Perceived Parental Context, Positive Schemas and Life Satisfaction among University Students with and without a Mental Health Diagnosis

by

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A Thesis
presented to
The University of Guelph

In partial fulfilment of requirements
for the degree of
Master of Arts
in
Psychology

Guelph, Ontario, Canada
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ABSTRACT

PERCEIVED PARENTAL CONTENT, POSITIVE SCHEMAS AND LIFE SATISFACTION AMONG UNIVERSITY STUDENTS WITH AND WITHOUT A MENTAL HEALTH DIAGNOSIS

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This thesis examined the differences and mechanism behind the relationship between parental context and life satisfaction in University students with and without a mental health diagnosis, with positive schemas potentially mediating and/or moderating this relationship. Participants (N=318) were youth aged 17-19 (\(\bar{x}=18.11\)) attending University in Southern Ontario. Participants were asked to complete questionnaires online. The results indicated that parental communication, alienation, and trust best predicted life satisfaction (\(\beta=.509\)). The results also indicated there were significant differences for all factor means between groups (\(p<.001\)). However, despite these differences the model fit both samples equally well and showed equivalence across groups (\(\chi^2(1, N=318)=3.43, p=.064\)). Lastly, partial mediation of positive schemas (not moderation) was present in both subgroups (\(p<.001\)). Overall, this study highlights the differences between those with and with a mental health problem but also suggests the same underlying processes may be at play for all youth.
Acknowledgements

I could not have gotten to where I am now without the help of many individuals. I wanted to take this opportunity to thank those that have helped and supported me through this endeavor.

First, I’d like to thank my advisor, Dr. Margaret Lumley, for her hard work and guidance in completing this thesis. I am grateful she supported me throughout the process and encouraged me to complete enjoyable and thought-provoking research. Thank you to my co-advisor, Dr. Barbara Morrongiello, as her insight and research expertise were integral to completing this project. Thank you to my committee member, Dr. Scott Maitland, for all of his support and expertise. Thank you to my chair, Dr. Karl Hennig, for his encouragement and constructive feedback during my thesis defense. Thank you to my colleagues in the Resilience Youth Research Group especially Sarah Newcomb-Anjo, Brae McArthur, Kristy Boughton, Lindsey Keyfitz, Elizabeth Carlson, and Jordan Friedmann for their advice and support.

I am fortunate to have friends and family who provided me with unwavering encouragement and positivity. Thank you to my mother, Mary, who has always supported and continues to support me during all of my endeavors. Thank you to my father, Francis, who was always willing to help in any way he could. I also want to thank my brother, Patrick, who I am lucky to have as a brother and a friend. I could not have made it through this process without their love, support, and encouragement.
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**Introduction**

Mental health problems affect one in four people throughout their lifetime, with the highest prevalence being among youth aged 15-24 (World Health Organization, 2001). With the prominence of mental health problems in this age group it is essential to consider how mental health may influence an individual’s University experience. University is stressful for many young adults, regardless of mental health status, as they encounter a new environment with new demands and roles, while attempting to maintain grades, scholarships, and relationships (Crede & Niehorster, 2011). As a result of these stressors, some youth experience reductions in well-being, poor academic performance, increases in risky behaviour and the onset or worsening of mental health problems while attending university (Gerdes & Mallinckrodt, 1994; Perkins, 2002; Wintre & Yaffe, 2000). Although there are a variety of negative effects that can occur while at university, importantly, research also has identified protective factors that inoculate against negative outcomes. Self-efficacy, optimism, emotional and social competence, and social support have been identified as protective factors associated with academic success and successful integration into university life (Chemers, Hu, & Garcia, 2001; Parker, Summerfeldt, Hogan & Majeski, 2004; Wilcox, Winn, & Fyvie-Gauld, 2005). The current research seeks to expand the understanding of contextual (i.e., parental context) and intrapersonal (e.g., youth positive schemas) factors that may be related to well-being for students with and without a mental health problem.

Regarding parental context of University students, there is much to learn about the role of parents at this time in development. Research suggests parents may be a major influence in late adolescents’ university experience, influencing psychological well-being, perceived levels of stress, levels of self-esteem, and academic success (Abar & Turrisi, 2008; Mattanah, Brand, &
Hancock, 2004; Mounts, Valentiner, Anderson, & Boswell, 2006; Wintre & Yaffe, 2000). Less is known, however, about relational mechanisms that link parenting to university students’ experience and the relative contributions of adolescent’s perceptions of the parenting context (e.g., parental involvement, autonomy granting). Further, intrapersonal factors in youth may mediate or moderate the relations between parental context factors and well-being. Although some researchers have speculated schemas act as a psychological mediator in this relationship there is the possibility that schemas and perceived parental qualities may interact. Addressing these issues, this research examined various aspects of youth’s perception of the parenting context and related this to adjustment while at university, with positive cognitive schemas examined as a potential mediator and/or moderator of how perceived parenting context influences student wellbeing. Mental health status was used to examine whether this relationship and/or any of these individual concepts differed between those with and without a mental health diagnosis.
Literature Review

