

**“I CAN’T GET NO... *SOCIAL* SATISFACTION”:
EXPLORING THE ROLES OF SHYNESS, SOCIABILITY AND
SOCIAL SUPPORT IN THE TRANSITION TO UNIVERSITY**

by

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Abstract

The current study investigated how shyness, sociability, and social support related to students' adjustment during the university transition. Two hundred and sixty-six participants were recruited from a sample of eligible first-year undergraduate psychology students (ages 18-19 years). Self-report questionnaires assessed students' personality (shyness, sociability), social support (from parents and peers), social dissatisfaction (loneliness, homesickness, friendsickness), and adjustment to university (belongingness, general well-being, satisfaction with the university experience). Overall, shyness was positively associated with social dissatisfaction and negatively related to peer support and adjustment. Conversely, sociability was negatively related to social dissatisfaction and positively associated with parental support, peer support, and adjustment. Social dissatisfaction was also found to mediate the associations between shyness and indices of adjustment to university. Results are discussed in terms of the psychological processes that underlie the links between shyness and adjustment during the transition to university. Findings will help identify risk and protective factors preceding student attrition.

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“I Can’t Get No... *Social Satisfaction*”: Exploring the Roles of Shyness, Sociability and Social Support in the Transition to University

Students encounter many challenges during the transition from high school to university. Despite their initial intentions, many students who enter post-secondary education do not finish their degree. This phenomena is known as student *attrition*. In the face of new academic and social pressures, incoming students must adapt not only to a novel learning environment but also to a new social setting in order to successfully adjust to university life. Indeed, a student’s peer group has a significant influence on their personal growth and adjustment during the undergraduate years. The university transition marks the first time that many students leave home, venturing away from the familiarity of high school and the comforts of established peer networks. Students have therefore relocated their lives and left behind friends and family when strong social support is needed most.

As students launch into higher education, a change in their living and learning environment brings with it new experiences as well as new people. This social transition may prove to be particularly challenging for *shy* students. Shyer individuals tend to experience feelings of wariness in the face of social novelty and/or self-consciousness in situations of perceived social evaluation (Asendorpf, 1991; Cheek & Buss, 1981). Along with an interest in achieving their academic objectives, shy students may be faced with additional challenges as they struggle between their desire to feel accepted and included by others, and their inherent hesitancy to approach and interact with unfamiliar peers.

During their first semester of university, students’ efforts are often directed towards maintaining ties with childhood and high school friends, while at the same time

developing new friendships on campus. Since a university student population is typically much larger than that of a high school, students are regularly in the presence of new people and are unlikely to know each student crowding their first-year lecture hall, let alone every person attending the institution (e.g., Bridges, 2000). Accordingly, the interpersonal challenges experienced by shy students in high school may therefore present themselves differently in university due to a lack of intimacy (e.g., Scanlon, 2004). For example, shy students who had difficulty making friends and/or were bullied in high school may instead experience more covert forms of peer rejection (i.e., whispering behind a student's back) or social neglect (i.e., not receiving a party invite) in university. Moreover, since shy individuals tend not to initiate social contacts (e.g., Cheek & Buss, 1981), university peers who do not know shy students well enough may inadvertently exclude them from social invites. Hence, the shy student may not recognize that their reluctance to interact with others may play a role in their own exclusion from social events, as opposed to being excluded as a result of peer victimization. Feelings of loneliness and social isolation therefore become looming threats in the absence of familial and peer support.

When new friendships are not easily formed during the transition, shy students may also have trouble disengaging from pre-university friendships (e.g., Asendorpf, 2000), which could act as a source of comfort and stability as well as a link to the past. As a result, shy students may become preoccupied with thoughts of home and begin to feel as though they do not belong (e.g., Fisher & Hood, 1987), thereby becoming disconnected from other students at university. Due to feelings of social anxiety, shy students may be reluctant to take advantage of on-campus resources such as intervention

programs and Frosh Week activities, which aim to socially integrate incoming students (e.g., Mounts, Valentiner, Anderson, & Boswell, 2006). In turn, these persistent feelings of loneliness, isolation and disconnection may negatively affect shy students' university experience, consequently contributing to academic difficulties and affecting students' health and well-being (e.g., Cheek & Busch, 1981). Without taking advantage of appropriate resources and activities constructed to tackle issues of social isolation, students may be at an increased risk for attrition (e.g., Astin, 1975; Fetters, 1977; Thomas, 2002; Tinto, 1975). Universities therefore have a responsibility to help shy students adjust to their new social environment by assisting students' efforts to develop interpersonal relationships.

The primary goal of this study was to investigate how shyness, sociability, social dissatisfaction and social support relate to students' adjustment during the university transition. In particular, the *moderating* role of social support in the links between shyness and adjustment was examined. It was speculated that positive social support from parents and peers would "buffer" shy students from negative outcomes during the first year of university. That is, although shy students might be more likely to experience feelings of loneliness, homesickness and friendsickness (i.e., a reluctance to disengage from high school friendships), and have more trouble adjusting to university life as compared to their more sociable peers, support from parents and peers may help to alleviate some of these negative outcomes (particularly for shy individuals).

In addition, the *mediating* role of social dissatisfaction in the associations between shyness and indices of adjustment to university was also explored. It was expected that the experience of social dissatisfaction would partially account for associations between

shyness and adjustment difficulties during the transition to university. Accordingly, shy students may experience greater feelings of loneliness, homesickness, and friendsickness, which may lead to fewer feelings of belongingness, poorer well-being, and less satisfaction with the university experience.

In the following sections, a conceptual overview of shyness from birth to young adulthood is presented. Shyness is then discussed within the context of the university transition, and associated parental and peer support networks will be explored. Following the examination of a theoretical model of institutional departure, a description and results of the current study will be provided. Several research implications are then discussed, followed by an examination of associated limitations and future directions.

Conceptual Overview of Shyness

Shyness is a personality trait characterized by feelings of awkwardness, anxiousness and discomfort in social situations (Asendorpf, 1991; Cheek & Buss, 1981; Crozier, 1979). Shyer individuals are reluctant to initiate social interactions and are quieter and more socially withdrawn than other individuals (Coplan, Prakash, O'Neil, & Armer, 2004; Crozier, 1979; Garcia-Coll, Kagan, & Reznick, 1984). Shyness has been associated with lower levels of self-esteem and self-confidence, fewer peer relationships, and inhibition of self-expression (Crozier, 1995; Martin, 1994; Zimbardo, 1990).

Shyness is a relatively stable concept across the life span (Kagan, Reznick, & Snidman, 1988). Shyer children tend to be socially withdrawn and therefore spend less time interacting with peers than non-shy children (Rubin, Coplan, & Bowker, 2009). It has been suggested that social fear and anxiety felt in the presence of peers inhibit shy children's desire to engage in social interactions (e.g., Coplan et al., 2004). Social

interaction is a critical component of children's social and cognitive development (Rubin, Bukowski, & Parker, 2006). As such, a significant portion of developmental research focuses on the potential effects of a lack of social interaction in childhood.

Although shyness develops from temperament and can have adverse consequences, it was a neglected topic within social development for many years (Rubin & Coplan, 2004). Past research tended to focus on externalizing problems (i.e., aggression) which are overtly observable and often require immediate intervention. As well, less attention was placed on internalizing behaviours (i.e., depression, anxiety) which often go undetected and therefore are not as readily attended to. Contemporary research has uncovered the risks associated with shyness and social withdrawal, thereby contributing to the greater amount of interest and attention it now receives.

The construct of shyness has been investigated for over a century. Lehman (1926; Lehman & Anderson, 1928) conducted observational studies of children's social participation with peers. This led to early classifications of shyness as a psychological neurosis, whereby shy children experienced a state of hyperinhibition, fear, and mistrust accompanied by certain physical symptoms (Lewinsky, 1941). Social inhibition was believed to act as a barrier that prevented shy individuals from participating in group interactions that they desired to join (Cheek & Melchior, 1990; Lewinsky, 1941). Adult personality theorist Eysenck (e.g., Eysenck & Eysenck, 1969) drew attention to a subtype of introversion that he labelled *neurotic* shyness, which referred to self-consciousness, insecurity, and anxiety in the face of social interactions.

Kagan and colleagues later described the temperamental trait of *behavioural inhibition* (BI) (e.g., Kagan, 1997; Kagan, Reznick, Clarke, Snidman, & Garcia-Coll,

1984). BI was conceptualized as a biologically-based wariness towards novel situations and unfamiliar people, such that extremely inhibited children possess a lower threshold for psychophysiological arousal (Garcia-Coll et al., 1984). In support of this assertion, inhibited infants have been found to have faster heart rates, higher levels of cortisol, and greater right frontal EEG activation as compared to their uninhibited counterparts (Eisenberg, Fabes, & Murphy, 1995; Fox et al., 1995; Garcia-Coll et al., 1984; Kagan, 1988). Similar results have been found among extremely shy adults (e.g., Beaton et al., 2006; Schmidt, 1999; Schmidt & Fox, 1994).

The focus on inhibition later shifted from biological factors to the social aspects of shyness (Rubin & Asendorpf, 1993). By examining how shy children interacted with peers, Asendorpf (1990) argued that shy children desired to play with others but their high anxiety regarding social interactions made them reluctant to do so. It was suggested that shy children experience an “approach-avoidance” conflict characterized by the presence of both high social approach and high social avoidance motivations. Shy children are therefore interested in interacting with others, but at the same time choose to avoid such social contact because of feelings of anxiety (Asendorpf, 1993; Coplan et al., 2004). In contrast, children who experience a strong desire for social approach but a low desire to avoid social interactions are characterized as typically developing *sociable* children.

For the purposes of the current study, shyness will be discussed alongside the construct of *sociability*. Sociability describes individuals who affiliate with others and prefer to have social relationships rather than being alone (Cheek & Buss, 1981). Cheek and Buss explored the empirical distinctiveness between shyness (tension and inhibition

with others) and sociability (preference for being with others as opposed to being alone).

It was concluded that shyness and sociability act as two separate constructs (Cheek & Buss, 1981; Czeschlik & Nuerk, 1996; Page, 1990; Schmidt & Fox, 1996). Therefore shyness refers to discomfort in novel social situations, whereas low sociability is more accurately characterized as a preference for being alone (Cheek & Buss, 1981).

More recently, researchers have begun to focus on the role of environmental influences in the development of shyness. Some influential factors include the presence of overprotective and anxious parents, and their impact on the development of children's insecure attachment styles (Burgess, Rubin, Cheah, & Nelson, 2005; Rubin, Cheah, & Fox, 2001). For example, parents who are very controlling and place too many restrictions on their children consequently deter them from exploring their environment, thereby contributing to children's increased fear and anxiety within the home (Coplan, Hastings, Lagacé-Séguin, & Moulton, 2002; Coplan et al., 2004).

Shyness in Emerging Adulthood

In older children and adolescents, shyness is conceptualized as a personality trait that leads to feelings of wariness in the face of social novelty and/or self-conscious behaviour in situations of perceived social evaluation (Asendorpf, 1991; Cheek & Buss, 1981). When presented with new social situations, shy individuals may react by feeling anxious, appearing nervous in the presence of other people, exhibiting a reluctance to initiate a conversation and continue interacting with others, and displaying atypical behaviours that dissuade others from interacting with them (Cheek & Buss, 1981; Crozier, 2000; Zimbardo, 1977). In older children, these outcomes may worsen as non-

social behaviour becomes more noticeable and peers perceive such behaviour as increasingly deviant (Rubin & Asendorpf, 1993).

The transition from high school to university is an important period of development, as older youth begin to move out of the family home and encounter new social and academic challenges (Larose & Boivin, 1998; Tao, Dong, Pratt, Hunsberger, & Pancer, 2000). This transition occurs during a developmental period known as *emerging adulthood*. Emerging adulthood refers to the developmental phase from the late teens through the twenties (ages 18 to 25 years), which is believed to be a period of profound life change and exploration that differs distinctly from both adolescence and young adulthood (Arnett, 1998, 2000, 2004). Emerging adulthood is uniquely distinguishable by an independence from social roles as well as normative expectations, whereby individuals explore different potential life directions involving education, career development, romantic relationships and comprehensive worldviews (Arnett, 2000). Features of this time period include: *feeling in-between* (i.e., not seeing oneself as either an adolescent or adult), *identity exploration* (i.e., in the areas of work, romantic relationships, and worldviews), *focus on the self* (i.e., lacking obligations to others), *instability* (i.e., changes in residential status, relationships, work and education), and *age of possibilities* (i.e., optimism towards future life directions) (Arnett, 2004).

Emerging adulthood and the transition to university is viewed as a period of semi-autonomy, whereby students who have recently moved out of the family home take on *some* of the responsibilities of independent living, while leaving other responsibilities to their parents, university staff, or other adults (Arnett, 2000; Goldscheider & DaVanzo, 1986; McInnis & James, 1995). University is often pursued in a nonlinear way, in

combination with work obligations and potential periods of nonattendance (Arnett, 2000; Hillman, 2005; McInnis, James, & Hartley, 2000). At this time, emerging adults are also engaged in forming intimate relationships while simultaneously establishing secure identities (Erikson, 1968), managing other close relationships (i.e., friendships) (Hartup & Stevens, 1997), and gradually assuming adult roles (Havighurst, 1948). Emerging adults consider their close friends as well as their romantic partners to be important members of their social networks (Fraley & Davis, 1997), and qualities of both types of relationships have been associated with happiness (Demir, 2008; Demir & Weitekamp, 2007). Accordingly, friendships and romantic relationships serve distinct functions; friendships tend to satisfy social integration needs (i.e., companionship) and feelings of worth (Furman & Buhrmester, 1992), whereas romantic relationships offer intimacy and emotional support (Weiss, 1974).

Shyness experienced during emerging adulthood appears to hinder successful development. For example, shyness may impede developmental milestones such as the formation of one's identity, development of romantic relationships, academic goals, and occupational achievements (Arnett, 2000; Nelson et al., 2008). Shyness in emerging adulthood is associated with several negative outcomes, including internalizing problems (e.g., loneliness, anxiety, depression, low self-esteem) and social difficulties (e.g., increased self-consciousness, problems developing new relationships, difficulty initiating and maintaining intimate and satisfying relationships) (Alden & Cappe, 1986; Asendorpf, 2000; Crozier, 2000; Leary & Buckley, 2000; Rowsell & Coplan, in press; Schmidt & Fox, 1996; Zimbardo, 1977). For example, Nelson and colleagues (2007) found that shy emerging adults had more internalizing problems, engaged in fewer externalizing

behaviours, and experienced greater problems in their close relationships than their non-shy peers.

A 19-year longitudinal study by Asendorpf, Denissen, and van Aken (2008) explored the long-term outcomes of shy (inhibited) versus non-shy comparison children. At 23 years of age, shy children were found to differ from their more outgoing counterparts in a number of ways. For example, young adults who were shy in childhood were perceived as being more inhibited by their parents, and demonstrated a delayed transition into life events such as romantic relationships and full-time occupations. Shy participants reported having as many peer relationships as comparisons and interacted more frequently with both same- and opposite-sex peers, but had a stable romantic partner half as often. Contrary to previous findings, Asendorpf and colleagues also reported that formerly shy children did not perceive themselves as being more inhibited or as having more internalizing problems in adulthood, as compared to comparison children. Findings suggest that parents who classify their child as extremely shy in early childhood may maintain this view as the child reaches adulthood by giving more weight to observable behaviour, such as delayed romantic relationships (Asendorpf et al., 2008).

