAN =Mother Authoritarian
 MTIVE =Mother Authoritative
 MPERM =Mother Permissive
 FRIAN =Father Authoritarian
 FTIVE =Father Authoritative
 FPERM =Father Permissive

POPRS= Parental Reciprocity
 SUPPORT=Parental Support
 INDEP=Enabling Independence
 IC=Integrative Complexity
 PARENT=Discussion with Parents

correlated with mother and father authoritativeness. In particular, the correlation between POPRS and both mother and father authoritativeness was moderately strong ($r [993] = .6540, p < .0005$ and $r [961] = .6287, p < .0005$, respectively). Discussion with Parents scores were also significantly correlated with both authoritativeness scales. Both Independence scores and integrative complexity scores were either trivial or nonsignificant.

In examining the relationship between the Emotional Well-Being category and Autonomy, once again the change in emotions scores were not significantly correlated with any of the Autonomy indices. These findings can be found in Table 15. On the other hand, all other correlations were significant. Furthermore, all indices were negatively correlated with BDI scores and PSS scores, and positively correlated with Self-esteem scores. The Identity measure was most strongly correlated, ranging from $-.4446$ (PSS: Time 2) to $.6200$ (Self-esteem: Time 1).

Regarding the intercorrelations between the Emotional Well-Being category and Parenting Style, as Table 16 demonstrates, once again all emotional changes over time are not significantly correlated to parenting style. Also, Time 1 correlations fail to meet the $.30$ cutoff and are considered trivial. Permissive correlations for both mother and father are all trivial in a statistical sense and,

Table 15
Intercorrelations Between Emotional Well-Being and Autonomy

	Autonomy	Self-Reliance	Identity	Work Orientation
<u>BDI</u>				
Time 1	-.4848 (1055) p<.0005	-.3521 (1055) p<.0005	-.5408 (1056) p<.0005	-.3281 (1056) p<.0005
Time 2	-.4314 (404) p<.0005	-.3202 (404) p<.0005	-.5008 (404) p<.0005	-.2454 (404) p<.0005
Difference	.0194 (404) p=.697	-.0079 (404) p=.874	.0003 (404) p=.995	.0547 (404) p=.272
<u>SELF-ESTEEM</u>				
Time 1	.5896 (1055) p<.0005	.4976 (1055) p<.0005	.6200 (1056) p<.0005	.3747 (1056) p<.0005
Time 2	.5789 (402) p<.0005	.4741 (402) p<.0005	.6083 (402) p<.0005	.3624 (402) p<.0005
Difference	-.0293 (402) p=.559	-.0294 (402) p=.557	-.0106 (402) p=.833	-.0357 (402) p=.476
<u>PERCEIVED STRESS</u>				
Time 1	-.5040 (1055) p<.0005	-.4022 (1055) p<.0005	-.5028 (1055) p<.0005	-.3718 (1055) p<.0005
Time 2	-.4446 (405) p<.0005	-.3408 (405) p<.0005	-.4446 (405) p<.0005	-.3213 (405) p<.0005
Difference	.1270 (405) p=.011	.0556 (405) p=.264	.1328 (405) p=.008	.1226 (405) p=.014

Table 16
Intercorrelations Between Emotional Well-Being and Parenting Style

	MRIAN	MTIVE	MPERM	FRIAN	FTIVE	FPERM
<u>BDI</u>						
Time 1	.2479 (1048) p<.0005	-.2339 (1048) p<.0005	-.0581 (1048) p=.060	.2322 (987) p<.0005	-.2301 (987) p<.0005	-.0711 (987) p=.025
Time 2	.1750 (398) p<.0005	-.1732 (398) p=.001	-.0315 (398) p=.531	.1993 (378) p<.0005	-.1900 (379) p<.0005	-.0744 (377) p=.149
Diff.	.0438 (398) p=.383	-.0624 (398) p=.214	.0102 (398) p=.839	.0364 (378) p=.480	-.0272 (379) p=.598	.0106 (377) p=.837
<u>SELF-ESTEEM</u>						
Time 1	-.1479 (1048) p<.0005	.2407 (1048) p<.0005	.0012 (1048) p=.969	-.1161 (987) p<.0005	.1783 (987) p<.0005	-.0059 (987) p=.852
Time 2	-.1745 (396) p<.0005	.1813 (396) p<.0005	.0643 (396) p=.201	-.1249 (375) p=.016	.0927 (376) p=.073	.0645 (374) p=.213
Diff.	-.0638 (396) p=.205	.0240 (396) p=.634	.0250 (396) p=.619	.0375 (375) p=.469	-.0512 (376) p=.322	-.0142 (374) p=.785
<u>PERCEIVED STRESS</u>						
Time 1	.2283 (1049) p<.0005	-.2698 (1049) p<.0005	-.0438 (1049) p=.156	.1904 (988) p<.0005	-.2212 (988) p<.0005	-.0452 (988) p=.155
Time 2	.1914 (399) p<.0005	-.2407 (399) p<.0005	-.0682 (399) p=.174	.2015 (378) p<.0005	-.1695 (379) p=.001	-.0811 (377) p=.116
Diff.	.0113 (399) p=.822	-.0569 (399) p=.257	.0028 (399) p=.956	-.0041 (378) p=.937	.0230 (379) p=.656	.0298 (377) p=.564

with one exception, not significant. Although emotional variables' correlations are in the expected direction, they remain quite minimal. Perhaps one could say that there is a small, positive relationship between BDI scores, PSS scores and both mother and father authoritarianism, and a small positive relationship between Self-esteem scores and mother authoritativeness. The correlation between Self-esteem scores and father authoritativeness was trivial.

As shown in Table 17, there were no significant correlations that met the cutoff criterion of .30 in examining the relationship between Autonomy and Parenting Style. Still, authoritativeness by both parents demonstrated the strongest relationships, notably with overall autonomy and identity.

Table 18 demonstrates the intercorrelations within the SACQ itself and its subscales. Just as with the Autonomy scale, although the strongest correlations were between the overall SACQ and the subscales, this is confounded by the fact that each individual subscale accounts for a portion of the total scale. Nevertheless, the strong relationships provide an indication of how the four subscales contribute to formulate a unified construct. Also, there were moderate correlations among the four subscales themselves, thereby affording each variable its own unique contribution. Caution must be taken in regard to interpreting the correlations between the 15-item goal/institutional attachment subscale and the

20-item social adjustment subscale ($r [407] = .7781, p < .0005$) given that there are eight overlapping items between the two. Nevertheless, analysis revealed that the correlation between the two is significantly lower than the theoretical upper limits ($z[407] = 4.72, p < .0005$).

To summarize thus far, from a cursory examination of the correlational analysis, there appears to be some significant relationships between some of the Relationship with Parents variables and SACQ scores, including POPRS, SPS-P, and perhaps Discussion with Parents. The Emotional Well-Being category demonstrates a solid relationship between BDI, Self-esteem, and PSS on one hand and SACQ scores on the other, with BDI and PSS correlating negatively, and Self-esteem possessing a positive relationship with SACQ scores. In regard to adjustment over time, the change over time scores may also be related. The variables of Self-reliance, Identity, and Work Orientation have positive correlations with all SACQ scores. Finally, Parenting Style does not appear to be strongly related to SACQ scores, especially in regard to permissiveness.

In assessing the relationships between the predictor variables themselves, since no correlations exceeded (or even approached) .90, it can be concluded that multicollinearity is not an issue and there is no redundancy between variables (Tabachnick & Fidell, 1996). Given that, in general, there were strong

correlations between Parenting Style and some of the other predictor variables (i.e., mother and father authoritativeness with POPRS), this may indicate its role as a variable that is mediated by other variables. This indirect role will be explored.

Finally, moderate correlations among SACQ scales indicates the relatedness among the various subscales, yet emphasizes their mutual distinctness.

Table 17
Intercorrelations Between Autonomy and Parenting Style

	MRIAN	MTIVE	MPERM	FRIAN	FTIVE	FPERM
Autonomy	-.1968 (1045) p<.0005	.2713 (1044) p<.0005	-.0525 (1043) p=.090	-.1441 (985) p<.0005	.2186 (985) p<.0005	-.0569 (985) p=.074
Self- Reliance	-.1588 (1045) p<.0005	.1992 (1044) p<.0005	-.1076 (1043) p=.264	-.0834 (985) p=.009	.1356 (985) p<.0005	-.1138 (985) p<.0005
Identity	-.1721 (1045) p<.0005	.2737 (1044) p<.0005	-.0282 (1043) p=.363	-.1587 (985) p<.0005	.2566 (985) p<.0005	-.0124 (985) p=.698
Work Orientation	-.1707 (1045) p<.0005	.2135 (1044) p<.0005	-.0038 (1043) p=.903	-.1199 (985) p<.0005	.1548 (985) p<.0005	-.0270 (985) p=.397

Table 18
Intercorrelations within the Student's Adjustment to College Questionnaire (SACQ) and its Subscales (n=407)

	SACQ	ACAD	SOCIAL	EMOT	GOAL
SACQ	1.0000	.8387*	.7461*	.7509*	.7689*
ACAD		1.0000	.4039*	.5302*	.5161*
SOCIAL			1.0000	.3681*	.7781*
EMOT				1.0000	.3410*

SACQ = Overall Score

ACAD = Academic Subscale

SOCIAL = Social Subscale

EMOT = Personal/Emotional Subscale

GOAL = Attachment to Institution/Goal Commitment Subscale

* p<.0005

Multiple Regression Analyses

As stated earlier, adjustment to university was assessed by the overall score on the SACQ, and the scores obtained on each of the four subscales of adaptation: academic, social, personal/emotional, and attachment to institution/goal commitment. Since the subscales combine to form the overall SACQ, they obviously cannot be included as predictors for the overall model. Also, as demonstrated from the correlations among the subscales, these are clearly distinct constructs from each other. Therefore, separate models were developed for each subscale as well as for the overall SACQ.

The following regression models, of course, reflect the strength of the relationships between the predictor and criterion variables. As for the models themselves, the underlying basis for specific inclusions and exclusions of variables reflects the opinion of Kerlinger (1973) who explains that one of the objectives of regression analyses is to achieve the greatest parsimony (i.e., the fewest variables) while maintaining the highest possible amount of explained, statistically significant variance. Another advantage in having fewer variables in the model is that this reduces the degrees of freedom, which in turn increases the size of the F-ratio used to determine the appropriateness of the model.

Assumptions concerning the data were investigated prior to formulating

models of regression. In consultation with the Statistical Consulting Service of the Institute for Social Research of York University, the following procedure was performed: First, it was determined that the data be examined to assess their normal distribution. While this is desirable for predictor variables, it is crucial for the outcome variables. Two criteria for establishing that normal distribution has been achieved were used:

- a) Skewness of the distribution preferably should be between +1.00 and -1.00, although a range of +2.00 to -2.00 can be considered acceptable.
- b) The Lilliefors modification of the Kolmogorov-Smirnov test. As advised, although a non-significant result is desired, normal distribution can be assumed if any nonzero digits within the four decimal places reported by SPSS are produced in the results. The findings for both predictor and outcome variables for these two criteria can be found in Table 19. As can be observed from this Table, both criteria were met for all outcome and predictor variables. Although the value of the skewness was greater than one for the variables of BDI (both Fall and Winter) and independence from parents, they were within the acceptable cutoff range. Therefore, it appears as though the data are well-suited for regression analysis. The plots for the distributions of the variables were visually inspected and appeared normal.

Table 19

Indications of Normal Distribution for Outcome Variables and Predictor Variables

OUTCOME	Skewness	K-S Lilliefors
SACQ	-.0569	.0337
SACQ - Academic	.2814	.0628
SACQ - Social	-.1525	.0229
SACQ - Personal/Emotional	-.1648	.0358
SACQ - Goal/Institutional	-.5491	.0625
PREDICTOR		
BDI - Fall	1.3811	.1290
BDI - Winter	1.3104	.1197
BDI - Difference	.3246	.0775
Self-Esteem - Fall	-.5502	.0791
Self-Esteem - Winter	-.4191	.0645
Self-Esteem - Difference	-.0707	.0616
PSS - Fall	.0763	.0312
PSS - Winter	.2174	.0411
PSS - Difference	-.0123	.0609
POPRS	-.1584	.0314
PAQ - Father		
Authoritarian	.0866	.0568
Authoritative	-.2450	.0350
Permissive	-.0361	.0441
PAQ - Mother		
Authoritarian	.2365	.0656
Authoritative	-.2648	.0460
Permissive	.0956	.0531
Integrative Complexity	-.6424	.0906
Speaking with Parents	.1823	.0814
SPS (Parental Support)	-.8540	.0757
Independence	-1.4368	.1311
Autonomy	-.3913	.0455
- Self-Reliance	-.4781	.0553
- Identity	-.5461	.0667
- Work Orientation	-.3899	.0431

The second assumption that must be met is that the predictor variables share a linear relationship with the outcome variables. While to a degree this can be observed by examining the correlation coefficients between the predictor and outcome variables, it was advised to plot these data in order to be able to identify visually any other trends that may be present. In doing so, no other trends in the data (e.g., quadratic) appear to be present.

It was also necessary to examine whether certain demographic variables which could logically impact on the outcome contributed to the proposed models and to take them into consideration. One-way ANOVAs were conducted for living circumstances (i.e., living at home, in residence, or other), parental marital status, immigrant generational status - Canadian (IGS-C), mother's and father's education (i.e., post high school education), and family finances. The analyses revealed that for each of these variables, there were no significant differences between groups on any SACQ scales, with one exception. As revealed by the Tukey - HSD post hoc test, students living in residence ($M=113.59$, $SD=23.48$) scored significantly higher on the social adjustment measure ($F [2, 396] = 10.90$, $p<.0005$) than either those living at home ($M=102.03$, $SD=21.95$) or under other circumstances ($M=93.00$, $SD=23.20$). Therefore, this variable was included in the analysis for social adjustment.

Another variable that theoretically could have had impact in predicting adjustment was past academic achievement, as assessed by the Ontario Academic Credit (OAC) average. Upon analysis, no significant correlation was found between OAC average and any of the SACQ scales. Therefore, it was not included in any further SACQ analyses.

T-tests established that gender contributes differentially to the overall SACQ and to the personal/emotional subscale, with males demonstrating greater adjustment. For the overall SACQ males ($M=396.15$, $SD=61.42$) scored significantly higher than females ($M=378.57$, $SD=65.81$), $t(405)=2.47$, $p=.014$. For the personal/emotional subscale of the SACQ, males ($M=91.83$, $SD=17.95$) also scored significantly higher than females ($M=79.75$, $SD=22.26$), $t(256.95)=5.70$, $p<.0005$. Therefore, in consultation with the Statistical Consulting Service, it was decided to run separate analyses by gender for these two variables, thereby eliminating the necessity of investigating interactions based on gender for the overall SACQ and its emotional subscale.

Although there were not gender main effects on the outcome variables, in building the other models, it remained necessary to examine the possibility of interactions between predictor variables and gender. To accomplish this, the scatter plots correlating the predictor variables with the academic, social, and

goal/institution subscales of the SACQ were examined. Interaction was determined by the intersection of the separate regression lines for males and females. There was indication of some degree of interaction in all three outcome variables. In each instance where this occurred, a dummy variable was constructed and incorporated (together with the main effect variables) in the regression analysis.

Again in consultation with the Statistical Consulting Service, it was decided to formulate regression models using a modified block entry method rather than a stepwise procedure. This was done for two reasons. First, considering the large number of predictor variables, this method allowed for the construction of the simplest models based on bivariate relationships, B coefficient significance levels, and changes in R-square (explained variance). The actual method can be described as sequential regression by category. The same categories for predictor variables as outlined earlier (i.e., Relationship with Parents, Emotional Well-Being, Autonomy, and Parenting Style) were employed. Initially, all variables within each category were included to determine the greatest amount of explained variance with the fewest variables. The best predictors in each category were then combined to form a single, unified model. A stepwise procedure, on the other hand, utilizes a predetermined level of

significance alone as the criterion for inclusion and is not flexible in this regard.

Second, stepwise regression is inappropriate when interactions are involved. While, in interpreting variables between which there are interactions, one only interprets the actual interaction rather than the main effects, in considering the total explained variance, the contributions of the main effects are included as well. In stepwise entry, since the only criterion for inclusion is statistical significance, it is possible (and actually likely) that the actual main effects could be excluded from the model and only the interaction included. This would cause an error in the explained variance due to underestimating the effects of these specific interaction variables.

Seven models ranging from five to eleven variables were developed based on the above criteria. As will be shown, each of these models demonstrated very respectable amounts of explained variance, ranging from $R^2 = .31$ to $R^2 = .67$. Also, for each of the models, residuals were examined and found to be normally distributed and, based on the R^2 values, not correlated with predicted values. The models are presented as follows: Overall SACQ (separate models for males and females), academic adjustment, social adjustment, personal/emotional adjustment (separate models for males and females), and attachment to university/goal commitment. In addition to describing the overall appropriateness of the model

and the explained variance of the total model (R^2), the unique contribution for each of the variables will be described. This will be accomplished by squaring the part correlation coefficient. This coefficient is "the correlation between Y and X_i when the linear effects of the other independent variables have been removed from X_i " (Norusis, 1988, p. 168). Of course, since these figures will represent the contribution of the particular variables *independent* from the other variables, their sum will necessarily be less than the total explained variance for the entire model.

In models where interaction effects (with gender) are present, the main effect and the gender effect are incorporated as well as the interaction variable. This is done regardless of whether the main effects are significant or not. As stated previously, this will only occur when gender is not a significant predictor variable on the outcome variable, which would necessitate separate models for gender (i.e., overall SACQ and personal/emotional). By including the main effect, the gender effect, and the interaction effect, it is possible to ascertain the appropriate amount of variance that is explained by these variables.

It should further be noted that regarding the interpretation of explained variance of models, Keppel (1991) outlines the following guidelines. Findings which explain 1% of the variance can be considered small, while explained variances of 15% are deemed large. Variables that can explain 6% of the

variance are within the medium range make a quite meaningful contribution. In addition to reporting the overall explained variance in each model, the contribution of each of the variables is also presented. It should be recognized that although the total of these values will be less than that of the total explained variance, it is the *unique* contribution of each variable *independent* of the others that is being identified. This in no way detracts from the explanation provided by the total model.

Overall SACQ - Males

A five-variable model which was significant was constructed ($F [5, 99]=25.12, p<.0005$). The explained variance for this model was almost 56%. The largest single variable in this model was the change in stress from Time 1 to Time 2, and this reflects an increase in stress across time and a constraint on adjustment ($R^2=.0679$). This was followed by the negative effects of initial stress in the Autumn term ($R^2=.0543$), an increased sense of identity ($R^2=.0443$), the negative effects of an increase in depressive symptomatology over time ($R^2=.0288$), and the positive contribution of increased POPRS scores ($R^2=.0176$). The nonstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 20.

Overall SACQ - Females

A six-variable model which was significant was constructed ($F [6, 274]=78.10, p<.0005$). The explained variance for this model was approximately 63%. The largest single variable in this model was the change in depressive symptomatology from Time 1 to Time 2, and this represents an increase across time which impedes adjustment ($R^2=.0496$). This was followed by the negative effects of all of the following; initial depressive symptomatology in the Autumn term ($R^2=.0429$), initial stress in the Autumn term ($R^2=.0345$), and change in stress from Time 1 to Time 2, which also reflects an increase in stress across time ($R^2=.0213$). This was followed by the positive effects of self-esteem in the Winter term ($R^2=.0122$), and a slight contribution from the degree of discussion of issues with parents ($R^2=.0100$). It should be noted that three of the variables overlap with the overall SACQ model for the male subjects, namely initial stress and the change over time in both stress and depressive symptomatology. The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 21.

Academic Adjustment

The next analysis examined academic adjustment as the outcome variable.

A model that incorporated eleven variables was constructed and found to be significant ($F(11, 367) = 24.29, p < .0005$). Even though eleven variables were incorporated into the model, four were included only in order to properly determine the effect of those variables which had interactions. Therefore, only seven actual predictor variables are discussed. The explained variance for this model was approximately 42%. The largest single variable in this model was the change in stress from Time 1 to Time 2, and this reflects an increase in stress across time and, therefore, impedes academic adjustment. As a variable in which there was an interaction, the procedure explained above was used to calculate explained variance ($R^2 = .0358$). The results indicated that if male subjects experience a decline in their perceived stress from Time 1 to Time 2, they tended to experience better academic adjustment than female subjects (see Figure 4). If, however, the perception of stress increased over this time period, they tended to undergo a poorer academic adjustment than the female subjects. The next largest variable was the positive contribution of work orientation ($R^2 = .0297$), followed by the change in depressive symptomatology from Time 1 to Time 2, representing an increase across time ($R^2 = .0296$) and a constraint on adjustment. This was followed by the negative effects of initial stress experienced in the Autumn term ($R^2 = .0274$). It must be emphasized that this is distinct from the change in stress

across time. There was no interaction with gender and, therefore, an initial elevation in perceived stress negatively affects both male and female subjects. Initial self-esteem was also subject to an interaction with gender. It was found that females with a lower initial self-esteem are less likely to perceive themselves as academically adjusted than their male counterparts. If, however, their initial self-esteem is higher, females are more likely to perceive academic adjustment in themselves ($R^2=.0198$) (see Figure 5). There was also an interaction with gender for the next variable, mutual reciprocity (POPRS). Conversely, however, it was found that males who experience lower reciprocity in their relationships with their parents were less likely than females to perceive their having adjusted academically. If, however, males perceive a greater degree of reciprocity, they are more likely than females to perceive academic adjustment ($R^2=.0190$) (see Figure 6). The final variable contributing to the model was initial depressive symptomatology in the Autumn term ($R^2=.0123\%$). The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 22.

Table 20
Summary of Regression Analysis for Variables Predicting Overall Adjustment to University (Males: N=105)

Variable	B	SE B	β
POPRS	.3148	.1585	.1521 *
Identity	3.4956	1.1088	.2893 **
BDI-Difference	-2.0457	.8040	-.1885 *
Stress	-2.5835	.7399	-.3191 ***
Stress-Difference	-3.2341	.8281	-.3271 ***

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

Note. $R^2 = .55918$
 Test of Significance for R^2 : $F(5, 99) = 25.11663, p < .0005$

Table 21
Summary of Regression Analysis for Variables Predicting Overall Adjustment to University (Females: N=281)

Variable	B	SE B	β
Discussion with Parents	1.4469	.5707	.0952 *
BDI	-3.3385	.5914	-.3386 ****
BDI-Difference	-3.6164	.5961	-.3067 ****
Esteem-Winter	1.8647	.6205	.1535 **
Stress	-2.7251	.5383	-.3368 ****
Stress-Difference	-2.0424	.5132	-.2158 ***

* $p < .05$
 ** $p < .01$
 *** $p < .001$
 **** $p < .0005$

Note. $R^2 = .63102$
 Test of Significance for R^2 : $F(6,274) = 78.09875, p < .0005$

Table 22
Summary of Regression Analysis for Variables Predicting Academic Adjustment to University (N=379)

Variable	B	SE B	β
Work	1.0774	.2484	.1995 ****
BDI	-.7241	.2592	-.1732 **
BDI-Difference	-1.0507	.2425	-.2228 ****
Stress	-.9535	.2288	-.2917 ****
Gender	-27.8139	16.8633	-.4791 n.s.
POPRS	.1363	.0624	.1740 *
POPRS X Sex	-.1385	.0647	-.3457 *
Esteem	-.8839	.4877	-.1721 n.s.
Esteem X Sex	1.3335	.5210	.7722 **
Stress-Difference	-1.6622	.3494	-.4341 ****
Stress-Diff X Sex	.7110	.3668	.1655 *

* $p < .05$

** $p < .01$

**** $p < .0005$

Note. $R^2 = .42131$

Test of Significance for R^2 : $F(11,367) = 24.28967, p < .0005$

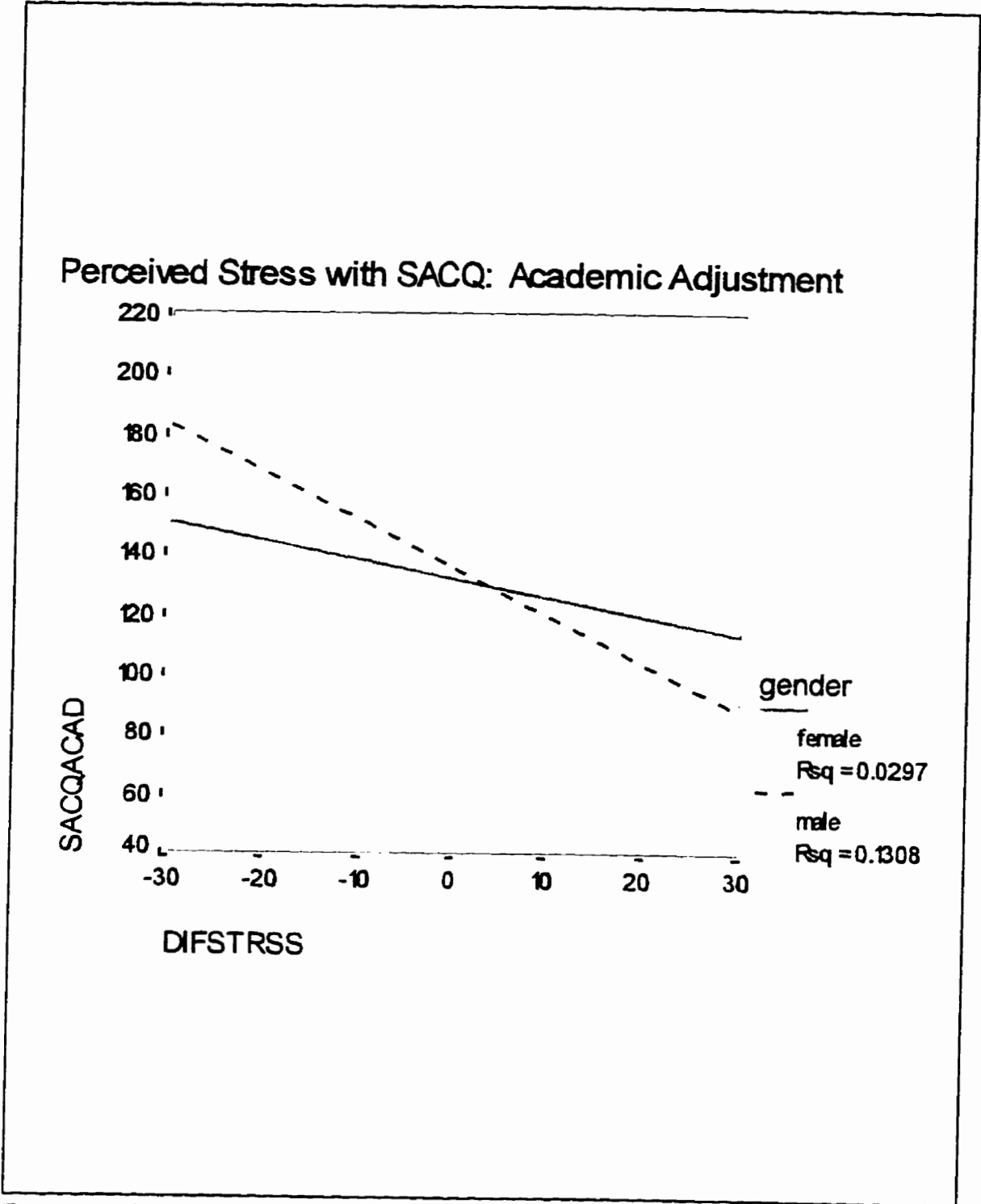


Figure 4: The Interaction of Gender in the Relationship between Change in Stress from Time 1 to Time 2 and Academic Adjustment.

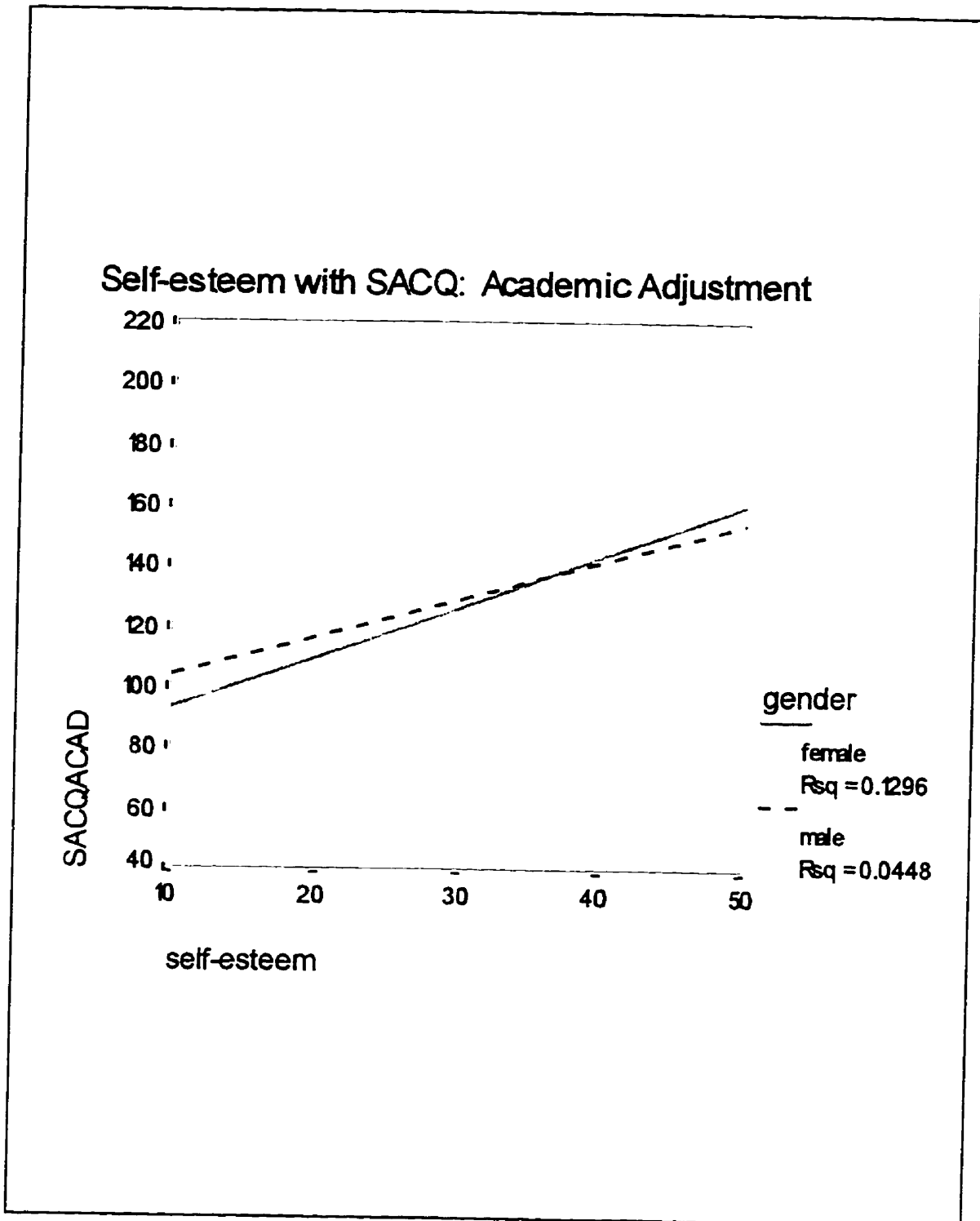


Figure 5: The Interaction of Gender in the Relationship between Self-esteem and Academic Adjustment.