Mental Health Among University Students

Mental health affects one in four individuals throughout their lifetime (World Health Organization, 2001), with the highest prevalence of mental health problems among those aged 15 to 24 years old (Statistics Canada, 2013). With 70% of mental health problems emerging during childhood and adolescence (Government of Canada, 2006), it is important to consider how mental health status may influence an individual’s university experience. University can be stressful for all youth as they struggle to adapt to a new environment while maintaining grades and relationships (Crede & Niehorster, 2011; Hamaideh, 2011; Polychronopoulou & Divaris, 2005). However, for those struggling with a mental health problem, this experience can be particularly challenging. Keyes et al. (2012) found that individuals with an existing mental illness experience heightened levels of academic impairment while attending university. Furthermore, Deberard, Scott, Spielmans and Julka (2004) found mental health status contributed to the likelihood of students continuing with their education after the first year of university. These differences are not surprising as youth with a mental health problem often encounter additional challenges that youth without any mental health concerns may never endure.

University may be particularly difficult for those self-identified as having a mental health problem due to unique challenges that are associated with mental illness. Research has shown that youth who self-identify as having a mental health problem (vs. those who do not) are particularly influenced by parental factors including perceived parental control and pressure. These parental constructs have been associated with an elevated risk of anxiety and depersonalization in youth (Wolfradt, Hempel, & Miles, 2003). Differences in family dynamics have also been identified as a unique risk factor to well-being in youth with a mental illness.
Miklowitz (2007) found youth who suffer from bipolar disorder are often immersed in families that score high on expressed emotion, defined by critical comments, hostility, and emotional over involvement (Vaughn, 1989). Furthermore, stigma, medication compliance, and symptom stability are all additional factors that uniquely contribute to quality of life in those self-identified as having a mental health problem (Blader, 2004; Greer, Wells, Morgenstern, & Leake, 1995; Staring et al., 2009). This study will examine the relations among perceived parental context, positive schemas and youth well-being in those with and without a history of a mental health challenges as self-identified by participants. Due to the breadth of mental health problems in this age group (Statistics Canada, 2013); all participants who identify as receiving a mental health diagnosis will be considered as having a mental health problem in this study.

**Stressors at University**

University is stressful for many young adults, regardless of mental health status, introducing many new experiences and barriers including navigating new social settings, adapting to new roles and responsibilities, making career decisions, and attempting to integrate into the university community (Crede & Niehorster, 2011). Students can struggle with the stress of maintaining grades, obtaining scholarships, and adjusting to the additional pressures associated with attending university (Hamaideh, 2011; Polychronopoulou & Divaris, 2005). For some young adults, this experience can result in increases in risky behaviour, problems in academics, difficulties in interpersonal relationships, and decreases in well-being (Gerdes & Mallinckrodt, 1994; Perkins, 2002; Wintre & Yaffe, 2000). To inoculate the effects of these potential stressors researchers have examined potential protective factors.

In an attempt to ameliorate the negative effects some youth endure while attending university, researchers have examined potential protective factors. Self-efficacy and optimism
are two factors that have been associated with increases in performance and adjustment (Chemers et al., 2001). Emotional and social competency have also been associated with academic success (Parker et al., 2004), and social support has been associated with successful integration into university life (Wilcox et al., 2005). Social support provided specifically by parents has been associated with quality of friendships in university students (Mounts et al., 2006). Although all positive, the outcomes associated with these protective factors is vast, complicating the definition of successful adjustment while at university.

Successful adjustment while attending University has been operationalized in different ways including the development of positive peer relationships, academic achievement, and levels of well-being (Gerdes & Mallinckrodt, 1994; Perkins, 2002; Wintre & Yaffe, 2000). For the purpose of this research, an important aspect of adjustment was examined, with a positive mental health lens, through participants’ levels of subjective well-being. A central aspect to subjective well-being is life satisfaction (Diener, Suh, Lucas & Smith, 1999; Diener, Oishi & Lucas, 2003). Research frequently describes life satisfaction as how satisfied one is with life (Suldo & Huerbner, 2006). Research also suggests that life satisfaction is correlated with positive emotions (Cohn et al., 2009). Individuals with high life satisfaction tend to have positive psychosocial functioning including social, intrapersonal, and cognitive functioning (Suldo & Huebner, 2006). Individuals with high life satisfaction have also reported low levels of behavioural and emotional problems (Suldo & Huebner, 2006). Furthermore, recent research suggests there is a relationship between positive schemas (defined below) and life satisfaction, with positive schemas reported as a robust predictor of these constructs (Tomlinson, Lumley, Keyfitz, & Rawana, under review).