In emerging adulthood, an essential part of adjustment involves the formation of new social relationships. Opportunities for individuals to expand their peer network are presented during their transition from high school into a new university environment. Students move away from their families of origin as well as established social networks, in turn seeking to develop new peer relationships in the face of novel academic challenges (Larose & Boivin, 1998; Tao et al., 2000). In this stage of development, shyness and social anxiety that is self-perceived by older children, adolescents, and adults

is regularly accompanied by lower social self-esteem (e.g., Cheek & Melchior, 1990). Shy individuals' fear of judgment and rejection within a university context may hinder their ability to initiate social interactions; yet as identity formation develops, shy individuals may become more confident and less threatened by social events (e.g., Scanlon, Rowling, & Weber, 2007). Support networks therefore influence the socio-emotional adjustment of students during the transition to university.

Shyness and the Transition to University

As new university students begin their transition from adolescence to adulthood, they are often in pursuit of opportunities for personal growth and development. The university transition is traditionally regarded as positive by most students (e.g., Fisher & Hood, 1987; Hillman, 2005; McInnis & James, 1995). However, this transition nevertheless involves change for all students as they discontinue old routines in order to adjust to the intellectual and interpersonal demands of their new environment. As a result, some students experience feelings of self-doubt and disappointment, and exhibit self-defeating habits in the face of new academic and social pressures (Compas, Wagner, Slavin, & Vannatta, 1986; Felner, Farber, & Primavera, 1983; Schlossberg, 1981; Weiss, 1990). Unsuccessful adjustment and a strained transition to university have been associated with several negative outcomes, including a lack of connectedness and involvement (Perry & Allard, 2003), a lack of belongingness (Weeks, Asher, & McDonald, 2010), unhappiness and dissatisfaction (Yorke, 2000), loneliness (Pargetter, 2000), isolation (Lawrence, 2001), disequilibrium (Jackson, 2003) and alienation (Mann, 2001; Scanlon et al., 2007).

During the university transition, students are also working towards individuating from their family of origin. Their unfamiliarity with university life can make the transition to adulthood challenging, thereby influencing individuals' personal security, need for acceptance, comfort level, and social support network. As such, many students have difficulty adapting to the university lifestyle. A noteworthy transition for many emerging adults is the move from the individual's childhood home to university (Paul & Brier, 2001). This transition is characterized by the movement from long-established family environments into novel, independent living spaces (e.g., on-campus residences, off-campus student housing). Particularly for students who are leaving their city of origin in order to pursue higher education, moving away from the family home is seen as a significant life transition. Many emerging adults are moving away from home for the first time, resulting in a renegotiation of family relationships and household responsibilities as a means of increasing students' independence (e.g., Kenny & Donaldson, 1992; Lopez, Campbell, & Watkins, 1988; Rice, 1992; Rice, Cole, & Lapsley, 1990).

Accordingly, there is some research to suggest that shy individuals may experience more challenges as they attempt to navigate life transitions (Mounts et al., 2006). Once immersed in the university environment, shy emerging adults may find it more challenging to develop peer relationships due to their tendency to withdraw from social situations (Mounts et al., 2006). Asendorpf (2000) found that shy students increased their peer network more slowly compared to non-shy individuals during the first nine months at university, and were less willing to separate themselves from pre-university friendships. Shy individuals tend to hinder relationship development due to their propensity for speaking less often during interactions, responding slowly to

conversation partners, and allowing longer silences during verbal exchanges (Leary & Buckley, 2000). Perhaps as a result, shy individuals also tend to experience fewer opportunities to interact socially and date less frequently than non-shy individuals (Mounts et al., 2006). Schmidt and Fox (1996) found that extreme shyness in undergraduate students was a strong predictor of socio-emotional problems such as depression, loneliness, fearfulness, social anxiety, neuroticism, and lower self-esteem, as well as psychosomatic challenges such as allergies and gastrointestinal problems. Shy students also report having fewer and less intimate relationships with peers (Asendorpf, 2000; Rowsell & Coplan, in press). As well, shy individuals reported being in love and having a steady sexual partner half as often as non-shy students (Asendorpf, 2000). Without the development of an ample social support system, shy students' psychological well-being may weaken under the stress of the university transition.

Shy students may therefore be an 'at-risk' group who could experience greater challenges to their psychological well-being and adaptive functioning due to their lack of social support during the transition (Mounts et al., 2006). Conversely, a more sociable personality and more adequate parental support may assist in the facilitation of a successful university transition. Indeed, *sociability* is strongly related to positive affect and life satisfaction (Emmons & Diener, 1986), as well as academic achievement (Hojat, Vogel, Zelznik, & Borenstein, 1988) in samples of university students. Sociable individuals may find it easier to construct a new peer network compared to shy or unsociable individuals, consequently protecting students from greater feelings of loneliness, depression and anxiety (Mounts et al., 2006).

In contrast, a person who has low levels of shyness and low levels of sociability may be comfortable in social situations with strangers, while expressing little desire to participate in social interactions. These *unsociable* individuals may be at a lower risk for university attrition because they are content with being alone and not having a large social network. Perhaps they have stronger parental support to make up for a lack of and/or disinterest in peer support. Research has yet to examine how combinations of shyness and sociability impact emerging adults' adjustment during the university transition. Current literature suggests that shy *and* sociable children may be on a developmental trajectory towards behavioural problems (e.g., Schmidt, 2003). Page (1990) reported that high shy, high sociable adolescents were more likely to report illicit drug use than high shy, low sociable adolescents. In a separate study by Miller, Schmidt, and Vaillancourt (2008), shy female undergraduates were more likely to have lower self-esteem and greater problems with disordered eating than their highly sociable peers. Combinations of shyness and sociability thus appear to influence children and adults on a behavioural level, yet it remains unknown whether sociability, as separate from shyness, is related to emerging adults' overall university adjustment.

Social Dissatisfaction during the University Transition

Past research on university transitions has placed a strong emphasis on students' individual and academic challenges (Paul & Brier, 2001). Social and relational problems have received less attention, despite being a common and prominent concern for new university students (Kaufman, Brown, Graves, Henderson, & Revolinski, 1993). Students who fail to form new social relationships in university may be at risk for experiencing negative outcomes (Asendorpf, 2000; Holahan, Valentiner, & Moos, 1994). As such,

research needs to further explore social determinants of students' satisfaction with their university experience.

The important role of social satisfaction in the transition to university is underscored by Fisher and Hood's (1987) "computational job strain model". This model suggests that students weigh the benefits and threats created by a new university environment against the benefits and securities of home life. Fisher (1989) describes an attentional resources model as a perspective on new university students' grief and subsequent difficulties during the transition. This model suggests that the new university environment demands limited attentional resources from students. In order to commit to the new environment, students' attention must shift from their pre-university experiences to their current university life. When feelings of loss and grief become overwhelming, less energy is invested in forming new relationships (Van Rooijen, 1986; Weiss, 1990).

Indeed, students may experience various types of *social dissatisfaction* during the transition into university. Literature focusing on students' academic abilities as a predictor of retention overlooks associations between socio-emotional factors such as loneliness and homesickness, and how these elements may impact students' academic success. It is important for researchers and practitioners to further understand the social, emotional, and academic challenges faced by incoming university students in order to better develop prevention and intervention efforts aimed at facilitating smooth, successful and productive transitions.

Loneliness. Loneliness refers to an awareness of one's *lack* of social and personal relationships, and the associated emotional discomfort or distress that leads to reactions of sadness, emptiness, and longing (Asher & Paquette, 2003). Weiss (1973) suggests that

feelings of loneliness develop due to insufficient amounts of social contact as well as having fewer meaningful and intimate relationships with others. Other definitions argue that loneliness reflects an individual's subjective inability to maintain social relationships (Russell, Cutrona, Rose, & Yurko, 1984) or a lack of intimate connections in terms of one's social relationships (Reis, 1990).

Loneliness has become a distressing experience for many university students, in turn exacerbating dysfunctional attitudes and behaviours. Research by Shaver, Furman, and Buhrmester (1985) showed that first-year students, who are transitioning away from previous social support networks (e.g., family, friends), reported significantly more loneliness during their first year of university. Literature suggests that students who fail to establish new social relationships during the university transition may be at risk of developing persistent loneliness (Asendorpf, 2000; Holahan et al., 1994). Loneliness has been associated with several outcomes, such as internalizing problems, adjustment problems, greater pre-university concerns, early drop-out as well as a reduced sense of belongingness and less intimacy with friends (La Greca & Harrison, 2005; Lee, Keough, & Sexton, 2002; Mattanah et al., 2010; Paul & Brier, 2001; Wiseman, 1997). Moreover, it has been suggested that students who remain lonely may be more likely to criticize the quality of the relationships they have formed while in university (Shaver et al., 1985). Therefore, an individual's exposure to social situations may not be enough to improve subjective feelings of loneliness (Jones, 1981).

It is important to study loneliness with regards to the transition to university in order to improve outcomes for students who have difficulty adjusting to university life, consequently putting them at risk for attrition. Fisher and Hartmann (1995) suggested that

feelings of alienation, marginalization, isolation, and loneliness contribute to students' decreased sense of belongingness. Loneliness has previously been correlated with need to belong measures, but has been consistently identified as a separate construct from belongingness (Baumeister & Leary, 1995; Mellor, Stokes, Firth, Hayashi, & Cummins, 2008; Reis, 1990; Russell et al., 1984). Belongingness is uniquely characterized as a developmental process that involves feeling connected to society as a whole (Lee, Draper, & Lee, 2001). Feelings of belongingness have been associated with important academic and psychological outcomes in youth (e.g. Anderman, 2002). Loneliness and belongingness are negatively correlated (e.g., Weeks et al., 2010), whereby loneliness is often viewed as an affective and behavioural consequent of a lack of belongingness (Lee & Robbins, 1995). Hence, by reducing feelings of loneliness and alienation during the transition to university, it is expected that students will feel more connected and committed to the institution, thereby reporting greater belongingness and exhibiting better overall adjustment.

Shyness and loneliness have been linked from childhood (e.g., Coplan, Girardi, Findlay, & Frohlick, 2007) through to adulthood (e.g., Zimbardo, 1977). Shy individuals tend to be lonelier than their non-shy peers, and loneliness is argued to be associated with a lack of belonging (Heinrich & Gullone, 2006; Jones, Rose, & Russell, 1990). In particular, shyness has been found to correlate strongly and positively with emotional loneliness (i.e., missing a close relationship), whereas sociability correlated moderately and negatively with social loneliness (i.e., lack of integration into a social network) (Perry & Buss, 1990). Shy emerging adults tend to report greater feelings of loneliness in the transition to university (Mounts et al., 2006), engage in less dating (Leck, 2006), and

report lower levels of happiness (Neto, 2001) compared to their non-shy peers. Specific to university, more shy students reported feeling chronically lonely compared to non-shy students (Asendorpf, 2000). Research by Nicpon and colleagues (2006) found that students who perceived themselves as less lonely and reported increased social support made more positive university persistence decisions. Pretty, Andrewes, and Collett (1994) found that the amount of social support reported by students was negatively correlated with feelings of loneliness. These findings suggest that loneliness may not be solely due to the smaller size of a shy individual's peer network, but also results from the lower quality of a shy person's peer relationships (Mounts et al., 2006).

A study by Mounts and colleagues (2006) reported that high shyness and low sociability were both associated with students' loneliness as they enter university, even when controlling for the effects of gender, socioeconomic status and living environment. As well, loneliness was related to students' anxiety and depression during the university transition. Thus, shyness and sociability might be indirectly related to anxiety and depression through their association with loneliness (Mounts et al., 2006).

Moreover, sociability might help facilitate the development of social relationships (Mounts et al., 2006). During the university transition, sociable students may prosper over unsociable individuals when it comes time to form a new social network. This social advantage could result in fewer feelings of loneliness, depression and anxiety (Mounts et al., 2006).

Homesickness. *Homesickness* is conceptualized as a complex cognitive-motivational-emotional state associated with grieving for, yearning for, and being preoccupied with thoughts of home (Fisher & Hood, 1987). Associated distress is caused

by the anticipation of, and separation from, one's family and his or her home environment as well as a perceived need to go home (Fisher, 1988, 1989; Fisher, Murray, & Frazer, 1985; Thurber, 2005). Previous studies by Fisher and colleagues (1984, 1985, 1986) examining boarding school pupils, student nurses, and university students have reported that about 60-70 percent of individuals experience homesickness. These findings support the practical importance of continuing to explore feelings of homesickness within an academic context.

Homesickness has been associated with higher levels of psychological disturbance, cognitive failure, and obsessionality symptoms, as well as poor academic performance, anxiety, depression, and various somatic changes (Fisher & Hood, 1987). Fisher and Hood found that a stressful transition increased students' levels of psychological disturbance (i.e., depression, obsessionality) and absent-mindedness, regardless of whether students were living on or off campus. The main sources of stress for university students included academic challenges, adjustment to new routines, coping with financial pressures and social difficulties. Certain sources of stress remain unique to university residents as compared to home-based individuals. Residents at the university reported problems associated with a new social network, new domestic responsibilities, and a lack of privacy, while students living at home experienced a restriction of freedom and independence.

However, feelings of homesickness are not limited to students residing on campus. Fisher and Hood (1987) found that 71.9 percent of students living on campus reported feelings of homesickness compared to 5.6 percent of students living at home. When faced with the requirements of the novel post-transition environment, a student

living at home may still miss the security and familiar routines of his or her old lifestyle as he or she encounters challenges during a day on campus. Of the residents who reported feeling homesick, 36.6 percent had not felt homesick initially; these feelings developed over the course of their first year at university. Homesick students describe their university experience as more stressful and report significantly lower levels of adaptation to university life, as compared to non-homesick students. Adaptation was found to be negatively related to reported stress levels and positively related to satisfaction (Fisher & Hood, 1987). In contrast, students who are more adjusted are less likely to feel helpless and are better able to develop social relationships (Van Rooijen, 1986). The state of feeling homesick and discontent may therefore become a self-fulfilling prophecy, whereby students who ruminate and are not psychologically able to keep up with academic demands in turn experience difficulties initiating and maintaining friendships.

Homesickness may be a reaction to one's dissatisfaction with a new environment. Fisher and colleagues (1985) found that homesick students reported reduced satisfaction with residence and peer relationships, as compared to non-homesick students. By contrast, homesick students have exhibited an increased tendency to view the family home in positive terms, such that they are faster to have positive thoughts and slower to have negative thoughts in regards to the home environment (Fisher, 1987).

Students who report experiencing homesickness have been shown to experience greater absent-mindedness than those who do not, and are also more likely to express difficulties in concentration and coping with academic work due to their preoccupations with home (Fisher et al., 1985). Fisher and Hood (1987) suggest that increased depression might develop for on-campus residents because of their separation from home and old

friends. Students need to adjust to their new environment by breaking away from many aspects of their previous lifestyle. It is expected that students who leave home and take up residence at university would thus experience greater adverse psychological effects as a result of their relocation, as compared to students who reside at home. There is also evidence of reduced satisfaction with features of the current environment with homesick individuals. For example, Stokols, Schumaker, and Martinez (1983) examined individuals who relocate for a new job, and found that people who experienced less successful adjustment following the transition reported more illness-related symptoms as well as a reduced level of satisfaction with the new environment. This suggests that homesickness may bias judgements about overall satisfaction of a new environment, which has implications for students' university experiences following a challenging transition.

For shy individuals, the experience of heightened anxiety may occur when away from home as a result of separation from parents and/or other family members. For example, Eurelings-Bontekoe, Vingerhoets, and Fontijn (1994) examined the personality characteristics of military soldiers suffering from homesickness. Homesick soldiers were characterized by higher levels of introversion and social isolation, and also displayed high levels of shyness, social inadequacy, hostility, social anxiety and low assertiveness. In a study of first year university students, Randall (2004) reported that female students expressed stronger feelings of homesickness than their male peers. However, certain characteristics were also found that distinguished homesick males from their female peers, most notably shyness and insecure attachment. Shy male students also described their families as less emotionally expressive and supportive, and more controlling. These

findings suggest that feelings of extreme homesickness may in turn exacerbate shy students' anxiety, further contributing to their introversion.