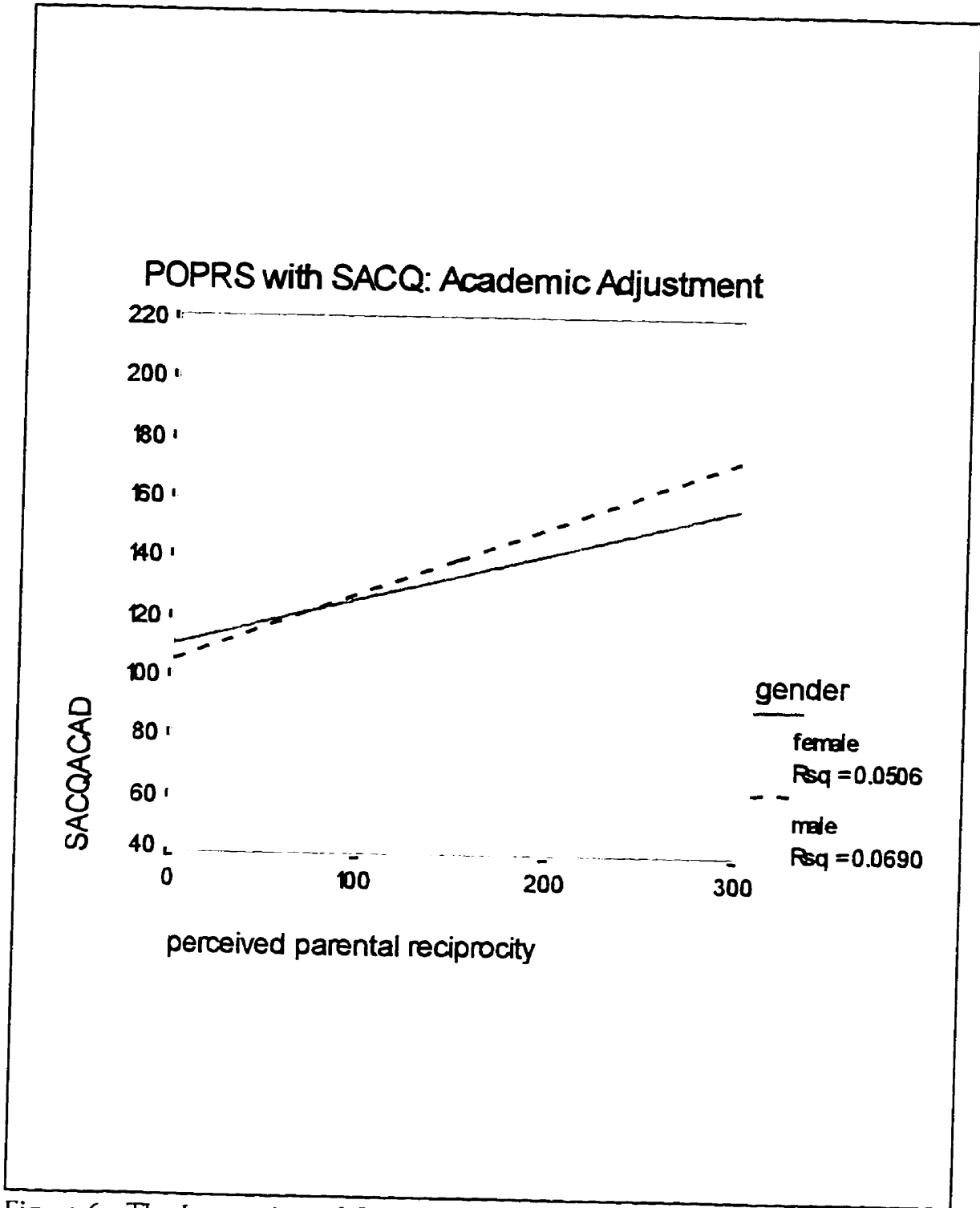


Figure 6: The Interaction of Gender in the Relationship between POPRS and Academic Adjustment.

Social Adjustment

The next analysis examined social adjustment as the outcome variable. A model that incorporated eleven variables and was significant was constructed ($F(11, 361)=15.79, p<.0005$). Even though eleven variables were incorporated into the model, three were included only in order to properly determine the effect of those variables which had interactions. Therefore, only eight actual predictor variables are discussed. The explained variance for this model was approximately 33%. The largest single variable in this model was the negative effects of initial depressive symptomatology in the Autumn term ($R^2=.0344$). The next two variables were two parenting style scales, mother permissiveness ($R^2=.0336$) and mother authoritarianism ($R^2=.0270$). Both variables involved interaction with gender. Although mother authoritarianism followed a general trend (the greater the authoritarianism, the less the social adjustment), the same interaction was reflected in both. For females, the less permissive or authoritarian they perceived their mothers, the less social adjustment they experienced. For males, subjects who perceived their mothers as less permissive or authoritarian experienced more social adjustment than females. However, the more permissive or authoritarian female students perceived their mothers to have been, the more social adjustment they reported, while for males, this was associated with poorer social adjustment

than the females (see Figures 7 and 8). This finding requires some explanation which will be furnished in subsequent discussion. These were followed by the change in depressive symptomatology from Time 1 to Time 2, once again representing an increase across time ($R^2=.0224$) and a constraint on adjustment, the positive contribution of an increase in self-esteem from Time 1 to Time 2 ($R^2=.0194$), and the positive effects of an authoritative paternal parenting style ($R^2=.0163$), an increased sense of identity ($R^2=.0160$), and self-reliance ($R^2=.0127$). It should also be noted that while in the previous analysis on living circumstances which showed that students living in residence scored higher on social adjustment than either those students living at home or under other circumstances, this variable did not significantly contribute to the overall model of social adjustment. The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 23.

Table 23
Summary of Regression Analysis for Variables Predicting Social Adjustment to University (N=373)

Variable	B	SE B	β
Identity	.8040	.2745	.1850 **
Self-reliance	.7760	.2977	.1446 **
FTIVE	.3999	.1354	.1354 **
BDI	-.8775	.2046	-.2414 ****
BDI-Difference	-.6879	.1988	-.1693 ***
Esteem-Difference	.9139	.2834	.1532 **
Gender	-57.5216	20.4309	-1.1258 **
MRIAN	-.4474	.3347	-.1478 n.s.
MRIAN X Sex	.8399	.3773	.5345 *
MPERM	-.7870	.4369	-.1929 n.s.
MPERM X Sex	1.3084	.5013	.6652 **

* $p < .05$
 ** $p < .01$
 *** $p < .001$
 **** $p < .0005$

FTIVE = Authoritative - Father
 MRIAN = Authoritarian - Mother
 MPERM = Permissive - Mother

Note. $R^2 = .32485$
 Test of Significance for R^2 : $F(11,361) = 15.79077, p < .0005$

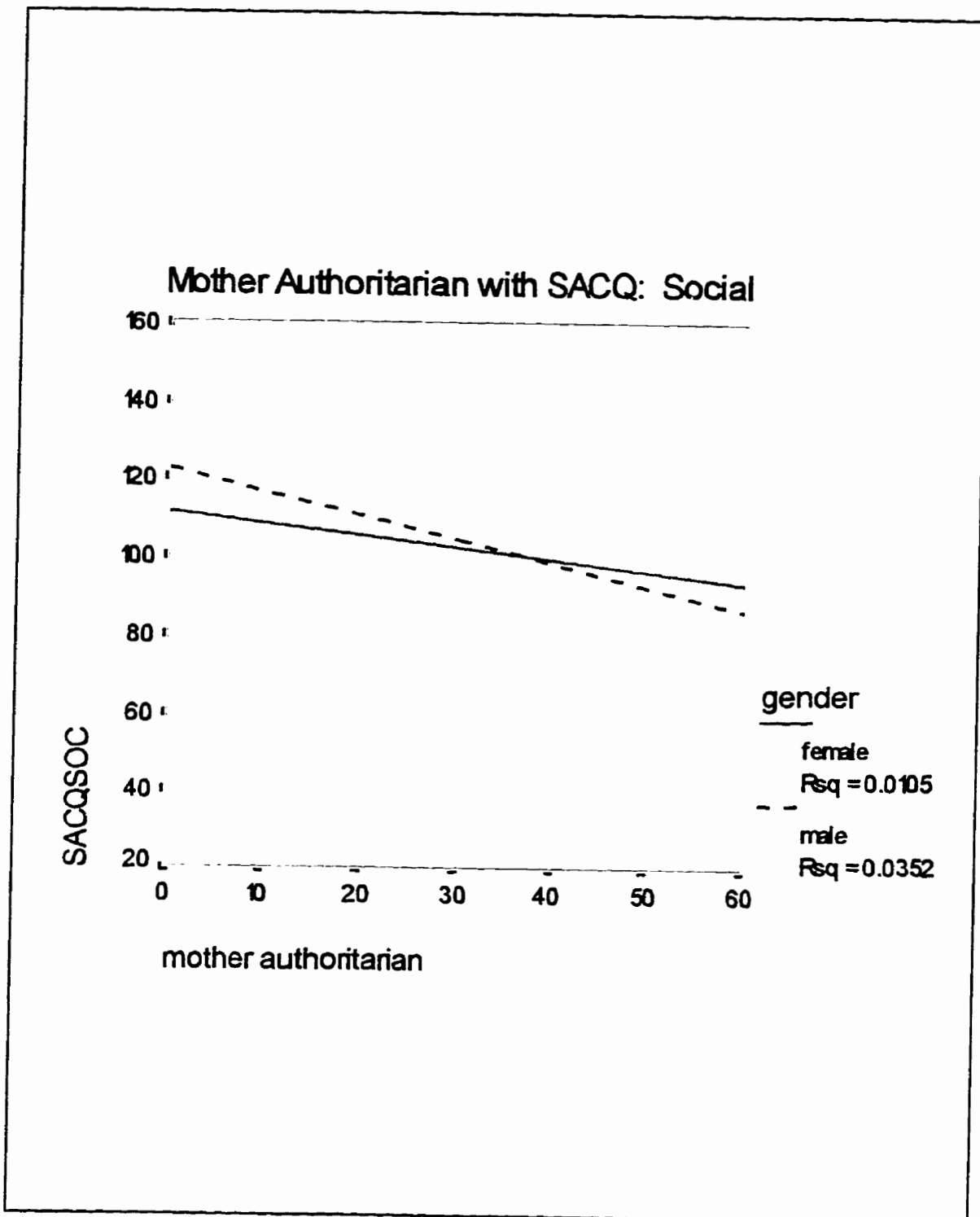


Figure 7: The Interaction of Gender in the Relationship between Maternal Authoritarianism and Social Adjustment.

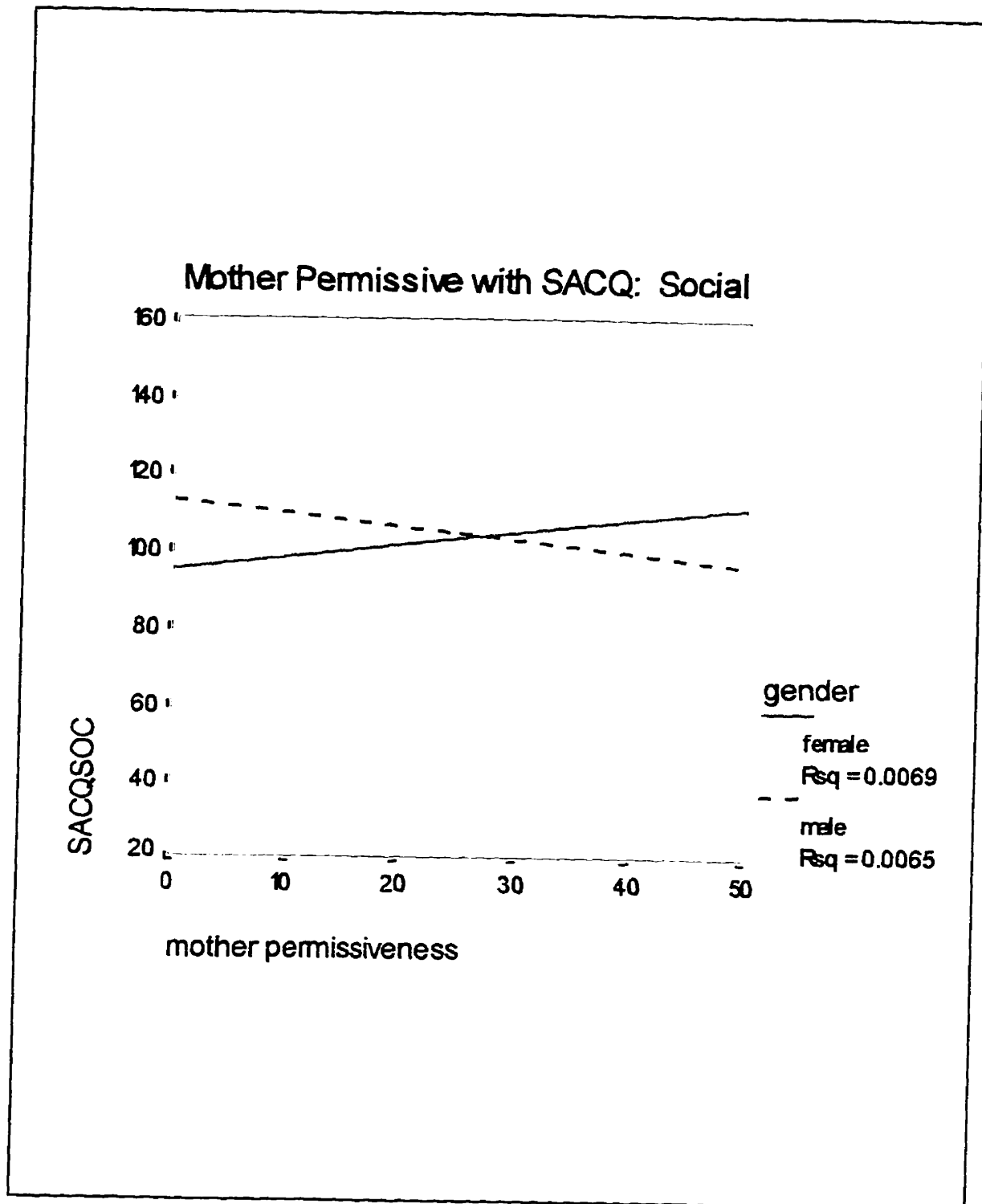


Figure 8: The Interaction of Gender in the Relationship between Maternal Permissiveness and Social Adjustment.

Personal/Emotional Adjustment - Males

The next analysis examined personal/emotional adjustment for male subjects as the outcome variable. A five-variable model which was significant was constructed ($F [5, 107]=42.53, p<.0005$). The explained variance for this model was almost 67%. The largest single variable effect in this model was the degree of initial stress felt during the Autumn term ($R^2 = .01808$), constraining adjustment. This was followed by the negative effects of the change in stress from Time 1 to Time 2, reflecting an increase in stress across time ($R^2 = .0106$), the positive contribution of an increased sense of identity ($R^2 = .0328$), the negative contribution by the increase in depressive symptomatology over time ($R^2 = .0244$), and enabled independence ($R^2 = .0225$). The inclusion of the last variable is important because its contribution is in the opposite direction from what would have been predicted. In this context, it seems that the greater amount of independence attained, the less one adjusts to university from a personal/emotional perspective. This finding warrants further discussion. The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 24.

Personal/Emotional Adjustment - Females

The next analysis examined personal/emotional adjustment for females as the outcome variable. A five-variable model which was significant was constructed ($F [5, 275]=106.53, p<.0005$). The explained variance for this model was almost 66%. Four variables in the "Emotional Well-Being" category provided almost all the explained variance. Given that the outcome variable is personal/emotional adjustment to university, this is quite understandable. Nevertheless, specific areas of emotions are identified that support/detract from this adjustment. The largest single variable in this model was the increase in depressive symptomatology from Time 1 to Time 2 ($R^2 = .0728$), followed by initial perceived stress in the Autumn term ($R^2 = .0723$), the initial depressive symptomatology in the Autumn term ($R^2 = .0580$), and the increase in stress from Time 1 to Time 2 ($R^2 = .0450$). The presence of these four variables was associated with diminished personal/emotional adjustment. There was also a very small, yet significant contribution from integrative complexity. Most interesting, however, was that it was negatively related to personal/emotional adjustment. In other words, emotional adjustment diminished for female students with increased complexity in their thinking. This finding warrants discussion as well. The unstandardized regression coefficients (B), standard errors (SE B), the

standardized regression coefficients (β), and the significance levels can be found in Table 25.

Attachment to University/Goal Commitment

The next analysis examined attachment to university/goal commitment as the outcome variable. A model that incorporated nine variables and was significant was constructed ($F [9, 353]=17.49, p<.0005$). Even though nine variables were incorporated into the model, two were included only to properly determine the effect of a variable for which there was an interaction with gender. Therefore, only seven actual predictor variables are discussed. The explained variance for this model was approximately 31%. The largest single variable in this model was initial depressive symptomatology during the Autumn term ($R^2 = .0982$), thus constraining adjustment. There was an interaction effect of gender with the next variable, mutual reciprocity (POPRS) ($R^2 = .0334$). Results showed a general upward trend in attachment to university/goal commitment as mutual reciprocity increased. Males, however, tended to experience lower scores than females on the outcome variable if they scored lower in mutual reciprocity. As the POPRS scores increased, however, male subjects tended to score higher on attachment to university/goal commitment than did female subjects (see Figure 9). These two variables were followed by the negative contribution of an increase

in depressive symptomatology from Time 1 to Time 2 ($R^2 = .0288$), the positive contribution of self-reliance ($R^2 = .0204$), and positive adjustment due to an increase in self-esteem from Time 1 to Time 2 ($R^2 = .0174$), an (unpredicted) increase in the degree of maternal authoritarian parenting style ($R^2 = .0172$), and increase in discussion with parents on university issues ($R^2 = .0123$). The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels can be found in Table 26.

To summarize, seven models were developed to account for various aspects of adjustment to university: 1) overall SACQ for males 2) overall SACQ for females 3) academic adjustment 4) social adjustment 5) personal/emotional for males 6) personal/emotional for females 7) attachment to university/goal commitment. Using accepted practice of model construction, parsimony was combined with achieving explained variance to produce statistically significant models of between five and eleven variables (interaction variables included), with very respectable explained variances ranging from 31% to 67%.

While other variables made significant contributions to the models, the category of "Emotional Well-Being" was the most consistent factor. It should be noted that for each of the models, variables involving BDI scores (depressive

symptomatology) or PSS scores (perceived stress) were negatively related to each of the adjustment measures, and self-esteem scores were positively related. This means that as BDI scores and PSS scores declined, and self-esteem scores increased, there was greater adjustment to university. The most common variable was change in BDI scores from Time 1 to Time 2. This variable was present in each model. The variable of initial BDI scores in the Autumn term was present in all the models with the exception of overall SACQ for males and the personal/emotional adjustment scale for males. Initial stress in the Autumn term and change in stress across Time 1 and Time 2 were present in all models except for social adjustment and attachment to university/goal commitment. Some aspect of self-esteem was present in the overall SACQ for females (the only Winter variable in the entire study to be included), academic adjustment, social adjustment, and attachment to university/goal commitment. Clearly, it can be concluded that emotional factors are involved in the socio/emotional adaptation to university.

At least one "Autonomy" variable was present in each of the models except for overall SACQ for females and personal/emotional adjustment for females. Of the "Relationship with Parents" category, POPRS made the most significant contribution and was incorporated into the overall SACQ for males, academic

adjustment, and attachment to university/goal commitment.

As will be discussed, parenting style variables made direct contributions to the social adjustment scale and the area of attachment to university/goal commitment. Since this is a measure that taps into retrospective feelings that reflect one's attitudes to the parenting style used by parents in the past, it is possible that this style should have had impact on the current relationship with parents as well. In this way, the parenting style variables may well have an indirect effect on adjustment mediated by other variables in addition to any current direct effect. Therefore, the mediating role that other variables may provide will now be investigated.

Table 24
Summary of Regression Analysis for Variables Predicting Personal/Emotional Adjustment to University - Males (N=113)

Variable	B	SE B	β
Independence from Parents	-.4979	.1857	-.1530 **
Identity	.8102	.2501	.2295 **
BDI-Difference	-.5624	.2014	-.1743 **
Stress	-1.3925	.1832	-.5805 ****
Stress-Difference	-1.2165	.2090	-.4126 ****

** $p < .01$

**** $p < .0005$

Note. $R^2 = .66527$
 Test of Significance for R^2 : $F(5, 107) = 42.53233, p < .0005$

Table 25
Summary of Regression Analysis for Variables Predicting Personal/Emotional Adjustment to University - Females (N= 281)

Variable	B	SE B	β
Integrative Complexity	-.5760	.2794	-.0728 *
BDI	-1.2088	.1766	-.3670 ****
BDI-Difference	-1.4634	.1908	-.3680 ****
Stress	-1.2464	.1631	-.4538 ****
Stress-Difference	-.9846	.1634	-.3121 ****

* $p < .05$

**** $p < .0005$

Note. $R^2 = .65951$

Test of Significance for R^2 : $F(5,275) = 106.53174, p < .0005$

Table 26

Summary of Regression Analysis for Variables Predicting Goal/Institutional Adjustment to University (N=363)

Variable	B	SE B	β
Discussion with Parents	.5862	.2337	.1333 *
Self-reliance	.7105	.2203	.1602 **
MRIAN	.3705	.1249	.1457 **
BDI	-1.1099	.1568	-.3698 ****
BDI-Difference	-.6566	.1712	-.1919 ***
Esteem-Difference	.7128	.2392	.1445 **
Gender	15.7999	6.5697	.3722 *
POPRS	.1167	.0512	.2054 *
POPRS X Sex	-.1227	.0498	-.4206 *

* $p < .05$
 ** $p < .01$
 *** $p < .001$
 **** $p < .0005$

MRIAN = Authoritarian - Mother

Note. $R^2 = .30844$
 Test of Significance for R^2 : $F(9, 353) = 17.49321, p < .0005$

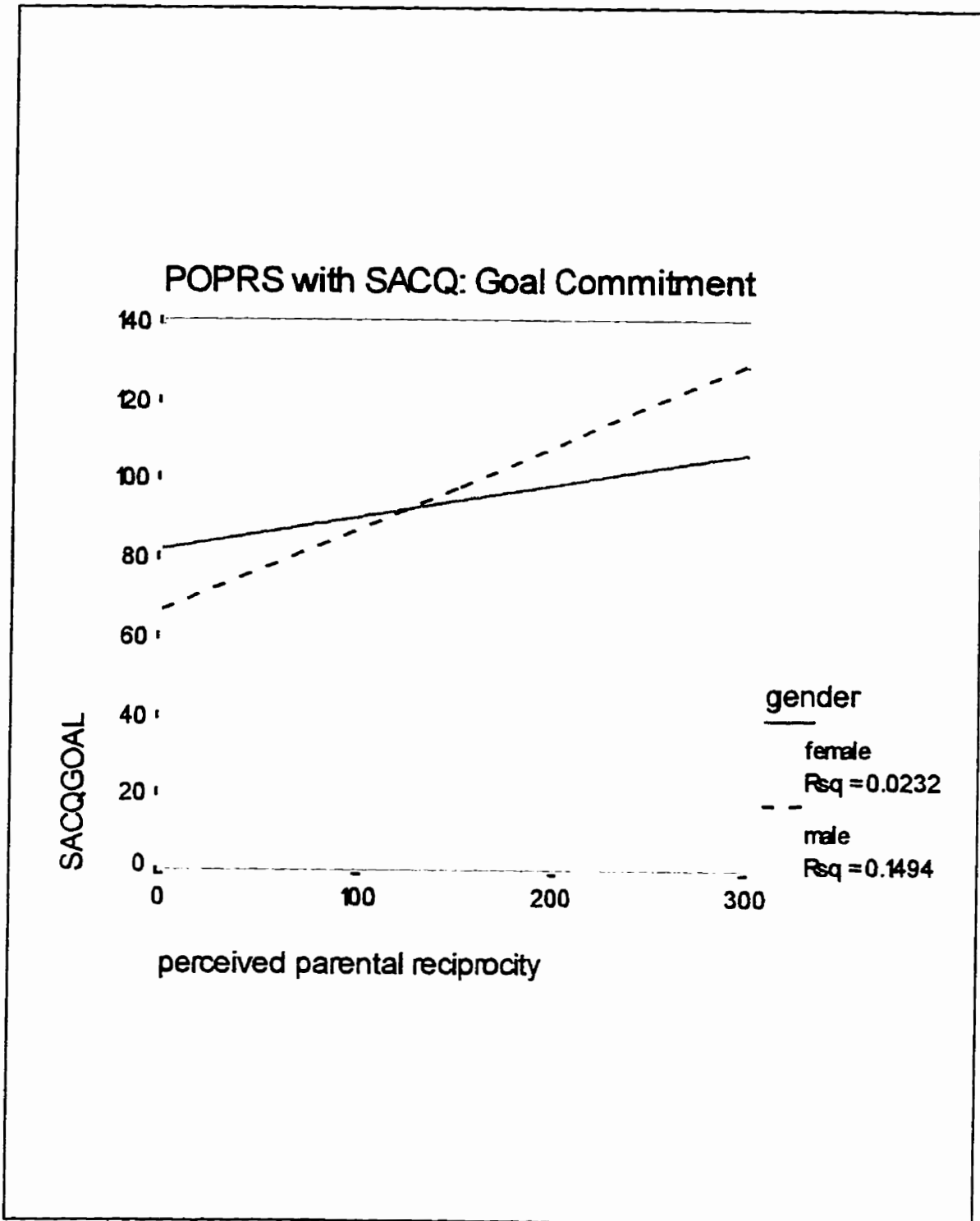


Figure 9: The Interaction of Gender in the Relationship between POPRS and Attachment to University/Goal Commitment.

Indirect Effects of Parenting Style as Mediated by Other Predictor Variables

As stated, it is conceivable that parenting style variables may provide an indirect effect on adjustment as well as any direct effects that may occur. Specifically, it would be predicted that authoritative parenting would facilitate positive aspects in relationships with parents (i.e., mutual reciprocity, parental support), emotional well-being, and a sense of autonomy (as informed by self-reliance, identity, and work orientation). Furthermore, it would be predicted that authoritarianism would have an indirect negative impact on adjustment as mediated by these variables.

Correlations between the various categories and parenting style have been presented earlier. The correlations between Parenting Style and "Relationship with Parents", "Emotional Well-Being", and "Autonomy" can be found in Table 14, Table 16, and Table 17, respectively. A single, forced-entry block regression was conducted in which each of the variables of the "Relationship with Parents", "Emotional Well-Being", and "Autonomy" categories were regressed on the six parenting style scales. Subsequently, regression models were built using the same principles outlined earlier. Although not all original predictor variables have been demonstrated to facilitate adjustment to university and therefore could not mediate indirect effects, these were examined as well in order to further clarify

the role of parenting style on other constructs. For each of the models, residuals were examined, found to be normally distributed and, based on the R^2 values, not correlated with predicted values.

Parenting Style and Relationship with Parents

In discussing parenting style with this category of variables, it should be noted that authoritative parenting style contributed positively and authoritarian parenting style contributed negatively. In regressing POPRS on parenting style, a two-variable model which was significant was constructed ($F [2, 957] = 589.74$, $p < .0005$). Using only the paternal and maternal authoritative scales, it was possible to obtain an explained variance of approximately 55%. Although a slight amount of added variance could have been achieved with the inclusion of the other parenting style variables, clearly it is authoritative that is positively related to reciprocity. Mother authoritative ($R^2 = .1573$) accounted for slightly more variance than father authoritative ($R^2 = .1143$).

In regard to parental support (SPS -P), a three-variable model which was significant was constructed ($F [3, 974] = 245.38$, $p < .0005$). The explained variance for this model was approximately 43%. Again, mother authoritative was the main variable ($R^2 = .1353$), followed by father authoritative ($R^2 = .0347$), while father authoritarianism ($R^2 = .0127$) was negatively related.

In relation to enabling independence, a single-variable, yet significant model was constructed ($F [1, 1047]=32.62, p<.0005$). The explained variance for this was approximately 3%. Again, mother authoritativeness was the salient variable.

Although, as expected, there was no significant relationship with integrative complexity, when regressing degree of Discussion with Parents on parenting style, a two-variable model which was significant was constructed ($F [2, 941]=136.01, p<.0005$). Once again, using only the paternal and maternal authoritativeness scales, it was possible to obtain an explained variance of approximately 22%. Again, mother authoritativeness ($R^2 = .0914$) accounted for more variance than father authoritativeness ($R^2 = .0268$). The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels for Relationship with Parents variables can be found in Table 27.