**Parental Context in Adolescence**

Historically, adolescence is considered to be a period marked with increased importance
of peers and decreased ties to parents (Wintre & Yaffe, 2000). However, rather than being eclipsed by peers, some research suggests that parents continue to exert a major influence on students’ adjustment while at university (Abar & Turrisi, 2008; Mounts et al., 2006; Mattanah et al, 2004; Wintre & Yaffe, 2000). Specifically, perceived parenting behaviours and students’ current relationships with their parents have been found to mediate youth’s well-being while at university. Wintre and Yaffe (2000) found students’ current relationships with their parents, specifically perceived reciprocity in their relationship and the ability to discuss university related issues, directly affects youth’s university experience (Wintre & Yaffe, 2000). Parenting behaviour also appears to be related to the selection of friends in college. The more students reported discussing their lifestyle and extracurricular activities with their parents and the more they perceived their parents as wanting to know this information, the less likely students were to drink or associate with peers who drink (Abar & Turrisi, 2008). Perceived levels of parental support have also been associated with quality of friendships in university (Mounts et al., 2006).

Other researchers suggest that the key to successful adjustment while attending university is the ability to separate from one’s parents without experiencing negative feelings of guilt, anxiety, or parental rejection while developing into an autonomous self. These researchers argue that a successful university experience is associated with parents’ who provide support but allow their children to grow by providing them with the space needed to achieve this autonomy (Mattanah et al., 2004). Providing the correct amount of autonomy while still providing support throughout one’s university career can be defined as a positive parent-child relationship. A positive parenting relationship is defined in the literature as high levels of trust, acceptance and warmth, and an open communication style (as cited in Sanders, 1999; Sanders, 2008; Sanders, Markie-Dadds, & Turner, 2003). Parental trust is defined as the amount of security youth feel
from their parents and/or the amount they feel their parents respond adequately to their needs and emotional states (Armsden & Greenberg, 1987b). Parental acceptance or alienation, which are used interchangeably in the literature, refer to the amount of anger youth feel towards their parents or the amount of emotional detachment youth feel from their parents. Lastly, open communication is defined as the amount youth feel their parents are aware of their needs and desires and/or the amount they are willing to openly share these with their parents (Armsden & Greenberg, 1987b). In sum, this research suggests that a positive parental context can influence adjustment in university students. However, the relative contributions of different perceived parenting factors and mechanisms behind this relationship remain unknown and may provide important clues for bolstering positive adjustment for students.

**Positive Cognitive Schemas**

The impact youth’s perceived parenting context has on their well-being may be better explained by youth’s core beliefs about their self, relationships and the world (i.e., cognitive schemas). It may be that the perceived parenting context is a particularly potent associate of positive functioning among youth with strong positive core beliefs (e.g., “I deserve good things to happen to me”). Negative schemas (i.e. self-defeating attitude, feelings of wanting to escape the world, negative perceptions of the world and self, optimism) act as mediators between parental styles and psychological well-being (Messman-Moore & Coates, 2007; Stowkowy & Addington, 2012; and Thimm, 2010). Thus, youth’s positive schemas may mediate the relation between perceived parenting context and life satisfaction among University students.

Cognitive schemas are considered here to be cumulative representations of past experiences containing cognitive structures (James et al., 2007) that are developed by imposing patterns on reality that accumulate as our experiences grow (Axelrod, 1973). If new patterns do
not fit with pre-existing ones, the schema is adjusted, the new pattern is dismissed, or an additional schema is created to encompass this new pattern. This allows a balanced view of the world by creating non-overlapping categories of people, characteristics, or events (Axelrod, 1973). By creating these categories, one is able to quickly interpret the world and react to it (Young, Klosko, & Weishaar, 2003). Cognitive schemas are comprised of two components, content and the structure (Beck, 1967). Schema content is comprised of core beliefs (i.e. “I am a loveable person”) while structure refers to the organization and categorization of these beliefs and patterns in our mind [i.e. grouping individuals based on features associated with an out group, categorizing events as negative based on cognitive biases (Dozois & Beck, 2008)]. This research will focus on the content of young adults’ schemas. Core positive schemas (Keyfitz, Lumley, Hennig, & Dozois, 2013) include: worthiness (e.g., “I value many things about myself”), self-efficacy (e.g., “I can deal well with difficult situations”), optimism (e.g., “I usually see the positive side of things”), success (e.g., “If I try hard I can usually do well”), and trust (e.g., “I feel I can depend on people to keep my secrets”). These core schemas are primarily developed in childhood.