Friendsickness. The term homesickness covers a variety of experiences including separation and longing for one's friends (Fisher, 1989; Fisher et al., 1985). Yet, a shortcoming in current university transition research is the underemphasis on the loss of friendships in characterizations of homesickness (Paul & Brier, 2001). In emphasizing one's separation from the family environment, homesickness research rarely addresses the effect of students' departure from existing peer relationships as a distinct construct. Although individuating from the family home can be challenging, moving away from close friendships can also be difficult (Staik & Dickman, 1988). Stensrud (1986) suggests that given their voluntary nature, friendships are more difficult to maintain as compared to longstanding family connections. As such, friendships are believed to be less likely to endure over time than familial relationships, and therefore the end of friendships is viewed as a more final sense of loss.

University transition research tends to look ahead and focus on interpersonal issues that occur within university that ease or impede student adjustment (i.e., renegotiating family relationships, forming new university friendships). Nevertheless, this forward-looking viewpoint fails to consider the frequency with which new university students look back at their experiences before university (Paul & Brier, 2001).

Friendsickness is characterized by a preoccupation with (i.e., frequent thoughts) and concern for the loss of or change in pre-university friendships (i.e., efforts to maintain contact), which is triggered by one's relocation away from established social networks (Paul & Brier, 2001). As a burdening relational challenge, friendsickness is viewed as a

significant source of distress, thereby affecting students' adjustment to university (Paul & Brier, 2001). These feelings of distress may last for several months, at which time students will be working to maintain their pre-university friendships, rather than seeking to develop new peer support networks at school.

Though transition research commonly focuses on students' personal and academic challenges, social pressures are often overlooked despite being a central concern for new university students (Kaufman et al., 1993). Friendsickness is understood as a normative challenge in the transition to university (e.g., Fisher, 1989), such that emerging adults who are more concerned about losing old friends are increasingly likely to experience feelings of friendsickness. By contrast, emerging adults who are more concerned about making new friends within the novel university environment are less likely to experience friendsickness in university.

Drawing upon Fisher and Hood's (1987) "computational job strain model", students may weigh the challenges of initiating and maintaining university friendships with the benefits and securities of established peer networks back home. When a large disparity exists between what students desire and what is obtained at university, preconditions for friendsickness would be created. As compared to homesickness, relatively little is known about the causes and consequences of friendsickness. Paul and Brier (2001) reported that among their sample of first-year university students (n=70), just over half experienced moderate to high levels of friendsickness, while only 6 percent of the participants indicated little to no feelings (on average) of friendsickness. Among their other findings, friendsickness was associated with pre-university social concerns, more pre-university friends within the university social network, as well as loneliness and

poor self-esteem in university. New university students experiencing friendsickness also exhibited poorer adjustment to university.

Paul and Brier (2001) suggested that students mourning the loss of previous friendships may more often worry about losing their established network of peers over time. Moreover, after moving away to university, students may interact less frequently and less intimately with their pre-university peer group. Taken together with feelings of uncertainty about their new university environment, this may lead to feelings of loss, which may in turn trigger grief and mourning of past friendships. As such, students who remain preoccupied with past friendships may find it increasingly challenging to integrate these continuing relationships with their new relationships, resulting in a loss of social support. It appears as though a primary cost of friendsickness is a lessened sense of competence as a friend, whereby students feel insecure in their ability to form and maintain close friends as a result of their loss of pre-university friendships.

The link between shyness and friendsickness has yet to be explored empirically. However, there is some evidence to suggest that shy individuals may be more reluctant to disengage from high school friendships (Asendorpf, 2000), which in turn has been related to higher levels of friendsickness (Paul & Brier, 2001). Shy individuals have also been found to increase their peer network more slowly than their non-shy counterparts during the first nine months at university, and were less willing to separate themselves from pre-university friendships (Asendorpf, 2000).

Thus, it can be speculated that shy students may “look back” on how much effort they had to exert in making friends in high school, and consequently anticipate difficulties in forming new high quality friendships in university. Although shyness may

hinder the formation of friendships, once the friendship is established, shyness may not influence the quality of that relationship (Mounts et al., 2006). Indeed, emotional and behavioural symptoms of shyness are more pronounced during interactions in novel social settings (Coplan et al., 1994). Feeling intimidated by unfamiliar peers will likely contribute to greater social anxiety and discomfort, thereby resulting in social dissatisfaction, internalizing problems, and a less satisfying university experience. This may contribute to shy students feeling left out of both current university social gatherings as well as social activities going on at home in their absence. As they compare their home-based friends with students at university, this would likely contribute to their inability to disengage from what they are missing out on back at home.

Accordingly, students may adapt to the challenges of separation from home during the university transition if the new environment has positive elements and is not excessively difficult to adjust to. Since several features of university life are challenging (i.e., financial demands, small living accommodations, academic pressures), the experience of homesickness and friendsickness is created and/or exacerbated by how students perceive the new environment. Therefore the individual will increasingly miss home as he or she realizes how challenging life can be away from it.

As such, shy students who experience university as a source of heightened social stress, and fail to accept the challenge of overcoming their social anxiety, may not offset the effects of separation from home and loss of old friends. Shy students are more likely to expect worse outcomes due to negative biases and/or threat perception (i.e., “People are thinking negative things about me”). However, if things turn out positively, shy students may attribute their success to external factors (i.e., “People are being nice to me

because otherwise the professor will get angry at them”). Hence, students’ failure to cope with the challenge of a new university environment again becomes a self-fulfilling prophecy. As students experience negative interactions, this acts as evidence supporting their fear of peer rejection, whereas students who experience positive interactions in turn perceive them as being externally motivated, and therefore do not gain confidence in their social abilities. These individuals are therefore at increased risk for experiencing homesickness and friendsickness.

Support Networks during the Transition to University

It has been argued that the first year of university is the most difficult stage of adjustment a student faces (Giddan, 1988). Though shyness is associated with several challenges in the development of new friendships, existing parental and peer support networks may help to ease the university transition and act to encourage shy students to engage in novel social interactions. It is therefore expected that social support will moderate the relation between shyness and social dissatisfaction, thereby affecting students’ adjustment to university.

Parental support. During the transition to university, parents play a vital role in the lives of emerging adults (Adams, Ryan, & Keating, 2000). Many parents continue to provide children with support throughout this transition, as students move away from home and into a new living and learning environment (Adams et al., 2000; Moser, Paternite, & Dixon, 1996; Mounts, 2004). Students report feeling close to parents (particularly mothers) during the university transition (Moser et al., 1996). Research has shown that parental expectations of university completion are strong predictors of student goals and persistence (e.g., Sexton, 1965; Tinto, 1975). However, Pantages and Creedon

(1978) argue that parental influence depends on the quality of the parent-student relationship. Little research is currently available exploring the relation between parenting and university students' adjustment (Mounts et al., 2006). Hence, further research needs to examine how students perceive the support they receive from their parents during the transition to university, whereby specific practices are directed at facilitating and/or hindering successful student transitions and personal adjustment.

Parental support has been associated with several outcomes, including psychological adjustment, academic achievement, social integration as well as reductions in depressive symptomatology, anxiety, and loneliness (Hickman, Bartholomae, & McKenry, 2000; Holahan et al., 1994; Nora & Cabrera, 1996). Weiss (1982) suggests that separation anxiety may occur between parents and older children. The loss of immediate contact with relatives is expected to have some adverse effects (i.e., heightened anxiety, homesickness), whereby students' attentional focus is on home and people associated with home. Holahan and colleagues (1994) found that high levels of parental support were associated with high levels of psychological adjustment in university students over a 2-year-period. Within an academic context, Nora and Cabrera (1996) reported that higher levels of parental support for university attendance were associated with higher levels of academic experiences with faculty members, higher levels of social integration, and higher levels of academic achievement. Hickman and colleagues (2000) reported that authoritative parenting (i.e., warmth and support accompanied by appropriate control and limit-setting) was related to academic achievement in a sample of university students. Within a social context, higher levels of parental support for the transition were found to be related to higher levels of friendship quality and lower levels of loneliness (Mounts et

al., 2006). Parents who provide strong support for the transition may be instructing and encouraging their children to use effective social strategies for meeting new people with whom they can develop high quality friendships (Mounts et al., 2006).

In exploring the relations between parental support and indices of social dissatisfaction, several studies found that improved support can buffer against homesickness (e.g., Brissette, Scheier, & Carver, 2002; Ramsay, Jones, & Barker, 2007; Urani, Miller, Johnson, & Petzel, 2003). However, inconsistent findings have also been reported when examining the association between support and social dissatisfaction. Although students may look forward to the challenge of leaving home to begin university, the transition may be uniquely difficult for a student raised in a family that is characteristically close-knit and whose members are quite interdependent (Ellis, 1994). During the university transition, individuals may lose some of the support they are used to receiving from their family, potentially leading to greater adjustment difficulties. Smith (2003) found that religious youths reported higher quality relationships with parents, which led to greater feelings of homesickness in the transition to secondary school due to students' attachment to home (Longo, 2010). Hence, although family cohesiveness may improve relationship quality, it may in turn make a student's disconnection from home more challenging during the transition into university.

Hence, different forms of parental support appear to diversely affect outcomes for students during their transition to university, whereby other factors (i.e., attachment styles, parenting styles, relationship quality) might influence whether parental support increases or decreases feelings of social dissatisfaction. In a study of first-year university students, Brewin, Furnham, and Howes (1989) reported that an anxious attachment style

and greater dependence on others were associated with greater feelings of homesickness. This suggests that some attachment styles may make individuals more susceptible to homesickness when they are separated from family members (Banning & Randall, 2010). As well, Nijhof and Engels (2006) reported that students with authoritative and permissive parents experienced greater feelings of homesickness compared to students raised by authoritarian or uninvolved parents. As such, parenting styles may also play a role in the manifestation of homesickness, based on the effectiveness of parents' imparted coping strategies in targeting students' feelings of homesickness.

Additionally, individuals may be interested in escaping from overprotective parents *or* getting attention from neglectful or absent parents, who provide little parental support during the transition. Therefore, a balance is needed between providing a healthy amount of support for the student, while at the same time giving them enough space and freedom to develop independence and be self-sufficient. It is expected that individuals who experience overprotective parenting may exhibit rebellious, disobedient behaviour in the face of authority as a result of their new-found independence. By contrast, individuals who receive little attention from their parents may not have the skills necessary to cope with academic stresses and social pressures.

As compared to the more general parenting styles established in early childhood, parenting practices specifically associated with the university transition may be easier to modify in order for parents to effectively facilitate students' adjustment (Bogenschneider & Stone, 1997). It is therefore important to distinguish between general parental support and parental support exclusively within the context of the university transition (Mounts et

al., 2006). By examining context-specific support from parents, research and intervention can be specifically directed towards improving associated outcomes.

Peer support. One of the major tasks that emerging adults undertake as they transition to university is the initiation and maintenance of new social relationships. Several studies have explored the benefits of peer relationships during childhood and adolescence (e.g., Hartup & Stevens, 1997; Newcomb & Bagwell, 1995; Rubin, Bukowski, & Parker, 1998) and older adulthood (e.g., Adams & Blieszner, 1995; Antonucci & Akiyama, 1995). Peer relations are particularly important for emerging adults, as peers provide emotional and relational support, help to develop individual identity, present opportunities for socialization, and facilitate overall university adjustment (Hirsch, 1980). Research continues to discuss the importance of establishing new friendships in the university adjustment process (Hays & Oxley, 1986; Pascarella & Terenzini, 2005; Shaver et al., 1985).

Specifically investigating first-year university students, Swenson, Nordstrom, and Hiester (2008) found that students' peer relationships provided them with opportunities to vent about stressors associated with university. Greater perceived social support in university is associated with more positive emotional adjustment, a greater intimacy with friends, fewer adjustment problems, lower anxiety and depression, and fewer feelings of loneliness (Abbey, Abrams, & Caplan, 1985; La Greca & Harrison, 2005; Lopez, Mitchell, & Gormley, 2002; Mattanah et al., 2010; Pierce, Sarason, & Sarason, 1991). Having a friend to turn to during stressful life events has been associated with students' emotional and personal adjustment, as well as institutional attachment (Swenson et al.,

2008). Greater peer interactions are also associated with better academic performance (Mattanah et al., 2010).

Students who experience a challenging transition from high school to university report poorer, more disappointing social relationships (Paul & Brier, 2001). Pierce and colleagues (1991) reported that university friends' support was the most consistent predictor of loneliness. Langston and Cantor (1989) found that students who report having a negative university transitional experience overall felt dissatisfaction in the realm of social interactions and friendships. Therefore, it is expected that individuals who have difficulty initiating and maintaining new peer relationships may experience greater challenges in their adjustment to university, as they may not have a friend to provide encouragement and promote emotional well-being during challenging times. By contrast, individuals who have a strong peer support system during the transition may be less likely to experience poor emotional coping, and consequently feel better about being in the new university environment. These predictions provide a framework for exploring the social challenges encountered by shy students, who may be at risk for experiencing negative university outcomes.

Nonetheless, the literature reports some inconsistent findings in examining the associations between peer support and indices of social dissatisfaction. Peer support has often been identified as a contextual factor that significantly contributes to children's successes (e.g., Bossaert, Doumen, Buyse, & Verschueren, 2011; Buhs, 2005; Coplan, Closson, & Arbeau, 2007). However, Watt and Badger (2009) reported that developing friendships in a new location did not predict less homesickness when students were asked to report about missing friends from home. This suggests that the support once received

by long-established peer relationships may not be easily replaced by the development of new university relationships. Accordingly, the challenges that first-year students face in their detachment from established support networks back at home suggest that a level of trust and dependence on pre-university friendships may be weakened or lost during the transition, thereby contributing to greater feelings of social dissatisfaction and anxiety within the university environment.

Putting it All Together: A Theoretical Model of Institutional Departure

In this final section, the central constructs of interest for the proposed study will be situated within a broader theoretical model of institutional departure. Tinto's (1975, 1986) *interactionalist model of institutional departure* is a theoretical perspective introduced to describe the decision-making processes that influence students' persistence in, and departure from, university. This model links various institutional and student factors to postsecondary outcomes and has been widely utilized and supported, influencing both research and practice (e.g., Braxton & Brier, 1989; Braxton, Brier, & Hossler, 1988; Cabrera, Castaneda, Nora, & Hengstler, 1992; Metz, 2004; Munro, 1981; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1980; Pavel, 1991; Robbins et al., 2004; Terenzini, Pascarella, Theophilidels, & Lorang, 1985; Yi, 2008).

In his model, Tinto (1975) describes a longitudinal process of voluntary student departure, whereby students' individual characteristics (e.g., family background, SES, skills/abilities, prior schooling, parental support) influence their intentions, goals, and commitments before students even begin studying at a postsecondary institution (Braxton, Vesper, & Hossler, 1995; Pavel, 1991). Student entry traits and initial levels of commitment in turn influence the degree to which students become integrated into the

university's academic and social communities. University departure is believed to be more likely to take place when incongruence exists between students' pre-entry characteristics (i.e., attributes, intentions, goals, commitments) and the university environment. This incongruence prohibits students' integration into the formal and informal academic and social systems of the institution (Braxton et al., 1995; Pavel, 1991). Social and academic integration into the university environment are consequently thought to be key determinants of student attrition.