Parenting Style and Emotional Well-Being

Since this part of the study focusses on the effects of perceived parenting style on current factors, in considering this category, it was deemed appropriate to evaluate emotional well-being at the point of entry to university. Therefore, only initial BDI scores, self-esteem scores, and perceived stress scores are included

in this analysis.

In regressing BDI on parenting style, a two-variable model which was significant was constructed ($F [2, 980]=50.94, p<.0005$). The explained variance obtained through the model was approximately 9%. It appears that the two parenting styles that evoke a significant degree of depressive symptomatology are mother authoritarianism ($R^2 = .0408$) and a lack of authoritativeness with father ($R^2 = .0369$).

In relation to self-esteem, a single-variable, yet significant model was constructed ($F [1, 1046]=64.31, p<.0005$). The explained variance for this was approximately 6%. Again, mother authoritativeness was the significant, positively contributing, variable.

In terms of perceived stress, a two-variable significant model was constructed ($F [2,1045]=48.12, p<.0005$). The explained variance obtained through the model was approximately 8%. A lack of maternal authoritativeness ($R^2 = .0331$) and the presence of maternal authoritarianism ($R^2 = .0118$) appear to be the two parenting style factors which are related to a perception of stress. The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels for the Emotional Well-Being variables can be found in Table 28.

Parenting Style and Autonomy

The three psychosocial maturity variables which reflect an achieved sense of autonomy were tested in separate models. Regressing self-reliance on parenting style variables yielded a three-variable significant model ($F [3,1038]=38.31, p<.0005$). The explained variance obtained through the model was approximately 10%. In an important finding, all three maternal variables (as opposed to the paternal parenting styles) contributed meaningfully to self-reliance. The largest contributor to self-reliance is the lack of maternal permissiveness ($R^2 =.0555$), followed by a lack of maternal authoritarianism ($R^2 =.0294$), and the presence of maternal authoritativeness ($R^2 =.0235$).

Regarding identity, a two-variable significant model was constructed ($F [2, 978]=55.43, p<.0005$). The explained variance obtained through the model was approximately 10%. Both maternal and paternal authoritativeness are most closely linked with the emergence of one's own identity. Maternal authoritativeness ($R^2 =.036$) was a more robust predictor than was paternal authoritativeness ($R^2 =.0159$).

Finally, in terms of work orientation, a single-variable model was constructed ($F [1,1040]=50.72, p<.0005$). The explained variance for this was approximately 5%. Again, mother authoritativeness was the significant, positively

contributing, variable. The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels for the Autonomy variables can be found in Table 29.

To summarize, some variables of parenting style do, in fact, relate directly with almost all of the other variables to some degree. The most commonly identified variable that is associated with positive outcomes is that of maternal authoritativeness. It contributed significantly in every case except in relation to BDI scores (depressive symptomatology). Some effect of authoritativeness was present in every model, and particularly in the area of relationship with parents. It is especially important that the two authoritative variables can account for 55% of the variance in mutual reciprocity. Their association with emotional well-being and autonomy also emphasize the beneficial nature of parental authoritativeness. Furthermore, the fact that authoritarian parenting styles did not appear as reciprocals of authoritative ones is an indication that these two constructs are not mere mirror images of each other, but rather that each one taps into a different construct. The presence of one, however, does not necessarily indicate the absence of the other. Clearly, in addition to the direct relationship that certain parenting style variables have on adjustment to university, parenting style possibly may be mediated indirectly by a number of other predictor variables.

Table 27

Summary of Regression Analysis for Parenting Style Variables Predicting Relationship with Parents

POPRS

Variable	B	SE B	β
MTIVE	2.2580	.1232	.4611 ****
FTIVE	1.7566	.1124	.3931 ****

Note. $R^2 = .55207$
 Test of Significance for R^2 : $F(2, 957) = 589.73899, p < .0005$

SPS - P

MTIVE	.2642	.0174	.4284 ****
FTIVE	.1359	.0176	.2411 ****
FRIAN	-.0678	.0146	-.1312 ****

Note. $R^2 = .43046$
 Test of Significance for R^2 : $F(3, 974) = 245.37989, p < .0005$

Independence

MTIVE	.1409	.0247	.1738 ****
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Note. $R^2 = .03021$
 Test of Significance for R^2 : $F(1, 1047) = 32.61952, p < .0005$

Discussion with Parents

MTIVE	.2190	.0208	.3495 ****
FTIVE	.1076	.0189	.1892 ****

Note. $R^2 = .22425$
 Test of Significance for R^2 : $F(2, 941) = 136.00633, p < .0005$
 **** $p < .0005$

Table 28

Summary of Regression Analysis for Parenting Style Variables Predicting Emotional Well-Being

BDI

Variable	B	SE B	β
MRIAN	.1787	.0269	.2051 ****
FTIVE	-.1618	.0256	-.1950 ****

Note. $R^2 = .09417$
 Test of Significance for R^2 : $F(2, 980) = 50.94299, p < .0005$

Self-esteem

MTIVE	.1761	.0220	.2407 ****
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Note. $R^2 = .05792$
 Test of Significance for R^2 : $F(1, 1046) = 64.30654, p < .0005$

PSS

Variable	B	SE B	β
MTIVE	-.2332	.0379	-.2085 ****
MRIAN	.1333	.0363	.1246 ***

Note. $R^2 = .08433$
 Test of Significance for R^2 : $F(2, 1045) = 48.12207, p < .0005$

*** $p < .001$
 **** $p < .0005$

Table 29
Summary of Regression Analysis for Parenting Style Variables Predicting
Autonomy

Self-reliance

Variable	B	SE B	β
MPERM	-.2263	.0283	-.2792 ****
MRIAN	-.1316	.0226	-.2214 ****
MTIVE	.1091	.0210	.1759 ****

Note. $R^2 = .09969$
Test of Significance for R^2 : $F(3, 1038) = 38.31295, p < .0005$

Identity

MTIVE	.1618	.0258	.2196 ****
FTIVE	.0981	.0236	.1460 ****

Note. $R^2 = .10182$
Test of Significance for R^2 : $F(2, 978) = 55.43406, p < .0005$

Work Orientation

Variable	B	SE B	β
MTIVE	.1426	.0200	.2156 ****

Note. $R^2 = .04650$
Test of Significance for R^2 : $F(1, 1040) = 50.72086, p < .0005$

**** $p < .0005$

Academic Achievement Based on Grade Point Average (GPA)

The exact same procedure that was used in developing the models for student adjustment was used in assessing the contributing factors to academic achievement. In assessing the appropriate intercorrelations with GPA, the previous predictor variables were utilized (including the demographic variables of living circumstances (i.e., living at home, in residence, or other), parental marital status, immigrant generational status - Canadian (IGS-C), mother's and father's education (i.e., post high school education) and family finances). In addition, however, this examination was able to incorporate two other variables, one pre-entry to university, and the other post-entry to university. The first variable, and the one hypothesized as most salient, was students' reported Ontario Academic Credit (OAC) averages. Although this variable was nonsignificant in predicting any form of adjustment to university, it is predicted that this will not be the case when it comes to actual achievement and that OAC averages will significantly be related to GPA. Also, given that the GPA scores were attained at the end of the academic year (Time 3), it was reasoned that the original outcome variables could serve as predictors in this context. Although it was surmised that academic adjustment would provide the greatest prediction for actual academic achievement, other adjustment indices were examined as well.

As before, the overall SACQ could not be used in the same analysis as the subscales since it is comprised of them. Also, all the subscales themselves could not be used simultaneously due to the overlapping items between the social adjustment scale and the attachment to institution/goal commitment scale. Therefore, three separate analysis were run: overall SACQ, a combination of the academic, personal/emotional, and social scales, and a combination of the academic, personal/emotional, and attachment to institution/goal commitment scales. Ultimately, both the social adjustment and the attachment to institution/goal commitment scales were found to be inconsequential, and the academic scale proved to be a better predictor than the overall SACQ. The intercorrelations of all the predictor variables for GPA can be found in Table 30. Again, all correlations are correlations significant at a two-tailed alpha of .05.

In assessing the normal distribution of GPA values, analysis revealed a skewness of -.6291 and a Lilliefors value of .0406. Both of these values meet the criteria for the data to be normally distributed. The plot of these data also appeared normal. In addition, linear relationships could be observed between the predictor variables and GPA.

An analysis of differences due to gender was conducted and not found to be significant. Therefore, a single model was developed. Furthermore, although

scatter plots demonstrated indications of interaction with gender, these variables did not significantly contribute to the model.

A six-variable model which was significant was constructed ($F [6, 328]=35.51, p<.0005$). The explained variance for this model was approximately 39%. The largest single variable in this model was academic adjustment ($R^2=.1632$). It should be noted that since the variables in this study that are related to academic adjustment itself have already been identified, these variables can be considered indirectly related to achieved academic success. These variables (in diminishing contribution) are: increased stress over time (which affected the male students more severely), work orientation, change in depressive symptomatology, initial stress, initial self-esteem (greater initial self-esteem was more beneficial to female students than to males), and mutual reciprocity (greater mutuality was more beneficial to male students than to females). It is of some relevance that initial stress was the only variable that contributed significantly both to academic adjustment and academic achievement. Otherwise, none of these variables plays a direct role in academic achievement.

The next largest contributor to the model was the OAC average ($R^2=.1505$). Although not explaining as much as was originally predicted, it remains an

important variable in this model. Academic adjustment and OAC alone explain 31.37% of the variance, independent of any other variables. The remaining contributors are initial stress ($R^2=.033$), which is positively related to the outcome variable. This is followed by the only demographic variable in the study to have been significantly implicated in any model, maternal education ($R^2=.0175$). Intriguingly, discussion with parents about university issues was negatively related to the outcome ($R^2=.0127$), and maternal authoritarianism was negatively related as well ($R^2=.0085$). The unstandardized regression coefficients (B), standard errors (SE B), the standardized regression coefficients (β), and the significance levels for the Autonomy variables can be found in Table 31.

Finally, once again the residuals were found to be normally distributed. Furthermore, based on the R^2 values, they were not correlated with predicted values.

Table 30
Intercorrelations Between Grade Point Average (GPA) and Predictor Variables

	GPA		GPA
POPRS	.0063 (845) p=.856	Authoritarian-Father	-.0268 (823) p=.443
Parental Support	.0316 (885) p=.347	Authoritative-Father	-.0005 (824) p=.988
Independence	.0189 (892) p=.572	Permissive-Father	.0424 (823) p=.224
Integrative Complexity	.0884 (834) p=.011	Self-reliance	.0451 (879) p=.181
Discussion with Parents	.0214 (855) p=.533	Identity	.0384 (880) p=.255
Authoritarian-Mother	-.0853 (877) p=.012	Work Orientation	.1085 (880) p=.001
Authoritative-Mother	.0265 (877) p=.434	BDI-Fall	-.0897 (891) p=.007
Permissive-Mother	-.0583 (876) p=.084	BDI-Winter	-.1791 (361) p=.001

Table 30 (cont'd)

	GPA		GPA
BDI-Difference	-.2015 (361) p<.0005	OAC	.4551 (850) p<.0005
Self-esteem-Fall	.0535 (891) p=.110	Living Circumstances	.0387 (876) p=.253
Self-esteem-Winter	.1300 (359) p=.014	Family Composition	-.0196 (879) p=.561
Self-esteem-Difference	.1462 (359) p=.006	IGS-C	.0447 (882) p=.185
PSS-Fall	-.0251 (891) p=.455	Father - Education	.1054 (885) p=.002
PSS-Winter	-.1100 (361) p=.037	Mother - Education	.1108 (886) p=.001
PSS-Difference	-.1351 (361) p=.010	Family finances	.0039 (888) p=.907

Table 30 (cont'd)

	GPA
SACQ	.2440 (361) p<.0005
SACQ -Academic	.3803 (361) p<.0005
SACQ - Social	.0700 (361) p=.185
SACQ - Personal/Emot	.1401 (361) p=.008
SACQ - Attach/Goal	.0710 (361) p=.178

Table 31
Summary of Regression Analysis for Variables Predicting Academic Achievement
Based on Grade Point Average (N=334)

Variable	B	SE B	β
MRIAN	-.0184	.0086	-.0967 *
Stress	.0372	.0088	.2030 ****
OAC	.0988	.0110	.3940 ****
SACQ - Acad.	.0247	.0026	.4490 ****
Education-Moth.	.0835	.0271	.1347 **
Discussion w/ Parents	-.0399	.0152	-.1186 **

* $p < .05$

** $p < .01$

**** $p < .0005$

Note. $R^2 = .39378$

Test of Significance for R^2 : $F(6, 328) = 35.50950, p < .0005$

MRIAN = Authoritarian - Mother

Discussion

Demographic Data

The purpose of this study was to clarify the roles that relationship with parents and parenting style (i.e., parental socialization as described by Weidman, 1989a), in conjunction with other specific variables, play in adaptation to university from both a subjective socio/emotional perspective and an objective observation of actual academic achievement. In addition, however, the study tapped a rich data base which provides representation of a broad range of Canadian cultures and ethnicities. It should be emphasized that this comprehensive data set can be analyzed in a variety of ways, each with the potential to reveal yet another facet of demographic interest and empirical results. This was not, however, the primary purpose of this study and it is beyond the scope of the dissertation. Nevertheless, prior to the discussion of the primary purpose of this investigation, it is appropriate to draw attention to some of the salient features of the demographic portrait that emerge from the data base, and to address some relevant issues that ensue.

In analyzing the demographic attributes of first-year students at York, it is important to observe them within the framework previously established by Grayson (1993, 1994), based on data that were collected from York students

during the period between 1992 and 1994. The sample size of the present study was actually larger than those obtained by Grayson from Faculty of Arts students. Overall, the samples appear comparable, but as will be shown, there are some differences, both in results and the information that was obtained. Where applicable, a comparison of the results will be presented.

First, it should be noted that there was a good representation from both genders in this study, even though approximately 70% of the sample was comprised of females. Also, despite the high rate of divorce in society as a whole, it is interesting that approximately 79% of the subjects' parents were living together. Consistent with Grayson's findings, the vast majority (74.5%) of students live at home with their families, with only 18% in residence. Even more interesting is that 91% of the students did not apply to live in residence. This means that approximately half of those students living in residence decided to do so after being offered a place, perhaps due to York scholarship incentives. Grayson's (1995) finding that students who live at home with parents enjoy higher grade point averages, however, was not replicated in this study in which no significant differences among places of residence (i.e., with family, in residence, or other arrangement) were found. This will be subject to subsequent discussion.

The wide range of majors that were identified is an indication that the study tapped into the educational diversity and interests which can be found among York students. It is also important to recognize the prominent educational niche that Introductory Psychology fulfills, given that this course provides initial exposure to the study of psychology to such a broad spectrum of students. It would be interesting to obtain data regarding how many of these students changed their major to (or from) psychology subsequent to this course.

Perhaps the most fascinating aspect of the demographic variables involved those that refer to the ethno-cultural background of the students. Even though 77% of the subjects were born in Canada, the tremendous diversity of the student population is evident in the identification of 63 other countries of origin. This is underscored by the fact that the greater majority of parents of students were not born in Canada. This last point is particularly informative, as it was not included in the previous studies done by Grayson. The fact that both "language spoken at home" and "cultural/ethnic group" were left as open-ended response variables represents a departure from the standard methodology employed of providing specific choices (i.e., given the choices of "white", "black", "hispanic", and "other"). Although it was not feasible to analyze the results due to the small number of subjects in various cells, the fact that 74 different languages and 202

cultures were identified provides evidence of the multicultural mosaic that exists at York. It is also interesting, however, that 69% of these subjects did not consider themselves to be members of a visible minority (approximately 9% less than the proportion reported in Grayson's study). It should be noted, however, that the classification of what constitutes "visible" minority is not without difficulties. For example, Grayson (1994) has found that roughly 50% of students who grew up speaking Chinese in the home do not consider themselves as members of a visible minority group. Therefore, while a large variety of self-referenced cultures are referred to by the subjects, this does not necessarily single them out (in their minds) in a manner that would be visible to others. It should further be noted that the distinction between some of these categories is somewhat dubious and undoubtedly some of these categories could be collapsed and merged. Perhaps, however, this underscores the problem involved in forced-choice alternatives, particularly regarding such a personal issue (i.e., Can subjects who refer to themselves as Canadian-Italians be classified in the same category as those who call themselves Italian-Canadians?). As such, the formation of the immigrant/generational status (IGS) variable may provide a more meaningful basis for comprehensive investigation and should be subject to further empirical testing. The fact that the students were so well represented in each of the four

categories of IGS (subject and parents are immigrants to Canada, subject born in Canada to immigrant parents, subject and one parent born in Canada, subject and both parents born in Canada) may be an indication of this variable's utility as a discriminating factor.

Regarding parental education, while Grayson reported that the vast majority of parents did not receive post-secondary education, this was simply not the case for this sample. As reported, only 35.7% of fathers and 46.6% of mothers had no further education after high school. Similarly, only less than 9% of the subjects described their family's financial situation as below average means. Unlike Grayson's findings, there did not appear to be a discrepancy in level of family finances based on subjects identifying themselves as members of a visible minority. In addition, approximately half of the subjects reported that they "could" or "probably could" pay the costs of university outside of Toronto if the need arose. While exact figures of family finances for this sample are not available, for the most part, the students appear to be from homes where there has been some parental higher education, and at least adequate financial resources. Given the large size of this sample, it is likely representative of the larger York population and it remains unclear why these findings are not consistent with those of Grayson. It is possible that these findings reflect social

change due to the implementation of new government policies regarding accessibility to higher education. This may be reflecting greater difficulty that lower income students are experiencing in undertaking the very burdensome, and increasing, financial obligation currently placed directly on students.

Consonant with Grayson's findings, the vast majority (75.7%) of the students in this sample had an OAC average of 75% or better. The mean entry to university average of almost 80% is an indication of the commendable standard of scholarship that students are striving for in order to attend university.

The information obtained in this study concerning first-year York students is distinct from the previous investigations in one notable way. None of the previous studies involving these demographic variables utilized the opportunity to longitudinally assess student attitudes. Since students were solicited to provide their attitudes during the first week of classes (and specifically during their first psychology class) and then again after spending six or seven months in the university environment, this data set provides the unique opportunity to assess changes in attitudes *by the same subjects* concerning many of the variables.

The first investigation of this nature involved the students' expected grade average in their first year in university. Grayson had found that the majority of Arts students unrealistically expected marks in excess of B+. The students in this

sample had a similar expectation initially. In the second term, however, students' expectations had dropped to a much more realistic B to B- average. Not only were these expectations significantly different from each other, but the first term assessment was not significantly related to eventual GPA, while the second term's expectations were. Therefore, this allows the conclusion to be drawn that while students may initially have unrealistic expectations of the academic success they will enjoy in university, some students are capable of making a more objective and accurate assessment of their eventual academic achievement after spending six months in the university.

As stated previously, parents were most important to students in their decision to come to York, followed distantly by friends. In addition to the positive emphasis put on parents in this regard, it should also be noted that while only 26.8% of students considered parents as "not important" or "not important at all" in this regard, 43.6% classified friends the same way. It can be stated conclusively that parents play a crucial role in their children's decision to attend York, almost to the exclusion of other potential influences. In particular, the role of guidance counsellors is subject to question given that 61.3% of students deemed them as either "not important" or "not important at all".

In terms of feeling prepared for university, both academically and

emotionally, the results were comparable to those reported by Grayson. In comparing the attitudes of these subjects themselves over the course of the year, there was no significant change in the feelings of being academically prepared, but emotionally, there was a significant increase in the feeling of preparedness.

One area of concern is in regard to work habits and study skills. Consistent with Grayson, in the Autumn term, a minority reported feeling that they were adequately prepared for university in this regard. In the Winter term, however, this figure actually declined significantly. This would confirm Grayson's recommendation that more attention be paid to developing students' work habits and study skills.

Similarly, regarding the drive to succeed in university, consistent with Grayson, initially a large majority of students believed they had sufficient drive. This figure declined significantly in the Winter term as well. In this instance, while Grayson's findings did not reveal a problem, the comparison across the two terms is an indication of the shift in attitude which could possibly benefit from some intervention. Overall, the greater majority of students reported that they could have achieved greater success both in high school and in their first term in university had they worked to their full ability.

From their own accounts, students indicated tremendous comfort with

their English language skills regarding their speech, reading, and ability to follow a conversation. While their level of comfort in writing in English was significantly less, this largely is a reflection of their comfort in the other English language skills. These findings were consistent with those reported by Grayson.

In terms of assessing the quality of their university experience, results showed that, overall, students perceived significant declines in the academic quality of both York and the Faculty of Arts over the course of the academic year. There was also a significant decline in subjects' opinions concerning the academic quality of York students over the course of the year. In addition, there was a significant decline over the year in students' perceptions of the intellectual challenge provided by courses and the effort professors put into their teaching, and a significant increase in the perception that professors' academic demands on students are unrealistic. In both terms, less than half of the subjects felt that students' opinions are valued, that professors are interested in their students' academic development, and less than a quarter felt that professors will go out of their way to be helpful. Frankly, these statistics could be troubling in the negativity that is presented by students who, at most, have been exposed to the university setting for a half year. The following results raise the possibility that this may be a function of violated expectations on the part of the students and

that they are experiencing a decline in their expectations.

During the second data collection, students were asked to estimate the number of contacts of at least ten minutes duration they had with members of the faculty and teaching assistants each month about a variety of concerns. Findings demonstrated that less than a third of the students had *ever* contacted their professors about course-related problems or basic information concerning the academic programme. Concerning each of the other possibilities stated for contact, namely intellectual issues, campus issues, future occupation, personal problems, and informal socializing, less than 15% had ever done so. This is consistent with the literature that indicates the low likelihood of students seeking help (Halgin, Weaver, Edell, & Spencer, 1987; Kramer, Berger, & Miller, 1974; Strohmer, Biggs, & McIntyre, 1984; Tinsley, de St. Aubin, & Brown, (1982); Vredenburg, O'Brien, & Krames, 1988). The observations for contact with teaching assistants were comparable with the exception of contacting them concerning course-related problems, where slightly less than half still had no contact. While Grayson reported that new students expressed attitudes indicating that more than 90% of them would seek help from both professors and teaching assistants, in practice, a very small minority actually do so. He also found that the vast majority of incoming students had expected to have regular

contact with their instructors about all of these issues. While data concerning this sample's initial expectations were not obtained, it seems reasonable to assume that they would have had similar initial attitudes. As such, one can imagine the impact that violated expectations would have on students' attitudes towards the institution over the course of the year. This is not to say that their expectations were realistic or, in some instances (i.e., informal socializing or discussing personal problems), even appropriate. It is possible that these attitudes are artifacts from their high-school experiences or a romanticized notion of university life. Regarding some issues, however, it seems valid that students either have contact with their instructors or, at least, feel comfortable doing so. While it is not conclusive that this lack of contact or violated expectations of contact contribute to the decline in positive attitudes to the university experience, a link between the two has already been established. Pascarella and Terenzini (1991) have reported that students who have a high degree of contact with faculty tend to do better in a variety of relevant areas than students who do not. Furthermore, Astin (1993) has indicated that when the policies of the institution maximize the out-of-class contact of students with faculty and maximize academic and social involvement, positive outcomes are likely. The data from this study support the above findings and indicate the need for deriving a means

to overcome this difficulty.

Finally, in the area of student concerns, all of the initial reports across a variety of domains reconfirm Grayson's findings except in one area. Grayson (1994) reported that family interference with studies was the most frequent problem reported by subjects (43%). In this study, however, approximately 25% of the subjects identified this as something about which they were either "worried" or "very worried". Furthermore, in Grayson's previous study, his results in this domain were much more similar to this study's findings. At first, this discrepancy was difficult to explain. Subsequently, it was discovered that while Grayson's 1994 study indicated that this was the most frequently reported problem, there was no indication of the severity of the problem. Grayson's earlier study and this study, however, did provide the opportunity to indicate the severity of the problem. Therefore, while family interference may have been identified as a problem, it would also include those who may only have been minimally concerned. With this contradiction resolved, it can be concluded that while family interference may be a frequently quoted problem, it does not appear to be a source of any great concern to the students .

As stated, all other initial indications appear to be comparable. As demonstrated previously, however, the comparison between the attitudes during

the first data collection and the second were more useful in providing helpful indications of students' real areas of concern over the course of the academic year. There was no significant change, either positive or negative, in the following areas; concern in having to take a part-time job during the semester in order to meet expenses, concern over finding suitable accommodations, concern over doing well enough in university to satisfy the expectations of family and friends, and concern over family-related problems interfering with work. Concerning each of the above, a minority of the subjects rated themselves as being "worried" or "very worried". In regard to worrying about receiving good grades, being able to handle the work load, concern over stress, not being able to make friends in university, and family members meddling into academic decisions, there was a decline from the first term to the second, with about half of the subjects initially expressing concern about these issues. The decline in the degree of worrying about these issues was significant. It is possible that each of these areas, while not being a major issue even initially, declined over the course of the year due to their being issues which could be resolved by exposure, experience, and becoming acclimatized to the university environment. Only in regard to concern over being able to get into their chosen programmes and not having enough money did a minority of the subjects initially express concern which then increased to

a majority of the subjects feeling this way. In both of these areas, the mean change over the year was significant. Again, it is possible to explain this finding as realization due to extended experience. In summary, the student body who are attending York appear to represent a wide range of cultures, ethnicities, and backgrounds. They do seem to enter university with some unrealistic expectations of which they are relatively quickly disabused. This may tend to jade their feelings and, while there are some serious concerns over student attitudes to the university experience in general, they do appear to adapt, for the most part, given sufficient exposure to university. Clearly, however, there are some issues that might be addressed that could facilitate the transition into this new and distinct experience and culture.

Adjustment to University

The seven models that were constructed from correlational relationships and multiple regression analyses contain unique combinations of variables that will be discussed presently. The distinctiveness of each of the models is an indication that adjustment is multifaceted. The large proportion of explained variance of each of the models is an indication of the apt inclusion of the various predictor variables and the theoretical soundness of the study. Furthermore, the fact that models with so few variables are able to explain such high proportions

of variance provide strong indication of adherence to Kerlinger's (1973) objective of achieving parsimony. It is important to place regression analysis within the appropriate context prior to discussing the models themselves. Given the nature of regression coefficients and the goal of determining explained variance within an analysis, there is a natural tendency to attribute causality to the predictor variables as they relate to the outcome variable. As emphasized by Pedhazur (1975, 1982), however, there is an important distinction between the causal meaning of regression coefficients that are derived from experimental data and those obtained from correlational data, such as in a study of this sort. We are not able to interpret regression coefficients from naturally occurring data as though their associated variables had purposely been manipulated, as they would have been under experimental conditions. This is particularly tempting to do in a study such as this, given that the data were collected on a longitudinal basis. However, in addition to directionality of cause being problematic, it must be emphasized that both variables may be caused by an unknown third variable. As Pascarella and Terenzini (1991) point out: "Regression coefficients from correlational data can be quite useful in identifying *possibly* causal associations among variables (p.673)". Therefore, all conclusions will be viewed in this context.

As will be demonstrated, the role of parents was confirmed to play a small, yet significant part in most aspects of their children's adjustment to university. Furthermore, it was demonstrated that even in instances where perceived parenting style does not directly contribute to the explained variances of the models, it possibly contributes via its indirect relationship with many of the predictor variables. Each of the models will now be presented in the order of their analyses and their implications will be discussed.

Overall SACQ - Males

It must be recognized that the overall scale represents the combination of the various aspects of adjustment, namely, academic, social, personal/emotional, and attachment to the institution adjustment. From a regression point of view, however, it is more than a simple combination of the individual models. Rather, analysis was able to derive those aspects of commonality in adjustment between the various scales and provide the simplest combination of variables to explain variance.

Since there was a gender difference in overall adaptation to university, separate models were formulated for males and females. As will be shown, there is a parallel between the factors which appear to contribute to male and female adjustment. It is the proportions between them and the way in which the

variables combine that is different between the genders.

The five variables of the model that explain almost 56% of the variance for male overall adjustment were (in order of contributing variance) change in stress, initial stress, possessing a sense of identity, the change in depressive symptomatology, and an increase in perceived mutual reciprocity.

As will be shown, the "emotional well-being" variables generally are most important in contributing to the models, even for male subjects whose behaviour is commonly thought of as being less contingent on emotions than that of their female counterparts. Therefore, one important finding of the study is the provision of evidence that the adjustment attitudes of males are subject to their perceptions of their emotional experiences. It is important to note, however, that subjects are not rating whether they are feeling depressed or under stress: They are merely acknowledging the existence of certain symptoms. Research has shown that males and females attribute the source of emotions differently. Males tend to attribute emotions to external sources, while females attribute more to internal and relational causes (O'Leary & Smith, 1988). These attribution findings, however, do not mean that males experience less emotional feelings than females. While male subjects may not indicate the source of their emotional experience, they recognize its existence.

The importance of emotional well-being is congruent with Chickering's (1969) second vector of managing emotions. He believed that the emergence of negative emotions will manifest itself through the challenge of dealing with the questioning of inculcated values. It is intuitively understandable that if the perception of stress increases with continued exposure to university over the course of the year, that this, in turn, will impact on feeling more depressed and unable to cope as time progresses. In fact, although it is unknown whether one is the precursor of the other, the increase over time in depressive symptomatology significantly hindered overall adjustment. Neither initial depressive symptoms, nor latter indications of depressive symptoms significantly contributed to a constraint in male adjustment. Rather, it was the relative increase in depressive symptoms over time that was deleterious. In addition, the significance of initially perceived stress accentuates the importance of minimizing students' initial feelings of being overwhelmed at the outset of their university experience. Emotional factors, as will be discussed, have demonstrated themselves as recurring themes throughout the various models.

Given that research has previously shown that questioning one's identity can sometimes lead to personal crisis (Henton, et al., 1980), it is not surprising that possessing a sense of identity follows the emotional well-being variables in

explaining overall adjustment. Furthermore, since some researchers (e.g., Gilligan, 1982) have indicated that men place more value on personal agency than do women, it is possible that a healthy sense of personal identity may contribute to the overall adjustment of male subjects. Of course, identity development was central to Chickering's (1969) theory and spans all seven vectors. It is conceivable that this measure of identity taps many different aspects of adjustment in a general way due to the combination of the SACQ subscales of adjustment. This variable may be the "generic" contributor of the various interpersonal attributes elucidated by Chickering, and men place more value on personal agency than do women.