All schemas are developed through interactions with the environment primarily in childhood. According to Young (1994) and Bowlby (1973; 1988) one of the primary interactions that contribute to the development of these schemas at a young age are those with parents. The schemas developed in childhood influence how one perceives’ the world affecting social relationships and adjustment across the lifespan (Kobak & Sceery, 1988). Research indicates that these internal representations can also influence how one perceives interactions with parental figures later in life (Feeney & Cassidy, 2003). Feeney and Cassidy (2003) found that youth who had a positive view of their parental relations (i.e. available, accepting, supportive, reliable) were
more likely to describe discussions they had with their parents as positive and less hostile immediately after the conversation and 6 weeks later than those who perceived their relationship with their parents as negative regardless of the content of the conversation. Furthermore, the schemas developed in childhood have been associated with psychological well-being, subjective happiness, and humour styles in adolescence (i.e. self-enhancing versus self-defeating humour (Kazarian, Moghnie & Martin, 2010; Young, Lennie, & Minnis, 2011). The proposed study will examine late adolescent positive cognitive schemas with themes of optimism, self-efficacy, interpersonal trust, success and worthiness as potential mediating and/or moderating mechanisms in the relation between perceived parenting context and student’s life satisfaction in University for those with and without a mental health diagnosis.

**Current Study**

Previous research suggests parents continue to play an important role in university students’ academic performance and adjustment (Abar & Turrisi, 2008; Mattanah et al., 2004; Mounts et al., 2006; Wintre & Yaffe, 2000). Following from this, youths’ perceptions of their relationship with their parents may influence their life satisfaction in university as well. Furthermore, since parents are theorized to play a critical role in the development of cognitive schemas, and further, positive schemas have been associated with positive outcomes in adolescence, positive schemas may act as a mediator and/or moderator in the relation between youth’s perceptions of parenting and their life satisfaction in University. Thus, this study will examine the influence of perceived parenting context on life satisfaction among university students, further examining the mediating and/or moderating influence of positive schemas. Also examined will be the differences between these factors and this relationship for participants who have and have not self-identified as having a mental health diagnosis, as mental health has
been theorized to largely influence adjustment while at university (Deberard et al., 2004; Keyes et al., 2012). The current study aims are:

1) To examine the relative contribution of different perceived parental contextual factors on life satisfaction among university students and consequentially find the constructs that would act as the independent variable (IV) or predictor in this study.

2) To explore potential differences between those with and without a mental health problem among parenting context, positive schemas and life satisfaction.

3) To examine the mediating and/or moderating role of positive cognitive schemas in the relation between perceived parental context and life satisfaction among university students.

It is hypothesized that positive parental context will be associated with higher subjective well-being in university students. Furthermore, it is hypothesized that positive schemas will act uniquely as a mediator, not a moderator, in the relation between perceived parental context and students’ subjective well-being, meaning that one’s perception of themselves and others will better explain one’s perceived life satisfaction than their perceived parental context. This study will follow a correlational design with a single test session. Since data was collected at a single time point this study will have a snapshot of youths’ perception of their relationship with their parents, positive schemas and life satisfaction.

Methods

Participants

Of the 321 consented participants, 318 participants had usable data. All participants (N=318) were students from the University of Guelph participating in the psychology undergraduate research pool for course credit. Participants were aged 17 (n=47), 18 (n=188), and 19 (n=83) years and primarily female (79.6%). The majority of participants did not self-
identify as having a mental health diagnosis \((n=204)\), however 35\% did \((n=114)\); designated as the Clinical sample in the Results). After consent was obtained, all information pertaining to the measures discussed in the methods section were extracted and entered into SPSS for data analysis.

**Measures**

**Positive Schemas.**

The *Positive Schema Questionnaire* (PSQ; Keyfitz et al., 2013) is a 20-item self-report questionnaire scored on a 6-point Likert scale, where 1 is completely untrue of me and 6 is describes me perfectly. This questionnaire measures 5 core positive schema themes including worthiness, self-efficacy, optimism, success, and trust. Questions include “I believe in myself” and “I look at the bright side of things”. This questionnaire demonstrated strong internal consistency with an alpha of .93 in a sample of community youth ages 9-14 years (Keyfitz et al., 2013), and showed strong internal consistency for the present sample with \(\alpha=.96\). The PSQ is a self-report measure that was developed by reviewing the literature for concepts related to vulnerability and resilience for child psychopathology. After reviewing the literature the schema themes were created and defined. The items were then generated and selected based on clinical psychologists and graduate students’ evaluation of which items best represented the defined schemas.

**Life Satisfaction.**

The *Brief Multidimensional Students’ Life Satisfaction Scale* (BMSLSS; Huebner, 1994) is a 6-item self-report questionnaire that is scored on a 7-point Likert scale \((1 = Terrible, 5 = Mixed \text{ (about equally satisfied and dissatisfied)}, 7 = Delighted)\). This questionnaire measures overall life satisfaction in various domains including family, friends, living environment, school, and the self. Questions include “I would describe my satisfaction with my school life as”. The
BMSLSQ has shown acceptable internal consistency, criterion-related validity, and construct validity as well as convergent and discriminate validity in middle and high school student samples (Seligson, Huebner, & Valois, 2003). It has also been validated in college students aged 18 years and older (Zullig, Huebner, Gilman, Patton, & Murray, 2005). The BMSLSQ demonstrated acceptable internal consistency for the present sample as well ($\alpha=.86$).