Students enter university with expectations regarding what the institution will offer (Hossler & Gallagher, 1987; Zernsky & Oedel, 1983) and use these expectations as a basis from which to evaluate their early university experiences (Tinto, 1987, 1993). If their university experiences differ from these pre-university expectations, then students experience early dissatisfaction with their academic and social communities. This dissatisfaction hinders academic and social integration, which in turn affects institutional goals and commitments, and may result in student departure (Braxton et al., 1995). In contrast, when students' expectations are similar to their university experiences, this plays a role in developing their desire to establish membership in the institution they are attending, and to remain enrolled (Braxton et al., 1995).

Tinto's (1988) application of Van Gennep's (1960) construct postulated that 'rites of passage' are rituals that help individuals transition through important phases of life. Tinto revised this model to explain the stages that students experience in the transition to university (Scanlon et al., 2007). He theorizes that students' rituals are divided into three phases: (1) *separation* (from previous learning community); (2) *transition* (a period of change); and (3) *incorporation* (fully into a new community at university). Students must

be academically and socially connected to the university in order to achieve incorporation (Astin, 1980; Scanlon et al., 2007; Tinto, 1998). Three major sources of student departure are identified: academic difficulties; an inability to resolve educational and occupational goals; and a failure to incorporate oneself into intellectual and social communities within the university (Tinto, 1993). Only students who feel connected to their university will persist with post-secondary education (Scanlon et al., 2007). Moreover, the degree of integration and its influence on intentions and commitment have been associated with the availability of institutional support systems. If support networks are not available, it is likely that the institutional experience will be perceived as negative, thereby resulting in students' departure (e.g., Adams et al., 2000; Falk & Aitken, 1984; Lin, La Counte, & Eder, 1988; Pavel, 1991; Thomas, 2000; Wells, 1989; Wintre & Yaffe, 2000; Wright, 1985).

The stages described in Tinto's (1988) conceptual model can be used to underlie research on shyness and the university transition. For example, a shy student's *separation* from home may result in greater difficulty disengaging from the family environment and existing friendships, which act as preconditions to homesickness and friendsickness (e.g., Asendorpf, 2000; Paul & Brier, 2001). During the *transition* stage, shy students may find it particularly challenging to adapt to significant life changes within a novel social environment. With a preference for familiarity and stability (Howard & Howard, 1995), shy students may be overwhelmed in the face of anxiety-provoking social opportunities, as exhibited by their reluctance to interact with unfamiliar peers. Finally, feelings of discomfort experienced by shy students during their *incorporation* into the new university community may prevent these students from becoming fully involved and

invested both socially and academically. Shy students' continued discomfort in the face of social novelty may then contribute further to feelings of loneliness, homesickness, friendsickness, as well as lower well-being and a less satisfying university experience overall.

The Current Study

The present study explored links among personality characteristics (i.e., shyness, sociability), social support networks (i.e., parents, peers), students' social dissatisfaction (i.e., loneliness, homesickness, friendsickness), and adjustment (i.e., belongingness, general well-being, satisfaction with the university experience) during the university transition. Along with considering the unique contributions of each construct to student adjustment during the university transition, indirect (i.e., mediated) and interactive (i.e., moderated) effects were also explored.

To accomplish this goal, first-year undergraduate students were recruited to complete a battery of questionnaires online. Students were asked to categorize their current living arrangements (i.e., on-campus housing/residential; off-campus housing/commuter; living with family/friends/roommates/alone) for the purpose of subsequent analyses distinguishing between "residential" and "commuter" students. The sample was restricted to students living on campus, which is consistent with previous research exploring homesickness and friendsickness in the transition to university (e.g., Fisher & Hood, 1987), and students living with their family were excluded from the current study (e.g., Watt & Badger, 2009).

Hypotheses. Overall, it was predicted that shyness would be negatively associated with receiving support from both parents and peers during the transition.

Shyness was also expected to be positively related to indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness) and predictive of adjustment difficulties (i.e., lower belongingness, lower well-being, less satisfied with university experience). Conversely, it was hypothesized that sociability would be positively related to support from parents and peers, negatively related to indices of social dissatisfaction, and predictive of successful adjustment to university.

The next set of hypotheses pertained to discriminations among different sub-types of social dissatisfaction. It was postulated that friendsickness would display unique associations with study variables in comparison with other measures of social dissatisfaction. For example, whereas homesickness is expected to be more strongly associated with parental support than peer support, friendsickness was hypothesized to be more strongly associated with peer support than parental support. Both homesickness and friendsickness were expected to be associated with greater loneliness, fewer feelings of belongingness, poorer well-being, and a less satisfying university experience. As well, while controlling for homesickness, it was speculated that friendsickness would be related to greater loneliness, fewer feelings of belongingness, lesser well-being and an increasingly less satisfying university experience.

A number of mediating and moderating effects were also predicted. To begin with, as suggested by Mounts and colleagues (2006), indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness) were expected to partially *mediate* links between shyness and indices of adjustment (i.e., belongingness, well-being, satisfaction with university experience). That is, the experience of social dissatisfaction was predicted

to at least partially help to account for associations between shyness and adjustment difficulties during the transition to university.

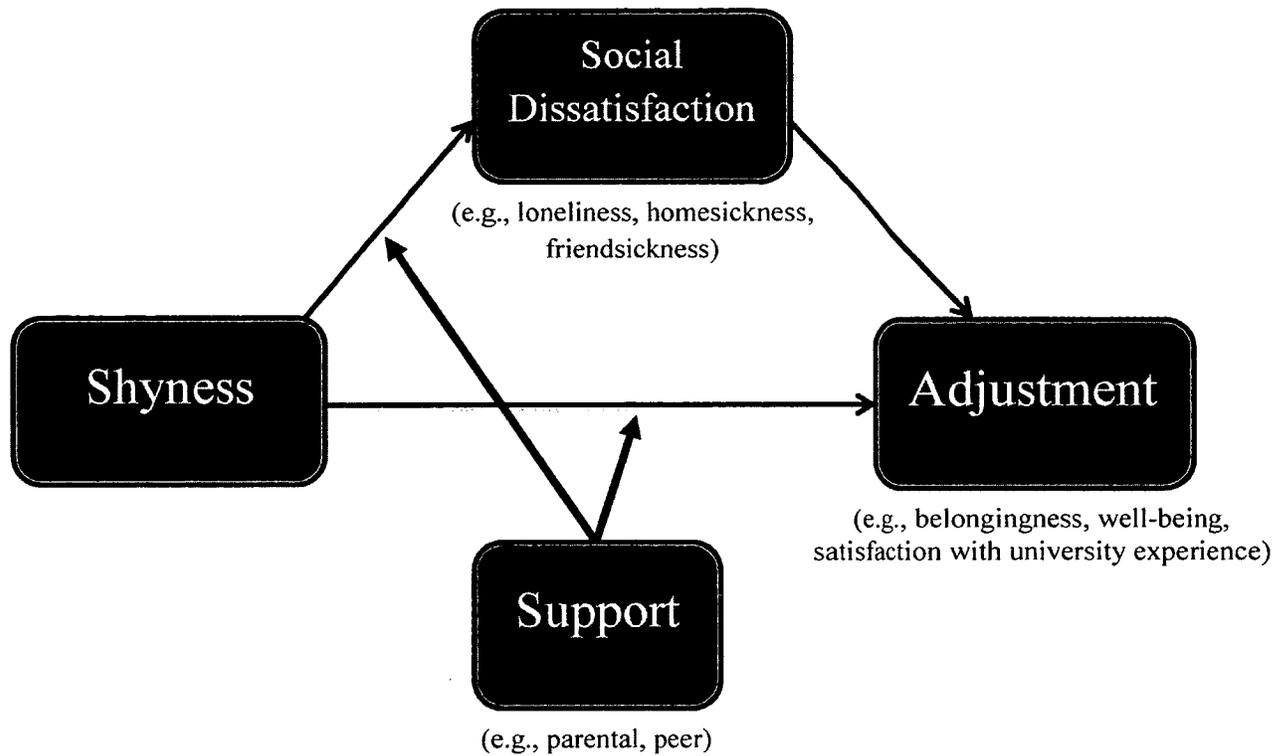
In terms of interactive effects, it was speculated that social support would *moderate* links between shyness and adjustment to university. More specifically, among students with lower reported levels of parental and peer support, shyness was expected to be more strongly related to negative adjustment indices. In contrast, among students with higher levels of support, these effects were expected to be attenuated (i.e., buffering effect). A conceptual model of these complex inter-associations is presented in Figure 1.

As well, a shyness by sociability interaction was expected in the prediction of adjustment to university. Students may experience high levels of shyness (i.e., feeling uncomfortable during social events) in combination with high levels of sociability (i.e., desiring opportunities to socialize) (Mounts et al., 2006). Though combinations of shyness and sociability appear to impact children and adults on a behavioural level (e.g., Page, 1990), it remains unknown how sociability, as separate from shyness, affects emerging adults' adjustment to university. Accordingly, it was speculated that high levels of sociability would exacerbate links between shyness and negative outcomes during the transition to university.

Finally, gender differences were examined on an exploratory basis. It has been suggested that shyness may be a greater risk factor for boys than girls (e.g., Coplan et al., 2004; Eisenberg, Shepard, Fabes, Murphy, & Guthrie, 1998; Gazelle & Ladd, 2003; Morison & Masten, 1991). Rubin and Coplan (2004) argued that these findings reflect a greater social acceptance of shyness for girls than boys in Western cultures. For example, in two separate longitudinal studies (Caspi, Elder, & Bem, 1988; Kerr, Lambert, & Bem,

1996) it has been found that shy boys were more likely than their peers to delay marriage, parenthood, and longstanding careers, suggesting that shy men may not follow typical life-course transitions throughout adulthood (Nelson et al., 2008). By contrast, shy women were more likely than non-shy women to adhere to a conventional timeframe involving marriage, childbearing, and homemaking (Caspi et al., 1988). Rowsell and Coplan (in press) also recently reported that shyness among first year university students was negatively related to well-being for males but not females. Additionally, research examining social support in young adults suggests that women commonly report receiving greater social support compared to men during stressful times, though both genders benefit from the support they receive (Luo, 2006; Schneider, Randoll, & Buchner, 2006). No gender differences were found in previous research exploring homesickness (e.g., Fisher & Hood, 1987). As such, gender differences in the pattern of associations between shyness and support, social dissatisfaction, and adjustment outcomes were explored.

Figure 1. Conceptual Model Linking Shyness, Social Dissatisfaction, and Adjustment to University.



Methods

Participants

Six hundred and ninety seven university students completed the on-line questionnaires over a three month period. Of this sample, $n=266$ students met the eligibility criteria for inclusion in the final sample: (1) first-year undergraduate psychology students; (2) between the ages of 18-19 years; and (3) living on-campus without family members. Participants were enrolled in Introductory Psychology courses (PSYC 1001 and PSYC 1002) at Carleton University in Ottawa, Canada. Sixty-nine percent of the sample was female and 30% was male. The sample was approximately 82% Caucasian, 5% Asian, 3% African-American, 2% Mixed/Bi-racial, 1% Hispanic/Latino, <1% Aboriginal, 4% Other, and 2% Preferred not to say. Fifteen percent of participants were from Ottawa and the surrounding area, and 85% of students were from outside of Ottawa.

Recruitment of students was conducted through the SONA system and students received 0.5 credits for their participation. This study was completed online using Survey Monkey, and participants were emailed the study link via the primary investigator's email account. Data were collected during the second semester of students' first year at university. Participants were asked to supply basic demographic information including their date of birth, gender and ethnicity as well as their level of education, relationship status, and high school GPA (see Appendix A). Participants were also asked to report their parents' highest level of education and occupation, as well as their current living arrangement (i.e., off-campus housing/commuter; on-campus housing/residential; living with family/friends/roommates/alone).

Measures

Shyness. Shyness was assessed using the *Revised Cheek and Buss Shyness Scale* (RCBS, Cheek & Melchior, 1985 – see Appendix B). The RCBS is a self-report measure that contains 20 items and was constructed based on the nine-item measure of shyness first developed by Cheek and Buss (1981). Items are used to evaluate symptoms representing the somatic, behavioural, and cognitive components of shyness (Cheek & Melchior, 1990). Participants are instructed to rate the extent to which each item is characteristic of their feelings and behaviours, from 1 (strongly disagree) to 5 (strongly agree). Some items on this measure include “*I feel painfully self-conscious when I am around strangers*” and “*I worry about how well I will get along with new acquaintances*”. Higher scores indicate higher levels of shyness. The measure has previously demonstrated strong reliability ($\alpha = .94$), and very high correlations ($r = .96$) have been reported with the original nine-item version (Cheek & Buss, 1981; Melchior & Cheek, 1990). In the current sample, strong reliability was also demonstrated ($\alpha = .93$).

Sociability. Sociability was measured using the five-item *Cheek and Buss Sociability Scale* (Cheek & Buss, 1981; adapted by Mounts et al., 2006 – see Appendix C). This self-report measure instructs participants to rate the extent to which each item is characteristic of their feelings and behaviours, from 1 (strongly disagree) to 5 (strongly agree). Some items on this measure include “*I like to be with people*” and “*I prefer working with others rather than alone*”. Higher scores indicate higher levels of sociability. The measure has previously demonstrated moderate reliability ($\alpha = .70$), which is adequate for a short measure (Cheek & Buss, 1981). Using the current sample, the measure demonstrated strong reliability ($\alpha = .86$).

Parental support. Parental support was assessed using the *Parental Support for the College Transition* measure, a 40-item self-report questionnaire (Mounts, 2004 – see Appendix D). Participants will rate each item on a four-response scale ranging from 1 (strongly disagree) to 4 (strongly agree). Items explore parental support for adolescents along financial, academic and social dimensions. Some of the items on this measure include “*My parents/guardian call me on the telephone while I’m at school*” and “*My parents paid tuition, room, or board for me to go to school*”. Higher scores indicate a higher level of parental support. The measure has previously demonstrated strong reliability ($\alpha = .88$) (Mounts et al., 2006). In the current sample, strong reliability was also demonstrated ($\alpha = .86$).

Peer support. Peer support was assessed using the *Network of Relationships Inventory- Social Provisions Version*, a 31-item self-report measure (NRI-SPV, Furman & Buhrmester, 1985 – see Appendix E). Participants rated the extent to which different peer network members satisfy each of seven social needs (affection, reliable alliance, enhancement of worth, intimacy, instrumental help, companionship, and nurturance of other), and two negative characteristics of relationships (conflict and antagonism). The NRI-SPV is the most widely used version of the NRI, and helps to make developmental comparisons in the different roles that network members play in satisfying diverse social needs. Some of the items on this measure include “*How often do you tell this person everything that you are going through?*” and “*How much does this person help you figure out or fix things?*”. Higher scores indicate a higher level of peer support. Authors previously report satisfactory internal consistency across all NRI-SPV scales for all

relationships (see Furman & Buhrmester, 2009). Strong reliability was also demonstrated in the current sample ($\alpha = .95$).

Loneliness. Loneliness was measured using the *Loneliness in Context Questionnaire* for college students (Asher, Weeks, & McDonald, 2010 – see Appendix F). This self-report measure contains 10 items. Participants are instructed to respond to items on a five-point scale, from 1 (never) to 5 (always). Some items on this measure include “*My place of residence is a lonely place for me*” and “*I feel sad and alone at social events*”. Higher scores indicate higher levels of loneliness. The measure has previously demonstrated strong internal reliability ($\alpha = .91$) (Asher et al., 2010). In the current sample, strong reliability was also demonstrated ($\alpha = .92$).

Homesickness. Homesickness was assessed using the *Homesickness Questionnaire* (HQ, Archer, Ireland, Amos, Broad, & Currid, 1998 – see Appendix G). The 33-item scale explores grief-based homesickness dimensions that include preoccupation/intrusive thoughts, pangs/distress related to missed attachment, seeking to maintain attachment, restlessness and guilt. Items are rated using a four-item scale, with greater scores indicating greater feelings of homesickness. The measure has previously demonstrated strong reliability ($\alpha = .88$) (Archer et al., 1998). Strong reliability was also demonstrated in the current sample ($\alpha = .92$).