Mutual reciprocity was the one parental relationship variable that remained a significant contributor to male adjustment. Even though previous research (Wintre, et al., 1995) has demonstrated no gender difference in perception of parental reciprocity among university age subjects, and there was none in this sample either, males appear to benefit more from perceived reciprocity than do females regarding overall adaptation to university. Although research has shown that women value connectedness in relationships more than do men (Baucom & Weiss, 1986; Gilligan, 1982, Josselson, 1988), it is reasonable to posit that those males who do allocate importance to the role of

their relationship with their parents are able to take advantage of the bilateral symmetry inherent in mutual reciprocity, perhaps even more so than their female counterparts. Furthermore, since a link between possessing an internal locus of control and the manifestation of mutual reciprocity has been established (Wintre et al., 1995), the presence of a well developed personal sense of identity, already present in this model, may be more likely to be manifest in the context of a mutual relationship with parents. This is consistent with the finding of mutual reciprocity having the strongest relationship with identity among the autonomy variables, with a shared variance of 14.54%. As stated, mutual reciprocity can be associated directly with Chickering's (1969) third and fifth vectors, which reflect aspects of identity as well.

Overall SACQ - Females

As stated, emotional well-being was also very important in the overall adjustment of females to university. In fact, although specific subscales will include a combination of various variables, overall adjustment can be almost exclusively attributed to emotional well-being. The six variables of the model that explain 63% of the variance were (in order of contributing variance) change in depressive symptomatology, initial depressive symptomatology, initial stress, change in stress, positive self-esteem in the Winter term, and degree of discussion

with parents concerning university issues.

As mentioned earlier, there is an overlap with the overall SACQ model for the male subjects regarding initial stress, change in stress over time, and change in depressive symptomatology over time. For female subjects, in the category of emotional well-being, initial indications of depressive symptomatology and self-esteem in the Winter term also made significant contributions. It would appear that females who enter university manifesting depressive symptoms are at greater risk to experience maladjustment later on. This is a concern regardless of ongoing symptomatology. Upon further investigation, a gender difference for depressive symptoms was found both for the Autumn term ($F [1, 1069] = 8.82, p < .01$) and the Winter term ($F [1, 405] = 5.31, p < .05$), with the female subjects demonstrating higher levels of symptoms. The fact that the manifestation of depressive symptomatology is a greater issue for female subjects than for males is not surprising given the statistics that women are approximately twice as likely as men to be diagnosed as depressive (Regier, Hirschfeld, Goodwin, et al., 1988). In addition, as Nolen-Hoeksema (1987, 1991) contends, women are inclined to ruminate about their sadness, rather than engage in distractive behaviour, and rumination prolongs depression.

The final emotional well-being variable involved was reported self-esteem

in the Winter term. This is a distinctive finding as it is the only variable in any of the models that includes a Winter term variable at all. Furthermore, even though this variable only contributed to the model of female subjects, there was no significant gender difference for self-esteem in the Winter term. It would appear that female students who are able to attain or retain a greater sense of self-esteem subsequent to being in university for six months, regardless of their initial perception of this variable, experience a higher degree of adjustment. Given the previous reports of women's regard for interpersonal relationships and that the Winter measure for self-esteem correlates significantly with every interpersonal relationship measure, it is reasonable to posit that these factors are strongly related to increased self-esteem for female subjects. Support for this position is provided by the finding of one study that only women with high self-esteem were able to benefit from greater support from family networks (Hobfall, Nadler, & Lieberman, 1986).

In light of the previous findings, it is evident that female subjects' discussion with parents would be related to their adjustment in university. It is not simply an issue of emotional closeness, but intellectual closeness as well (Schulthesis & Blustein, 1994). Since females apparently operate within the context of their social relationships and seek out more parental support than do

males (Kenny & Donaldson, 1991), and since late adolescent females have been reported as more likely than males to feel connected to parents in terms of empathy, communication, and closeness (Frank, Avery, & Laman, 1988), it is not surprising that the discussion of college issues with parents impacts on women.

Although male and female students differentially adapt to university, the emotional well-being component provides a strong basis for both models, albeit in distinct combinations. The positive contribution of each one's parental relationship component, despite the presence of other potential predictors, indicates the robustness of parental relationships as a predictor for adjustment.

SACQ - Academic Adjustment

Since there was no gender difference between the responses of male and female subjects regarding the outcome variable of academic adjustment, one model was constructed for all subjects. There were, however, interactions based on gender. There were seven variables (a combination of 11 variables including interaction variables whose main effect counterparts would not necessarily have been incorporated otherwise) that provided approximately 42% explained variance. The variables (in descending order of explained variance) are as follows; change in stress (a variable that interacted with gender), work orientation, change in depressive symptomatology, initial stress, initial self-esteem (a variable that

interacted with gender), mutual reciprocity (an interaction effect), and initial depressive symptomatology.

Again, it must be emphasized that academic adjustment is a distinct construct from academic achievement (such as measured by GPA). While the latter is an objective measure of actual achievement, regardless of personal sense of accomplishment and affiliation within the university context, the former is a completely subjective report of personal perspective. In order to identify what precisely comprises academic adjustment, or a lack of it, Baker and Siryk (1986) presented interviews with students who also completed the scale. They reported:

Low scores in the academic area were explained as reflecting problems with goal-setting, as in personal motivation for being in college or choice of major; dissatisfaction with course program, particular courses, or professors; level of difficulty of the work, or conversely for some, lack of challenge by coursework or lack of intellectual stimulation by peers. (p.34)

It is not surprising that emotional well-being variables are also related to academic adjustment, given its subjective nature. The interaction for gender and change in stress bears some interpretation. It was found that male subjects were more sensitive to the change in stress over time. If there was a decline in their perceived stress over the course of the year, then they tended to experience

greater academic achievement than the female subjects. If, however, their degree of perceived stress increased over the course of the year, they fared worse than the female subjects in academic achievement. Therefore, it was demonstrated that males were more sensitive to the changes in perceived stress than the females in the study. It should be noted that female subjects also followed this trend, but not to the extent of their male counterparts. Clearly, however, there is a link between the change in perceived stress and the perception of academic adjustment.

Not unexpectedly, the autonomy variable of work orientation was also related to academic adjustment. It will be recalled that Steinberg et al. (1989) found that it was specifically work orientation that was related to GPA (academic achievement). Therefore, although, as mentioned earlier, GPA does not necessarily equate with academic adjustment, it is reasonable that work orientation would be linked in some way to both constructs. In addition, as a portion of the autonomy construct, work orientation reflects Chickering's (1969) third vector in its incorporation of maturity to work independently.

The following two emotional well-being variables of change in depressive symptomatology and initial stress can be viewed in the same context as mentioned previously. Their manifestation represents a constraint on academic

adjustment. It should be mentioned that initial stress in this instance must be distinguished from the interaction of change in stress over time. In this case, there was no interaction in the degree of stress between the genders.

Initial self-esteem, however, was also subject to an interaction effect. It was found that if females initially experience lower self-esteem, then subsequently they are more at risk than males not to adapt academically. If, however, they enter university with a greater sense of self-esteem, they tend to adjust better than males academically. As before, self-esteem was correlated with each of the interpersonal variables. In this manner, it is possible that an initially higher self-esteem for females can be viewed as collateral to the other interpersonal variables and enhanced by association.

Finally, an interaction was found for mutual reciprocity in academic adjustment. Specifically, if males did not perceive a high degree of mutuality in their relationship with parents, they tended to experience less academic adjustment than the female subjects. If, however, they possessed greater reciprocity than the females, they sustained a higher degree of academic adjustment. This finding is consonant with the earlier contribution of reciprocity to overall adjustment for males and not for females. As stated, it is possible that those males who value relationships with parents are able to take advantage of

bilateral symmetry inherent in mutual reciprocity, perhaps even more so than their female counterparts. Furthermore, mutual reciprocity can be associated directly with Chickering's (1969) third and fifth vectors. As such, the conceptual link between mutual reciprocity and work orientation can be established.

SACO - Social Adjustment

Since there was no initial gender difference between the responses of male and female subjects regarding the outcome variable of social adjustment, one model was constructed for all subjects. There were, however, interactions based on gender. There were eight variables (a combination of eleven variables including interaction variables whose main effect counterparts would not necessarily have been incorporated otherwise) that provided approximately 33% explained variance. This lower percentage of explained variance was to be expected given the lack of variables that tap interpersonal relationships other than those with parents. The variables (in descending order of explained variance) are as follows: initial depressive symptomatology, maternal permissiveness (a variable that interacted with gender), maternal authoritarianism (a variable that interacted with gender), change in depressive symptomatology, change in self-esteem, paternal authoritativeness, a sense of identity, and self-reliance.

The interviews Baker and Siryk (1986) conducted with the students to identify what precisely comprises social adjustment, or a lack of it, yielded the following:

problems with making friends or keeping friends in general, or in particular, problems with boyfriends, girlfriends, or roommates; difficulties with parents; ethnic, religious, or sociocultural differences with peers, sometimes regarding alcohol or other drugs or sexual behavior; missing friends or relatives from home; geographical-cultural displacement, occasionally with reference to urban-rural differences; problems in living arrangements; and unavailability of preferred extracurricular activities.

(p.34)

Some of the issues raised above are not generally applicable given that this sample is from a mostly a commuter student population. Any of the issues that relate to peers are obviously absent in this analysis. It is a salient point that having problems with parents is one of the recognized manifestations of difficulties in social adjustment.

The inclusion of the three emotional well-being variables of initial depressive symptomatology, change in depressive symptomatology, and change in self-esteem indicate how emotional states contribute to a perception of social

adjustment. Emotional dissatisfaction from the outset and a worsening of such symptoms hamper social adjustment, while an improvement in self-esteem over time facilitates it. The prominence of emotional well-being is once again congruent with Chickering's (1969) second vector of managing emotions whereby the emergence of negative emotions will manifest themselves with the challenge of dealing with the questioning of inculcated values. It is intuitively understandable that if a person enters university with demonstrated depressive symptoms, or if this worsens over time, that this will have a negative impact on their ability to form social bonds and integrate into the social structure of university life. On the other hand, an increase in self-esteem will bolster confidence and promote social interaction. Although self-esteem is usually viewed as a relatively stable trait variable (Flett, personal communication, 1997), it is possible that students are particularly vulnerable at this critical time of transition.

There was an interaction for gender in both maternal authoritarianism and maternal permissiveness. In maternal authoritarianism, there was an overall trend that more authoritarianism was associated with poorer social adjustment. Males, however, were at greater risk for the effects of authoritarianism than females, and demonstrated greater adjustment in its absence. Regarding maternal permissiveness, with low permissiveness, males fared better than females in social

adjustment, but with high permissiveness, females actually adjusted better than the male subjects. In understanding these findings, it must first be mentioned that the data show that authoritarianism is not the reciprocal of authoritativeness and that one can be manifest in the absence of the other. Clearly, they are not polar opposites. Other research with Buri's (1991) scale (i.e., Flett, Hewitt, & Singer, 1995) also illustrates this point.

In understanding the gender differences regarding parenting styles in general, it must be mentioned that previous research has had few consistent findings (i.e., Smetana, 1988, 1993; Smetana & Asquith, 1994; Tisak, 1986). Baumrind (1989), however, reported that among children, girls, but not boys, who came from authoritarian families were more socially assertive. In addition, sons of authoritarian parents have been found to be unfriendly and lacking in leadership, initiative, and self-confidence in their relations with their peers (as reported in Maccoby & Martin, 1983). This is consistent with the present finding in that although authoritarianism was deleterious, female subjects reported greater social adjustment than males under this condition. The fact that they actually improved in social adjustment under permissive conditions may indicate that girls may need the freedom from their mothers in order to maximize social integration. Males, on the other hand, may require a balance between

maternal authoritarianism and permissiveness in order not to impinge on their social adjustment. In general, these findings are consistent with the earlier results concerning males and mutual reciprocity (in overall SACQ). Males appear to be more at risk than females, once there is some constraining factor on their interpersonal relating. Both males and females, however, were shown to benefit from authoritativeness from their fathers. This aspect of relationship with parents may be more salient with fathers since they are usually perceived as being more authoritarian than mothers (Youniss & Smollar, 1985). Therefore, an increased degree of democracy in paternal relationships with their children appears to facilitate social adjustment. Also, authoritative parenting has been found to be associated with improved self-esteem in children (Baumrind, 1989, 1991b), adolescents (Steinberg et al., 1989) and college students (Buri, 1989), which, as mentioned before, is one of the contributing variables to social adjustment.

This is the first model in which retrospective assessment of a background variable has been significant and deemed to provide a direct link to an aspect of adjustment. Therefore, in addition to any indirect relationship parenting style will demonstrate (as will be discussed), it has a direct effect as well. This confirms that aspects of parenting style function as one of the background

characteristic variables in the model as theorized by Tinto (1975, 1993) and Weidman (1989a).

Finally, as for identity and self-reliance, both aspects of autonomy were demonstrated to be related to social adjustment. It is reasonable that these two variables would be associated with social adjustment. The same explanation that has applied to identity thus far is relevant here as well. The self-reliance subscale taps into three underlying characteristics: the absence of excessive dependence on others, a sense of control over one's life, and initiative. All three of these characteristics would be beneficial in social integration. These two variables also merge well into other variables in the model. Self-esteem has been associated with identity (Greenberger, et al., 1974), and authoritative parenting has been found to be related to autonomy (Steinberg, et al., 1989) in general, and specifically with self-reliance (Baumrind, 1967). Possessing a sense of autonomy, as manifested in a sense of identity and self-reliance, forms the underpinning of Chickering's (1969) theory. Therefore, their inclusion is most appropriate in this model.

SACQ - Personal/Emotional - Males

Due to a gender difference in personal/emotional adaptation to university, separate models were formulated for males and females. As will be shown, there

is a parallel between the factors which appear to contribute to male and female adjustment. It is the proportions between them and the way in which the variables combine that is different between the genders. Both of these models have the largest explained variance.

The five variables of the model that explain almost 67% of the variance were (in order of contributing variance) initial stress, change in stress, possessing a sense of identity, the change in depressive symptomatology, and enabled independence from parents (negatively related). It should be noted that these are the same variables that formulate the model for overall male adjustment, with the exception of enabled independence in place of mutual reciprocity.

In order to identify what precisely comprises personal/emotional adjustment, or a lack of it, Baker and Siryk's (1986, p.34) interviews with the students revealed the following:

in the area of personal/emotional adjustment, where items are couched largely in terms of psychological or physical feelings-states, explanatory references were made to the same kinds of issues as previously cited or to problems with health or personal finances.

With this in mind, it becomes even easier to understand how personal/emotional adjustment becomes similar to a general concept of adjustment.

Since personal/emotional adjustment is being assessed, it is reasonable that the major contributors would be from the emotional well-being category. Of note is that only the negative predictors for emotional well-being were salient variables, and not the positive variable of self-esteem. This finding of the relevance of emotional well-being for personal/emotional adjustment can be informed by the discussion of overall SACQ for males. As was similarly the case, this facet of personal/emotional adjustment relates to Chickering's (1969) second vector of managing emotions.

In considering the nature of personal/emotional adjustment, previous discussion concerning the identity variable is pertinent here. As well, it should be remembered that identity forms the foundation for all of Chickering's (1969) seven vectors.

It is interesting that the only significant parenting variable is enabled independence, and this is the one instance in which it was included in a model. Even though it was pointed out in the introduction that independence can operate distinctly from autonomy, given the inclusion of identity, it is at first curious as to why this variable is included, and in the opposing valence. Upon consideration, however, if one examines the four items of this scale, it is possible to interpret them not as a measure of enabled independence from parents, or, as

Flanagan et al. (1993) define it, as "self-determination in the context of parental encouragement (p. 177)", but rather as a form of detachment from them. This would be similar to Steinberg and Silverberg's (1986) attempt to measure emotional autonomy which was reinterpreted by Ryan and Lynch (1989) as a measure of detachment from parents. Specifically, this measure of independence is very similar to Steinberg and Silverberg's (1986) scale of "nondependency on parents". Research has shown this scale to be negatively related to self-esteem, an internal locus of control, attachment with parents, and mutual reciprocity (Wintre, et al. 1995). If this comparison is appropriate, then this variable could be considered as one of detachment from parents, thereby providing an explanation of its direction of relationship contradicting all others in the study.

SACQ - Personal/Emotional - Females

As in the case of personal/emotional adjustment for males, almost all of the explained variance in this variable was provided by the emotional well-being variables when assessed in females. Also, there is much similarity between this model and the overall SACQ for females.

The five variables of the model that explain almost 66% of the variance were (in order of contributing variance) change in depressive symptomatology, initial stress, initial depressive symptomatology, change in stress, and integrative

complexity (negatively related). The only emotional well-being variable that was a significant contributor for the females, but not the males, was initial depressive symptomatology. In light of the previously cited findings of O'Leary and Smith (1988), in which they demonstrated that women more commonly attribute emotion to internal causes (such as moods), it is understandable that the initial depressive symptomatology experienced by females would have a greater impact on their personal/emotional adjustment over time. While males were demonstrated to be susceptible to the effects over time of both depressive symptoms and stress, and to the initial effects of stress (which encompasses a variety of experiences), the female subjects are most sensitive to a variable which directly reflects an inner state, perhaps due to their ruminating tendencies alluded to earlier.

There was also a very small contribution of integrative complexity. It contributed negatively, however, to female personal/emotional adjustment. First, it should be noted that there was a gender difference for integrative complexity in which females scored higher ($F [1, 990] = 39.80, p < .0005$). Also, this finding directly contradicts that of Pancer et al. (1995) in which they found complex thinking about what university would be like to be a buffer to stress. A possible explanation of this contains two components. First, previous studies using

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integrative complexity have not incorporated an analysis based on gender. Therefore, it is possible that even in those studies, males were responsible for the positive results. Second, it has previously been found that women are inclined to ruminate about their sadness, rather than engage in distractive behaviour, and rumination prolongs depression (Nolen-Hoeksema 1987, 1991). As such, in this case it is conceivable that females who tend to think more complexly become enmeshed in their thinking to the extent that they display higher degrees of depressive symptomatology or stress. In doing so, they actually worsen these symptoms, thereby detracting from personal/emotional adjustment. Furthermore, it seems reasonable that this would most significantly impinge in this area of adjustment. Quite possibly, the "coherent picture", described by Widick, et al. (1978a), that one establishes of oneself via the differentiation and integration of complexity, may not be a complimentary one. It should be remembered, however, that integrative complexity explained only a small amount of the variance and is not a powerful predictor for personal/emotional adjustment.

SACQ - Attachment to University/Goal Commitment

Since there was no initial gender difference between the responses of male and female subjects regarding the outcome variable of attachment to university, one model was constructed for all subjects. There were, however,

interactions based on gender. There were seven variables (a combination of nine variables including interaction variables whose main effect counterparts would not necessarily have been incorporated otherwise) that provided approximately 31% explained variance. The variables (in descending order of explained variance) are as follows: initial depressive symptomatology, mutual reciprocity (a variable that interacted with gender), change in depressive symptomatology, self-reliance, change in self-esteem, maternal authoritarianism (positively related), and discussion with parents concerning university issues.

In considering the three emotional well-being variables, it would appear that initial depressive symptomatology may set the tone for a lack of becoming attached to the university and remaining committed to goals. These findings are in keeping with theoretical models of depression and low commitment to goals (Klinger, 1977) and empirical research on the role of goal orientation in depression (Karoly & Ruchman, 1995; Lecci, Karoly, Briggs, & Kuhn, 1994). Additionally, a worsening of these symptoms over the course of the year further detracts, while an increase in self-esteem enhances. Basically, this can be explained that the worse one feels about oneself, the less one is attached to the institution, and the better one feels about oneself, the more one is attached. Perhaps the most interesting result in this area is that this is the only area of

adjustment in which both initial stress and change in stress do not contribute significantly. In fact, this is consistent with the opinion in the literature that stressor effects are assumed to occur under two conditions: The first is that the situation is deemed to be threatening or otherwise demanding and the second is that there are insufficient resources to deal with the stress (Lazarus, 1966, 1977). According to this, as Cohen et al. (1983) put forth, an emotional response is not based solely on the intensity of the event, but rather depends on personal and contextual factors as well. Furthermore, Cohen et al. demonstrated that increases in perceived stress was predictive of increase in health center utilization. Therefore, it is possible that within the context of the university, students were able to utilize the many help facilities that are offered in the university. Doing this, in fact, would seem to be a means to increasing attachment to the institution. The balance of those who would and those who would not use such services might help explain the absence of this otherwise central variable.

Regarding reciprocal mutuality with parents, there was again an interaction based on gender. While both genders were able to utilize the positive effects of reciprocity, males tended to demonstrate less attachment to university and commitment to goals with a lower degree of reciprocity than did females. On the other hand, greater degrees of reciprocity with parents resulted in much higher

indications of attachment to university and commitment to goals for males than for females. As posited previously, it may be that under the circumstances that males take advantage of their interpersonal relationships, they demonstrate a generally higher degree of connectedness than females possessed all along. Therefore, males with higher degrees of mutual reciprocity in their relationships with parents may be more primed to forming longer term and stronger commitments than their other male peers who are lacking in this aspect of their relationships. It follows, of course, that females also would be able to benefit from the effects of this facet in their relationships with their parents.

In this instance, both males and females appear to demonstrate greater attachment in the context of greater discussion with parents. Although it was previously argued why this would be more likely with females, it is reasonable to argue that when males also operate within a framework of social relationships, as would males who possess mutually reciprocal relationships with parents, they too would seek out greater degrees of connectedness via communication and closeness, as do females (Frank, Avery, & Laman, 1988). In fact, Grotevant and Cooper (1986) have argued that there is a link between connectedness with parents and mutuality. Therefore, both males and females should theoretically experience greater attachment to university and commitment to their goals in

relation to increased discussion with parents about university issues.

In addition to being related to social adjustment (which has some overlapping items with the attachment to university scale), self-reliance was found to be associated with this aspect of adjustment as well. As stated before, the self-reliance subscale taps into three underlying characteristics: the absence of excessive dependence on others, a sense of control over one's life, and initiative. It seems reasonable that these factors would enable one to create a bond with an institution, independent from the influences of others, and remain committed to personal goals. Once again, this emphasizes the autonomy of the individual as reflected in the identity vectors of Chickering's (1969) model.

Finally, while intuitively the opposite would be expected, maternal authoritarianism was found to be positively linked with attachment to university and commitment to goals. By way of speculation, perhaps a small degree of rigidity that would be instilled by one's mother would buffer an individual from the distractions found in a university that could sidetrack one from goals established. If so, this would represent a unique departure in understanding the effects of authoritarianism and indicate a positive outcome. It should also be recalled that this variable represents a direct link from a retrospective background variable to a current aspect of adjustment.

Indirect Effects of Parenting Style as Mediated by other Predictor Variables

Clearly, authoritativeness in general, and specifically maternal authoritativeness, was related to almost all of the predictor variables in this study. In each case, either maternal authoritativeness or paternal authoritativeness, or both, contributed to explained variance. Additionally, the direction of each of the relationships was as hypothesized. Authoritativeness was positively related to all Relationship with Parents variables, negatively related to the Emotional Well-Being variables of depressive symptomatology and perceived stress, while positively related to self-esteem, and positively related to all autonomy subscales. This is completely congruent with previous findings insofar as authoritative parenting has been associated in younger populations with better academic performance (Dornbusch, et al., 1987; Steinberg, et al., 1992), increased competence, autonomy, and self-esteem (Baumrind, 1989, 1991b; Buri, 1989; Steinberg, et al., 1989), and less deviance (Baumrind, 1991b).

The greater influence of mothers than fathers is also consistent with the literature. Several researchers have reported that fathers' relationships with their adolescent children lack the everyday intimacy of mothers' relationships (Wright & Keple, 1981; Youniss & Smollar, 1985) Youniss and Smollar (1985) also reported that fathers were often described as not expressing themselves openly,

or not being engaged in personal interactions with their children. Smollar and Youniss (1989) also said that the evidence indicates that "while fathers merit respect, they tend to remain somewhat distant figures in the adolescents' lives" (p.81). In light of these findings, it is understandable why maternal authoritativeness occupies the prominent role in respect to the relationship with their children (cf. Bradbury, 1992; Hawkins & Dollahite, 1996).

Perhaps the most important finding in this area was that the combination of maternal and paternal variance was able to explain more than 55% of the variance of mutual reciprocity. Although, as mentioned previously, the link between the two has been clearly established (i.e., Yaffe & Wintre, 1996), this high degree of relationship provides potential evidence of authoritativeness as a precursor for mutuality and the indirect role parental authoritativeness has in relation to aspects of adjustment, as mediated by mutuality. This finding also appears to lend support to Lewis' (1981) reinterpretation of Baumrind's theory which emphasizes the role of reciprocal communication in authoritative families that helps create an independent sense of self in children. Furthermore, in each of the instances where mutual reciprocity was related to adjustment (namely, overall adjustment for males, academic adjustment, and attachment to institution/ goal commitment), the main benefit was derived by the male subjects.

Baumrind (1989), in fact, demonstrated that authoritative parenting was especially important in the development of competence in sons. It would, appear, therefore, that this mediating role of mutuality has been clearly confirmed.

Discussion with parents was also explained by both maternal and paternal authoritativeness. Given the previously described commonality between this variable and mutual reciprocity, their parallel in this aspect would follow as well.

The relationship between parenting style and perceived parental support mirrors the previous one with the exception of the inclusion of a negative contribution of paternal authoritarianism. Authoritarianism may play a greater role in support given the emphasis on warmth (e.g., expressions of caring and love, reassurance of worth, and nurturance) within the framework of Weiss (1974). Furthermore, as Cutrona et al. (1994) demonstrated, parental support appears to be linked specifically with a low stress environment and the absence of conflict. Therefore, it seems reasonable that paternal rigidity and remoteness would feature as a negative variable.

Only maternal authoritativeness was found to be related to the variable of enabled independence. While, superficially, this linkage would appear to repudiate the potential reinterpretation of this variable as one of detachment, this is not necessarily so. Only 3% of the variance was explained by maternal

authoritativeness, much less than in any other variable predicted by maternal authoritativeness. Hypothetically, the link between the two should have been much stronger. The fact that it is not may lend support to the confusion that the items of this measure may raise.

In terms of the negative emotional well-being variables, while there was a negative relationship with some aspect of authoritativeness, both depressive symptomatology and perceived stress were found to be related to maternal authoritarianism. Baumrind (1967) found that authoritarian parenting was associated with unhappiness, apprehensiveness, and a vulnerability to stress. Therefore, remoteness by the person from whom one expects the most nurturance is understandably associated with the manifestation of depressive symptomatology and the perception of stress. It is interesting that only paternal authoritativeness was found to be related with a diminished degree of depressive symptomatology and not maternal authoritativeness. By way of speculation, perhaps one could postulate that in order to provide a buffer, it is the normally more distant and removed relationship that is required to demonstrate authoritativeness. In this one instance, authoritativeness provided by the more familiar mother does not sufficiently shield children from these symptoms. In regard to stress, however, which is a more routine experience, maternal

authoritativeness would again provide the necessary buffer. Finally, the link between authoritativeness and self-esteem has already been established (Baumrind, 1989, 1991b; Buri, 1989; Steinberg, et al., 1989).

Regarding the autonomy variables, there is, as well, an underlying theme of relatedness with authoritative parenting. Identity, most closely linked with self-concept and self-esteem, would logically be related to the authoritativeness of both parents. Work orientation, on the other hand, which is more of a functional attitude, is more related with maternal authoritativeness, again possibly reflecting the distance of fathers in a pragmatic sense. Self-reliance has already been demonstrated to be related to authoritativeness (Baumrind, 1967). In addition to only demonstrating a relationship with maternal factors and not paternal factors, however, self-reliance was also the only variable to be related to all three parenting styles, including a permissiveness component. While it has been argued that the various parenting styles are not mirror images of each other, perhaps in relation to self-reliance they create a tension of balance among them. In other words, in order to promote true self-reliance, mothers must deal with their children in a consistently authoritative manner, devoid of either authoritarianism or permissiveness.

In summary, parenting style is clearly a demonstrated antecedent to the

other variables in this study. Although there was some inclusion of other parenting styles, authoritativeness in general, and specifically maternal authoritativeness was the salient factor. In addition to clarifying the relationship between parenting style and the other variables, the findings have confirmed that authoritative parenting style is mediated by other pertinent predictors of the various aspects of adjustment to university. Also, these findings have identified an extremely important factor in the consideration of family background characteristics as theorized by Tinto (1975, 1993) and Weidman (1989a).

Academic Achievement Based on Grade Point Average (GPA)

It must be recalled that while all of the above adjustment measures were from the subjective assessment of the subjects themselves, actual academic achievement is an objective observation, independent of personal evaluation. Furthermore, as Pascarella and Terenzini (1991) have pointed out, a student's grades are perhaps the single best predictor of obtaining a bachelor's or an advanced degree in university. Given that there was no gender difference between the responses of male and female subjects regarding the outcome variable of GPA, one model was constructed for all subjects. As stated previously, because there was a time gap, it was feasible to use appropriate measure of adjustment to

university as predictors. As anticipated, perceived academic adjustment was demonstrated to be the most appropriate predictor. There were six variables that provided approximately 39% explained variance. The variables (in descending order of explained variance) are as follows: perceived academic adjustment, OAC average, initial stress (positively related), maternal level of education, discussion with parents about university issues (negatively related), and maternal authoritarianism (negatively related).

Although the variables that contribute to perceived academic adjustment will not be discussed again, they are (in descending order of explained variance) as follows: change in stress (an interaction effect), work orientation, change in depressive symptomatology, initial stress, initial self-esteem (an interaction effect), mutual reciprocity (an interaction effect), and initial depressive symptomatology. The combination of emotional well-being variables with autonomy and relationship with parent variables indicates the breadth of factors necessary for adjustment, and in this context, achievement. It should also be mentioned that male students were demonstrated to be at greater risk, and able to benefit more, in relation to those variables in which there was an interaction effect. In addition, while these variables accounted for 42% of the variance, the rest of the variables related to academic adjustment remain unknown. Therefore,

while academic adjustment and achievement can still be considered as distinct constructs, the former still remains the most significant contributor in this model. In effect, academic adjustment mediates the other variables. They remain, therefore, indirectly related to actual academic achievement.