**Parent-Child Relationships.**

*The Inventory of Parent and Peer Attachment* (IPPA; Armsden & Greenberg, 1987a) is a 53 item self-report questionnaire that is assessed on a five-point Likert scale with 1 being ‘almost always or always true’ and 5 being ‘almost never or never true’. This questionnaire was intended for use with youth ages 17 to 20 years. It is designed to measure the positive and negative affective and cognitive dimensions of adolescents’ relationships with their peers and parents. Lower scores on the IPPA represent more positive relations with parents (i.e. high level of trust, open communication, and low levels of alienation). Items include “my parents understand what I am going through these days” and “I like to get my parents point of view on things I’m concerned about”. Participants answer the questions based on their perception of both of their parents. The IPPA measures three factors: anger and alienation, communication, and trust. The IPPA has shown good internal consistency [$\alpha=0.72$ (peer attachment items) to 0.91 (parent attachment items)], strong test-retest reliability ($\alpha=0.86$ for the peer attachment items to 0.93 for the parent attachment items), and moderate convergent validity with other measures (Gullone & Robinson, 2005). The IPPA demonstrated acceptable internal consistency in the present sample ($\alpha=.76$).

*The Parent Child Relationship Inventory* (PCRI; Gerard, 1994) is a 78-item questionnaire that is measured on a 4-point Likert scale (1=strongly agree, 4=strongly disagree) that was
intended for use with children 3-13 years. The PCRI is a self-report measure that examines adolescents’ views of their parents parenting skills and style. It is based on youth’s perception of both parents. The questionnaire measures 7 scales including Parental Support, Satisfaction with Parenting, Involvement, Communication, Limit Setting, Autonomy, and Role Orientation. This questionnaire has shown significant internal consistency for the Satisfaction, Limit Setting, and Involvement Scales, strong one-year stability, convergent validity over a one-year period, and maternal reports on the PCRI have demonstrated concurrent validity with adolescents’ (ages 5 through 17) perceptions of their parent’s skills (Coffin, Guerin, & Gottfried, 2006). The PCRI demonstrated moderate internal consistency in the present sample (α=.67).

The Child Report of Parenting Behavior Inventory- Short form (CRPBI; Schludermann & Schludermann, 1988), is a 48 item self-report questionnaire that is scored on a 5-point Likert scale (1 = Disagree to 5 = Agree). The questionnaire asks youth to report perceived parenting attributes. For the purpose of this study, youth reported on their perception of their mother’s parenting attributes. The questionnaire measures 3 factors: Positive Involvement (Rejection vs. Acceptance), Negative Control (Psychological Control vs. Psychological Autonomy), and Lax Discipline (Lax Control vs. Firm Control). Questions include “my mother is a person who enjoys doing things with me” or “my mother is always trying to change me”. The CRPBI has shown good reliability (α = .77 to α = .92; Boughton & Lumley, 2011), as well as good convergent and discriminate validity (Seja Kaugars et al., 2011) in undergraduates ages 17-43 years. The CRPBI demonstrated moderate internal consistency in the present sample (α=.69).

Mental Health.

The Mental Health Questionnaire (MHQ) was created for this study to screen individuals for mental health history. In this study, students were classified as clinical by self-reporting
receiving a mental health diagnosis (i.e. answering yes to question 7: “have you ever received a mental health diagnosis”). The measure consists of 9 questions total, 8 of which are scored on a dichotomous scale of yes/no and one question that is scored on a 7-point Likert scale. Questions include “In the past month, have you visited a mental health professional?” or “Have you ever been sad, down, blue or highly stressed and anxious for a period of at least two weeks?” The MHQ demonstrated strong internal consistency in the present sample ($\alpha=.83$).

**Procedure**

All participants accessed this study through an online participant pool where they could view a list of studies for which they could receive class credit for participation. All participants who chose to participate in this study were first asked to complete two questionnaires that assessed mental health status (See Appendix A). After completing these initial surveys, all participants were sent an e-mail inviting them to participate in an additional study aimed at learning more about how past emotional difficulties during childhood, and/or different kinds of childhood experiences with family related to self-concept, mood, anxiety, interpersonal relationships and well-being in young adulthood (See Appendix B). Information about the study was provided to the students when they viewed the participant page online (See Appendix C). The information provided included the study’s purpose, procedures and potential risks. If a student chose to participate they were sent to an online consent form before completing the survey (Appendix D). Participation in the study was confidential, and participants were informed of this in the consent form. Consent was passively assumed when participants carried on to complete the survey. Participants were provided with support resources throughout the survey should they experience any discomfort. Participants were informed that they could discontinue at any time or decide to not answer a question without penalty.
The survey was approximately 90 minutes in length and included the Positive Schemas Questionnaire, the Brief Multidimensional Student’s Life Satisfaction Questionnaire, the Child Report of Parental Behaviour Inventory, Inventory of Parent and Peer Attachment (parent items only), and the Parent Child Relationship Inventory (See Appendix E). At the top of each page a progress bar was present to keep participants aware of their progress in the study.