Friendsickness. Friendsickness was explored using the *Friendsickness Scale* created by Paul and Brier (2001 – see Appendix H). The 10-item self-report measure examines two main themes of friendsickness: preoccupation with maintaining pre-university relationships and concern about how those pre-university friendships may change. Participants responded to items on a four-point scale, from 1 (not at all like me)

to 4 (very much like me). Some items on this measure include “*I think often about my friends from home*” and “*I’m trying to remain the same person I was in high school so that my pre-university friendships will continue*”. Higher scores indicate higher involvement and concern with pre-university relationships. The measure has previously demonstrated strong internal consistency ($\alpha = .83$) (Paul & Brier, 2001).

Belongingness. Belongingness was measured using the six-item *Belongingness Measure for College Students* (Weeks, Asher, & McDonald, 2010 – see Appendix I). Participants responded to items on a five-point scale, from 1 (strongly disagree) to 5 (strongly agree). Some items on this measure include “*I feel connected to this school*” and “*I feel welcome at this school*”. Greater scores indicate greater feelings of belongingness. The measure has previously demonstrated strong internal reliability ($\alpha = .92$) (Weeks et al., 2010). In the current sample, strong reliability was also demonstrated ($\alpha = .92$).

Well-being. Well-being was assessed using the four-item *Subjective Happiness Scale* (Lyubomirsky & Lepper, 1999 – see Appendix J; students $\alpha = .86$, community $\alpha = .88$) and the five-item *Satisfaction With Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985 – see Appendix K; students $\alpha = .86$, community $\alpha = .90$). Participants were asked to indicate their happiness and satisfaction on Likert scales. In the current sample, strong reliability was also demonstrated in both the happiness ($\alpha = .88$) and satisfaction with life ($\alpha = .87$) scales.

Student satisfaction with the university experience. Students’ experience in university was assessed using an adapted version of the *Student Satisfaction Inventory* (SSI, Schreiner, 2009 – see Appendix L). The original SSI is a 79-item instrument that

assesses satisfaction on two continua. Each item is phrased as a positive expectation that the institution may or may not meet (e.g., “*Most students feel a sense of belonging here*”). Satisfaction with university occurs when an expectation is met or exceeded by the institution (Tinto, 1987, 1993). Though the measure is typically not used in this way, the current study used only the satisfaction subscale of the measure, rather than examining the gap between importance ratings and satisfaction. Previous studies that have examined students’ university expectations in comparison to adjustment outcomes typically do so using two or more time points, rather than reporting these differences in retrospect (e.g., Paul & Brier, 2001). The present study was conducted at only one time point; therefore the current researchers chose to explore students’ satisfaction ratings independently of their importance ratings. Participants rated their level of satisfaction that the university has met their expectations, using a seven-point response scale from 1 (very dissatisfied) to 7 (very satisfied). Since retention among first-year students is more likely to occur when students feel a sense of community (Schreiner, 2009), the following subscales were of specific interest for the proposed study: *Campus Climate* (17 items), *Student Centeredness* (6 items), *Campus Life* (15 items), and *Concern for the Individual* (6 items). Higher scores indicate higher levels of satisfaction with the university. The measure has previously demonstrated strong reliability ($\alpha = .98$) (Schreiner, 2009). In the current sample, strong reliability was also demonstrated ($\alpha = .98$).

Procedure

Upon recruitment via the SONA system, participants were screened to ensure eligibility (i.e., age, year of study – see Appendix M). After screening and participant sign-up, participants were emailed the Survey Monkey link to access the current study.

Participants were required to enter a personalized identification number before beginning the study. Consent was obtained by providing individuals with a consent form to read prior to beginning the study. A box was checked to indicate participants' agreement to take part in the study, giving individuals the opportunity to discontinue participation at any time. This consent form also outlined how participant anonymity and response confidentiality were ensured. After consent was obtained, students completed the measures online.

Results

Preliminary Analyses

Checking assumptions. To begin with, data were checked for entry errors, missing values, and outliers. Missing data from individual scale items were pro-rated using mean scale values for the remaining items, as appropriate. Box plots did not indicate the presence of any extreme outliers. To account for outlying scores, cases with z -scores greater than 3 SD above the mean were adjusted to 3 SD from the mean (Tabachnick & Fidell, 1996). General assumptions of linearity, independence, homoscedasticity, order, and normality for all measures and scales were examined. The variable of loneliness showed a significant positive skew. However, after the variable was log-transformed, this adjustment did not significantly alter the results. Therefore, results are presented with original values for all cases. Accordingly, general assumptions were not violated.

Factor structure of friendsickness scale. Since the friendsickness measure has not often been employed in previous studies, the next analyses examined its factor structure and psychometric properties. Results from a Principal Components Analysis

(PCA) indicated the presence of two separate factors with Eigenvalues greater than one. The first factor (Eigenvalue = 4.13) included 8 items and explained 41.26% of the variance. The second factor (Eigenvalue = 1.66) included 4 items and explained 16.58% of the variance. Factor loadings are displayed in Table 1.

The second factor was comprised primarily of two items with content related to the effort required to maintain friendships (i.e., “I feel my friends from home aren’t trying hard enough to maintain our friendship”, “I feel guilty about not working hard enough to maintain my pre-university friendships”). These items did not load above .30 on the first factor. Since two-item factors are discouraged (Tabachnick & Fidell, 2007), the PCA was re-run after dropping these two items. Results indicated that all remaining 8 items loaded onto a single factor (Eigenvalue = 4.08) that explained 51.00% of the variance. Factor loadings ranged from .56 to .82. The internal consistency of this new factor was strong ($\alpha = .86$).

Associations with demographic variables. The goal of these analyses was to determine if any demographic variables needed to be controlled for in the main analyses. Results from correlational analyses indicated that parental education was associated with two variables of the ten main variables in the study. Significant associations were found between parental education and sociability ($r = .15, p < .05$) and parental support ($r = .29, p < .001$). GPA was significantly and negatively associated only with well-being ($r = -.12, p < .05$). Subsequent analyses were initially conducted controlling for both parental education and GPA. However, since this did not change the pattern of results, subsequent results are reported without controlling for parental education and GPA.

Table 1

Factor Loadings for the Initial PCA of the Friendsickness Scale Items.

	Component	
	1	2
1. Miss my friends from home.	.78	
2. Always remain close with pre-university friends.	.76	-.36
3. Friends aren't trying hard enough.		.72
4. Think often about friends from home.	.79	
5. Remain the same person so that friendships continue.	.62	
6. A lot of time trying to maintain friendships.	.82	
7. Trying hard to stay close to pre-university friends.	.57	.56
8. Free time spent on pre-university friendships.	.71	
9. Bring up pre-university friends with friends at university.	.62	
10. Feel guilty about not maintaining pre-university friendships.		.77

In terms of gender effects, results from a MANOVA for the main study variables indicated an overall main effect of gender, $F(10, 199) = 2.11, p = .03, \eta_p^2 = .10$. Results from subsequent univariate analyses indicated significant gender differences for parental support, $F(1, 208) = 7.47, p < .01$ and peer support, $F(1, 208) = 4.39, p < .05$, with females reporting greater parental support ($M = 2.78, SD = .47$) than males ($M = 2.60, SD = .40$) as well as greater peer support ($M = 3.08, SD = .47$) as compared to males ($M = 2.92, SD = .56$). Descriptive statistics for all study variables are provided in Table 2.

Associations among Study Variables

Bivariate correlations were conducted to examine associations among all variables. Results are displayed in Table 3. Among the results, *shyness* was significantly and negatively associated with sociability. Shyness was also significantly and negatively associated with peer support, but was not significantly related to parental support. Shyness was significantly and positively related to loneliness and homesickness, but was not significantly related to friendsickness. As well, shyness was significantly and negatively associated with indices of adjustment, including belongingness, well-being, and satisfaction with the university experience.

In contrast, *sociability* was significantly and positively related to support from both parents and peers. Sociability was also significantly and negatively associated with indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness), and significantly and positively associated with indices of adjustment to university (i.e., belongingness, well-being, satisfaction with university experience).

In examining types of social support, *parental support* was significantly and positively related to peer support. Additionally, parental support was significantly and

Table 2

Descriptive Statistics for All Study Variables.

Variable	Mean	<i>SD</i>	Range
Shyness	2.65	0.72	1.10 – 4.70
Sociability	3.73	0.80	1.20 – 5.00
Parental Support	2.73	0.45	1.00 – 3.82
Peer Support	3.02	0.51	1.64 – 4.07
Loneliness	2.05	0.74	1.00 – 4.35
Homesickness	2.47	0.61	1.30 – 4.32
Friendsickness	2.63	0.65	1.00 – 4.00
Belongingness	3.76	0.86	1.17 – 5.00
Well-Being	4.85	1.13	1.30 – 7.00
Satisfaction	4.84	0.98	1.90 – 7.00

Table 3
Correlations among Study Variables.

	2	3	4	5	6	7	8	9	10
1. Shyness	-.44***	-.10	-.18**	.48***	.21***	.07	-.30***	-.41***	-.19**
2. Sociability	-	.27***	.29***	-.35***	-.13*	.15*	.30***	.32***	.23***
3. Parental Support		-	.22**	-.16**	.21**	.22***	.08	.16*	.15*
4. Peer Support			-	-.32***	-.04	.29***	.15*	.22**	.23**
5. Loneliness				-	.51***	.04	-.54***	-.50***	-.49***
6. Homesickness					-	.34***	-.61***	-.42***	-.45***
7. Friendsickness						-	-.10	-.03	.01
8. Belongingness							-	.56***	.68***
9. Well-Being								-	.55***
10. Satisfaction									-

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

negatively associated with loneliness. However, contrary to expectations, parental support was significantly and positively related to both homesickness and friendsickness. Parental support was also significantly and positively related to well-being and satisfaction, but was not significantly associated with belongingness. *Peer support* was also significantly and negatively related to loneliness. However, as with parental support, peer support was also significantly and positively related to friendsickness (but not significantly associated with homesickness). As well, peer support was significantly and positively associated with indices of adjustment (i.e., belongingness, well-being, satisfaction with university experience).

With regards to indices of social dissatisfaction, *loneliness* was significantly and positively related to homesickness, but was not associated with friendsickness. Additionally, loneliness was significantly and negatively associated with adjustment (i.e., belongingness, well-being, satisfaction with university experience). *Homesickness* was significantly and positively related to friendsickness. As well, homesickness was significantly and negatively associated with adjustment (i.e., belongingness, well-being, satisfaction with university experience). In contrast, *friendsickness* was not associated with any indices of adjustment to university.

When exploring adjustment outcomes, *belongingness* was significantly and positively related to well-being and satisfaction with the university experience. *Well-being* was also significantly and positively associated with satisfaction.

Correlations were also computed separately by gender. An online statistics website was used to test the significance of the difference between two correlation coefficients (see Lowry, 2012). Results indicated significant gender differences only in

two instances. The significant and negative correlation between shyness and well-being was stronger for males than for females; Males ($r = -.56, p < .001$), Females ($r = -.33, p < .001$). Additionally, parental support was positively related to well-being for males ($r = .36, p < .01$) but not females ($r = .10, p = .18$).

Shyness, Sociability, and Adjustment

Interactive associations between shyness, sociability, and gender in the prediction of adjustment to university were examined with a series of hierarchical linear regression models. The order of entry into each equation for predictor variables was then determined by the conceptual model. For these and subsequent analyses, two conceptually-derived and empirically-substantiated aggregate variables were created. The first pertained to *social dissatisfaction*, and included the variables of loneliness and homesickness ($r = .51, p < .01$). Of note, although friendsickness was originally intended to be included in this summary variable, it did not demonstrate significant associations with loneliness, and was also not significantly associated with any of the indices of adjustment to university (i.e., belongingness, well-being, satisfaction with university). Accordingly, the friendsickness variable was excluded from subsequent analyses.

The second aggregate variable represented *university adjustment*, and was created by combining scores of belongingness in university, well-being (i.e., happiness, life satisfaction), and satisfaction with university (r 's ranging between .55 and .68; all p 's < .001).

The first set of regressions examined shyness, sociability, and gender as predictors of social dissatisfaction. The main effect variables of shyness, sociability, and gender were centered and entered into the model at Step 1. The two-way interaction

terms (i.e., shyness x sociability, shyness x gender, sociability x gender) were then entered at Step 2. Finally, the three-way interaction term (shyness.x sociability x gender) was entered at Step 3. Results revealed that shyness was positively associated with social dissatisfaction, whereas sociability was negatively associated with social dissatisfaction. There was no significant main effect of Gender. There were no statistically significant interactions (see Table 4). These findings confirmed earlier hypotheses regarding the significant and positive association between shyness and social dissatisfaction, as well as the significant and negative relation between sociability and social dissatisfaction.

The second set of regressions examined shyness, sociability, and gender as predictors of adjustment. The main effect variables of shyness, sociability, and gender were centered and entered into the model at Step 1. The two-way interaction terms (i.e., shyness x sociability, shyness x gender, sociability x gender) were then entered in Step 2. Finally, the three-way interaction term (shyness x sociability x gender) was entered at Step 3. Results revealed that shyness was negatively associated with adjustment, whereas sociability was positively associated with adjustment. There was no significant main effect of Gender. There were no statistically significant interactions (see Table 5). These findings confirmed earlier expectations regarding the significant and negative relation between shyness and adjustment, as well as the significant and positive association between sociability and adjustment. Contrary to hypotheses, a shyness x sociability interaction was not found to predict students' adjustment to university.

Shyness, Social Dissatisfaction, and Adjustment: Mediation Analyses

The goal of these analyses was to examine if social dissatisfaction mediated the association between shyness and adjustment. Following protocols established by Baron

Table 4

Hierarchical Regression Predicting Social Dissatisfaction from Shyness, Sociability, and Gender.

Variable	R ²	F	ΔR ²	ΔF	β
Step 1	.17	17.67***	.17***	17.67***	
Shyness					.35***
Sociability					-.12*
Gender					-.01
Step 2	.18	9.43***	.01	1.15	
Shyness					.33***
Sociability					-.11
Gender					.00
Shyness x Sociability					-.08
Shyness x Gender					-.01
Sociability x Gender					-.08
Step 3	.19	8.44***	.01	2.23	
Shyness					.34***
Sociability					-.10
Gender					-.04
Shyness x Sociability					-.07
Shyness x Gender					-.04
Sociability x Gender					-.07
Shyness x Sociability x Gender					-.10

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

Table 5

Hierarchical Regression Predicting Adjustment from Shyness, Sociability, and Gender.

Variable	R ²	F	ΔR ²	ΔF	β
Step 1	.16	15.75***	.16***	15.75***	
Shyness					-.26***
Sociability					.21**
Gender					.06
Step 2	.16	8.08***	.01	.50	
Shyness					-.24***
Sociability					.20**
Gender					.06
Shyness x Sociability					.08
Shyness x Gender					-.01
Sociability x Gender					-.02
Step 3	.17	7.14***	.01	1.45	
Shyness					-.25***
Sociability					.19**
Gender					.09
Shyness x Sociability					.06
Shyness x Gender					.02
Sociability x Gender					-.02
Shyness x Sociability x Gender					.08

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

and Kenny (1986), a series of regression analyses were computed (see Figure 2). The first regression revealed that the relation between shyness and adjustment was significant. The second regression showed that the relation between shyness and social dissatisfaction was significant. The third regression revealed that the relation between social dissatisfaction and adjustment was significant. Finally, the relation between shyness and adjustment was no longer significant when controlling for social dissatisfaction, therefore supporting a full mediation.