While OAC averages were not the best predictor, nevertheless, they remain a strong contributor to the model. This logical finding has been consistently present in the literature (cf. Cutrona, et al., 1994; Dispenzier, 1971; Hooper, 1968; McCausland & Stewart, 1974; McDonald & Gawkoski, 1979; Neely, 1977; Steinberg, et al., 1989; Steinberg, et al., 1992). It is assumed that the same skills and traits that enabled high academic achievement previously, continue to do so in university.

An interesting finding was that initial stress was positively associated with academic achievement. As mentioned previously, some researchers maintain the perspective that stressor effects occur within a context that the individual is unable to cope with (Lazarus, 1977; Mason, 1971). Accordingly, it is possible that an initial perception of stress in university merely emphasizes a student's recognition of the tremendous task before them and, thereby, facilitates eventual academic success. The long-term existence of such perceptions (such as into the Winter term), however, after initial adjustment, would theoretically tend to be

more deleterious in nature. This was demonstrated by work on defensive pessimists. People who told themselves "I'm going to fail" as a motivational strategy, did better at first, but then were found to suffer from long-term health problems and other adjustment difficulties (Flett, personal communication, August, 1997).

It is interesting that the only demographic variable that was significant was the relationship of maternal educational level to their children's GPA. There are two reasonable explanations for this phenomenon, which are not mutually exclusive of one another. First, it is possible that maternal education is functioning purely as a "background variable", consistent with Tinto (1975, 1993) and Weidman (1989a). Mothers with a higher level of education may value education more than other individuals and influence their children's attitudes towards educational achievement. They also may work with their children to a greater extent, thereby priming them for greater academic success, both through the inculcation of values and by the attainment of actual skills. It is also possible, however, that educated mothers may actually continue to provide influence and actual assistance to their children at the university level, thus transforming this into a current relationship-with-parent variable. This is also a more practical opportunity in a commuter university such as York, thus

enabling inexperienced university students to benefit from their mothers directly. Given the previously discussed tendency for fathers to remain somewhat distant figures in their children's lives (Smollar & Youniss, 1989), it comes as no surprise that this was found to be a salient variable only in regard to mothers and not for fathers. This explanation is congruent with the finding that maternal authoritarianism is negatively associated with academic achievement. Although discipline is necessary in order to be able to accomplish the necessary work, undue rigidity and harshness, particularly from a potential source of support, could reasonably impact negatively on achievement.

Finally, discussion with parents about university issues was found to be negatively related to academic achievement. At first glance, this is difficult to understand, given that mutual reciprocity is mediated by academic adjustment in a positive manner. It should be mentioned, however, that this is not a discussion with parents variable, but rather, a discussion with parents about university issues specifically. It is possible that, in this context, a difference would be found if an overall level of communication with parents was being determined. This is particularly a possibility in light of the positive effects of mutual reciprocity. A conceivable interpretation of this finding is that students who depend on their parents as sources for information about university-related

issues are demonstrating a greater degree of insecurity than peers who are using other sources for their university information. This, in turn, impacts negatively on academic achievement. It should be remembered, however, that this variable contributes a rather small proportion of the variance, relative to the variables of academic adjustment and OAC averages. Another possibility is that parents' actual experience with university is either non-existent or likely out of date. Thus, as a source of strategic suggestions, they might tend to be inadequate.

General Discussion and Conclusions

The primary purpose of this study was to assess the role of first-year students' relationships with their parents in their adjustment to university. Although emotional well-being variables provided the strongest contribution to adjustment, nevertheless, various aspects of the parental role were demonstrated to contribute to adjustment to university, both directly and indirectly. There was a parenting variable (either from the relationship with parents category or a direct relationship with an aspect of parenting style) in every one of the models, with the exception of emotional adjustment for females. It was especially gratifying to observe that the measure of mutual reciprocity was able to contribute above and beyond the emotional well-being variables. Mutual reciprocity was demonstrated to be related to overall adjustment for males, academic adjustment,

and attachment to the university/goal commitment. It was mediated by academic adjustment in an indirect relationship with actual academic achievement. This clearly establishes the POPRS as an appropriate measure in the inclusion of a study of this nature. In addition, discussion with parents about university issues was present in relation to overall female adjustment and attachment to the university/goal commitment, as well as being inversely related with actual academic achievement. One or more aspect of parenting style was related with social adjustment and attachment to the university/goal commitment, as well as again being inversely related with actual academic achievement. The inverse relationship of enabled independence with male personal/emotional adjustment may be an anomaly and actually represent a form of detachment. Care should be taken in the utilizing of this measure. Overall, it is therefore confirmed that relationships with parents facilitate adaptation to university both from a socio-emotional perspective and an academic one.

Clearly, however, many of the other variables, in a variety of configurations, contribute in explaining each of the aspects of adjustment. The variable of change in reported depressive symptomatology over the course of the year was present in each of the adjustment models directly and mediated by academic adjustment in regard to actual academic achievement. Initial depressive

symptomatology was present in each model with the exception of overall adjustment for the male subjects. Both initial perceived stress and the change in perceived stress were present in each of the adjustment models with the exception of the measure for attachment to the university/goal commitment. Initial self-esteem was present directly in academic adjustment, and therefore, indirectly in actual academic achievement. Change in self-esteem over the course of the year was present in the models predicting social adjustment and attachment to the university/goal commitment. Self-esteem in the winter term was related to female overall adjustment. Therefore, some aspect of self-esteem was present in all models with the exception of male overall adjustment and emotional adjustment. All of these findings confirm the very large role emotional well-being plays in both socio-emotional and academic adjustment to university.

In the area of autonomy, self-reliance was related to social adjustment and attachment to the university/goal commitment. Identity was related to social adjustment for both genders, but only for males in overall adjustment and emotional adjustment. Work orientation was found directly related only with academic adjustment, and therefore, indirectly with academic achievement. Although aspects of the autonomy measure relate differentially to areas of adjustment, there is a clear link between these variables and both socio-

emotional and academic adjustment to university.

It is interesting to note that none of the demographic variables was demonstrated as contributing to any measure of adjustment. These variables included present living circumstances, marital status of parents, immigrant-generational status (IGS - C), family finances, and either maternal or paternal education. It was only in relation to actual academic achievement that maternal education was a salient variable.

Regarding the parenting style variables as mediated by the other predictor variables, authoritativeness was consistently shown to be an important contributor, especially in relation to mutual reciprocity. In particular, maternal authoritativeness was demonstrated to be the most significant of these variables. The importance of parenting style in general, and specifically authoritativeness as a background factor, both directly and indirectly, has been confirmed.

There were several important findings involving the intercorrelations between the predictor variables themselves and, thereby, their functioning as mediators in indirect relationships. Mutual reciprocity and the degree of discussion with parents were found to be strongly correlated with parental social support. In fact, in the case of mutual reciprocity and parental support, there was a shared variance of over 58%, the greatest amount between any two independent

variables in the study. This helps explain the lack of significance of the parental social support variable in relation to any of the outcome measures. This absence had been particularly troubling since it theoretically should have been a strong predictor for some aspect of adjustment. Furthermore, Cutrona et al. (1994) clearly established the link between parental social support and university GPA. In light of this, however, it appears that parental social support is subsumed mainly under mutual reciprocity, and, to a degree, under discussion with parents. This would explain the absence of this variable in the models. As such, it can be argued that parental support is most beneficial within a context of reciprocity. It should, however, comprise an indirect relationship with those factors that these other two variables relate to directly. In addition, mutual reciprocity and parental social support were found to be negatively related to depressive symptomatology and perceived stress, and positively related to self-esteem and identity.

As expected (cf. Cohen, et al., 1983), depressive symptomatology and perceived stress were strongly correlated with each other and negatively correlated with self-esteem. Also, the depressive symptomatology and perceived stress scales were negatively correlated with all three of the autonomy subscales, while the self-esteem scale was positively correlated with them.

One additional comment about one of the variables is in order. With one exception, integrative complexity was not found to be significantly related with any variable in the study. Since it is based on the processes of differentiation and integration, which should be related to Chickering's (1969) conception of the process of identity development, it is difficult to understand its failure to provide further insight. This is exacerbated by the significant results that have been achieved using integrative complexity in previous studies (cf. Hunsberger, Lea, Pancer, et al., 1992; Hunsberger, et al., 1995; Pancer, et al., 1995; Pratt, et al., 1992; Santolupo & Pratt, 1994). One possible explanation for this occurrence would be scoring error. This, however, is not likely since great care was taken in learning the proper procedures for scoring and establishing an excellent degree of reliability. Another more feasible explanation is that in all of the above investigations, subjects were either interviewed and allowed to answer orally, or they were mailed questionnaires which they were able to complete at their leisure. In addition, the second method gave subjects the opportunity to discuss responses with others. All of the above may have served to elevate scores. In this study, however, students were given the measure for integrative complexity as part of a large package, which the vast majority of subjects completed in one sitting during class time. There was a limited amount of space provided and no cue was given

regarding the nature of the responses that should be provided. In addition, this was the only predictive measure in the entire package which required more than circling a number in agreement. Finally, this was the last measure of the package. All of the above may have promoted boredom or fatigue, both which could have hindered the proper completion of the questionnaire. In light of the above, caution must be used in interpreting the absence of a relationship with the other variables or its limited value as a predictor for adjustment.

The entire study was established within a framework which was informed by and adapted from the work of three theorists; Chickering, Tinto, and Weidman. Chickering's (1969) theory of vectors, which focusses on identity development, has been addressed throughout this paper. It has been demonstrated as a foundation of many of the variables, including variables of an intrapersonal, an interpersonal, and an emotional nature.

There are three main findings from this study which relate to Tinto's (1975, 1993) theory of student departure. First, certain variables in family background, particularly authoritative parenting style have been confirmed to have an effect on student adjustment to university. Second, the findings revealed distinct variables involved in the different areas of adjustment and academic achievement, thus identifying separate domains of academic integration and

social integration. This finding provides additional justification of Tinto's conceptualization of academic integration and social integration as constructs to be distinguished from one another. Third, Tinto's emphasis on goal and institutional commitment has been demonstrated as a valid construct of outcome. These last two findings were refined further in order to assess adjustment in four distinct manners, separate still from the manner in which actual academic achievement is assessed. One final comment in regard to Tinto is in order. Although he developed a theory to identify factors involved in student departure, his theory can also be utilized, reciprocally, as a theory of student retention. This is the case in the present study, where an attempt was made to identify factors involved in student adjustment. Similar to Tinto, this study can therefore be used reciprocally to address maladjustment in university and a lacking of adaptation to the transition.

Finally, it was Weidman's (1989a) model that provided the basic template for this investigation. Like Tinto, Weidman also identified the potential of pre-entry variables and this has been confirmed by the demonstrated importance of aspects of parenting style, particularly authoritativeness. His greater contribution, however, was establishing a theoretical foundation for the effects of ongoing relationships with parents, or as he terms it, parental socialization.

Although current socio-economic status of parents was not found to contribute to adjustment, the models were very much informed by "Parent/Child Relationships". Within his category of "Collegiate Experience", he identifies, like Tinto, social and academic integration, which, as stated, has been addressed in this study. Also, by identifying and empirically testing the hypothesized variables, this study was able to transform sociological variables and investigate some of the underlying psychological mechanisms.

Practical Implications

There are several practical implications that emerge as a result of the findings of this study, and their implementation is indicated. First, it has been demonstrated that the maintenance of emotional well-being of students is of primary concern in all areas of adjustment to university. Students have been shown to be particularly at risk from the development of depressive symptomatology and reactions to stress. Furthermore, findings have shown that a significant number of students are entering university with these difficulties prior to experiencing the rigours of university life. Therefore, it would appear to be crucial for the university to make students aware of the options in accessing the mental health support facilities that are available to them. One suggestion would be to have mental health workers visit classes early in the Autumn term

and speak with the students directly. In addition to providing information on the services available, students could be informed regarding how commonplace their difficulties are and that they are not suffering alone. In addition to traditional therapy that is offered to individuals experiencing difficulties, it may also be possible to establish counselling groups that focus on the tribulations one goes through while adjusting to this new environment, with an emphasis on stress management. Furthermore, regarding counsellors themselves, care must be taken to ensure that they are sensitive to the unique and diverse needs and issues that will face a conglomeration of the wide range of cultures that comprise the student body at York.

Another implication that has arisen from these findings is that parents continue to play an important role in the lives of their children. It is, therefore, important to involve parents and educate them as much as possible regarding their children's attendance at university. York has already made efforts in this area by offering "Parents' Orientation" sessions and producing a handbook for parents with a variety of useful information aimed to help parents guide their new university students. It may be beneficial as well to have university representatives attend community high schools on parent-teacher nights during students' senior year, in order to address parents' concerns and orient them to the process that

will be taking place. While York established a Parents' Association in 1987 as a means to involve parents, it would seem worthwhile to maintain ongoing communication with parents and inform them of university events, issues, and include recommendations to facilitate their children's transition to university. Given the diverse languages spoken by parents and the large number of them who are immigrants to Canada, it may be useful to offer these services in a variety of languages, and by members of a range of ethnic communities. This would ensure reaching out to the largest number of parents possible.

A final suggestion is that it appears that the demographic make-up of the university is in a state of flux. Several substantial differences have emerged from previous findings of just a few years ago. Therefore, it is important to keep demographic information on the students current in order to best serve the needs of a changing population.

Limitations and Directions for Future Research

This study has yielded many productive and informative findings. It is not, however, without its limitations which could be addressed in the future.

First, while a large portion of the variance was explained by the models, there are a number of variables that could have been included that may have elicited even higher proportions of explained variance. One such variable alluded to by both

Tinto and Weidman is that of peer relationships. It is reasonable to hypothesize that this would impact especially in the social, personal/emotional, and attachment to university/goal commitment areas of adjustment. Tinto has maintained that relationships with professors in a variety of contexts also affects academic and social integration. Additionally, while the parent socialization variables have been informative, other variables related to parent-child relationships could be investigated. Included in this, for example, could be measures of nurturance, connectedness, conflict, and, perhaps, a different measure of independence. It is reasonable that to assume that coping styles and measures of personality could also be related to various areas of adjustment. Finally, in the area of academic achievement, one could hypothesize that intelligence (i.e., I.Q.) and academic aspirations could play significant roles. In short, there are a variety of avenues that could be explored in the future in order to expand the models further.

A second limitation is inherent to the use of regression analysis in this type of study. By definition, regression analysis precludes the right to assume causality, but rather, as has been done, to assess potential causation. It remains largely predictive rather than explanatory. In structural-equation modeling (SEM), the focus is on explanation and SEM allows for the determination of

indirect effects through mediating variables, as well as direct effects. It is in regard to the investigation of indirect effects that causal modeling provides substantively more information than do regular regression analyses. In future investigations, it would be most advantageous to utilize this powerful method of analysis and, thereby, clarify some of the pathways that have only been speculated about in this study. For the present, however, it is felt that the usage of causal modeling in this study would have been inappropriate. The most common mistake that researchers make in regard to causal modeling is thinking that it can accomplish the impossible, namely attribute causality to correlational data. As Wolfle (1985a) explains, the purpose of causal modeling is to determine the extent to which an *a priori* system of hypothesized causal effects is supported by the data. It is not the regression coefficients that "prove" causal relationships, but rather, they exist because they are posited by theories. As such, one does not confirm a causal relationship through regression coefficients in causal modeling, rather, one fails to disconfirm the theory through its nonsignificant departure from fit to the data.

Given that this study was conducted under the guidance of sound theory, it would still seem appropriate to have applied this methodology. However, as pointed out by Pascarella and Terenzini (1991), in order to obtain meaningful

and unbiased results, it is crucial that no important causal influences are excluded. The most difficult part in causal modeling, and, ironically, the one most often overlooked is that it must reflect sound social theory. While some very respectable advances have been achieved in this study, as seen in the first limitation, there is still some room for development. Potential for future use of this methodology, however, appears very plausible and appealing.

A third limitation is that there is an inherent difficulty in the usage of retrospective evaluation such as that used in assessing parenting style. In a review of the flaws in retrospective research, Halverson (1988) reported that such responses are coloured by the subject's current personality to the point that memory reconstruction is considered to be likely. Furthermore, there may be perceptions of change, consistency, and occurrence of events that may simply be false. There are two solutions to this problem. The more difficult one would be to conduct the study longitudinally from the time of childhood, thereby circumventing the above concerns. Another, more practical, solution would be not to rely on the subject alone, but to interview the parents themselves. Even though they are at risk for the same factors as the subjects themselves, agreement between the two would lend a great deal of validity to the reported data.

A fourth limitation is that all the data in the study are from the

perspective of the student. This is a particular risk in assessing relationships with parents. Studies suggest that adolescents may systematically underestimate the importance of parental influences on aspirations (Davies & Kandel, 1981; Looker & Pineo, 1983). These authors stress the importance of obtaining data from the parents as well and not relying solely on reports from their children. In future research, it would be most informative to follow this advice and incorporate the direct views and attitudes of parents.

A fifth limitation in this study is that, longitudinally, adjustment to university encompassed, at most, a period of the first seven months of university experience, and the measure of academic achievement only pertains to the first year of study. Although these initial impressions should be valid, it would be informative to observe the effects over a longer term. Originally, the potential to follow this cohort through their university years (and possibly beyond) was built into this study. Unfortunately, their second year of study was disrupted by a strike in the university that lasted two months. It is impossible to know what debilitating effects this prolonged strike had both on their adjustment across the various domains and on their actual academic achievement. In fact, there is reason to question the validity of their GPAs for their second year of study. Perhaps some longitudinal investigation will be able to be conducted in their final

years of university, but it will be difficult to defend against the criticism that the data may be contaminated by this experience. Ultimately, this study should be conducted on a single cohort across their three or four years in university.

The sixth limitation to this study is that a complete accounting of the effects of the ethnic and cultural diversity in this sample have not been fully addressed. The impact of ethnic origin continues to be a source of discussion and debate within the literature (cf. Goldmann & McKenny, 1993; Kralt, 1990; Renaud & Badets, 1993; Smith, 1992; White, 1990). Although it may be that within group differences may be greater than those found between different ethnic groups, and that the IGS-C measure helps categorize differences due to immigration in a meaningful way, the issue of culture will continue to be a salient one.

The final limitation to this study is that it effectively has an $n=1$. Specifically, it is difficult to know how generalizable the results found at York University are to other universities. It would commonly have been argued that a sample from a commuter university would not be representative of university populations on the whole. This, however, does not reflect a growing trend in which a greater proportion of North American postsecondary education students commute to university than did previously. In fact, it has been argued that

commuting students have become the statistical norm and that an estimated 60% of students commute (Slade & Jarmul, 1975; Stewart, Merrill, & Saluri, 1985). Furthermore, it should be noted that there was no differential contribution of explained variance based on living circumstances (i.e., living at home or in residence). Nevertheless, caution must be exercised in overgeneralizing these results. It would be interesting to attempt to replicate these findings in other institutions, such as those in which the majority of students do live in residence.

In conclusion, this rich data sample has yielded some fascinating results in which the current relationship with parents has been demonstrated to facilitate adjustment to university from both a socio-emotional perspective and an academic one. In addition, initial emotional states and their changes over time, as well as constructs related to autonomy have been demonstrated to be related as well. Furthermore, retrospective perceived parenting style, especially authoritativeness, appears to have an indirect positive effect on adjustment and achievement. These predictor variables seem to be consistently related to the outcome variables regardless, of the broad range of cultures, socio-economic status, and living circumstances that are represented in this sample.

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List of Appendices

Appendix

- A Standardized Instructions (Both data collections)
- B Demographic frequencies
- C Beck Depression Inventory (BDI)
- D Self-esteem Scale
- E Perceived Stress Scale (PSS)
- F Perception of Parental Reciprocity Scale (POPRS)
- G Parental Authority Questionnaire (PAQ)
- H Integrative Complexity / Discussion with Parents
- I Social Provisions Scale - Parent Version (SPS-P)
- J Enabled Independence Subscale of the Late Adolescents' Relationship with Parents (LARP) Scale
- K Autonomy Subscale of the Psychosocial Maturity Inventory (PMI)
- L Demographics - Time 1
- M Student Adaptation to College Questionnaire (SACQ)
- N Demographics - Time 2

Appendix A: Consent Form- Time 1

Please read this form before beginning

This questionnaire is part of a York University study that examines adjustment to university life. Participation is voluntary. However, we think that you will find the questionnaire interesting and hope you will help us improve academic life at York University. We will be returning in the Winter to ask you to fill out another form (a shorter one!). Students completing both questionnaires properly will become ELIGIBLE for a LOTTERY of a GRAND PRIZE of \$100.00 and four ADDITIONAL PRIZES of \$50.00 each.

With your permission, in order to study student adjustment to university, we will be granted access to students' academic results by the university. For this reason, it is necessary to obtain your student number. Please be assured that the questionnaires and the records will be treated with the STRICTEST CONFIDENCE. No one other than the primary researchers will have any access to this information and no individual student will be described or identified in any reports. Your completion of the questionnaire indicates your willingness to participate.

In answering the questionnaire, you need not ponder too much over any question, but caution should be taken to note changes between rating scales on different questions. There are no right or wrong answers, we just want to know your real feelings. Again, we **THANK YOU** for your participation.

Appendix A: Consent Form- Time 2

Please read this form before beginning

This questionnaire is the second part of a York University study that examines adjustment to university life. We would appreciate it if all students would complete the questionnaire, especially those who completed the fall questionnaire. This survey is a shorter form. Participation is voluntary. Students completing both questionnaires will become eligible for a lottery of a grand prize of \$100.00 and four additional prizes of \$50.00 each. Again, we think that you will find the questionnaire interesting and hope you will help us improve academic life at York University.

Please provide your student number and not your name. Please be assured that the questionnaires and the records will be treated with the strictest confidence. No one other than the primary researchers will have any access to this information and no individual student will be described or identified in any reports. Your completion of the questionnaire indicates your willingness to participate.

In answering the questionnaire, please note changes between rating scales on different questions. You need not ponder too much over any question. There are no right or wrong answers, we just want to know your real feelings. Again, we **THANK YOU** for your participation. Please Check one of the following:

- _____ I filled out the first questionnaire in the fall.
- _____ I did **NOT** fill out the first questionnaire in the fall.
- _____ I'm not sure if I filled out the first questionnaire in the fall.

Appendix B -Demographic Frequencies

GENDER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
male	0	318	29.7	29.7	29.7
female	1	754	70.3	70.3	100.0
	Total	1072	100.0	100.0	

AGE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	17	10	.9	.9	.9
	18	243	22.7	22.7	23.6
	19	557	52.0	52.0	75.6
	20	142	13.2	13.2	88.8
	21	55	5.1	5.1	93.9
	22	28	2.6	2.6	96.5
	23	10	.9	.9	97.5
	24	12	1.1	1.1	98.6
	25	8	.7	.7	99.3
	26	6	.6	.6	99.9
	27	1	.1	.1	100.0
	Total	1072	100.0	100.0	

Mean 19.253 Std dev 1.344 Minimum 17.000
 Maximum 27.000

YEARUNIV year at university

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
first	1	1072	100.0	100.0	100.0
	Total	1072	100.0	100.0	

MARRSTAT marital status

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
single	1	1063	99.2	99.3	99.3
married	2	5	.5	.5	99.8
separated/divorced	3	2	.2	.2	100.0
		2	.1		
		-----	-----	-----	
Total		1072	100.0	100.0	

FAMCOMP family composition

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
living together	1	837	78.1	79.3	79.3
separated/divorced	2	176	16.4	16.7	96.0
widow	3	34	3.2	3.2	99.2
widower	4	8	.7	.8	100.0
.	.	17	1.6	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

LIVCIRC living circumstances

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
with family	1	785	73.2	74.5	74.5
in residence	2	191	17.8	18.1	92.7
other	3	77	7.2	7.3	100.0
.	.	19	1.8	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

APPLYRES apply to residence

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1	79	7.4	9.3	9.3
no	2	766	71.5	90.7	100.0
.	.	227	21.2	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	
Valid cases	845				

offer of residence

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1	350	32.6	43.9	43.9
no	2	448	41.8	56.1	100.0
.	.	274	25.6	Missing	
Total		1072	100.0	100.0	

Valid cases 798

MAJOR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
anthropology	1	2	.2	.2	.2
business/economics	2	60	5.6	5.7	5.8
english	3	57	5.3	5.4	11.2
computer science	4	4	.4	.4	11.6
french studies	5	7	.7	.7	12.3
geography/urban stud	6	6	.6	.6	12.8
history	7	10	.9	.9	13.8
languages	8	1	.1	.1	13.9
mathematics for comm	9	1	.1	.1	13.9
linguistics	10	2	.2	.2	14.1
humanities	11	4	.4	.4	14.5
mathematics	12	2	.2	.2	14.7
philosophy	13	3	.3	.3	15.0
physical education	14	108	10.1	10.2	25.2
political science	15	11	1.0	1.0	26.2
psychology	16	256	23.9	24.1	50.3
fine arts	18	17	1.6	1.6	51.9
science	19	21	2.0	2.0	53.9
sociology	21	53	4.9	5.0	58.9
undecided/undeclared	22	166	15.5	15.6	74.6
mass communication	23	10	.9	.9	75.5
cultural studies	24	8	.7	.8	76.2
political science/ps	25	2	.2	.2	76.4
law	26	1	.1	.1	76.5
arts	27	12	1.1	1.1	77.7
law/society/sociolog	28	4	.4	.4	78.0
law and society and	29	9	.8	.8	78.9
music	30	20	1.9	1.9	80.8
biology/psychology	31	8	.7	.8	81.5
visual arts	33	20	1.9	1.9	83.4
psychology/sociology	34	10	.9	.9	84.4

psychology/philosoph	35	3	.3	.3	84.6
psychology/spanish	36	2	.2	.2	84.8
cultural FA	37	2	.2	.2	85.0
physical health and	38	2	.2	.2	85.2
history and psycholo	39	2	.2	.2	85.4
drama	40	12	1.1	1.1	86.5
social	43	1	.1	.1	86.6
environmental studie	44	7	.7	.7	87.3
education & history	45	1	.1	.1	87.4
administrative studi	46	2	.2	.2	87.6
women's studies	47	2	.2	.2	87.7
bba	48	11	1.0	1.0	88.8
cchs	49	2	.2	.2	89.0
film	50	11	1.0	1.0	90.0
kinesiology & health	52	7	.7	.7	90.7
kinesiology	53	29	2.7	2.7	93.4
psychology & languag	54	1	.1	.1	93.5
geography & sociolog	55	2	.2	.2	93.7
psychology & music	56	1	.1	.1	93.8
bas	57	4	.4	.4	94.2
theatre	59	6	.6	.6	94.7
film & video	60	3	.3	.3	95.0
fine arts & theatre	61	1	.1	.1	95.1
jewish studies	62	1	.1	.1	95.2
psychology & educati	63	3	.3	.3	95.5
psychology & french	64	1	.1	.1	95.6
kinesiology & physic	65	1	.1	.1	95.7
psychology & english	66	6	.6	.6	96.2
italian	68	1	.1	.1	96.3
chemistry	69	1	.1	.1	96.4
law and psychology	70	1	.1	.1	96.5
dance	71	4	.4	.4	96.9
liberal studies	72	1	.1	.1	97.0
psychology & visual	73	1	.1	.1	97.1
english and history	74	2	.2	.2	97.3
biology	75	3	.3	.3	97.5
labour studies/philo	77	1	.1	.1	97.6
east asian studies	79	1	.1	.1	97.7
ece	81	1	.1	.1	97.8
science/undecided	82	1	.1	.1	97.9
mass communication &	83	1	.1	.1	98.0
psychology & italian	86	1	.1	.1	98.1
urban studies	87	1	.1	.1	98.2
law & society	88	3	.3	.3	98.5
mass communication &	89	1	.1	.1	98.6
mass communication &	90	3	.3	.3	98.9
english & physical e	92	1	.1	.1	99.0
critical studies	93	1	.1	.1	99.1
biology & physical e	95	1	.1	.1	99.2
law & society & poli	96	2	.2	.2	99.3
french & mass commun	97	1	.1	.1	99.4
religious studies	98	1	.1	.1	99.5
english/fine arts	99	1	.1	.1	99.6

scotland	78	1	.1	.1	94.5
sicily	79	1	.1	.1	94.6
singapore	80	1	.1	.1	94.7
slovenia	81	1	.1	.1	94.8
somalia	82	1	.1	.1	94.9
south africa	84	8	.7	.7	95.6
south korea	85	2	.2	.2	95.8
sri lanka	86	5	.5	.5	96.3
sudan	87	1	.1	.1	96.4
syria	89	1	.1	.1	96.4
taiwan	90	5	.5	.5	96.9
trinidad	93	6	.6	.6	97.5
turkey	94	2	.2	.2	97.7
uganda	95	2	.2	.2	97.9
usa	97	3	.3	.3	98.1
ussr	98	1	.1	.1	98.2
venezuela	99	1	.1	.1	98.3
vietnam	100	9	.8	.8	99.2
wales	101	1	.1	.1	99.3
yugoslavia	102	3	.3	.3	99.5
ghana	104	2	.2	.2	99.7
bahrain	107	1	.1	.1	99.8
kuwait	108	1	.1	.1	99.9
zambia	110	1	.1	.1	100.0
.		2	.2	Missing	
Total		1072	100.0	100.0	