After completing the survey, participants received a debriefing form (See Appendix F) that included similar information as the original consent forms as well as community and campus resources should they need support. Each participant was given 1.5 credits in their class to complete the survey. This study was approved by the University of Guelph Research Ethics Board and all collected data were secured in on an encrypted computer that was password protected and located in a locked research area.

Statistical Analyses

To analyze the data SPSS Version 23 and AMOS Version 23 were used. All analyses statistically controlled for the effect of gender. In SPSS this meant adding gender first in the regression analyses. In AMOS this meant adding gender as a variable in the model and regressing it onto each factor. Multiple simultaneous regressions were run to analyze which parental questionnaire accounted for the most variance (denoted by \( \beta \)) in self-reported life satisfaction in university students and as a result would act as the independent variable in this model. These regressions were run in the total sample as well as separately, within the clinical and nonclinical subgroups, to ensure that the same questionnaire accounted for the most variance in all subsets of the population. After the IV was selected, a basic statistical model was created, including only the IV (parents) and the dependent variable/outcome (life satisfaction), based on theoretical evidence in AMOS. The purpose of statistical modeling is to determine the goodness-
of-fit between a hypothesized model (and each of its factors) and a sample. Since it is highly unlikely the hypothesized model will perfectly fit the observed data, the differential between the two is represented by residuals, which allows for an examination of the amount of variance unaccounted for by the factors and/or the model or measurement error (Bryne, 2010; Zurbriggen, 2009).

The fit of the model and its factors were assessed within each group to ensure that the model/factors had acceptable fit before continuing with the analysis. For the purpose of this study acceptable fit was indicated by a non-significant CMIN or chi-square value ($\chi^2$), a relative chi-square ($\chi^2$/df) of less than 5 (Schumacker & Lomax, 2004), a GFI value over .90, a AGFI value over .90, a CFI value over .93 (Bryne, 1994), and a RMSEA value under .08 (Browne & Cudeck, 1993) with values between .08-1.0 representing mediocre fit. Historically, the CMIN value estimates have proven to be unrealistic and problematic and as a result other estimates of fit have been suggested (MacCallum, Browne, & Sugawara, 1996). Most recently, the RMSEA value has been given merit by researchers as one of the most informative fit indices (Bryne, 2010) due to its sensitivity to model misspecification, useful interpretative guidelines, and ability to incorporate confidence intervals (Hu & Bentler, 1998). The standards presented here are all guidelines and fit indices may not be the most accurate representations of model fit. Yet the importance of evaluating fit cannot be understated, without acceptable fit and/or theoretical evidence to support the model and its factors a new or altered model would need to be created (Bryne, 2004).

The analysis was then extended to a multigroup framework to evaluate the fit of the model and each of its factors across both groups simultaneously. Assessing model/factor fit across groups simultaneously allows invariance tests to be conducted and creates a baseline
model, which is needed to continue testing for invariance (Bryne, 2004). The baseline model was not constrained and was considered to have configural invariance as long as each model had the same number of factors, loaded in the same pattern across groups. Invariance at each level was represented by a non-significant chi-square value. This chi-square value represents the difference between groups when establishing configural invariance but once configural invariance was established the baseline model was used as a reference for which all other models were contrasted. A non-significant value supported the null hypothesis, namely, the models were not significantly different. Once configural invariance was established, metric invariance was tested. A model was considered to have metric invariance if the factor loadings were equivalent across groups as indicated by a non-significant chi-square value. Next, invariance of factor variances was tested by constraining the latent variables variances equal. This was followed by testing of factor covariance in which the variances associated with the latent variables are set equal across groups. Invariance of latent means was then tested by setting the intercepts associated with the latent variables equal to each other. Lastly, invariance of error variances was assessed by constraining measurement errors equal across all groups. If the model was equivalent across all groups, full measurement invariance can be assumed (Bryne, 2004; 2010; Steinmetz et al., 2009). However, it is extremely rare and seen as less important to establish invariance of error variances. Consequently, the term partial invariance was created to describe the process that occurs when all factor loadings for the entire model cannot be constrained. Partial invariance allows all loadings that are not invariant to be freely estimated while those that can be held equal are constrained. This allows researchers to obtain basic invariance before comparing constructs across groups (Bryne, Shavelson, & Muthen, 1989). This study followed Bryne et al.’s (1989) and Steinmetz et al’s (2009) definition of partial invariance by considering metric invariance
sufficient evidence of equivalence across groups. After establishing that invariance exists, information about the means (and latent means) in the model was assessed to examine group differences.