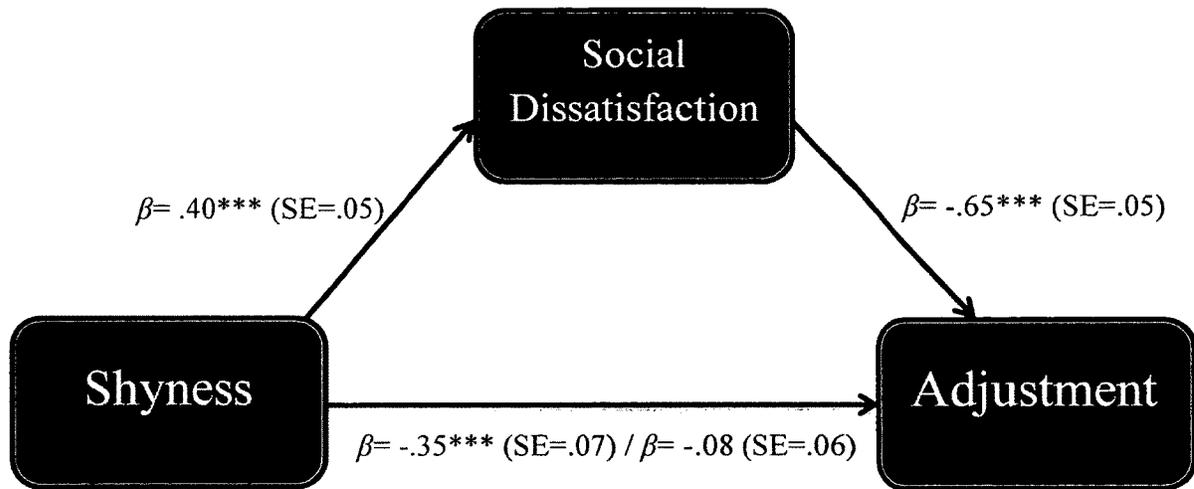
To confirm that the mediation was significant and to investigate the indirect effects, a Sobel Test and Bootstrapping with 95% confidence intervals were also conducted. The Sobel Test indicated that social dissatisfaction was a significant mediator linking shyness to adjustment ($z = -6.16, p = .00$). Additionally, the Bootstrapping method revealed that zero was not in the 95% confidence interval range (-.41 & -.22), therefore confirming that the mediation was significant. As hypothesized, the experience of social dissatisfaction therefore helped to account for associations between shyness and adjustment difficulties during the transition to university.

Moderating Role of Social Support

The final set of regressions explored the interaction associations between shyness, parental support, and peer support in the prediction of social dissatisfaction and adjustment. In the first analysis predicting social dissatisfaction, shyness, parental support and peer support were centered and entered into the model at Step 1. The two-way interaction terms (i.e., shyness x parental support, shyness x peer support) were then entered at Step 2. Results revealed that shyness was positively associated with social dissatisfaction. Parental support was not significantly associated with social

Figure 2

Mediational Model Linking Shyness, Social Dissatisfaction and Adjustment.



*** $p < .001$

dissatisfaction, whereas peer support was negatively associated with social dissatisfaction. There were no statistically significant interactions (see Table 6). Contrary to hypotheses, social support therefore did not significantly moderate the links between shyness and social dissatisfaction.

In the second analysis, shyness, parental support and peer support were centered to predict adjustment and entered into the model at Step 1. The two-way interaction terms (i.e., shyness x parental support, shyness x peer support) were then entered at Step 2. Results revealed that shyness was negatively associated with adjustment. Parental support was not significantly associated with adjustment, whereas peer support was positively associated with adjustment. There were no statistically significant interactions (see Table 7). Contrary to hypotheses, social support therefore did not significantly moderate the links between shyness and adjustment to university.

Table 6

Interaction Associations between Shyness, Parental Support, and Peer Support to Predict Social Dissatisfaction.

Variable	R ²	F	ΔR ²	ΔF	β
Step 1	.20	17.65***	.20***	17.65***	
Shyness					.40***
Parental Support					.07
Peer Support					-.15*
Step 2	.21	10.93***	.01	.89	
Shyness					.40***
Parental Support					.07
Peer Support					-.14*
Shyness x Parental Support					-.03
Shyness x Peer Support					-.08

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

Table 7

Interaction Associations between Shyness, Parental Support, and Peer Support to Predict Adjustment.

Variable	R ²	F	ΔR ²	ΔF	β
Step 1	.16	12.84***	.16***	12.84***	
Shyness					-.31***
Parental Support					.09
Peer Support					.16*
Step 2	.16	7.80***	.00	.36	
Shyness					-.31***
Parental Support					.09
Peer Support					.15*
Shyness x Parental Support					.02
Shyness x Peer Support					.05

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

Discussion

The primary goal of the current study was to examine links between shyness, sociability, social support, social dissatisfaction, and adjustment during the university transition. Overall, shyness was positively associated with indices of social dissatisfaction and predicted adjustment difficulties during students' first year at university. As well, although shyness was negatively associated with perceived support from peers, it was not significantly related to parental support. Conversely, sociability was negatively related to social dissatisfaction and predictive of successful university adjustment. Furthermore, sociability was positively related to both parental and peer support.

In terms of indices of social dissatisfaction, loneliness was positively related to homesickness and negatively related to adjustment, but was not associated with friendsickness. Homesickness was positively related to friendsickness and negatively associated with adjustment. However, friendsickness was not associated with any indices of adjustment. Accordingly, there was limited support to suggest that friendsickness is an important and unique construct in the transition to university context.

Finally, indices of social dissatisfaction (loneliness, homesickness) were found to *mediate* associations between shyness and indices of adjustment to university. However, contrary to predictions, neither sociability nor social supports were found to *moderate* associations between shyness and outcome variables.

Results suggest that shyer students may experience greater challenges in their transition to university as compared to their less shy, more sociable peers. These findings are discussed in terms of the psychological processes that underlie the links between shyness and adjustment during the transition to university.

Sociability and the Transition to University

Sociability was expected to be negatively related to indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness), and positively related to indices of adjustment (i.e., belongingness, well-being, satisfaction with university). It was also hypothesized that sociability would be positively related to parental and peer support. As predicted, students who were more sociable reported less social dissatisfaction and more successful adjustment compared to students who were less sociable. Sociability was also significantly and positively related to perceived support from both parents and peers.

Consistent with the literature, individuals who are more sociable find it easier to form new social networks compared to their less sociable counterparts (e.g., Cheek & Buss, 1981; Mounts et al., 2006). Within a university context, sociability therefore appears to facilitate students' development of social relationships due to their strong desire to engage in peer interactions. Through their development of a strong social network, students who are more sociable may experience fewer feelings of loneliness, homesickness and friendsickness as a result of both their sustained pre-university friendships, as well as the ease with which they form new university-based friendships (e.g., Fisher & Hood, 1987; Mounts et al., 2006; Paul & Brier, 2001). Students who are eager to make new friends (and who possess the self-confidence and social skills to successfully do so) will likely experience fewer interpersonal challenges, receive more social support, and report greater feelings of social satisfaction. Taken together, these experiences would likely ease the transition and adjustment to university for more sociable students.

Moreover, research suggests that higher levels of parental support are associated with greater social integration, more positive friendship quality, and more positive psychological adjustment (e.g., Holahan et al., 1994; Mounts et al., 2006; Nora & Cabrera, 1996). Individuals who report having positive parental relationships are likely to have a more positive social orientation (i.e., identification with adult prosocial values) in early adulthood (Bartholomew & Horowitz, 1991; Pierce, Sarason, & Sarason, 1991). Since sociable individuals tend to have a strong desire to interact with others, social students may also receive greater support from parents - who have continually provided their children with strategies for developing positive peer affiliations (Bartholomew & Horowitz, 1991; Hickman et al., 2000). It is also possible that sociable students who experience expressive, supportive family environments consequently seek out opportunities to acquire further support as they transition into young adulthood. Accordingly, the qualities and behaviours that are characteristic of more sociable individuals likely allow these students to adapt to the various interpersonal and support-specific changes associated with the university transition, whereby these students are better able to elicit and obtain social support from various domains (i.e., family, pre-university friendships, university-based friendships).

A shyness by sociability interaction was also expected to predict students' adjustment to university. It was speculated that high levels of sociability would exacerbate links between shyness and negative outcomes during the transition to university. No interaction effects were found, thereby indicating that sociability appeared to act independently of shyness in predicting adjustment during the transition to university.

Subtypes of Social Dissatisfaction

The next set of hypotheses pertained to the uniqueness and implications of different subtypes of social dissatisfaction.

Loneliness. With regard to *loneliness*, results indicated a positive association to homesickness and negative associations to parental support, peer support and adjustment. Accordingly, students experiencing greater loneliness reported feeling more homesick and perceived themselves as receiving less support from both family and friends. These findings are consistent with the literature, whereby students' failure to develop and adjust to new social relationships results in negative outcomes, such as persistent loneliness and difficulty disengaging from high school friendships (Asendorpf, 2000; Holahan et al., 1994). Within the university context, lonelier students may feel socially isolated from the interpersonal interactions they observe other students taking part in, thereby making their feelings of social dissatisfaction more salient (i.e., sitting alone during a meal inside the cafeteria while other students are interacting). As students start feeling less content and more socially dissatisfied, they likely begin to recall how life felt when they were living at home, perhaps with a strong desire to return to what is perceived to be a less lonely, more supportive setting. These feelings of disconnection from both the present context as well as the home environment in turn may lead to greater difficulties adjusting to university life.

Homesickness. Results indicated that *homesickness* was positively related to parental support and friendsickness, and negatively related to adjustment. Feelings of isolation may be exacerbated by and/or contribute to how often students miss home and think about family and friends that were left behind following the move away to

university. As a result, students likely report stronger feelings of homesickness and an overall dissatisfaction with their exclusion from the current - as well as the past - home environments. Hence, greater feelings of social dissatisfaction (as indicated by loneliness and homesickness) may result in more negative outcomes during students' first year of university. Accordingly, socially dissatisfied students may come to feel as though they do not belong or "fit in" appropriately within the university context, feel less content with their experiences, and perceive their overall university experience more negatively. It is plausible that the more students are feeling detached and left out of peer relations taking place back at home, the more these same students desire to find those supportive means in their current environment in order to feel more satisfied with their post-secondary experiences.

In examining homesickness' positive association with parental support, it appears as though students experiencing greater homesickness may elicit more support from parents as a result of these feelings of detachment, in hopes of relieving some of its negative effects. Hence, these students may be receiving a lot of support from parents during their first year of university, thereby making the physical absence of family even more difficult to become accustomed to. This may consequently result in greater parental support due to strong feelings of homesickness. It is also possible that students raised in characteristically close-knit families may lose some of the support they were accustomed to receiving in the past, thereby resulting in greater homesickness and adjustment difficulties (e.g., Ellis, 1994). Though family cohesiveness may improve relationship quality, it may also make the transition to university increasingly difficult when a student's need for familial support is not being met. Accordingly, the distress felt by

some in the absence of home may motivate parents to offer greater support through other means (i.e., strong financial support, constant communication via email/text messages) in order to compensate for the lack of proximity. This may consequently result in greater feelings of homesickness which are responded to by an increase in parental support.

Friendsickness. There has only been sparse previous research related to the construct of *friendsickness*. It was expected that friendsickness would display unique predictive effects (while controlling for other indices of social dissatisfaction) in terms of university adjustment. It was also expected that homesickness would be more strongly associated with parental support than peer support, and that friendsickness would be more strongly predicted by peer support than by parental support. However, overall, little empirical support emerged from the current study with regard to the importance and uniqueness of the construct of friendsickness during the transition to university.

To begin with, results from factor analysis in the present sample revealed an initial (and unexpected) two-factor solution for this scale, with two items that did not load on the original scale. Although these two items were excluded from subsequent analyses, it should be noted that even when these two items were included in the friendsickness scale score, the pattern of results was essentially unchanged. Clearly additional work is required to further evaluate the psychometric properties, reliability, and validity of this measure. Alterations will likely be required as a result.

Results of the current study also indicated that although friendsickness was moderately associated with homesickness, it was not significantly associated with loneliness. Similar to findings with homesickness, friendsickness was positively related

to both parental and peer support. However, friendsickness was not significantly associated with any indices of adjustment to university.

These findings are consistent with a previous study indicating that friendsickness was not related to loneliness in first year university students (Paul & Brier, 2001). As well, given that a student's displacement from home separates them from both family and friends (e.g., Fisher & Hood, 1987), friendsickness and homesickness would be expected to co-occur. As was the case with homesickness, the positive association between friendsickness and both parental and peer support suggest that students feeling socially dissatisfied may be seeking out more support, or rather, students who are used to receiving a lot of support from family and friends may be feeling increasingly discontent with their detachment from home. However, the lack of associations found between friendsickness and indices of adjustment call into question its importance as a unique predictor of success during the transition to university.

It would be interesting to examine the concept of friendsickness further in order to determine why unique effects were not found in the present study. It is possible that the concept of friendsickness does not add anything more to the frequently utilized homesickness factor, and therefore its uniqueness or lack thereof does not require additional focus. Since it is maintained that friendsickness is a normative challenge in the university transition that is distressing and dampening to university adjustment, current researchers presume that universities would benefit from "peer-specific" friendsickness prevention and intervention efforts so that the negative outcomes associated with the loss of friendships during the university transition have a lessened impact on adjustment.

Shyness and the Adjustment to University

Overall, it was expected that shyness would be positively related to indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness) and negatively related to indices of adjustment (i.e., belongingness, well-being, satisfaction with university experience). As hypothesized, students who reported greater feelings of shyness were also more likely to experience greater social dissatisfaction (i.e., loneliness, homesickness) and more adjustment difficulties during their first year of university. However, shyness did not display an expected association with friendsickness.

Consistent with the previous literature, shyer students tended to experience greater social challenges during their first year of university compared to their more sociable counterparts (Mounts et al., 2006). Students reporting greater feelings of shyness may be more socially dissatisfied as a consequence of their social apprehension, regardless of their desire for interpersonal interactions (e.g., Cheek & Buss, 1981). Feelings of insecurity and self-doubt in the presence of unfamiliar peers may in turn hinder shyer students' attempts to "fit in" socially during their first year of university, despite being presented with opportunities to interact with their fellow students (e.g., during Frosh Week, in academic lectures, and within residence halls). Consequently, a shyer student may adjust less successfully to an unfamiliar university campus as a result of their loneliness, nervousness and discomfort within these novel contexts.

Shyness and the university transition may therefore foster greater social dissatisfaction as well as more adjustment difficulties for students across two (related but differing) contexts: (1) loneliness, referring to one's discontentment within the *immediate context* of the novel university environment (e.g., feeling socially isolated in your dorm

room); and (2) homesickness, referring to challenges experienced as a result of students' separation from the familiar *pre-university context* (e.g., missing your family and friends from your hometown). Accordingly, these difficulties may in turn create fewer opportunities for shy students to feel as though they belong at university, potentially exacerbating internalizing problems (i.e., anxiety, depression) and reducing students' satisfaction with many school-based experiences. The university transition therefore presents another context in which shy individuals encounter additional challenges in their adjustment during transitory life events.

In an examination of gender differences, shyness was found to be more strongly and negatively associated with well-being among males than females. Similar results were recently reported by Rowsell and Coplan (in press). Since the literature suggests that shyness is less socially accepted in males within Western cultures (e.g., Rubin & Coplan, 2004), it is possible that shy male students making the transition into university may experience more peer rejection or social neglect as a result of their "atypical" social behaviour. In turn, these interpersonal challenges would likely result in reduced feelings of well-being within the university context.