Valid cases 1070

FCOUNTRY father's country of origin

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
canada	1	296	27.6	27.8	27.8
afghanistan	2	3	.3	.3	28.1
argentina	3	3	.3	.3	28.4
aruba	4	1	.1	.1	28.5
austria	5	7	.7	.7	29.1
bangladesh	7	1	.1	.1	29.2
barbados	8	3	.3	.3	29.5
belgium	9	2	.2	.2	29.7
burma	11	3	.3	.3	30.0
chile	13	2	.2	.2	30.2
china	14	38	3.5	3.6	33.7
colombia	15	1	.1	.1	33.8
croatia	16	8	.7	.8	34.6
cyprus	17	2	.2	.2	34.8
czechoslovakia	18	4	.4	.4	35.2
denmark	19	1	.1	.1	35.2

dominique	20	1	.1	.1	35.3
ecuador	21	5	.5	.5	35.8
egypt	22	5	.5	.5	36.3
el salvador	23	2	.2	.2	36.5
england	24	30	2.8	2.8	39.3
ethiopia	26	1	.1	.1	39.4
fiji	27	1	.1	.1	39.5
france	29	2	.2	.2	39.7
germany	30	16	1.5	1.5	41.2
greece	31	50	4.7	4.7	45.9
grenada	32	3	.3	.3	46.1
guatemala	33	1	.1	.1	46.2
guyana	34	26	2.4	2.4	48.7
holland	35	6	.6	.6	49.2
hong kong	36	22	2.1	2.1	51.3
hungary	37	8	.7	.8	52.1
india	38	50	4.7	4.7	56.8
indonesia	39	3	.3	.3	57.0
iran	40	8	.7	.8	57.8
iraq	41	2	.2	.2	58.0
ireland	42	5	.5	.5	58.5
isle of man	43	1	.1	.1	58.6
israel	44	11	1.0	1.0	59.6
italy	45	115	10.7	10.8	70.4
jamaica	46	34	3.2	3.2	73.6
japan	47	1	.1	.1	73.7
jordan	48	2	.2	.2	73.9
kenya	49	9	.8	.8	74.7
korea	50	10	.9	.9	75.7
laos	51	2	.2	.2	75.8
latvia	52	1	.1	.1	75.9
lebanon	53	6	.6	.6	76.5
macao	55	1	.1	.1	76.6
macedonia	56	5	.5	.5	77.1
malaysia	57	4	.4	.4	77.4
malta	58	9	.8	.8	78.3
morocco	59	2	.2	.2	78.5
mozambique	60	1	.1	.1	78.6
nairobi	61	1	.1	.1	78.7
pakistan	65	7	.7	.7	79.3
peru	68	2	.2	.2	79.5
philippines	69	27	2.5	2.5	82.0
poland	70	22	2.1	2.1	84.1
portugal	71	43	4.0	4.0	88.2
romania	72	4	.4	.4	88.5
russia	73	8	.7	.8	89.3
St. Lucia	74	2	.2	.2	89.5
St. Kitts	75	1	.1	.1	89.6
St. vincent	76	1	.1	.1	89.7
scotland	78	5	.5	.5	90.1
sicily	79	2	.2	.2	90.3
slovenia	81	3	.3	.3	90.6
somalia	82	1	.1	.1	90.7

south africa	84	8	.7	.8	91.4
south korea	85	2	.2	.2	91.6
sri lanka	86	9	.8	.8	92.5
sudan	87	1	.1	.1	92.6
switzerland	88	2	.2	.2	92.8
syria	89	3	.3	.3	93.0
taiwan	90	4	.4	.4	93.4
tanzania	91	2	.2	.2	93.6
trinidad	93	22	2.1	2.1	95.7
turkey	94	2	.2	.2	95.9
ukraine	96	3	.3	.3	96.1
usa	97	7	.7	.7	96.8
ussr	98	1	.1	.1	96.9
vietnam	100	10	.9	.9	97.8
wales	101	2	.2	.2	98.0
yugoslavia	102	11	1.0	1.0	99.1
zaire	103	1	.1	.1	99.2
ghana	104	4	.4	.4	99.5
netherlands	105	1	.1	.1	99.6
bahrain	107	1	.1	.1	99.7
serbia	111	1	.1	.1	99.8
uruguay	112	1	.1	.1	99.9
dominican republic	113	1	.1	.1	100.0
.		8	.7	Missing	
Total		1072	100.0	100.0	

Valid cases 1064

MCOUNTRY mother's country of origin

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
canada	1	325	30.3	30.4	30.4
afghanistan	2	4	.4	.4	30.8
argentina	3	3	.3	.3	31.1
austria	5	3	.3	.3	31.4
bangladesh	7	1	.1	.1	31.5
barbados	8	3	.3	.3	31.7
belgium	9	3	.3	.3	32.0
brazil	10	1	.1	.1	32.1
chile	13	2	.2	.2	32.3
china	14	26	2.4	2.4	34.7
colombia	15	1	.1	.1	34.8
croatia	16	5	.5	.5	35.3
cyprus	17	3	.3	.3	35.6
czechoslovakia	18	2	.2	.2	35.8
denmark	19	1	.1	.1	35.9
dominique	20	1	.1	.1	36.0
ecuador	21	6	.6	.6	36.5

egypt	22	6	.6	.6	37.1
el salvador	23	2	.2	.2	37.3
england	24	29	2.7	2.7	40.0
estonia	25	1	.1	.1	40.1
fiji	27	1	.1	.1	40.2
finland	28	1	.1	.1	40.3
france	29	2	.2	.2	40.4
germany	30	12	1.1	1.1	41.6
greece	31	42	3.9	3.9	45.5
grenada	32	3	.3	.3	45.8
guatemala	33	1	.1	.1	45.9
guyana	34	25	2.3	2.3	48.2
holland	35	4	.4	.4	48.6
hong kong	36	34	3.2	3.2	51.8
hungary	37	6	.6	.6	52.3
india	38	45	4.2	4.2	56.6
indonesia	39	3	.3	.3	56.8
iran	40	9	.8	.8	57.7
ireland	42	5	.5	.5	58.1
israel	44	10	.9	.9	59.1
italy	45	99	9.2	9.3	68.4
jamaica	46	36	3.4	3.4	71.7
japan	47	2	.2	.2	71.9
jordan	48	1	.1	.1	72.0
kenya	49	7	.7	.7	72.7
korea	50	10	.9	.9	73.6
laos	51	2	.2	.2	73.8
latvia	52	1	.1	.1	73.9
lebanon	53	7	.7	.7	74.5
lithuania	54	2	.2	.2	74.7
macedonia	56	4	.4	.4	75.1
malaysia	57	4	.4	.4	75.5
malta	58	5	.5	.5	75.9
morocco	59	4	.4	.4	76.3
mozambique	60	2	.2	.2	76.5
norway	64	1	.1	.1	76.6
pakistan	65	8	.7	.7	77.3
palestine	66	1	.1	.1	77.4
peru	68	2	.2	.2	77.6
philippines	69	31	2.9	2.9	80.5
poland	70	26	2.4	2.4	83.0
portugal	71	40	3.7	3.7	86.7
romania	72	7	.7	.7	87.4
russia	73	7	.7	.7	88.0
St. Lucia	74	1	.1	.1	88.1
St. Kitts	75	1	.1	.1	88.2
St. vincent	76	1	.1	.1	88.3
saudi Arabia	77	1	.1	.1	88.4
scotland	78	14	1.3	1.3	89.7
sicily	79	3	.3	.3	90.0
singapore	80	1	.1	.1	90.1
slovenia	81	4	.4	.4	90.4
somalia	82	1	.1	.1	90.5

south africa	84	8	.7	.7	91.3
south korea	85	2	.2	.2	91.5
sri lanka	86	9	.8	.8	92.3
sudan	87	1	.1	.1	92.4
switzerland	88	1	.1	.1	92.5
syria	89	2	.2	.2	92.7
taiwan	90	9	.8	.8	93.5
tanzania	91	2	.2	.2	93.7
tobago	92	1	.1	.1	93.8
trinidad	93	20	1.9	1.9	95.7
turkey	94	1	.1	.1	95.8
uganda	95	2	.2	.2	96.0
ukraine	96	1	.1	.1	96.1
usa	97	10	.9	.9	97.0
ussr	98	1	.1	.1	97.1
vietnam	100	9	.8	.8	97.9
wales	101	1	.1	.1	98.0
yugoslavia	102	11	1.0	1.0	99.1
ghana	104	4	.4	.4	99.4
bosnia	106	2	.2	.2	99.6
bahrain	107	1	.1	.1	99.7
kuwait	108	1	.1	.1	99.8
rhodesia	109	1	.1	.1	99.9
uruguay	112	1	.1	.1	100.0
.		4	.4	Missing	
	Total	1072	100.0	100.0	
Valid cases	1068				

IGS Immigrant/Generational Status - Canadian

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Immigrant	0	243	22.7	22.9	22.9
Student born in Cana	1	447	41.7	42.2	65.1
Student & one parent	2	124	11.6	11.7	76.8
Student and parents	3	246	22.9	23.2	100.0
.		12	1.1	Missing	
	Total	1072	100.0	100.0	

Valid cases 1060

LANGUAGE language spoken at home

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
english	1	747	69.7	69.9	69.9
italian	2	31	2.9	2.9	72.8
korean	3	9	.8	.8	73.6
greek	4	30	2.8	2.8	76.4
portugese	5	25	2.3	2.3	78.8
chinese	6	8	.7	.7	79.5
cantonese	7	40	3.7	3.7	83.3
mandarin	8	4	.4	.4	83.6
filipino	9	1	.1	.1	83.7
polish	10	14	1.3	1.3	85.0
russian	11	3	.3	.3	85.3
hebrew	12	8	.7	.7	86.1
arabic	13	6	.6	.6	86.6
hindu	15	5	.5	.5	87.1
spanish	16	15	1.4	1.4	88.5
persian	17	6	.6	.6	89.1
armenian	18	5	.5	.5	89.5
assyrian	19	1	.1	.1	89.6
bengali	21	2	.2	.2	89.8
katchi	22	2	.2	.2	90.0
croatian	23	3	.3	.3	90.3
danish	24	1	.1	.1	90.4
hungarian	25	3	.3	.3	90.6
lithuanian	27	1	.1	.1	90.7
punjabi	28	10	.9	.9	91.7
romanian	29	1	.1	.1	91.8
serbian	30	1	.1	.1	91.9
slovakian	31	2	.2	.2	92.0
slovenian	32	1	.1	.1	92.1
tagalong	34	2	.2	.2	92.3
tamil	35	3	.3	.3	92.6
urdu	37	4	.4	.4	93.0
vietnamese	38	3	.3	.3	93.3
yugoslavian	39	1	.1	.1	93.4
portuguese and english	40	8	.7	.7	94.1
hebrew and english	41	2	.2	.2	94.3
english and czeckoslovakian	42	1	.1	.1	94.4
english and tagalog	43	1	.1	.1	94.5
english and singalese	44	1	.1	.1	94.6
bengali and spanish	45	1	.1	.1	94.7
filipino and english	46	1	.1	.1	94.8
greek and english	47	8	.7	.7	95.5
english and spanish	48	4	.4	.4	95.9
english and arabic	49	2	.2	.2	96.1
polish and english	50	1	.1	.1	96.2
english and french	51	1	.1	.1	96.3
macedonian	52	3	.3	.3	96.5

english and filipino	53	1	.1	.1	96.6
english and cutchi	54	1	.1	.1	96.7
english and sele	55	1	.1	.1	96.8
english and chinese	56	3	.3	.3	97.1
english and serbian	57	2	.2	.2	97.3
english and bengali	58	1	.1	.1	97.4
somali	59	1	.1	.1	97.5
english and lao	60	1	.1	.1	97.6
cantonese and english	61	2	.2	.2	97.8
italian and english	62	4	.4	.4	98.1
vietnamese and english	63	1	.1	.1	98.2
german	64	2	.2	.2	98.4
german and gujurati	65	1	.1	.1	98.5
punjabi and english	66	1	.1	.1	98.6
gujurati	67	3	.3	.3	98.9
serbo/croatian	70	1	.1	.1	99.0
english/urdu	71	4	.4	.4	99.3
persian/danish/english	72	1	.1	.1	99.4
english/patois	73	1	.1	.1	99.5
latvian/english	74	1	.1	.1	99.6
punjabi/hindi/english	75	1	.1	.1	99.7
hindi/punjabi	76	1	.1	.1	99.8
english/hindi	77	1	.1	.1	99.9
korean /english	78	1	.1	.1	100.0
.		3	.3	Missing	
Total		1072	100.0	100.0	

Valid cases 1069

MINORITY member of minority

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
minority member	1	329	30.7	31.3	31.3
not a minority member	2	723	67.4	68.7	100.0
.		20	1.9	Missing	
Total		1072	100.0	100.0	

Valid cases 1052

CULTURE culture identified with					Valid	Cum
Value	Label	Value	Frequency	Percent	Percent	Percent
1	afro-american	13	13	1.2	1.4	1.4
2	afro-canadian	11	11	1.0	1.2	2.5
3	afro-carribean	1	1	.1	.1	2.7
4	alternative/freak	2	2	.2	.2	2.9
5	american	1	1	.1	.1	3.0
6	anglophone	1	1	.1	.1	3.1
7	arab	5	5	.5	.5	3.6
8	armenian	6	6	.6	.6	4.2
9	asian	13	13	1.2	1.4	5.6
10	asian-indian	2	2	.2	.2	5.8
11	athiest	2	2	.2	.2	6.0
12	athiest/canadian	2	2	.2	.2	6.3
13	black	13	13	1.2	1.4	7.6
14	british	4	4	.4	.4	8.1
16	canadian	126	126	11.8	13.4	21.4
17	canadian/anglo-saxon	1	1	.1	.1	21.5
18	canadian/austrian	1	1	.1	.1	21.6
19	canadian/belgian	1	1	.1	.1	21.7
20	chinese/canadian	7	7	.7	.7	22.5
21	canadian/croat	3	3	.3	.3	22.8
23	canadian/egyptian	1	1	.1	.1	22.9
24	canadian/filipino	4	4	.4	.4	23.3
25	canadian/german	3	3	.3	.3	23.6
26	canadian/greek	13	13	1.2	1.4	25.0
27	canadian/hungarian	1	1	.1	.1	25.1
28	canadian/italian	30	30	2.8	3.2	28.3
29	canadian/japanese	2	2	.2	.2	28.5
30	canadian/jewish	1	1	.1	.1	28.6
31	canadian/korean	1	1	.1	.1	28.7
32	canadian/polish	3	3	.3	.3	29.1
33	canadian/portugese	6	6	.6	.6	29.7
34	canadian/scottish	4	4	.4	.4	30.1
35	canadian/serb	2	2	.2	.2	30.3
36	canadian/south asian	2	2	.2	.2	30.5
38	canadian/ukranian	1	1	.1	.1	30.6
39	caribbean	1	1	.1	.1	30.8
40	carribbean/canadian	2	2	.2	.2	31.0
41	catholic	4	4	.4	.4	31.4
42	caucasian male	1	1	.1	.1	31.5
43	caucasian female	1	1	.1	.1	31.6
44	caucasian	26	26	2.4	2.8	34.4
45	chinese	52	52	4.9	5.5	39.9
47	chinese/vietnamese	1	1	.1	.1	40.0
48	canadian/indian	1	1	.1	.1	40.1
49	chinese slaviv canadian	1	1	.1	.1	40.2
50	christian-canadian	1	1	.1	.1	40.3
51	christianity	2	2	.2	.2	40.5
52	croatian	1	1	.1	.1	40.6
53	dutch	1	1	.1	.1	40.7

east indian	54	20	1.9	2.1	42.8
eastern european	56	2	.2	.2	43.1
ecuador/spanish	57	1	.1	.1	43.2
english canadian	58	2	.2	.2	43.4
european/canadian	66	3	.3	.3	43.7
european	67	16	1.5	1.7	45.4
female	68	1	.1	.1	45.5
Filipino	69	11	1.0	1.2	46.7
finnish	70	1	.1	.1	46.8
franco/ontarian	71	1	.1	.1	46.9
french canadian	73	4	.4	.4	47.3
french/british	74	1	.1	.1	47.4
french	75	1	.1	.1	47.5
gay	76	1	.1	.1	47.6
german/native indian	77	1	.1	.1	47.7
german	78	3	.3	.3	48.0
goan	79	1	.1	.1	48.1
greek	80	20	1.9	2.1	50.3
greek/cypriot	81	2	.2	.2	50.5
greek orthodox	82	1	.1	.1	50.6
greek/austrian	83	1	.1	.1	50.7
guyanese/indian	84	1	.1	.1	50.8
guyanese	85	1	.1	.1	50.9
hindu/east indian	86	1	.1	.1	51.0
hispanic	87	5	.5	.5	51.5
hungarian	88	1	.1	.1	51.6
hungarian self culture	89	2	.2	.2	51.9
indian/austrian	90	1	.1	.1	52.0
indian/filipino/canadian	91	2	.2	.2	52.2
indian	92	14	1.3	1.5	53.7
indian/irish	93	2	.2	.2	53.9
indian/muslim	94	1	.1	.1	54.0
indo-carribean	95	1	.1	.1	54.1
indonesian	96	2	.2	.2	54.3
irish	97	5	.5	.5	54.8
israeli	98	2	.2	.2	55.0
italian/european	99	1	.1	.1	55.1
italian	100	57	5.3	6.0	61.2
italian/french	101	1	.1	.1	61.3
jamaican chinese	102	2	.2	.2	61.5
jamaican/african/canadian	103	2	.2	.2	61.7
jewish/israeli	104	1	.1	.1	61.8
jewish	105	65	6.1	6.9	68.7
korean	106	7	.7	.7	69.5
laosian	107	1	.1	.1	69.6
latin american	108	4	.4	.4	70.0
latino/jewish	109	1	.1	.1	70.1
latino	110	3	.3	.3	70.4
lebanese	111	1	.1	.1	70.5
macedonéan	112	4	.4	.4	70.9
maltese	113	1	.1	.1	71.0
marratska	114	1	.1	.1	71.2
melato	116	1	.1	.1	71.3

middle eastern	117	1	.1	.1	71.4
mixed	118	1	.1	.1	71.5
muslim	119	5	.5	.5	72.0
native canadian	120	1	.1	.1	72.1
none	121	26	2.4	2.8	74.9
north american	122	3	.3	.3	75.2
oriental	123	3	.3	.3	75.5
pakistani	125	3	.3	.3	75.8
pakistani-indian	126	1	.1	.1	75.9
persian	127	2	.2	.2	76.1
polish	128	8	.7	.8	77.0
portugese	129	18	1.7	1.9	78.9
portugese/guyanese	130	1	.1	.1	79.0
protestant	132	1	.1	.1	79.1
punjab/indian	133	1	.1	.1	79.2
russian	136	1	.1	.1	79.3
scottish	137	2	.2	.2	79.5
sephardic jew	139	1	.1	.1	79.6
sikh	141	5	.5	.5	80.2
slovenian	142	1	.1	.1	80.3
south asian	144	10	.9	1.1	81.3
south asian muslim	145	1	.1	.1	81.4
south east asian	147	3	.3	.3	81.8
south american	148	1	.1	.1	81.9
sri lankan	149	2	.2	.2	82.1
sudanese/egyptian coptic	150	1	.1	.1	82.2
tamil	152	1	.1	.1	82.3
ukranian/slovenia	153	1	.1	.1	82.4
ukranian	154	1	.1	.1	82.5
vietnamese	155	2	.2	.2	82.7
was	156	5	.5	.5	83.2
WASP	157	7	.7	.7	84.0
west indian	159	19	1.8	2.0	86.0
west indian/canadian	160	2	.2	.2	86.2
west indian with south asian descent	161	1	.1	.1	86.3
white	162	20	1.9	2.1	88.4
white male	163	4	.4	.4	88.9
white canadian	164	5	.5	.5	89.4
white female	166	2	.2	.2	89.6
white/hispanic	167	1	.1	.1	89.7
white/catholic	168	2	.2	.2	89.9
white caucasian	169	3	.3	.3	90.2
woman	170	3	.3	.3	90.6
anglo saxon	175	9	.8	1.0	91.5
serbian	176	2	.2	.2	91.7
greek/macedonian	177	2	.2	.2	91.9
english	178	6	.6	.6	92.6
russian/jewish	179	1	.1	.1	92.7
egyptian/coptic	180	1	.1	.1	92.8
caucasian/canadian	181	1	.1	.1	92.9
british/caucasian	182	1	.1	.1	93.0
canadian/french/italian	183	1	.1	.1	93.1

east asian	184	4	.4	.4	93.5
black canadian	185	3	.3	.3	93.8
german english/european	186	1	.1	.1	94.0
eurasian	187	1	.1	.1	94.1
white female caucasian	188	3	.3	.3	94.4
persian/european	189	1	.1	.1	94.5
black west indian	190	1	.1	.1	94.6
canadian/french canadian	191	1	.1	.1	94.7
filipino/dutch	192	1	.1	.1	94.8
hindu	193	1	.1	.1	94.9
anglosaxon-caucasian	194	3	.3	.3	95.2
african	195	4	.4	.4	95.7
jamaican	196	2	.2	.2	95.9
north american india	197	1	.1	.1	96.0
canadian british	198	1	.1	.1	96.1
white christian north american	199	1	.1	.1	96.2
canadian-italian rom. catholic	200	1	.1	.1	96.3
german scottish	202	1	.1	.1	96.4
caucasian portuguese	203	1	.1	.1	96.5
mennonite/christian	204	1	.1	.1	96.6
jamaxian/mulatto/canadian	205	1	.1	.1	96.7
helenic/canadian	207	1	.1	.1	96.8
caucasian/german/scottish	208	1	.1	.1	96.9
arab/south asian	209	1	.1	.1	97.0
jewish/english/canadian	210	1	.1	.1	97.1
canadian/irish/english	211	1	.1	.1	97.2
iranian	212	1	.1	.1	97.3
canadian/macedonian	213	2	.2	.2	97.6
slavic	214	1	.1	.1	97.7
canadian/asian	219	1	.1	.1	97.8
canadian maltese	220	1	.1	.1	97.9
black east indian	221	1	.1	.1	98.0
polish/french	222	1	.1	.1	98.1
ukranian/english	223	1	.1	.1	98.2
british/scottish	224	1	.1	.1	98.3
spanish	226	3	.3	.3	98.6
black/jamaican-canadian	227	1	.1	.1	98.7
jewish/european	228	1	.1	.1	98.8
afro-american/canadian	230	1	.1	.1	98.9
korean/german	231	1	.1	.1	99.0
east and west indian	232	1	.1	.1	99.2
irish/canadian	233	1	.1	.1	99.3
portuguese/european	235	1	.1	.1	99.4
chinese malaysian	236	1	.1	.1	99.5
japanese	237	1	.1	.1	99.6
humanitarian cultural	238	1	.1	.1	99.7
indo west indian	239	1	.1	.1	99.8
persian iranian	241	1	.1	.1	99.9
irish/french	242	1	.1	.1	100.0
.		129	12.0	Missing	
Total		1072	100.0	100.0	
Valid cases	943				

FATHEDUC father's education

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
elementary school	1	134	12.5	12.6	12.6
some high school	2	139	13.0	13.1	25.7
high school	3	107	10.0	10.1	35.7
technical training	4	165	15.4	15.5	51.2
community college	5	120	11.2	11.3	62.5
some university	6	77	7.2	7.2	69.7
B.A.	7	145	13.5	13.6	83.4
some graduate work	8	39	3.6	3.7	87.0
M.A./Ph.D.	9	36	3.4	3.4	90.4
professional degree	10	102	9.5	9.6	100.0
.	.	8	.7	Missing	
Total		1072	100.0	100.0	
Mean	4.818	Std dev	2.758	Minimum	1.000
Maximum	10.000				

Valid cases 1064

MOTHEDEC mother's education

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
elementary school	1	123	11.5	11.6	11.6
some high school	2	138	12.9	13.0	24.6
high school	3	234	21.8	22.0	46.6
technical training	4	119	11.1	11.2	57.8
community college	5	150	14.0	14.1	71.9
some university	6	84	7.8	7.9	79.8
B.A.	7	140	13.1	13.2	92.9
some graduate work	8	22	2.1	2.1	95.0
M.A./Ph.D.	9	23	2.1	2.2	97.2
professional degree	10	30	2.8	2.8	100.0
.	.	9	.8	Missing	
Total		1072	100.0	100.0	
Mean	4.228	Std dev	2.294	Minimum	1.000
Maximum	10.000				

Valid cases 1063

FINANCES

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
below average means	1	94	8.8	8.8	8.8
average means	2	661	61.7	61.9	70.8
above average means	3	282	26.3	26.4	97.2
well above average m	4	30	2.8	2.8	100.0
.	.	5	.5	Missing	
	Total	1072	100.0	100.0	

Mean 2.232 Std dev .641 Minimum 1.000
 Maximum 4.000

Valid cases 1067

FAMUNIV family member attending or has attended university

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1	517	48.2	48.5	48.5
no	2	548	51.1	51.5	100.0
.	.	7	.7	Missing	
	Total	1072	100.0	100.0	

Valid cases 1065

UNIVOUT ability to afford to attend university outside Toronto

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1	300	28.0	28.0	28.0
probably could pay	2	239	22.3	22.3	50.3
probably could not pay	3	158	14.7	14.8	65.1
no	4	267	24.9	24.9	90.0
don't know	9	107	10.0	10.0	100.0
.	.	1	.1	Missing	
	Total	1072	100.0	100.0	

Valid cases 1071

OAC Ontario Academic Credit average

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	55	1	.1	.1	.1
	59	1	.1	.1	.2
	60	2	.2	.2	.4
	62	1	.1	.1	.5
	65	4	.4	.4	.9
	66	1	.1	.1	1.0
	67	1	.1	.1	1.1
	68	2	.2	.2	1.3
	69	2	.2	.2	1.5
	70	21	2.0	2.1	3.5
	71	13	1.2	1.3	4.8
	72	15	1.4	1.5	6.3
	73	42	3.9	4.1	10.4
	74	51	4.8	5.0	15.4
	75	91	8.5	8.9	24.3
	76	69	6.4	6.8	31.0
	77	50	4.7	4.9	35.9
	78	100	9.3	9.8	45.7
	79	66	6.2	6.5	52.2
	80	86	8.0	8.4	60.6
	81	51	4.8	5.0	65.6
	82	43	4.0	4.2	69.8
	83	52	4.9	5.1	74.9
	84	38	3.5	3.7	78.6
	85	47	4.4	4.6	83.2
	86	33	3.1	3.2	86.4
	87	38	3.5	3.7	90.1
	88	20	1.9	2.0	92.1
	89	21	2.0	2.1	94.1
	90	22	2.1	2.2	96.3
	91	16	1.5	1.6	97.8
	92	7	.7	.7	98.5
	93	9	.8	.9	99.4
	94	3	.3	.3	99.7
	95	2	.2	.2	99.9
	96	1	.1	.1	100.0
	.	50	4.7	Missing	
	Total	1072	100.0	100.0	

Mean 79.752 Std dev 5.658 Minimum 55.000
 Maximum 96.000

Valid cases 1022

EXPAVR expected average in Fall term

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
A+	1	5	.5	.5	.5
A	2	173	16.1	16.3	16.8
A-	3	29	2.7	2.7	19.5
B+	4	209	19.5	19.7	39.2
B	5	500	46.6	47.1	86.3
B-	6	38	3.5	3.6	89.9
C+	7	57	5.3	5.4	95.3
C	8	47	4.4	4.4	99.7
C-	9	1	.1	.1	99.8
D	11	2	.2	.2	100.0
.	.	11	1.0	Missing	
Total		1072	100.0	100.0	

Mean 4.532 Std dev 1.538 Minimum 1.000
 Maximum 11.000

Valid cases 1061

EXPAVR2 expected average at Winter term

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
A	2	30	2.8	7.4	7.4
A-	3	2	.2	.5	7.9
B+	4	72	6.7	17.8	25.7
B	5	168	15.7	41.6	67.3
B-	6	25	2.3	6.2	73.5
C+	7	58	5.4	14.4	87.9
C	8	44	4.1	10.9	98.8
C-	9	3	.3	.7	99.5
D+	10	1	.1	.2	99.8
D	11	1	.1	.2	100.0
.	.	668	62.3	Missing	
Total		1072	100.0	100.0	

Mean 5.322 Std dev 1.630 Minimum 2.000
 Maximum 11.000

Valid cases 404

PARYORK parental advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	290	27.1	27.1	27.1
important	2	199	18.6	18.6	45.7
neutral	3	280	26.1	26.2	71.9
not important	4	138	12.9	12.9	84.8
not at all important	5	149	13.9	13.9	98.8
don't know	9	13	1.2	1.2	100.0
.	.	3	.3	Missing	
		-----	-----	-----	
	Total	1072	100.0	100.0	

Valid cases 1069

FAMYORK family member advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	87	8.1	8.3	8.3
important	2	126	11.8	12.0	20.2
neutral	3	213	19.9	20.2	40.4
not important	4	165	15.4	15.7	56.1
not at all important	5	410	38.2	38.9	95.0
don't know	9	53	4.9	5.0	100.0
.	.	18	1.7	Missing	
		-----	-----	-----	
	Total	1072	100.0	100.0	

Valid cases 1054

PEERYORK friend advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	93	8.7	8.7	8.7
important	2	211	19.7	19.8	28.6
neutral	3	280	26.1	26.3	54.9
not important	4	191	17.8	18.0	72.9
not at all important	5	272	25.4	25.6	98.5
don't know	9	16	1.5	1.5	100.0
.	.	9	.8	Missing	
		-----	-----	-----	
	Total	1072	100.0	100.0	

Valid cases 1063

TEACHYRK teacher advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	71	6.6	6.7	6.7
important	2	141	13.2	13.3	20.0
neutral	3	203	18.9	19.2	39.2
not important	4	176	16.4	16.6	55.9
not at all important	5	414	38.6	39.1	95.0
don't know	9	53	4.9	5.0	100.0
.	.	14	1.3	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1058

GUIDYORK guidance counsellors

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	55	5.1	5.2	5.2
important	2	102	9.5	9.7	14.9
neutral	3	169	15.8	16.0	31.0
not important	4	173	16.1	16.4	47.4
not at all important	5	473	44.1	44.9	92.3
don't know	9	81	7.6	7.7	100.0
.	.	19	1.8	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1053

CURRYORK current student advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	62	5.8	5.9	5.9
important	2	141	13.2	13.4	19.3
neutral	3	251	23.4	23.8	43.1
not important	4	134	12.5	12.7	55.8
not at all important	5	392	36.6	37.2	93.1
don't know	9	73	6.8	6.9	100.0
.	.	19	1.8	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1053