Group differences were explored through a latent means analysis in AMOS. A latent means analysis estimates the intercepts in the baseline group, which is randomly selected, and then constrains the intercepts of the second (and/or subsequent) group(s) equal to the baseline. The latent means of the baseline group were fixed to zero to allow the latent mean estimates (or alpha values) of the second group to be estimated, thereby forming a test of differences. The estimated mean was then divided by the standard error to provide an estimate of how far away the estimated mean is from zero, which is denoted by Cohen’s $d$ (Bryne, 2010).

Next, a new model was created in AMOS to test for mediation. The fit of this model was assessed separately in both groups using the same fit indices described previously and assessed from a multigroup framework as well (previously described). After acceptable fit and partial invariance was established, a series of multiple regressions were run simultaneously in AMOS to test for mediation (Field, 2013). A mediation analysis examines the relationship between the independent and dependent variable and determines whether a third variable or mediator better explains the relationship. If the relationship between the independent variable and dependent variable is diminished such that the relation is no longer statistically significant after the addition of the mediator, full mediation is considered to occur (Baron & Kenny, 1986). If full mediation did not occur, partial mediation was considered if the relationship between the predictor and the outcome was reduced after accounting for the effect of the mediator.

To test the extent to which partial mediation occurred, a post-hoc Sobel test was run. Sobel tests examine the extent to which the mediator carries the influence of the independent
variable (predictor) to the dependent variable (outcome) in the event that full mediation (i.e. the relationship between the IV and DV is non-significant after the mediator is added) does not occur (Preacher & Leonardelli, 2001). A Sobel test evaluates the effect of a mediator by using the regression weights and standards errors of the path between the independent variable and the mediator, as well as between the mediator and the dependent variable, to create a critical ratio value that is used to test whether the indirect effect of the mediator is significantly different from zero (Preacher & Leonardelli, 2001). The critical ratio is compared to a critical value associated with a given alpha level from the standard normal distribution (Baron & Kenny, 1986). This critical ratio represents the extent to which partial mediation occurs (i.e. equivalent to a standard deviation; Preacher & Leonardelli, 2001).

Lastly, to rule out the possibility that schemas could interact with youth’s perception of their parental relationship, a PROCESS analysis was run to test for moderation (Hayes, 2013). A PROCESS analysis tests for moderation by running multiple regression analyses at the same time. To test for moderation the predictor as well as the independent variable (positive schemas) are regressed onto the dependent variable separately. A third variable, an interaction term created by combining the predictor and the IV is simultaneously regressed onto the DV as well. Moderation exists if the direction and/or magnitude of the relationship between the IV and/or the predictor and the DV are dependent on the third variable (Baron & Kenny, 1986).

**Results**

The means and standard deviations for all factors within each subgroup can be found in Table 1. These means are based on each factors total score and not the latent variables that were created and used in the modeling program as part of this study. However, they are provided for reference and comparable to those represented by a latent variable.
To gain a better understanding of the demographics and severity of mental health problems for those classified as clinical, frequency analyses were run on items of the MHQ. The frequency of responses to the MHQ for those with and without a mental health problem can be seen in Table 2.

**Aim 1: Relative Contribution of Different Perceived Parental Contextual Factors**

It is important to note that structural equation modeling was used to assess the differences between those with and without a mental health problem as well as the mechanism behind the relationship between parental context and life satisfaction. As a result all factors needed to be created in AMOS. Before drawing the factors in AMOS it was essential to determine which parental constructs would act as the IV or predictor(s) in this study. To evaluate this, multiple simultaneous regressions were run exploring the amount of variance (denoted by \( \beta \)) accounted for by each of the three parental scales used in this study. As Table 3 illustrates, the best predictor of life satisfaction was the Inventory of Parent and Peer Attachment (IPPA) which accounted for 51% of the variance in life satisfaction (DV) compared to 33% (PCRI) and 34% (CRPBI) respectively. Consequentially, parental trust, parental alienation, and parental communication (the three constructs of the IPPA) were chosen as the constructs of parental context and the predictor (IV) in this study.

**Aim 2: Differences between those With and Without a Mental Health Diagnosis**

Once the IV was found, all of the factors were drawn in AMOS and their fit within the total sample was assessed to ensure these factors adequately represented this population. As illustrated in Table 4, the fit indices for parental context and positive schemas (PSQ) were indicative of acceptable fit. However, the basic model (including the IV and DV alone) as seen in Figure 1 fit the sample less well with the CMIN value indicating poor model fit and the RMSEA
value indicating mediocre fit. Nonetheless, since the rest of the fit indices were indicative of acceptable model fit and theoretical evidence supports the relationships represented by this model; all factors as well as the baseline model were seen as adequately fitting the sample, allowing for further analyses to be conducted.