Mediating effects of social dissatisfaction. In the present study, indices of social dissatisfaction (i.e., loneliness, homesickness, friendsickness) were expected to partially *mediate* links between shyness and indices of adjustment (i.e., belongingness, well-being, satisfaction with university experience). Accordingly, the experience of social dissatisfaction was predicted to partially account for associations between shyness and adjustment difficulties during the transition to university.

Findings confirmed that social dissatisfaction *fully* mediated the links between shyness and adjustment. This suggests that university adjustment might be heavily tied to feelings of social satisfaction during students' first year of university. Based on Tinto's (1988) conceptual model, a possible interpretation is that students who experience greater shyness during the *separation* stage may feel lonelier and more homesick within the novel university environment. During this stage, shy students may initially isolate themselves as a result of their social discomfort in unfamiliar situations, while also encountering challenges in their detachment from their previous learning community (i.e., high school academic and peer circles). If this behaviour becomes routine over time, however, these students may continue to segregate themselves either because the behaviour seems safe and familiar to them, or perhaps because they may be experiencing peer rejection as a result of their initial sequestered behaviour. In any event, this active or passive detachment from their peers would likely intensify feelings of loneliness.

At the same time, students' dissatisfaction with the university environment would likely result in reflective thoughts of the security and familiarity of home, resulting in greater feelings of homesickness. In turn, these intensifying feelings of loneliness and homesickness may lead to more adjustment difficulties during students' first year in university. Students who feel socially rejected or neglected, and have an increasing desire to seek the familiar comforts of home, would likely have trouble feeling as though they belong at university. These feelings coincide with Tinto's *transition* stage, whereby shy students may have trouble adapting to the significant life changes associated with the move from high school and the family home into a university living and learning environment. Without feelings of connectedness to the post-secondary environment,

shyer students will likely feel discontent and less satisfied with the overall university experience. As is described in Tinto's *incorporation* stage, shy students' discomfort in the new environment may hinder their willingness and ability to integrate themselves into both social and academic contexts. Without accessible support networks, it is likely that students will perceive their institutional experiences as predominantly negative. Shyer behaviours therefore introduce additional difficulties in students' adjustment during their transition to university through their feelings of social dissatisfaction.

Shyness and support. It was predicted that shyness would be negatively associated with both parental and peer support. That is, shy students were expected to report receiving less support from both parents and peers during the university transition. This hypothesis was partially supported – with results indicating that shyness was significantly and negatively associated with peer support, but not parent support.

Some previous research in the university context has also indicated a lack of association between shyness and parental support (e.g., Mounts et al., 2006). For some students seeking constant familial support, their disconnection from home may become particularly challenging (i.e., homesickness) and result in perceived decreases in support. Hence, some students may not receive the same level of support they used to receive while living at home, despite a strong desire for it. Students may consequently ask for more support in order to lessen the negative impact of emotions and beliefs associated with missing home. However, some parents may take a more “hands-off” parenting approach once their children go away to university, whereby students are encouraged to develop a greater level of independence in order to successfully navigate the university environment. Accordingly, some shy students may feel dissatisfied with the shifting

level of parental support they are now receiving due to their strong dependence on family members, thereby contributing further to feelings of social dissatisfaction.

It can be further speculated that some students may report receiving a very high level of parental support during their university transition, as parents may attempt to compensate for the lack of proximal distance to their children by employing more overprotective parenting styles, which have been associated with greater shyness and social anxiety (e.g., Burgess, Rubin, Cheah, & Nelson, 2005; Rubin, Cheah, & Fox, 2001). Parents who become overly involved in students' lives during the transition may not be allowing their children many opportunities to act autonomously and subsequently develop the self-confidence required to tackle the academic and social challenges presented during university.

Conversely, there may indeed be a negative association between shyness and parental support, but the current study failed to detect it. Since a context-specific measure of university support from parents was used in the current study, subsequent research findings therefore provide a somewhat narrow university-specific perspective concerning the associations between shyness and perceived support. It therefore remains unclear how a more general measure of parental support would relate to emerging adults' shyness and adjustment.

Existing literature also confirms the significant and negative association between shyness and peer support. Since shyness characteristics tend to hinder the development of social relationships (e.g., Leary & Buckley, 2000), this may result in shyer individuals receiving less support from peers. Despite the importance of establishing new friendships during the university adjustment process (Hays & Oxley, 1986), it would likely take

shyer students longer to develop a peer support group in university as a result of their social discomfort and unfamiliarity with the new environment. Accordingly, these difficulties provide shy students with fewer opportunities to obtain peer support. Since the move to university also requires students to renegotiate pre-university friendships and to individuate from peer networks back at home, long-established peer relationships may not be easily replaced as students adapt to a new university context (e.g., Watt & Badger, 2009). This in turn may present several particularly challenging obstacles for shy students in their attempt to acquire peer support in university as well as maintain friendships with peers back at home.

It is also possible that shy individuals may be under-reporting the actual amount of support they receive from their peers. Several factors may contribute to students' lack of perceived support, including heightened social threat perception (e.g., Muris, Merckelbach, & Damsma, 2000), a fear of negative evaluation (e.g., Keighin, Butcher, & Darnell, 2009), self-consciousness (e.g., Bruch, Giordano, & Pearl, 1986), attribution biases (e.g., Girodo, Dotzenroth, & Stein, 1981), and other negative self- and social-cognitive thought patterns. Hence, students' perceptions of their social network likely impact how well-supported and/or neglected they feel during their adjustment to university.

Moderating effects of support. In terms of interactive effects, it was hypothesized that social support from parents and peers would *moderate* links between shyness and adjustment to university. Among students with lower reported levels of parental and peer support, shyness was expected to be more strongly related to negative

indices of adjustment. Conversely, among students with higher levels of support, these effects were expected to be attenuated (i.e., buffering effect).

Contrary to hypotheses, social support did not significantly moderate the links between shyness and adjustment to university, and no significant interactions were found. Social support may not work as a moderating variable because shy students' detachment from support networks back at home may result in the weakening or loss of long-established and heavily valued social relationships. The development of social support in a new location may not lessen feelings of loneliness and homesickness (Watt & Badger, 2009). This may therefore contribute to greater feelings of social dissatisfaction with old *and* new peer relationships while living away at university.

Implications for Intervention, Counseling, and the University Transition

More recently, universities have begun to express their growing concerns regarding a "mental health crisis", whereby an influx of undergraduate students have been seeking counseling support for a variety of internalizing problems, such as anxiety and depression (see UWO, 2011). Despite their best efforts, some schools have been unable to keep up with the sudden demand for psychological services on campus, and as a result, students may be unable to attain professional support from their university, even when it is directly requested. Correspondingly, universities have also been combating rising rates of student attrition (Statistics Canada, 2008) as well as on-campus suicides (see University Affairs, 2012). These issues have highlighted the emergent need for continued research investigating groups of students who may be more vulnerable to experiencing these negative outcomes.

Potentially lost amongst the crowd, shyer students may be overlooked as an “at-risk” group of students struggling to adjust to life in university. With a preference for avoiding anxiety-provoking social situations, shyer students may “shy away” from pursuing counseling services for their social anxiety and dissatisfaction with university, particularly if presented with additional obstacles in their attempt to seek support from counseling staff (i.e., initiating phone calls to book counseling appointments, long wait times before next available openings). Instead, shyer students experiencing considerable distress may withdraw further from roommates, classmates, and school staff, in hopes of reducing the anxious feelings associated with a novel university environment.

As evidenced by the results of the current study, students’ social dissatisfaction and isolation can have a powerfully negative impact on their ability to adapt and thrive during their first year of university. Still, some university prevention and intervention programs are taking strides to successfully integrate students into a new post-secondary way of life by facilitating peer interactions (e.g., Mattanah, Ayers, Brand, & Brooks, 2010). However, these programs may fail to account for students who actively avoid seeking out and signing up for public programs and events that can leave shyer students feeling increasingly vulnerable, self-conscious, and exposed in situations of perceived social evaluation (Asendorpf, 1991). Accordingly, the difficulties experienced by shyer, more withdrawn students may inadvertently go unnoticed.

With greater attention being paid to students who have withdrawn from the university community, intervention and counseling programs can begin to develop alternate options to combat the less visible adjustment difficulties experienced by socially isolated individuals. For example, intervention and prevention programs can be

introduced via online social mediums in order to provide socially anxious students with the social support they may be lacking, without the additional pressure of face-to-face interactions. Rather than retreating into their dorm rooms, shyer students will then have the option of seeking both peer support from other students who may also experience shyness and social anxiety, as well as counseling support from professionals who are trained to provide psychological assistance from a remote location. The ultimate goal of these programs would be to facilitate the gradual development of trust, comfort, and familiarity with new persons, with the hope that shyer students will feel less lonely and increasingly supported by their peers, and likely be more comfortable with acquiring counseling services. By introducing different forms of social support through more varied methods, universities will be better able to assist and promote students' transition into university.

Limitations and Future Directions

A few caveats should be considered in the interpretation of the results from the current study. To begin with, the use of a correlational design precludes inferences regarding causality with regard to direction of effect. For example, findings from mediation analyses were interpreted to indicate that shyness led to social dissatisfaction, which in turn led to a less positive university experience. However, since assessments of shyness, social dissatisfaction and adjustment were all collected concurrently, another plausible interpretation of these analyses could be that having a negative transition to university experience "causes" shy students to report more loneliness and homesickness.

Cross-sectional data also does not allow for an assessment of *changes* in parenting, peers or adolescents' characteristics during the time period of the study (e.g.,

do shyness and sociability change over time, and are these changes related to adolescent adjustment during the university transition?). The current study assessed these constructs at a single time point, a few months into students' first year at university. It would be valuable to examine temporal changes in factors like friendship stability and received support across the school transition, as researchers were not able to examine the long-term effects of shyness, sociability, parental and peer support on social dissatisfaction and adjustment, or whether these effects are specifically influential during the first year of university.

Additionally, single shot questionnaires of key constructs do not give a full picture of each factor being examined (e.g., short term loneliness has less negative outcomes compared to chronic loneliness) (Kochenderfer-Ladd & Wardrop, 2001). As such, repeated assessments would help to account for more of the variance in children's loneliness (Asher & Paquette, 2003). Future research would benefit from conducting longitudinal designs to further explore the implications of the reported associations. It may also be valuable to examine changes in personality and social dissatisfaction over time throughout university (i.e., across a 4-year degree) and to examine changes in outcome measures, with specific attention paid to identifying and investigating factors that preceded student attrition.

Also of note, all of the data were self-reports from the first year university students. Future research would benefit from multiple informant reports, particularly for paternal and peer support for the university transition measures, as these would strengthen the investigative findings. Emerging adults may misrepresent the characteristics that they possess, purposefully or otherwise (i.e., social desirability).

Assessment of parental and peer support would have been stronger if parental reports and peer reports of these variables were also assessed and compared to students' self-report measures. Self-reports are good enough for this study because it has been suggested that children's reports of parents' behaviour might be more accurate reflections of the assessments of independent observers than parents' reports of their behaviours (e.g., Gonzales et al., 1996; Mounts et al., 2006). The setup of this study is therefore a good 'first step' in exploring the relation between shyness, sociability, support, and adjustment during the university transition.

Another limitation of the current study was the use of the "Social Support Total" score. Although this measure was supposed to target "friend support", some participants did include other family members or romantic partners - however, the majority (i.e., 545) did refer to friends here. Future research may want to include a friend-specific support variable to account for this variability in responses.

Additional research investigating peer support is also needed, and could benefit from examining how factors such as friendship quality, friendship involvement, and autonomy change over the course of a university degree. Friendship is a protective factor that enhances positive outcomes and buffers against negative outcomes (Selman, 1983). It would be expected that shy individuals would experience greater internalizing problems (e.g., depression, anxiety) with low quality friendships. It is also expected that friendship would be a stronger protective factor for girls than for boys, as high quality friendships decrease some of the risk for anxious-withdrawn girls and their feelings of separation anxiety. Associated findings would likely provide researchers with additional information concerning the frequency and quality of friendship development during the

university transition, in hopes of identifying and combating the additional challenges faced by shy students.

Finally, the students in the sample were currently attending the same university within Ottawa, Canada. Therefore, the sample's homogenous characteristics resulted in limited generalizability of current findings along the dimensions of gender, race, and university environment. Additional research exploring the same factors at different universities as well as other post-secondary institutions (i.e., colleges, trade schools) would be beneficial in comparing whether certain personalities and levels of social satisfaction, support and adjustment are more characteristic of university attendees as compared to college students.

Conclusion

The current research contributes to our knowledge of social dissatisfaction and support for positive adjustment outcomes, thereby furthering to our understanding of shyness at the transition to university. Results indicate that social satisfaction might play an important role in the adjustment of first year university students, findings of which will help identify risk and protective factors preceding student attrition. Ultimately, researchers and practitioners are working to understand and explain the social and intellectual issues facing new university students in order to develop prevention and intervention programs to facilitate a successful transition.

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Appendices – Appendix A

DEMOGRAPHIC INFORMATION

Name: _____

Birthdate: _____ Age: _____
month day year

Sex: Male _____ Female _____ Year of Study: _____

Psychology Course Enrollment: 1001 _____ 1002 _____

High School GPA: A (100-80%) _____ C (69-60%) _____
B (79-70%) _____ D (59 or below) _____Ethnic group: Caucasian _____ Asian _____ African-Canadian _____
Hispanic _____ Aboriginal _____ Other (*Specify*) _____

Is English your first language? Yes _____ No _____

Select *all* that apply:Housing: On-campus _____ Off-campus _____
Roommate(s) _____ No roommate(s) _____
With friends _____ With non-friends _____
With family _____ Without family _____Relationship Status: Married _____ Separated _____
Divorced _____ Single, never been married _____
Widowed _____ Member of unmarried couple _____

Please fill out this Parent/guardian information about your primary caregivers. Either parent can be designated as Parent One or Parent Two.

Parent One's highest level of education completed (check one):

elementary school _____ high school diploma or equivalent _____
 community college or equivalent _____ university degree _____
 graduate school degree _____

Parent One's current primary occupational status (select the single best option):

Paid employment (full-time) _____ Retired _____
 Paid employment (part-time) _____ Unemployed (health reasons) _____
 Supported employment _____ Unemployed (other reason) _____
 Self-employed _____ Non-paid work (voluntary/charity) _____
 Student _____ Other: (*Specify*) _____
 Homemaker _____

Parent Two's highest level of education completed (check one):

elementary school _____ high school diploma or equivalent _____
 community college or equivalent _____ university degree _____
 graduate school degree _____

Parent Two's current primary occupational status (select the single best option):

Paid employment (full-time) _____ Retired _____
 Paid employment (part-time) _____ Unemployed (health reasons) _____
 Supported employment _____ Unemployed (other reason) _____
 Self-employed _____ Non-paid work (voluntary/charity) _____
 Student _____ Other: (*Specify*) _____
 Homemaker _____

Appendix B

CHEEK AND BUSS SHYNESS SCALE - REVISED

INSTRUCTIONS: Please read each item carefully and decide to what extent it is characteristic of your feelings and behavior. Fill in the blank next to each item by choosing a number from the scale printed below.