FORMYORK former student advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	51	4.8	4.8	4.8
important	2	105	9.8	10.0	14.8
neutral	3	155	14.5	14.7	29.6
not important	4	134	12.5	12.7	42.3
not at all important	5	491	45.8	46.7	89.0
don't know	9	116	10.8	11.0	100.0
.	.	20	1.9	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1052

REPYORK york rep advice about York

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very important	1	45	4.2	4.3	4.3
important	2	91	8.5	8.7	13.0
neutral	3	173	16.1	16.5	29.5
not important	4	143	13.3	13.6	43.1
not at all important	5	468	43.7	44.7	87.8
don't know	9	128	11.9	12.2	100.0
.	.	24	2.2	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1048

ACADPREP academically prepared for university (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	15	1.4	1.5	1.5
disagree	2	64	6.0	6.2	7.7
neutral	3	369	34.4	36.0	43.7
agree	4	410	38.2	40.0	83.7
strongly agree	5	167	15.6	16.3	100.0
.	.	47	4.4	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Mean 3.634 Std dev .878 Minimum 1.000
Maximum 5.000

Valid cases 1025

ACADPRE2 academically prepared in for university (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	5	.5	1.2	1.2
disagree	2	29	2.7	7.2	8.5
neutral	3	132	12.3	32.8	41.3
agree	4	184	17.2	45.8	87.1
strongly agree	5	52	4.9	12.9	100.0
.	.	670	62.5	Missing	
Total		1072	100.0	100.0	

Mean 3.619 Std dev .846 Minimum 1.000
 Maximum 5.000
 Valid cases 402

EMOTPREP emotionally prepared for university (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	34	3.2	3.3	3.3
disagree	2	114	10.6	11.1	14.5
neutral	3	296	27.6	28.9	43.4
agree	4	337	31.4	32.9	76.3
strongly agree	5	243	22.7	23.7	100.0
.	.	48	4.5	Missing	
Total		1072	100.0	100.0	

Mean 3.626 Std dev 1.064 Minimum 1.000
 Maximum 5.000
 Valid cases 1024

EMOTPRE2 emotionally prepared for University (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	10	.9	2.5	2.5
disagree	2	36	3.4	8.9	11.4
neutral	3	100	9.3	24.8	36.1
agree	4	168	15.7	41.6	77.7
strongly agree	5	90	8.4	22.3	100.0
.	.	668	62.3	Missing	
Total		1072	100.0	100.0	

Mean 3.723 Std dev .987 Minimum 1.000
 Maximum 5.000
 Valid cases 404

WORKHABT prepared for university-work habits (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	44	4.1	4.2	4.2
disagree	2	134	12.5	12.9	17.1
neutral	3	378	35.3	36.3	53.5
agree	4	337	31.4	32.4	85.9
strongly agree	5	147	13.7	14.1	100.0
.	.	32	3.0	Missing	
Total		1072	100.0	100.0	
Mean	3.393	Std dev	1.017	Minimum	1.000
Maximum	5.000				
Valid cases	1040				

WORKHBT2 prepared for univ. re work habits (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	22	2.1	5.4	5.4
disagree	2	79	7.4	19.6	25.0
neutral	3	137	12.8	33.9	58.9
agree	4	127	11.8	31.4	90.3
strongly agree	5	39	3.6	9.7	100.0
.	.	668	62.3	Missing	
Total		1072	100.0	100.0	
Mean	3.203	Std dev	1.037	Minimum	1.000
Maximum	5.000				
Valid cases	404				

DRIVE drive to succeed in university (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	8	.7	.8	.8
disagree	2	30	2.8	2.9	3.7
neutral	3	237	22.1	22.9	26.6
agree	4	412	38.4	39.9	66.5
strongly agree	5	346	32.3	33.5	100.0
.	.	39	3.6	Missing	
Total		1072	100.0	100.0	
Mean	4.024	Std dev	.866	Minimum	1.000
Maximum	5.000				
Valid cases	1033				

DRIVE2 drive to succeed in university (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	8	.7	2.0	2.0
disagree	2	27	2.5	6.8	8.9
neutral	3	115	10.7	29.1	38.0
agree	4	157	14.6	39.7	77.7
strongly agree	5	88	8.2	22.3	100.0
.	.	677	63.2	Missing	
Total		1072	100.0	100.0	

Mean	3.734	Std dev	.949	Minimum	1.000
Maximum	5.000				
Valid cases	395				

HSSUCCSS could have achieved greater success in high school

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	37	3.5	3.5	3.5
disagree	2	58	5.4	5.5	9.0
neutral	3	123	11.5	11.7	20.7
agree	4	207	19.3	19.6	40.3
strongly agree	5	630	58.8	59.7	100.0
.	.	17	1.6	Missing	
Total		1072	100.0	100.0	

Mean	4.265	Std dev	1.086	Minimum	1.000
Maximum	5.000				
Valid cases	1055				

T1SUCCSS could have achieved higher marks in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	12	1.1	2.9	2.9
disagree	2	26	2.4	6.4	9.3
neutral	3	49	4.6	12.0	21.3
agree	4	105	9.8	25.7	47.1
strongly agree	5	208	19.4	51.0	98.0
.	.	8	.7	2.0	100.0
.	.	664	61.9	Missing	
Total		1072	100.0	100.0	

Mean	4.272	Std dev	1.253	Minimum	1.000
Maximum	9.000				
Valid cases	408				

SPEAKENG ease with speaking english

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	15	1.4	1.4	1.4
disagree	2	21	2.0	2.0	3.4
neutral	3	37	3.5	3.5	6.8
agree	4	109	10.2	10.2	17.0
strongly agree	5	889	82.9	83.0	100.0
.	.	1	.1	Missing	
Total		1072	100.0	100.0	

Mean 4.714 Std dev .748 Minimum 1.000
 Maximum 5.000

Valid cases 1071

READENG ease with reading english

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	21	2.0	2.0	2.0
disagree	2	14	1.3	1.3	3.3
neutral	3	35	3.3	3.3	6.5
agree	4	101	9.4	9.4	16.0
strongly agree	5	898	83.8	84.0	100.0
.	.	3	.3	Missing	
Total		1072	100.0	100.0	

Mean 4.722 Std dev .762 Minimum 1.000
 Maximum 5.000

Valid cases 1069

CONVENG ease with following conversation in english

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	20	1.9	1.9	1.9
disagree	2	9	.8	.8	2.7
neutral	3	23	2.1	2.2	4.9
agree	4	49	4.6	4.6	9.5
strongly agree	5	965	90.0	90.5	100.0
.	.	6	.6	Missing	
Total		1072	100.0	100.0	

Mean 4.811 Std dev .688 Minimum 1.000
 Maximum 5.000

Valid cases 1066

WRITEENG ease with writing english

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	101	9.4	9.6	9.6
disagree	2	69	6.4	6.6	16.2
neutral	3	50	4.7	4.8	20.9
agree	4	68	6.3	6.5	27.4
strongly agree	5	764	71.3	72.6	100.0
.	.	20	1.9	Missing	
Total		1072	100.0	100.0	
Mean	4.260	Median	5.000	Mode	5.000
Std dev	1.354				
Valid cases	1052				

ACQUA1 academic quality of York (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	256	23.9	23.9	23.9
good	2	517	48.2	48.3	72.2
average	3	213	19.9	19.9	92.1
poor	4	12	1.1	1.1	93.2
very poor	5	1	.1	.1	93.3
no idea	9	72	6.7	6.7	100.0
.	.	1	.1	Missing	
Total		1072	100.0	100.0	
Valid cases	1071				

T2ACQUA1 academic quality of York after Term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	55	5.1	13.9	13.9
good	2	180	16.8	45.5	59.3
average	3	112	10.4	28.3	87.6
poor	4	41	3.8	10.4	98.0
very poor	5	8	.7	2.0	100.0
.	.	676	63.1	Missing	
Total		1072	100.0	100.0	
Mean	2.412	Std dev	.922	Minimum	1.000
Maximum	5.000				
Valid cases	396				

ACQUA2 academic quality of Faculty of Arts (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	281	26.2	26.2	26.2
good	2	455	42.4	42.5	68.7
average	3	170	15.9	15.9	84.6
poor	4	14	1.3	1.3	85.9
very poor	5	4	.4	.4	86.3
no idea	9	147	13.7	13.7	100.0
.	.	1	.1	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

T2AQUA2 academic quality of Faculty of Arts after Term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	42	3.9	11.7	11.7
good	2	168	15.7	46.8	58.5
average	3	100	9.3	27.9	86.4
poor	4	37	3.5	10.3	96.7
very poor	5	12	1.1	3.3	100.0
.	.	713	66.5	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Mean 2.468 Std dev .945 Minimum 1.000
 Maximum 5.000

Valid cases 359

ACQUA3 academic quality of students (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	96	9.0	9.0	9.0
good	2	350	32.6	32.7	41.6
average	3	426	39.7	39.8	81.4
poor	4	35	3.3	3.3	84.7
very poor	5	7	.7	.7	85.3
no idea	9	157	14.6	14.7	100.0
.	.	1	.1	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1071

T2AQUA3 academic quality of York students after Term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very good	1	16	1.5	4.2	4.2
good	2	116	10.8	30.1	34.3
average	3	209	19.5	54.3	88.6
poor	4	36	3.4	9.4	97.9
very poor	5	8	.7	2.1	100.0
.	.	687	64.1	Missing	
Total		1072	100.0	100.0	

Mean 2.751 Std dev .764 Minimum 1.000
 Maximum 5.000
 Valid cases 385

CHALLENG courses will be intellectually challenging (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	5	.5	.5	.5
disagree	2	35	3.3	3.5	4.0
neutral	3	194	18.1	19.5	23.5
agree	4	387	36.1	38.8	62.3
strongly agree	5	376	35.1	37.7	100.0
.	.	75	7.0	Missing	
Total		1072	100.0	100.0	

Mean 4.097 Std dev .865 Minimum 1.000
 Maximum 5.000
 Valid cases 997

CHALLENG2 courses are intellectually challenging (Winter)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	5	.5	1.2	1.2
disagree	2	31	2.9	7.7	9.0
neutral	3	147	13.7	36.6	45.5
agree	4	162	15.1	40.3	85.8
strongly agree	5	57	5.3	14.2	100.0
.	.	670	62.5	Missing	
Total		1072	100.0	100.0	

Mean 3.585 Std dev .870 Minimum 1.000
 Maximum 5.000
 Valid cases 402

PROFHELP professors will go out of their way to help you (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	78	7.3	9.5	9.5
disagree	2	171	16.0	20.9	30.4
neutral	3	377	35.2	46.0	76.4
agree	4	141	13.2	17.2	93.7
strongly agree	5	52	4.9	6.3	100.0
.	.	253	23.6	Missing	
Total		1072	100.0	100.0	

Mean 2.900 Std dev 1.004 Minimum 1.000
 Maximum 5.000
 Valid cases 819

PRFHELP2 professors will go out of their way to help you (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	39	3.6	10.5	10.5
disagree	2	82	7.6	22.2	32.7
neutral	3	154	14.4	41.6	74.3
agree	4	83	7.7	22.4	96.8
strongly agree	5	12	1.1	3.2	100.0
.	.	702	65.5	Missing	
Total		1072	100.0	100.0	

Mean 2.857 Std dev .990 Minimum 1.000
 Maximum 5.000
 Valid cases 370

OPINVAL students' opinions will be valued in class (Fall term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	27	2.5	3.0	3.0
disagree	2	88	8.2	9.8	12.8
neutral	3	361	33.7	40.2	53.1
agree	4	282	26.3	31.4	84.5
strongly agree	5	139	13.0	15.5	100.0
.	.	175	16.3	Missing	
Total		1072	100.0	100.0	

Mean 3.466 Std dev .968 Minimum 1.000
 Maximum 5.000
 Valid cases 897

OPINVAL2 students opinions are valued in class (Winter term)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	10	.9	2.6	2.6
disagree	2	49	4.6	12.7	15.3
neutral	3	143	13.3	37.1	52.5
agree	4	141	13.2	36.6	89.1
strongly agree	5	42	3.9	10.9	100.0
.	.	687	64.1	Missing	
Total		1072	100.0	100.0	

Mean 3.405 Std dev .934 Minimum 1.000
 Maximum 5.000

Valid cases 385

PROFEFF professors put a lot of effort into teaching (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	14	1.3	1.5	1.5
disagree	2	65	6.1	7.2	8.7
neutral	3	305	28.5	33.6	42.2
agree	4	345	32.2	38.0	80.2
strongly agree	5	180	16.8	19.8	100.0
.	.	163	15.2	Missing	
Total		1072	100.0	100.0	

Mean 3.673 Std dev .923 Minimum 1.000
 Maximum 5.000

Valid cases 909

PROFEFF2 professors put a lot of effort into teaching (Winter)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	10	.9	2.5	2.5
disagree	2	36	3.4	9.1	11.7
neutral	3	146	13.6	37.1	48.7
agree	4	156	14.6	39.6	88.3
strongly agree	5	46	4.3	11.7	100.0
.	.	678	63.2	Missing	
Total		1072	100.0	100.0	

Mean 3.487 Std dev .906 Minimum 1.000
 Maximum 5.000

Valid cases 394

PROFDEV professor interest in students' academic development (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	92	8.6	10.3	10.3
disagree	2	208	19.4	23.3	33.6
neutral	3	336	31.3	37.6	71.2
agree	4	183	17.1	20.5	91.7
strongly agree	5	74	6.9	8.3	100.0
.	.	179	16.7	Missing	
Total		1072	100.0	100.0	

Mean 2.932 Std dev 1.085 Minimum 1.000
Maximum 5.000
Valid cases 893

PROFDEV2 professors interest in students' academic development (Winter)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	29	2.7	7.5	7.5
disagree	2	89	8.3	23.1	30.6
neutral	3	172	16.0	44.6	75.1
agree	4	82	7.6	21.2	96.4
strongly agree	5	14	1.3	3.6	100.0
.	.	686	64.0	Missing	
Total		1072	100.0	100.0	

Mean 2.904 Std dev .939 Minimum 1.000
Maximum 5.000
Valid cases 386

PROFREAS professor will not make unreasonable academic demands (Fall)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	70	6.5	8.1	8.1
disagree	2	138	12.9	16.0	24.2
neutral	3	361	33.7	42.0	66.2
agree	4	214	20.0	24.9	91.0
strongly agree	5	77	7.2	9.0	100.0
.	.	212	19.8	Missing	
Total		1072	100.0	100.0	

Mean 3.105 Std dev 1.041 Minimum 1.000
Maximum 5.000
Valid cases 860

PRFREAS2 professors don't make unreasonable academic demands (Winter)

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1	16	1.5	4.1	4.1
disagree	2	55	5.1	14.1	18.2
neutral	3	151	14.1	38.7	56.9
agree	4	140	13.1	35.9	92.8
strongly agree	5	28	2.6	7.2	100.0
.	.	682	63.6	Missing	
Total		1072	100.0	100.0	

Mean	3.279	Std dev	.936	Minimum	1.000
Maximum	5.000				
Valid cases	390				

PCONCRS contact with professor re course related problems

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	268	25.0	67.5	67.5
1-2 times	1	93	8.7	23.4	90.9
3-4 times	2	20	1.9	5.0	96.0
5+ times	3	16	1.5	4.0	100.0
.	.	675	63.0	Missing	
Total		1072	100.0	100.0	

Mean	.456	Std dev	.769	Minimum	.000
Maximum	3.000				
Valid cases	397				

PCONINF contact with professor re basic information about academic programme

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	272	25.4	68.5	68.5
1-2 times	1	92	8.6	23.2	91.7
3-4 times	2	22	2.1	5.5	97.2
5+ times	3	11	1.0	2.8	100.0
.	.	675	63.0	Missing	
Total		1072	100.0	100.0	

Mean	.426	Std dev	.723	Minimum	.000
Maximum	3.000				
Valid cases	397				

PCONINT contact with professor re intellectual issues

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	344	32.1	86.9	86.9
1-2 times	1	37	3.5	9.3	96.2
3-4 times	2	8	.7	2.0	98.2
5+ times	3	7	.7	1.8	100.0
	.	676	63.1	Missing	
	Total	1072	100.0	100.0	

Mean .187 Std dev .547 Minimum .000
Maximum 3.000

Valid cases 396

PCONISS contact with professor re campus issues

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	370	34.5	93.2	93.2
1-2 times	1	23	2.1	5.8	99.0
3-4 times	2	3	.3	.8	99.7
5+ times	3	1	.1	.3	100.0
	.	675	63.0	Missing	
	Total	1072	100.0	100.0	

Mean .081 Std dev .323 Minimum .000
Maximum 3.000

Valid cases 397

PCONOCC contact with professor re future occupation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	349	32.6	88.1	88.1
1-2 times	1	37	3.5	9.3	97.5
3-4 times	2	6	.6	1.5	99.0
5+ times	3	4	.4	1.0	100.0
	.	676	63.1	Missing	
	Total	1072	100.0	100.0	

Mean .154 Std dev .471 Minimum .000
Maximum 3.000

Valid cases 396

PCONPER contact with professor re personal problems

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	376	35.1	94.7	94.7
1-2 times	1	15	1.4	3.8	98.5
3-4 times	2	1	.1	.3	98.7
5+ times	3	5	.5	1.3	100.0
	.	675	63.0	Missing	
	Total	1072	100.0	100.0	

Mean .081 Std dev .394 Minimum .000
 Maximum 3.000
 Valid cases 397

CONSOC contact with professor socially

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	353	32.9	88.9	88.9
1-2 times	1	34	3.2	8.6	97.5
3-4 times	2	4	.4	1.0	98.5
5+ times	3	6	.6	1.5	100.0
	.	675	63.0	Missing	
	Total	1072	100.0	100.0	

Mean .151 Std dev .490 Minimum .000
 Maximum 3.000
 Valid cases 397

TACONCRS contact with T.A. re course related problems

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	218	20.3	55.1	55.1
1-2 times	1	112	10.4	28.3	83.3
3-4 times	2	46	4.3	11.6	94.9
5+ times	3	20	1.9	5.1	100.0
	.	676	63.1	Missing	
	Total	1072	100.0	100.0	

Mean .667 Std dev .871 Minimum .000
 Maximum 3.000
 Valid cases 396

TACONINF contact with T.A. re basic information about academic programme

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	290	27.1	73.6	73.6
1-2 times	1	66	6.2	16.8	90.4
3-4 times	2	27	2.5	6.9	97.2
5+ times	3	11	1.0	2.8	100.0
.	.	678	63.2	Missing	
Total		1072	100.0	100.0	
Mean	.388	Std dev	.737	Minimum	.000
Maximum	3.000				
Valid cases	394				

TACONINT contact with T.A. re intellectual issues

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	331	30.9	84.0	84.0
1-2 times	1	35	3.3	8.9	92.9
3-4 times	2	18	1.7	4.6	97.5
5+ times	3	10	.9	2.5	100.0
.	.	678	63.2	Missing	
Total		1072	100.0	100.0	
Mean	.256	Std dev	.660	Minimum	.000
Maximum	3.000				
Valid cases	394				

TACONISS contact with T.A. re campus issues

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	376	35.1	94.9	94.9
1-2 times	1	16	1.5	4.0	99.0
3-4 times	2	3	.3	.8	99.7
5+ times	3	1	.1	.3	100.0
.	.	676	63.1	Missing	
Total		1072	100.0	100.0	
Mean	.063	Std dev	.299	Minimum	.000
Maximum	3.000				
Valid cases	396				

TACONOCC contact with T.A. re future occupation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	372	34.7	93.9	93.9
1-2 times	1	18	1.7	4.5	98.5
3-4 times	2	6	.6	1.5	100.0
	.	676	63.1	Missing	
	Total	1072	100.0	100.0	
Mean	.076	Std dev	.317	Minimum	.000
Maximum	2.000				
Valid cases	396				

TACONPER contact with T.A. re personal problems

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	375	35.0	95.2	95.2
1-2 times	1	15	1.4	3.8	99.0
3-4 times	2	3	.3	.8	99.7
5+ times	3	1	.1	.3	100.0
	.	678	63.2	Missing	
	Total	1072	100.0	100.0	
Mean	.061	Std dev	.296	Minimum	.000
Maximum	3.000				
Valid cases	394				

TACONSOC contact with prof socially

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
zero	0	347	32.4	87.6	87.6
1-2 times	1	36	3.4	9.1	96.7
3-4 times	2	10	.9	2.5	99.2
5+ times	3	3	.3	.8	100.0
	.	676	63.1	Missing	
	Total	1072	100.0	100.0	
Mean	.164	Std dev	.483	Minimum	.000
Maximum	3.000				
Valid cases	396				

WORRY1 being able to make friends

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	220	20.5	20.6	20.6
not very worried	2	253	23.6	23.6	44.2
neutral	3	305	28.5	28.5	72.7
worried	4	196	18.3	18.3	91.0
very worried	5	80	7.5	7.5	98.5
not applicable	9	16	1.5	1.5	100.0
.	.	2	.2	Missing	
Total		1072	100.0	100.0	

Valid cases 1070

WWORRY01 being able to make friends in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	118	11.0	29.0	29.0
not very worried	2	94	8.8	23.1	52.1
neutral	3	120	11.2	29.5	81.6
worried	4	54	5.0	13.3	94.8
very worried	5	13	1.2	3.2	98.0
not applicable	9	8	.7	2.0	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

WORRY2 having enough money

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	157	14.6	14.6	14.6
not very worried	2	166	15.5	15.5	30.1
neutral	3	219	20.4	20.4	50.6
worried	4	261	24.3	24.3	74.9
very worried	5	264	24.6	24.6	99.5
not applicable	9	5	.5	.5	100.0
Total		1072	100.0	100.0	

Valid cases 1072

WWORRY02 having enough money in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	32	3.0	7.9	7.9
not very worrried	2	48	4.5	11.8	19.7
neutral	3	86	8.0	21.1	40.8
worried	4	108	10.1	26.5	67.3
very worried	5	128	11.9	31.4	98.8
not applicable	9	5	.5	1.2	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

WORRY3 abilit to do university level work

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	76	7.1	7.1	7.1
not very worrried	2	215	20.1	20.1	27.1
neutral	3	322	30.0	30.0	57.2
worried	4	273	25.5	25.5	82.6
very worried	5	185	17.3	17.3	99.9
not applicable	9	1	.1	.1	100.0
Total		1072	100.0	100.0	

Valid cases 1072

WWORRY03 ability to do university level work in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	42	3.9	10.3	10.3
not very worrried	2	89	8.3	21.9	32.2
neutral	3	124	11.6	30.5	62.7
worried	4	107	10.0	26.3	88.9
very worried	5	45	4.2	11.1	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Mean 3.059 Std dev 1.156 Minimum 1.000
 Maximum 5.000

Valid cases 407

WORRY4 worry about having suitable accommodation in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	531	49.5	49.7	49.7
not very worrrried	2	152	14.2	14.2	64.0
neutral	3	151	14.1	14.1	78.1
worried	4	72	6.7	6.7	84.8
very worried	5	42	3.9	3.9	88.8
not applicable	9	120	11.2	11.2	100.0
.	.	4	.4	Missing	
	Total	1072	100.0	100.0	

Valid cases 1068

WWORRY04 worry about having suitable accomodation in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	198	18.5	48.6	48.6
not very worrrried	2	73	6.8	17.9	66.6
neutral	3	68	6.3	16.7	83.3
worried	4	34	3.2	8.4	91.6
very worried	5	9	.8	2.2	93.9
not applicable	9	25	2.3	6.1	100.0
.	.	665	62.0	Missing	
	Total	1072	100.0	100.0	

Valid cases 407

WORRY5 satisfy family and friends in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	179	16.7	16.7	16.7
not very worrrried	2	196	18.3	18.3	35.0
neutral	3	230	21.5	21.5	56.5
worried	4	235	21.9	21.9	78.4
very worried	5	203	18.9	19.0	97.4
not applicable	9	28	2.6	2.6	100.0
.	.	1	.1	Missing	
	Total	1072	100.0	100.0	

Valid cases 1071

WWORRY05 satisfy family and friends in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	56	5.2	13.8	13.8
not very worrried	2	74	6.9	18.2	31.9
neutral	3	95	8.9	23.3	55.3
worried	4	109	10.2	26.8	82.1
very worried	5	61	5.7	15.0	97.1
not applicable	9	12	1.1	2.9	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

WORRY6 handling workload in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	46	4.3	4.3	4.3
not very worrried	2	128	11.9	12.0	16.3
neutral	3	268	25.0	25.1	41.4
worried	4	353	32.9	33.1	74.5
very worried	5	270	25.2	25.3	99.8
not applicable	9	2	.2	.2	100.0
.	.	5	.5	Missing	
Total		1072	100.0	100.0	

Valid cases 1067

WWORRY06 handling workload in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	18	1.7	4.4	4.4
not very worrried	2	55	5.1	13.6	18.0
neutral	3	135	12.6	33.3	51.4
worried	4	131	12.2	32.3	83.7
very worried	5	66	6.2	16.3	100.0
.	.	667	62.2	Missing	
Total		1072	100.0	100.0	

Valid cases 405

WORRY7 ability to get good grades

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	79	7.4	7.4	7.4
not very worrried	2	172	16.0	16.1	23.5
neutral	3	232	21.6	21.7	45.2
worried	4	304	28.4	28.4	73.6
very worried	5	282	26.3	26.4	100.0
.	.	3	.3	Missing	
Total		1072	100.0	100.0	

Valid cases 1069

WWORRY07 ability to get good grades in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	28	2.6	6.9	6.9
not very worrried	2	66	6.2	16.3	23.2
neutral	3	100	9.3	24.6	47.8
worried	4	119	11.1	29.3	77.1
very worried	5	93	8.7	22.9	100.0
.	.	666	62.1	Missing	
Total		1072	100.0	100.0	

Valid cases 406

WORRY8 ability to handle stress

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	88	8.2	8.3	8.3
not very worrried	2	165	15.4	15.6	23.8
neutral	3	279	26.0	26.3	50.1
worried	4	266	24.8	25.1	75.2
very worried	5	262	24.4	24.7	99.9
not applicabile	9	1	.1	.1	100.0
.	.	11	1.0	Missing	
Total		1072	100.0	100.0	

Valid cases 1061

WWORRY08 ability to handle stress in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	25	2.3	6.2	6.2
not very worried	2	75	7.0	18.6	24.8
neutral	3	119	11.1	29.5	54.3
worried	4	106	9.9	26.3	80.6
very worried	5	77	7.2	19.1	99.8
not applicable	9	1	.1	.2	100.0
.	.	669	62.4	Missing	
Total		1072	100.0	100.0	

Valid cases 403

WORRY9 part-time job to meet expenses in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	215	20.1	20.1	20.1
not very worried	2	135	12.6	12.6	32.7
neutral	3	205	19.1	19.1	51.8
worried	4	188	17.5	17.6	69.4
very worried	5	203	18.9	19.0	88.3
not applicable	9	125	11.7	11.7	100.0
.	.	1	.1	Missing	
Total		1072	100.0	100.0	

Valid cases 1071

WWORRY09 part-time job to meet expenses in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	78	7.3	19.3	19.3
not very worried	2	73	6.8	18.0	37.3
neutral	3	87	8.1	21.5	58.8
worried	4	73	6.8	18.0	76.8
very worried	5	58	5.4	14.3	91.1
not applicable	9	36	3.4	8.9	100.0
.	.	667	62.2	Missing	
Total		1072	100.0	100.0	

Valid cases 405

PARTTIME parttime work during year

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1	203	18.9	50.2	50.2
no	2	170	15.9	42.1	92.3
didn't want	3	31	2.9	7.7	100.0
.	.	668	62.3	Missing	
Total		1072	100.0	100.0	

WORRY10 ability to get into chosen programme in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	189	17.6	17.6	17.6
not very worrrried	2	150	14.0	14.0	31.6
neutral	3	237	22.1	22.1	53.7
worried	4	220	20.5	20.5	74.3
very worried	5	238	22.2	22.2	96.5
not applicable	9	38	3.5	3.5	100.0
Total		1072	100.0	100.0	

Valid cases 1072

WWORRY10 ability to get into chosen programme in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	24	2.2	5.9	5.9
not very worrrried	2	57	5.3	14.0	19.9
neutral	3	87	8.1	21.4	41.3
worried	4	106	9.9	26.0	67.3
very worried	5	123	11.5	30.2	97.5
not applicable	9	10	.9	2.5	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

WORRY11 interference from family related problem in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	352	32.8	32.8	32.8
not very worrried	2	198	18.5	18.5	51.3
neutral	3	205	19.1	19.1	70.4
worried	4	154	14.4	14.4	84.8
very worried	5	101	9.4	9.4	94.2
not applicable	9	62	5.8	5.8	100.0
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1072

WWORRY11 interference from family related problem in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	112	10.4	27.6	27.6
not very worrried	2	104	9.7	25.6	53.2
neutral	3	75	7.0	18.5	71.7
worried	4	62	5.8	15.3	86.9
very worried	5	35	3.3	8.6	95.6
not applicable	9	18	1.7	4.4	100.0
.		666	62.1	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 406

WORRY12 finding summer job in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	367	34.2	34.3	34.3
not very worrried	2	140	13.1	13.1	47.4
neutral	3	193	18.0	18.0	65.4
worried	4	156	14.6	14.6	80.0
very worried	5	154	14.4	14.4	94.4
not applicable	9	60	5.6	5.6	100.0
.		2	.2	Missing	
		-----	-----	-----	
Total		1072	100.0	100.0	

Valid cases 1070

WWORRY12 finding summer job in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	110	10.3	27.0	27.0
not very worrried	2	42	3.9	10.3	37.3
neutral	3	53	4.9	13.0	50.4
worried	4	76	7.1	18.7	69.0
very worried	5	107	10.0	26.3	95.3
not applicable	9	19	1.8	4.7	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

WORRY13 family meddling in academic decision in term 1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	433	40.4	40.4	40.4
not very worrried	2	203	18.9	18.9	59.3
neutral	3	172	16.0	16.0	75.4
worried	4	124	11.6	11.6	86.9
very worried	5	89	8.3	8.3	95.2
not applicable	9	51	4.8	4.8	100.0
Total		1072	100.0	100.0	

Valid cases 1072

WWORRY13 family meddling in academic decision in term 2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
not at all worried	1	159	14.8	39.1	39.1
not very worrried	2	93	8.7	22.9	61.9
neutral	3	73	6.8	17.9	79.9
worried	4	40	3.7	9.8	89.7
very worried	5	23	2.1	5.7	95.3
not applicable	9	19	1.8	4.7	100.0
.	.	665	62.0	Missing	
Total		1072	100.0	100.0	

Valid cases 407

Appendix C: BDI

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one.

Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

2. 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

5. 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.
 - 1 I feel I may be punished.
 - 2 I expect to be punished.
 - 3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.
 - 1 I am disappointed in myself.
 - 2 I am disgusted with myself.
 - 3 I hate myself.

8. 0 I don't feel I am worse than anybody else.
 - 1 I am critical of myself for my weaknesses or mistakes.
 - 2 I blame myself all the time for my faults.
 - 3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.
 - 1 I have thoughts of killing myself, but I would not carry them out.
 - 2 I would like to kill myself.
 - 3 I would kill myself if I had the chance.

10. 0 I don't cry anymore than usual.
 - 1 I cry more now than I used to.
 - 2 I cry all the time now.
 - 3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated now than I ever am.
 - 1 I get annoyed or irritated more easily than I used to be.
 - 2 I feel irritated all the time now.
 3. I don't get irritated at all by the things that used to irritate me.

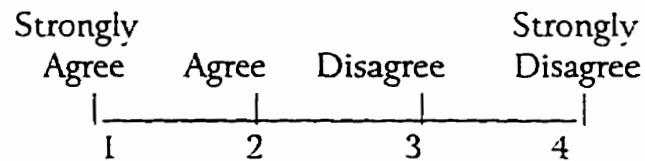
12. 0 I have not lost interest in other people.
 - 1 I am less interested in other people than I used to be.
 - 2 I have lost most of my interest in other people.
 - 3 I have lost all of my interest in other people.

20. 0 I am no more worried about my health than usual.
- 1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
 - 2 I am very worried about physical problems and it is hard to think of much else.
 - 3 I am so worried about my physical problems, that I cannot think of anything else.
21. 0 I have not noticed any changes in my interest in sex.
- 1 I am less interested in sex than I used to be.
 - 2 I am much less interested in sex now.
 - 3 I have lost interest in sex completely.

Appendix D: Self-Esteem

FEELINGS ABOUT YOURSELF

Please indicate your agreement or disagreement with each of the following statements.

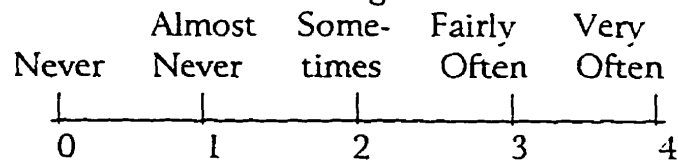


I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4
I feel that I have a number of good qualities.	1	2	3	4
All in all, I am inclined to feel that I am a failure.	1	2	3	4
I am able to do things as well as most people.	1	2	3	4
I feel I do not have much to be proud of.	1	2	3	4
I take a positive attitude toward myself.	1	2	3	4
On the whole, I am satisfied with myself.	1	2	3	4
I wish I could have more respect for myself.	1	2	3	4
I certainly feel useless at times.	1	2	3	4
At times I think I am no good at all.	1	2	3	4

Appendix E: PSS

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate *how often* you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:



In the last month, how often have you...

been upset because of something that happened unexpectedly?

felt that you were unable to control the important things in your life?

felt nervous and "stressed"?

dealt successfully with irritating life's hassles?

felt that you were effectively coping with important changes that were occurring in your life?

felt confident about your ability to handle your personal problems?

felt that things were going your way?

found that you could not cope with all the things that you had to do?

been able to control irritations in your life?

felt that you were on top of things?

been angered because of things that happened that were outside of your control?

found yourself thinking about things that you have to accomplish?

been able to control the way you spend your time?

felt difficulties were piling up so high that you could not overcome them?

Appendix F: POPRS

Perception of Parental Reciprocity Scale (POPRS)

General Scale Items

1. Parents don't share their opinions with you, they tell you what to do.
2. Parents advise you what's good for them and not what's good for you.
3. There is mutual respect between me and my parents even in areas in which we disagree.
4. My parents would never consider discussing their problems with me.
5. I seldom consider discussing my problems with my parents.
When it comes to talking to others, just to be able to clarify my thoughts, I can
6. talk to my mother.
7. talk to my father.
I used to think of my parents as having all the answers. Now . . .
8. I can hardly stand to hear their opinions.
9. I can listen to their opinions and put them in perspective.

Mother/Father Scale Items

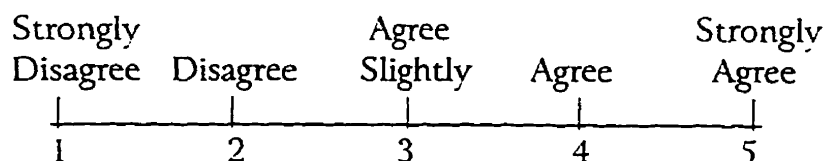
(Mother items are identical to father items when "mother" and "she" are replaced with "father" and "he".)

1. My mother gives me a lot more space than she did before.
2. I often feel that my mother is talking "at" me and not with me.
3. My mother and I can enjoy each other's company and participate in shared activities.
4. I feel that my mother is approachable to discuss problems within our family.
5. My mother is comfortable expressing her doubts and fears with me.
6. Mutual respect is a term that I can use to describe my relationship with my mother.
7. I am able to be myself with my mother.
8. I am usually very cautious about what I say to my mother.
9. When I try to share my concerns with my mother, her response usually makes me sorry I began the conversation.

10. I can communicate as well with my mother as I can with my friends.
My mother and I can meaningfully discuss the following issues:
11. politics
12. my relationship with a significant other
13. career decisions
14. religion
15. sexual relations
16. university decisions
17. personal views on femininity/masculinity

Appendix G: PAQ

For each of the following statements choose the number on the 5-point scale that best describes how that statement applies to you and your mother/father. Try to read and think about each statement as it applies to you and your mother/father during your years growing up at home. We are looking for your overall impression regarding each statement. Don't spend a lot of time on any one item and be sure not to omit any items.



(Mother items are identical to father items when "mother" and "she" are replaced with "father" and "he".)

- _____ While I was growing up, my mother felt that in a well-run home, the children should have their way in the family as often as parents do.
- _____ Even if her children didn't agree with her, my mother felt that it was for our own good if we were forced to conform to what she thought was right.
- _____ Whenever my mother told me to do something as I was growing up, she expected me to do it immediately without asking any questions.
- _____ As I was growing up, once family policy had been established, my mother discussed the reasoning behind the policy with the children in the family.
- _____ My mother has always encouraged verbal give-and-take whenever I have felt that family rules and restrictions were unreasonable.
- _____ My mother has always felt that what children need is to be free to make up their own minds and to do what they want to do, even if this does not agree with what their parents might want.
- _____ As I was growing up, my mother did not allow me to question any decision she had made.

- _____ As I was growing up, my mother directed the activities and decisions of the children in the family through reasoning and discipline.
- _____ My mother has always felt that more force should be used by parents in order to get their children to behave the way they are supposed to.
- _____ As I was growing up, my mother did not feel that I needed to obey rules and regulations of behaviour simply because someone in authority had established them.
- _____ As I was growing up, I knew what my mother expected of me in my family, but I also felt free to discuss those expectations with my mother when I felt they were unreasonable.
- _____ My mother felt that wise parents should teach their children early just who is the boss in the family.
- _____ As I was growing up, my mother seldom gave me expectations and guidelines for my behaviour.
- _____ Most of the time as I was growing up, my mother did what the children in the family wanted when making family decisions.
- _____ As the children in my family were growing up, my mother consistently gave us direction and guidance in rational and objective ways.
- _____ As I was growing up, my mother would get very upset if I tried to disagree with her.
- _____ My mother feels that most problems in society would be solved if parents would not restrict their children's activities, decisions, and desires as they are growing up.
- _____ As I was growing up, my mother let me know what behaviour she expected of me, and if I didn't meet those expectations, she punished me.
- _____ As I was growing up, my mother allowed me to decide most things for myself without a lot of direction from her.
- _____ As I was growing up, my mother took the children's opinions into consideration when making family decisions, but she would not decide for something simply because the children wanted it.
- _____ My mother did not view herself as responsible for directing and guiding my behaviour as I was growing up.

- _____ My mother had clear standards of behaviour for the children in our home as I was growing up, but she was willing to adjust those standards to the needs of each of the individual children in the family.
- _____ My mother gave me direction for my behaviour and activities as I was growing up and she expected me to follow her direction, but she was always willing to listen to my concerns and to discuss that direction with me.
- _____ As I was growing up, my mother allowed me to form my own point of view on family matters and she generally allowed me to decide for myself what I was going to do.
- _____ My mother has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don't do what they are supposed to as they are growing up.
- _____ As I was growing up, my mother often told me exactly what she wanted me to do and how she expected me to do it.
- _____ As I was growing up, my mother gave me clear directions for my behaviours and activities, but she was also understanding when I disagreed with her.
- _____ As I was growing up, my mother did not direct the behaviours, activities, and desires of the children in the family.
- _____ As I was growing up, I knew what my mother expected of me in the family and she insisted that I conform to those expectations simply out of respect for her authority.
- _____ As I was growing up, if my mother made a decision in the family that hurt me, she was willing to discuss that decision with me and to admit it if she had made a mistake.

Appendix H: Integrative Complexity & Discussion with Parents

In general, what do you expect university life to be like?

What do you expect classes and school work to be like at university?

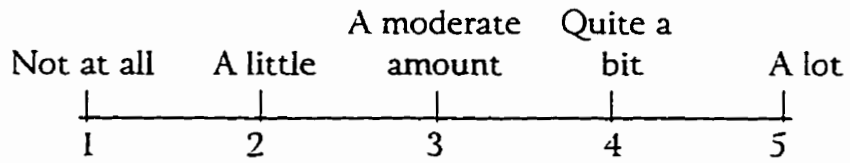
What do you think university social life will be like?

What aspects of university are you looking forward to?

What kinds of things are you fearful or apprehensive about in connection with attending university?

How do you think your sense of who you are or what kind of person you are will change while you are at university?

How much have you discussed the following issues with your parents?



- _____ what university life will be like
- _____ what classes will be like
- _____ what professors will be like
- _____ what social life at university will be like

Appendix I: SPS-P

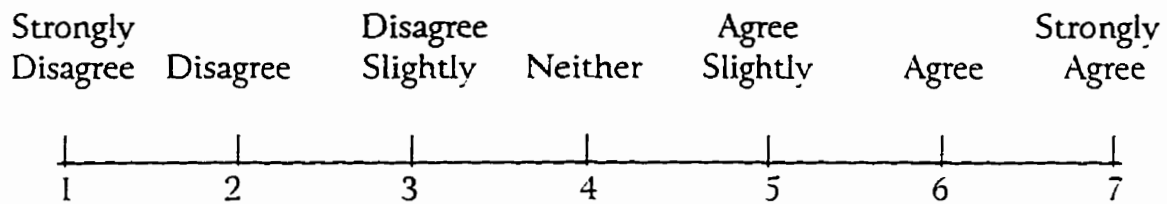
In answering the next set of questions, please think about your current relationship with your parents.

- 1.....NO
- 2.....SOMETIMES
- 3.....YES

- Can you depend on your parents to help you if you really need it? _____
- Do you feel you could not turn to your parents for guidance in times of stress? _____
- Do your parents enjoy the same social activities that you do? _____
- Do you feel personally responsible for the well-being of your parents? _____
- Do you feel your parents do not respect your skills and abilities? _____
- If something went wrong, do you feel that your parents would not come to your assistance? _____
- Does your relationship with your parents provide you with a sense of emotional security and well-being? _____
- Do you feel your competence and skill are recognized by your parents? _____
- Do you feel your parents do not share your interests and concerns? _____
- Do you feel your parents do not really rely on you for their well-being? _____
- Could you turn to your parents for advice if you were having problems? _____
- Do you feel you lack emotional closeness with your parents? _____

Appendix J: LARP - Enabling Independence Subscale

Please indicate your agreement or disagreement with each of the following statements.



I make my own decisions about things that affect me.

1 2 3 4 5 6 7

My parent(s) expect me to take responsibility for my actions.

1 2 3 4 5 6 7

I feel that I control my life.

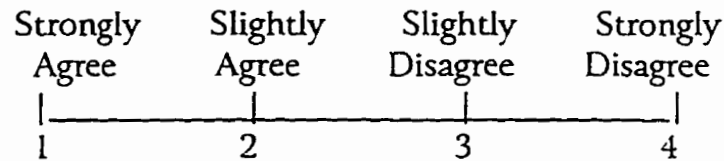
1 2 3 4 5 6 7

My parent(s) encourage me to be independent.

1 2 3 4 5 6 7

Appendix K: PMI - Autonomy Subscale

Please indicate your agreement or disagreement with each of the following statements.



When a job turns out to be much harder than I was told it would be, I don't feel I have to do it perfectly.

It's not very practical to try to decide what kind of job you want because that depends so much on other people.

I can't really say what my interests are.

I find it hard to stick to anything that takes a long time to do.

In a group I prefer to let other people make the decisions.

I never seem to feel the same about myself from one week to the next.

I hate to admit it, but I give up on my work when things go wrong.

You can't be expected to make a success of yourself if you had a bad childhood.

Most people are better liked than I am.

I seldom get behind in my work.

Luck decides most things that happen to me.

My life is pretty empty.

I tend to go from one thing to another before finishing any one of them.

The main reason I'm not more successful is that I have bad luck.
I can't seem to keep people as friends for very long.

I often don't finish work I start.

Someone often has to tell me what to do.

I'm acting like something I'm not a lot of the time.

I often leave my studying unfinished if there are a lot of good TV shows on that evening.

When things go well for me, it is usually not because of anything I myself actually did.

I never know what I'm going to do next.

I believe in working only as hard as I have to.

I feel very uncomfortable if I disagree with what my friends think.

I change the way I feel and act so often that I sometimes wonder who the "real" me is.

It's more important for a job to pay well than for a job to be very interesting.

It is best to agree with others, rather than say what you really think, if it will keep the peace.

Nobody knows what I'm really like.

Very often I forget work I am supposed to do.

I don't know whether I like a new outfit until I find out what my friends think.

I am not really accepted and liked.

Appendix L: Demographics - Time 1

Please complete the following:

1. Student number: _____
2. Sex: Male _____ Female _____
3. Age: _____
4. Year at University: _____
5. Major: _____
6. Marital Status: Single _____ Married _____ Separated/Divorced _____
7. Family Composition: Are your parents...
living together _____ (Go to #10)
separated/divorced _____
mother a widow _____
father a widower _____
8. If your parents are no longer living together, what was your age when this occurred? _____
9. If there is a step-parent involved, what was your age when he/she began to live at your home? _____
10. If you have siblings, please state their age and sex.

11. Present Living Circumstances
with family _____
Who resides there? _____
in residence _____ (Go to #14)
other (please explain) _____
12. Did you apply to live in residence?
Yes _____ No _____
13. Did you receive an offer of residence space?
Yes _____ No _____
14. Primary language spoken at home:

15. Were you born in Canada? Yes _____ No _____
If not, in what country were you born? _____

16. What country was your father born in?

17. What country was your mother born in?

18. Are you a member of a visible minority?
Yes _____ No _____
19. Which cultural/ethnic group do you consider yourself a member of?

20. Financially, do you consider your family to be:
below average means _____
average means _____
above average means _____
well above average means _____
21. What is the highest level of education that your parents received?
- | | Father | Mother |
|--|--------|--------|
| Elementary school or less..... | _____ | _____ |
| Some high school..... | _____ | _____ |
| Completed high school..... | _____ | _____ |
| Some technical, vocational training..... | _____ | _____ |
| Completed community college.. | _____ | _____ |
| Some university..... | _____ | _____ |
| Completed Bachelor's degree..... | _____ | _____ |
| Some work at the graduate level (MA, PhD, etc.)..... | _____ | _____ |
| Completed MA or PhD..... | _____ | _____ |
| Completed Professional Degree (Doctor, Lawyer, Engineer, etc.).. | _____ | _____ |
22. Have any other family members attended (or are currently attending) university? If so, who?
Yes _____ No _____

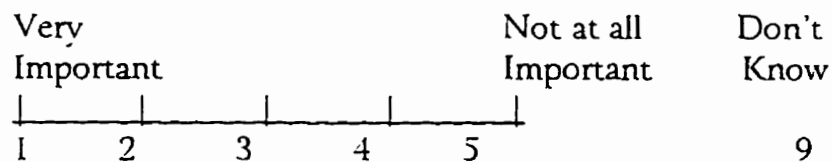
23. What was your average at the time of admission (six OAC courses)?
Average: _____%

24. Overall, what do expect your grade average to be this coming year?
 _____ letter grade

25. Could you afford the cost of going to a university outside of Metropolitan Toronto?

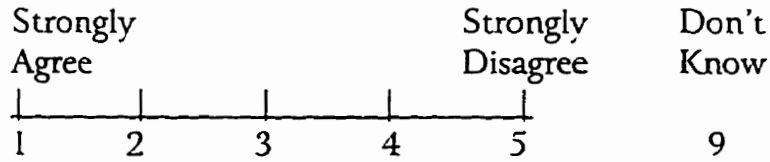
- Yes _____
- Probably could pay the cost _____
- Probably could NOT pay the cost .. _____
- No _____
- Don't know _____

26. Please indicate how important the following people were to your decision to come to York University.



- a) Parents 1 2 3 4 5 9
- b) Other family members 1 2 3 4 5 9
- c) Friends 1 2 3 4 5 9
- d) Teachers 1 2 3 4 5 9
- e) Guidance counsellors 1 2 3 4 5 9
- f) Current York students 1 2 3 4 5 9
- g) Former York students 1 2 3 4 5 9
- h) York representatives 1 2 3 4 5 9
- i) Other (please specify)
 _____ 1 2 3 4 5 9

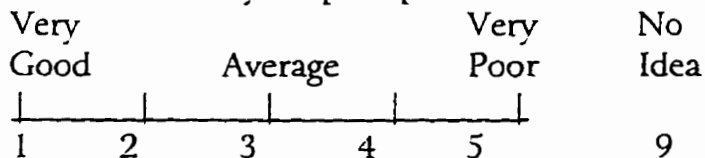
27. Answers in the following section will provide some information on your expectations, your general attitudes and impressions of education, learning, and of yourself. There are no 'right' or 'wrong' answers.



- | | |
|---|-------------|
| a) I feel academically prepared for university. | 1 2 3 4 5 9 |
| b) I am emotionally prepared for university. | 1 2 3 4 5 9 |
| c) If I had worked to my full ability, I could have achieved higher marks in high school. | 1 2 3 4 5 9 |
| d) I am prepared for university in terms of work habits and study skills. | 1 2 3 4 5 9 |
| e) I have the energy and drive to succeed in university. | 1 2 3 4 5 9 |
| f) I have no difficulty in speaking English | 1 2 3 4 5 9 |
| g) I can read English with no problem. | 1 2 3 4 5 9 |
| h) It is difficult for me to write in English. | 1 2 3 4 5 9 |
| i) I can easily follow a conversation in English. | 1 2 3 4 5 9 |
| j) Professors will go out of their way to help you. | 1 2 3 4 5 9 |
| k) Students' opinions will be valued in the classroom. | 1 2 3 4 5 9 |
| l) Courses will be a real intellectual challenge. | 1 2 3 4 5 9 |
| m) Academic standards will be high. | 1 2 3 4 5 9 |

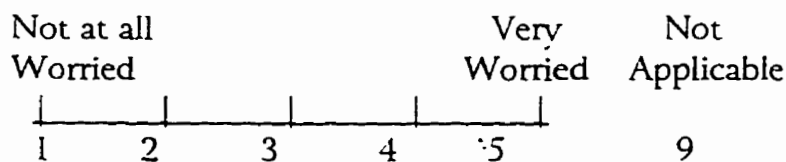
- n) Professors will put a lot of effort into teaching. 1 2 3 4 5 9
- o) Professors will be interested in students' academic development. 1 2 3 4 5 9
- p) Professors will not make unreasonable academic demands on students. 1 2 3 4 5 9

28. Please indicate your perception of the following:



- a) The academic quality of York University. 1 2 3 4 5 9
- b) The academic quality of the Faculty of Arts. 1 2 3 4 5 9
- c) The academic quality of students attending York University. 1 2 3 4 5 9

29. It is not uncommon for students entering university to express a variety of concerns about their environment. We would like to get some indication of what your concerns are.

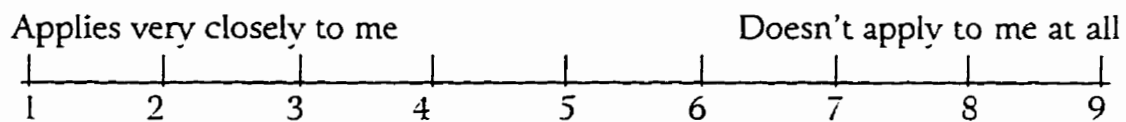


- a) Being able to make friends at university. 1 2 3 4 5 9
- b) Having enough money to meet the expenses involved in attending university. 1 2 3 4 5 9
- c) Having the ability to do university level work. 1 2 3 4 5 9

- | | | | | | | |
|---|---|---|---|---|---|---|
| d) Having suitable accommodation. | 1 | 2 | 3 | 4 | 5 | 9 |
| e) Doing well enough in university to satisfy the expectations of family and friends. | 1 | 2 | 3 | 4 | 5 | 9 |
| f) Handling the work load. | 1 | 2 | 3 | 4 | 5 | 9 |
| g) Having the ability to get good grades. | 1 | 2 | 3 | 4 | 5 | 9 |
| h) Being able to handle stress. | 1 | 2 | 3 | 4 | 5 | 9 |
| i) Having to take a part-time job during the semester to get money to meet expenses. | 1 | 2 | 3 | 4 | 5 | 9 |
| j) Not being able to get into the programme or courses that I want. | 1 | 2 | 3 | 4 | 5 | 9 |
| k) Family related problems interfering with studies. | 1 | 2 | 3 | 4 | 5 | 9 |
| l) Finding a job during the summer. | 1 | 2 | 3 | 4 | 5 | 9 |
| m) My family meddling into my academic decisions. | 1 | 2 | 3 | 4 | 5 | 9 |

Appendix M: SACQ

For each statement, please encircle one number at the point along the continuum which best represents your judgement concerning how closely the statement applies to you at the present time(i.e., within the last several days). Please be sure to answer every item and do not circle more than one number per item.



I feel that I fit in well as part of the York environment.

I have been feeling tense or nervous lately.

I have been keeping up to date on my academic work.

I am meeting as many people, and making as many friends, as I would like at York.

I know why I'm in university and what I want out of it.

I am finding academic work at York difficult.

Lately I have been feeling blue and moody a lot.

I am very involved with social activities in university.

I am adjusting well to university.

I have not been functioning well during examinations.

I have felt tired much of the time lately.

Being on my own, taking more responsibility for myself, has not been easy.

I am satisfied with the level at which I am performing academically.

I have had informal personal contacts with York professors.

I am pleased now about my decision to go to university.

I am pleased now about my decision to attend York in particular.

I am not working as hard as I should at my coursework.

I have several close social ties at York.

My academic goals and purposes are well-defined.

I haven't been able to control my emotions very well lately.

I am not really smart enough for the academic work I am
expected to be doing now.

Lonesomeness for home is a source of difficulty for me right now.

Getting a university degree is very important to me.

My appetite has been good lately.

I haven't been very efficient in the use of study time lately.

I enjoy living in a university residence (Please omit if you do not
live in a residence; any university housing should be regarded as
a residence).

I enjoy writing papers for courses.

I have been having a lot of headaches lately.

I really haven't had much motivation for studying lately.

I am satisfied with the extracurricular activities available at York.

I've given a lot of thought lately to whether I should ask for help from the Counselling and Development Centre, or from a psychotherapist outside of York.

Lately, I have been having doubts regarding the value of a university education.

I am getting along very well with my roommate(s).

(Please omit if you do not have a roommate).

I wish I were at another college or university rather than York.

I've put on (or lost) too much weight recently.

I am satisfied with the number and variety of courses available at York.

I feel that I have enough social skill to get along well in the university setting.

I have been getting angry too easily lately.

Recently, I have had trouble concentrating when I try to study.

I haven't been sleeping very well.

I'm not doing well enough academically for the amount of work I put in.

I am having difficulty feeling at ease with other people at York.

I am satisfied with the quality or the calibre of courses available at York.

I am attending classes regularly.

Sometimes my thinking gets muddled up too easily.

I am satisfied with the extent to which I am participating in social activities at York.

I expect to stay at York for a bachelor's degree.

I haven't been mixing too well lately with individuals I might normally be attracted to.

I worry a lot about my university expenses.

I am enjoying my academic work at York.

I have been feeling lonely a lot at York lately.

I am having a lot of trouble getting started on homework assignments.

I feel I have good control over my life situation at York.

I am satisfied with my programme of courses for this semester.

I have been feeling in good health lately.

I feel I am very different from other students at York, in ways that I don't like.

On balance, I would rather be at home than here.

Most of the things I am interested in are not related to any of my coursework at York.

Lately, I have been giving a lot of thought to transferring to another university.

Lately, I have been giving a lot of thought to dropping out of university altogether and for good.

I find myself giving considerable thought to taking time off from university and finishing later.

Appendix N: Demographics - Time 2

Please complete the following:

1. Student number: _____
2. Sex: Male _____ Female _____
3. Age: _____
4. Are your living accommodations the same as they were in the fall?
Yes _____ No _____
If not, please state where you are currently living and why the change occurred.

5. Did you acquire part-time work during the school year?
Yes _____ No _____ Didn't want _____
6. Overall, what do expect your grade average to be this coming year?
_____ letter grade
7. Answers in the following section will provide some information on how your expectations about university have been met. There are no 'right' or 'wrong' answers.

Strongly Disagree	Strongly Agree	Don't Know
1	2	3
4	5	9

- | | |
|--|-------------|
| a) I feel academically prepared for university. | 1 2 3 4 5 9 |
| b) I am emotionally prepared for university. | 1 2 3 4 5 9 |
| c) If I had worked to my full ability, I could have achieved higher marks this term. | 1 2 3 4 5 9 |
| d) I am prepared for university in terms of work habits and study skills. | 1 2 3 4 5 9 |

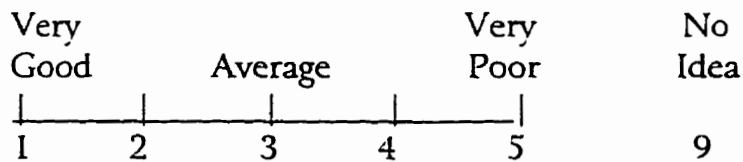
- e) I have the energy and drive to succeed in university. 1 2 3 4 5 9
- f) Professors will go out of their way to help you. 1 2 3 4 5 9
- g) Students' opinions are valued in the classroom. 1 2 3 4 5 9
- h) Courses are a real intellectual challenge. 1 2 3 4 5 9
- i) Academic standards are high. 1 2 3 4 5 9
- j) Professors put a lot of effort into teaching. 1 2 3 4 5 9
- k) Professors are interested in students' academic development. 1 2 3 4 5 9
- l) Professors do not make unreasonable academic demands on students. 1 2 3 4 5 9

8. I have had ____ number of out-of-class contacts of at least 10 minutes in duration with members of the faculty or teaching assistants each month concerning the following issues:

- Choose: 0 times
 1-2 times
 3-4 times
 5+ times

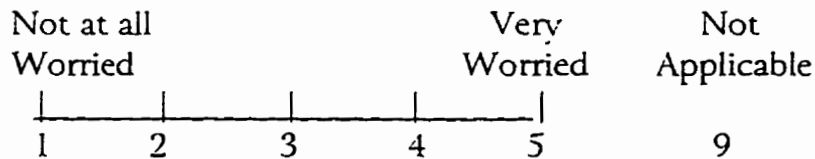
	Faculty	T.A.
a) Help in resolving personal problems	_____	_____
b) Socialize informally	_____	_____
c) Discuss campus issues	_____	_____
d) Plan future occupation	_____	_____
e) Basic information regarding the academic programme	_____	_____
f) Course related problems	_____	_____
g) Discuss intellectual issues	_____	_____

9. Please indicate your perception of the following.



- a) The academic quality of York University. 1 2 3 4 5 9
- b) The academic quality of the Faculty of Arts. 1 2 3 4 5 9
- c) The academic quality of students attending York University. 1 2 3 4 5 9

10. It is not uncommon for students in university to express a variety of concerns about their environment. We would like to get some indication of what your concerns are.



- a) Being able to make friends at university. 1 2 3 4 5 9
- b) Having enough money to meet the expenses involved in attending university. 1 2 3 4 5 9
- c) Having the ability to do university level work. 1 2 3 4 5 9
- d) Having suitable accommodation. 1 2 3 4 5 9
- e) Doing well enough in university to satisfy the expectations of family and friends. 1 2 3 4 5 9
- f) Handling the work load. 1 2 3 4 5 9

- | | | | | | | |
|--|---|---|---|---|---|---|
| g) Having the ability to get good grades. | 1 | 2 | 3 | 4 | 5 | 9 |
| h) Being able to handle stress. | 1 | 2 | 3 | 4 | 5 | 9 |
| i) Having to take a part-time job during the semester to get money to meet expenses. | 1 | 2 | 3 | 4 | 5 | 9 |
| j) Not being able to get into the programme or courses that I want. | 1 | 2 | 3 | 4 | 5 | 9 |
| k) Family related problems interfering with studies. | 1 | 2 | 3 | 4 | 5 | 9 |
| l) Finding a job during the summer. | 1 | 2 | 3 | 4 | 5 | 9 |
| m) My family meddling into my academic decisions. | 1 | 2 | 3 | 4 | 5 | 9 |