- 1 = very uncharacteristic or untrue, strongly disagree
- 2 = uncharacteristic
- 3 = neutral
- 4 = characteristic
- 5 = very characteristic or true, strongly agree

1. I feel tense when I'm with people I don't know well.
2. During conversations with new acquaintances, I worry about saying something dumb.
3. I am socially somewhat awkward.
4. I do not find it difficult to ask other people for information.
5. I am often uncomfortable at parties and other social gatherings.
6. When in a group of people, I have trouble thinking of the right things to talk about.
7. I feel relaxed even in unfamiliar social situations
8. It is hard for me to act natural when I am meeting new people.
9. I feel painfully self-conscious when I am around strangers.
10. I am confident about my social skills.
11. I feel nervous when speaking to someone in authority.
12. I have trouble looking someone right in the eye.
13. I am usually a person who initiates conversation.
14. I often have doubts about whether other people like to be with me.
15. Sometimes being introduced to new people makes me feel physically upset (for example, having an upset stomach, pounding heart, sweaty palms, or heat rash).
16. I do not find it hard to talk to strangers.
17. I worry about how well I will get along with new acquaintances.
18. I am shy when meeting someone of the opposite sex.
19. It does not take me long to overcome my shyness in a new situation.
20. I feel inhibited in social situations.

Appendix C

CHEEK AND BUSS SOCIABILITY SCALE – REVISED

INSTRUCTIONS: Please read each item carefully and decide to what extent it is characteristic of your feelings and behavior. Fill in the blank next to each item by choosing a number from the scale printed below.

1 = very uncharacteristic or untrue, strongly disagree

2 = uncharacteristic

3 = neutral

4 = characteristic

5 = very characteristic or true, strongly agree

1. I like to be with people.
2. I welcome the opportunity to mix socially with people.
3. I prefer working with others rather than alone.
4. I find people more stimulating than anything else.
5. I'd be unhappy if I were prevented from making many social contacts.

Appendix D

PARENTAL SUPPORT FOR THE COLLEGE TRANSITION

Read each statement below. If you:

1 = Strongly Disagree

2 = Disagree

3 = Agree

4 = Strongly Agree

1. My parents/guardian paid tuition, room and board for me to go to school.
2. My parents/guardian helped me move into my living quarters.
3. My parents/guardian provide me with a way to get home to visit (plane tickets, money, pick me up)
4. My parents/guardian gave me equipment for the dorm or supplies (blankets, sheets, fridge, etc.)
5. My parents/guardian gave me a computer to use at school.
6. My parents/guardian gave me money for entertainment and recreation.
7. My parents/guardian gave me a car or paid for car insurance for me to use a car at school.
8. My parents/guardian pay all my credit card bills.
9. My parents/guardian pay for all my expenses while I am at school.
10. My parents/guardian have not helped me financially because I have a scholarship, loans, etc.
11. My parents/guardian have not helped me financially.
12. My parents/guardian stayed with me on the first day of university.
13. My parents/guardian visit me while I am at school.
14. My parents/guardian call me on the telephone while I'm at school.
15. My parents/guardian send me email, text messages, or care packages.
16. My parents/guardian help me think of ways to make friends.
17. My parents/guardian helped me deal with homesickness.
18. My parents/guardian helped me resolve problems with roommates or friends.
19. My parents/guardian gave me advice about social organizations.
20. My parents/guardian did not give me any advice about university.

21. My parents/guardian did not give me social or emotional support.
22. My parents/guardian gave me advice on living with a roommate.
23. My parents/guardian gave me advice on getting dates.
24. My parents/guardian encouraged me to get out and meet people.
25. My parents/guardian encouraged me to be friendly toward other people.
26. My parents/guardian supported me in the decisions I made about university.
27. My parent /guardian encouraged me to be independent.
28. My parents/guardian encouraged me to stay at school on the weekends and not come home.
29. My parents/guardian attended orientation.
30. My parents/guardian helped with financial aid forms.
31. My parents/guardian helped with paperwork associated with move in day.
32. My parents/guardian went with me to talk with professors.
33. My parents/guardian talked with me about how important a university education is.
34. My parents/guardian asked me about my class work (homework, exams, grades, and classes).
35. My parents/guardian helped me decide which classes to take.
36. My parents/guardian helped me with registration.
37. My parents/guardian gave encouragement when classes were tough.
38. My parents/guardian did nothing to help me with academics.
39. My parents/guardian helped me with homework.
40. My parents/guardian gave me advice on how to study or time management.

Appendix E

NETWORK OF RELATIONSHIPS INVENTORY– SOCIAL PROVISIONS VERSION

Everyone has a number of people who are important in his or her life. These questions ask about your relationships with a same-sex friend and an opposite-sex friend.

The first questions ask you to identify your two friends about whom you will be answering the questions.

1. Please choose the most important **same-sex friend** you have had in high school. You may select someone who is your most important same-sex friend now, or who was your most important same-sex friend earlier in high school. **Do not choose a sibling.** If you select a person with whom you are no longer friends, please answer the questions as you would have when you were in the relationship.

Same-Sex Friend's First Name _____

How long is/was the friendship? ____ years ____ months (*please fill in numbers*)

Are you close friends now?

A. Yes B. Friends, but not as close as before C. No

2. Please choose the most important **other-sex friend** you have had in high school. You may select someone who is your most important other-sex friend now, or who was your most important other-sex friend earlier in high school. **Do not choose a sibling, relative, or boy/girlfriend—even if she or he is or was your best friend.** If you select a person with whom you are no longer friends, just answer the questions as you would have when you were in the relationship.

Other-Sex Friend's First Name _____

How long is/was the friendship? ____ years ____ months (*please fill in numbers*)

Are you close friends now?

A. Yes B. Friends, but not as close as before C. No

3. Sometimes we would also like you to answer the following questions about some **extra person**. If there is a name written in the space below, please answer about this person also.

Extra Person _____

Relationship _____

Now we would like you to answer the following questions about the people you have selected above. Sometimes the answers for different people may be the same but sometimes they may be different.

1. How much free time do you spend with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

2. How much do you and this person get upset with or mad at each other?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

3. How much does this person teach you how to do things that you don't know?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

4. How much do you and this person get on each other's nerves?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

5. How much do you talk about everything with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

6. How much do you help this person with things she/he can't do by her/himself?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

7. How much does this person like or love you?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

8. How much does this person treat you like you're admired and respected?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

9. Who tells the other person what to do more often, you or this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

10. How sure are you that this relationship will last no matter what?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

11. How much do you play around and have fun with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

12. How much do you and this person disagree and quarrel?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

13. How much does this person help you figure out or fix things?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

14. How much do you and this person get annoyed with each other's behaviour?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

15. How much do you share your secrets and private feelings with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

16. How much do you protect and look out for this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

17. How much does this person really care about you?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

18. How much does this person treat you like you're good at many things?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

19. Between you and this person, who tends to be the BOSS in this relationship?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

20. How sure are you that your relationship will last in spite of fights?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

21. How much do you go places and do enjoyable things with this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

22. How much do you and this person argue with each other?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

23. How much does this person help you when you need to get something done?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

24. How much do you and this person hassle or nag one another?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

25. How much do you talk to this person about things that you don't want others to know?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

26. How much do you take care of this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

27. How much does this person have a strong feeling of affection (loving or liking) toward you?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

28. How much does this person like or approve of the things you do?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

29. In your relationship with this person, who tends to take charge and decide what should be done?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

30. How sure are you that your relationship will continue in the years to come?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Same-Sex Friend	1	2	3	4	5
Other-Sex Friend	1	2	3	4	5
Extra Person	1	2	3	4	5

31. Earlier, when we asked you to choose your most important same- and other-sex friends, we said that they could not be a sibling or a relative. Now please tell us who, of all these people, is your best friend?

- A. My same-sex friend.
- B. My opposite-sex friend.
- C. My sibling. Name _____
- D. My relative. Name _____

Appendix F

. LONELINESS IN CONTEXT MEASURE FOR COLLEGE STUDENTS

	Never	Hardly Ever	Sometimes	Most of the Time	Always
1. Class is a lonely place for me.	1	2	3	4	5
2. I am lonely in the evening.	1	2	3	4	5
3. My place of residence is a lonely place for me.	1	2	3	4	5
4. My free time is a lonely time for me.	1	2	3	4	5
5. I feel sad and alone on weekends.	1	2	3	4	5
6. I am lonely with other people.	1	2	3	4	5
7. I feel sad and alone at social events.	1	2	3	4	5
8. I am lonely during meal times.	1	2	3	4	5
9. I feel sad and alone when I am studying.	1	2	3	4	5
10. Bed time is a lonely time for me.	1	2	3	4	5

Appendix G

HOMESICKNESS QUESTIONNAIRE

1. I can't help thinking about my home	1	2	3	4
2. When I'm thinking about nothing in particular my thoughts always come back to home	1	2	3	4
3. I can't concentrate on my work because I'm always thinking about home	1	2	3	4
4. I hardly ever think about my home	1	2	3	4
5. There is so much going on here that I hardly ever think about home	1	2	3	4
6. I visit home as often as I can	1	2	3	4
7. I phone/email home every week	1	2	3	4
8. Thinking about home makes me cry	1	2	3	4
9. I dream about my friends at home	1	2	3	4
10. I've settled in really well at the university	1	2	3	4
11. If I ever went home for the weekend I wouldn't want to come back	1	2	3	4
12. I try to make my room like that at home	1	2	3	4
13. I rarely phone/email home	1	2	3	4
14. I hate this place	1	2	3	4
15. I hardly ever visit home during the semester	1	2	3	4
16. I am drawn towards people who come from my hometown	1	2	3	4
17. I get really upset when I think about home	1	2	3	4
18. I am really happy to be here at the university	1	2	3	4
19. It upsets me if I am unable to phone home each week	1	2	3	4
20. I can't concentrate on my work	1	2	3	4
21. I feel empty inside	1	2	3	4
22. I avoid going home because it would be too upsetting	1	2	3	4
23. I wish I'd never come to the university	1	2	3	4
24. I dream about my home	1	2	3	4
25. I try to shut off thinking about my home	1	2	3	4
26. The people here annoy me	1	2	3	4
27. I can't seem to settle here at the university	1	2	3	4
28. I often dream about my family back home	1	2	3	4
29. My parents pushed me into coming to university	1	2	3	4
30. I feel as if I've left part of me at home	1	2	3	4
31. I blame myself for having come to university	1	2	3	4
32. I feel restless here	1	2	3	4
33. If I go home for the weekend I feel excited at the prospect of coming back to the university	1	2	3	4

Appendix H

FRIENDSICKNESS SCALE

Using the following scale, please tell us how you feel about your pre-university friendships:

- 1 = Not at all like me
- 2 = Somewhat unlike me
- 3 = Somewhat like me
- 4 = Very much like me

1. I miss my friends from home.	1	2	3	4
2. I will always remain close with my pre-university friends.	1	2	3	4
3. I feel my friends from home aren't trying hard enough to maintain our friendship.	1	2	3	4
4. I think often about my friends from home.	1	2	3	4
5. I'm trying to remain the same person I was in high school so that my pre-university friendships will continue.	1	2	3	4
6. I spend a lot of time trying to maintain my pre-university friendships.	1	2	3	4
7. I have sensed some changes in my pre-university friendships so I have been trying extra hard to stay close to them.	1	2	3	4
8. When I have free time, I spend it on my pre-university friendships (emailing, phoning, or getting together with them).	1	2	3	4
9. I bring up pre-university friends in conversations with friends at university (e.g., making comparisons, relating anecdotes, etc.).	1	2	3	4
10. I feel guilty about not working hard enough to maintain my pre-university friendships.	1	2	3	4

Appendix I

BELONGINGNESS MEASURE FOR COLLEGE STUDENTS

	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
1. I feel like I belong at this school.	1	2	3	4	5
2. It's hard for me to fit in here.	1	2	3	4	5
3. I feel connected to this school.	1	2	3	4	5
4. I feel welcome at this school.	1	2	3	4	5
5. This is definitely the right school for me.	1	2	3	4	5
6. I'm glad I came to this school.	1	2	3	4	5

Appendix J

WELL-BEING SCALES – HAPPINESS AND SATISFACTION WITH LIFE

Subjective Happiness Scale

Instructions to participants: For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
Not a very happy person						A very happy person

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
Less happy						More happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
Not at all						A great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
Not at all						A great deal

Appendix K

Satisfaction With Life Scale

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

- 1 = strongly disagree
- 2 = disagree
- 3 = slightly disagree
- 4 = neither agree nor disagree
- 5 = slightly agree
- 6 = agree
- 7 = strongly agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Appendix L

STUDENT SATISFACTION INVENTORY

Each item below describes an expectation about your experiences on this campus. On the *left*, tell us how **important** it is for your institution to meet this expectation. On the *right*, tell us how **satisfied** you are that your institution has met this expectation.

Importance to Me								My Level of Satisfaction						
Not Important at all		Very Important					<i>Campus Climate / Student Centeredness</i>	Not Satisfied at all		Very satisfied				
1	2	3	4	5	6	7		1	2	3	4	5	6	7
1	2	3	4	5	6	7	Most students feel a sense of belonging here.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	The campus staff are caring and helpful.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Faculty care about me as an individual.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	The campus is safe and secure for all students.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Administrators are approachable to students.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	It is an enjoyable experience to be a student on this campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	I feel a sense of pride about my campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	There is a commitment to academic excellence on this campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Students are made to feel welcome on this campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	This institution has a good reputation within the community.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	I seldom get the "run-around" when seeking information on this campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	This institution shows concern for students as individuals.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	I generally know what's happening on campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	There is a strong commitment to racial harmony on this campus.	1	2	3	4	5	6	7

1	2	3	4	5	6	7	Tuition paid is a worthwhile investment.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Freedom of expression is protected on campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Channels for expressing student complaints are readily available.	1	2	3	4	5	6	7
							<i>Campus Life</i>							
1	2	3	4	5	6	7	A variety of intramural activities are offered.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Living conditions in the residence halls are comfortable (adequate space, lighting, heat, air, etc.).	1	2	3	4	5	6	7
1	2	3	4	5	6	7	The intercollegiate athletic programs contribute to a strong sense of school spirit.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Residence hall staff are concerned about me as an individual.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Males and females have equal opportunities to participate in intercollegiate athletics.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	There is an adequate selection of food available in the cafeteria.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Residence hall regulations are reasonable.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	There are a sufficient number of weekend activities for students.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	I can easily get involved in campus organizations.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	The student centre is a comfortable place for students to spend their leisure time.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	The student handbook provides helpful information about campus life.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Student disciplinary procedures are fair.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	New student orientation services help students adjust	1	2	3	4	5	6	7

							to university.							
1	2	3	4	5	6	7	Freedom of expression is protected on campus.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Student activities fees are put to good use.	1	2	3	4	5	6	7

							Concern for the Individual							
1	2	3	4	5	6	7	Faculty care about me as an individual.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	My academic advisor is concerned about my success as an individual.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Counseling staff care about students as individuals.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Faculty are fair and unbiased in their treatment of individual students.	1	2	3	4	5	6	7

							Summary Items							
1	2	3	4	5	6	7	So far, how has your university experience met your expectations?	1	2	3	4	5	6	7
1	2	3	4	5	6	7	Rate your overall satisfaction with your experience here thus far.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	All in all, if you had to do it over, would you enroll here again?	1	2	3	4	5	6	7

APPENDIX M

SONA RECRUITMENT NOTICE SAMPLE

Study Name: “I Can’t Get No... *Social* Satisfaction”: Exploring the Roles of Shyness, Sociability and Social Support in the Transition to University

Description: This study asks participants to complete online questionnaires about their first year at university. In particular, we are interested in students’ *social* experiences during the transition to university.

Eligibility Requirements: We are looking for first-year undergraduate psychology students (age restricted to 18-19 years). Interested participants must be enrolled in Introductory Psychology courses (PSYC 1001 and PSYC 1002) at Carleton University in Ottawa, Canada.

Duration and Locale: 60min – Online.

Compensation: You will receive 0.5% towards a psychology course for your time and participation.

Researchers: Amy Epstein (Principal Investigator); Dr. Robert Coplan (Faculty Sponsor)

Email: aepstein@connect.carleton.ca

This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #10-xxx, insert your ethics reference number once obtained).