A multigroup framework was then adopted to evaluate the equivalence of each construct across subgroups simultaneously. Assessing equivalence and/or invariance of each factor further supports the fit of these constructs and structures in this population and supports the continued use of these constructs and models for additional analyses. Parental context showed configural invariance, metric invariance (χ²(2, N=318)=1.63, p=.443), invariance of factor covariances (χ²(1, N=318)=3.73, p=.053), as well as invariance of error variance (χ²(1, N=318)=.343, p=.558). Positive schemas showed configural invariance and weak metric invariance (χ²(4, N=318)=13.11, p=.011), however the error variances were not equal across groups (χ²(5, N=318)=38.67, p<.001). Lastly, the basic model showed configural invariance, metric invariance (χ²(3, N=318)=1.16, p=.762), invariance of factor covariances (χ²(1, N=318)=3.25, p=.071), as well as weak invariance of error variance (χ²(4, N=318)=12.48, p=.014). As a result, partial invariance can be assumed in this sample and further analyses are supported using these structures.

After supporting the fit and equivalence of all of the constructs and basic model in both samples, we examined whether those in the clinical and non-clinical groups differed on any of the factors by running a latent means analysis. The latent means analysis revealed significant differences in latent means for all factors in the model (p<.001). The latent mean for Parents was significantly higher for those who self-identified as having a mental health problem (d=4.50). The latent mean for Positive Schemas (d=-7.02) and Life Satisfaction (d=-3.51) were
significantly higher for those with no history of mental health problems. These results suggest there are differences in how those with and without a mental health diagnosis report their relationships with their parents, their positive schemas, and their satisfaction with their life. With those in the clinical group reporting more negative parental relations, endorsing fewer positive schemas, and reporting lower levels of life satisfaction.

**Aim 3: Examining the Mechanism**

After assessing the differences between latent means, the factors were rearranged to create a new model to test one of the possible mechanisms: mediation. Before running the mediation analysis the fit of the mediation model was assessed in both samples, again to test whether this newly created model adequately represented this population. The CMIN value for the clinical sample was significant, indicative of poor model fit \( \chi^2(30, N=114)=68.24, p=.00 \). However, the relative chi-square value (\( \chi^2/df=2.28 \)), the GFI=.89, AGFI=.80, and CFI=.95 all indicated mediocre to acceptable model fit. The RMSEA value was also indicative of poor model fit in the clinical sample (RMSEA=.11). In the nonclinical sample, the CMIN was indicative of poor model fit \( \chi^2(30, N=204)=56.21, p=.003 \). However, the relative chi-square value (\( \chi^2/df=1.87 \)), the GFI=.95, AGFI=.90, CFI=.98, and the RMSEA value (RMSEA=.066) were all indicative of acceptable model fit. Overall, the model fit indices and theoretical evidence support the use of this model in both samples.

We then assessed the fit of the mediation model from a multigroup framework by assessing the fit simultaneously across groups as well as invariance in this model. When analyzing the fit of the model across both groups simultaneously, the CMIN value was indicative of poor model fit \( \chi^2(66, N=318)=151.10, p<.001 \). However, the relative chi-square value (\( \chi^2/df=2.29 \)), the GFI=.91, AGFI=.85, CFI=.96, and RMSEA (RMSEA=.064) were all indicative
of acceptable model fit. In sum, the model fits this data well and configural invariance can be assumed. Following the establishment of configural invariance the factor loadings were constrained and metric invariance was established ($\chi^2(8, N=318)=12.67, p=.124$). Next the factor variances were constrained and invariance of factor invariances was established ($\chi^2(1, N=318)=.11, p=.739$). Invariance of factor covariances was then established ($\chi^2(1, N=318)=3.43, p=.064$). All intercepts were then constrained across all groups and found non-invariant ($\chi^2(1, N=318)=11.16, p=.001$). As a result, full structural invariance cannot be confirmed; however, partial invariance was present and the use of this model in additional analyses was further supported.

After the use of this model in this population was supported we tested for mediation. The results revealed that positive schemas acted as a partial mediator in the relationship between perceived parental context and life satisfaction in both groups. As Figure 2 illustrates, the standardized regression coefficient was significant between the predictor and the mediator, as was the standardized regression coefficient between the mediator and the outcome in the nonclinical sample. The standardized indirect effect was (-.531)(.505)=-.268. The significance of this indirect effect was tested using a post-hoc analysis. The Sobel test was significant for the nonclinical sample indicating partial mediation ($CR=-4.12, SE=.065, p<.001$). Similarly, the standardized regression coefficient between perceived parenting and life satisfaction was significant in the clinical sample, as was the standardized regression coefficient between positive schemas and life satisfaction. The standardized indirect effect was (-.499)(.544)=-.271. The post-hoc Sobel test revealed that positive schemas partially mediated this relationship as well ($CR=-3.50, SE=.077, p<.001$). In sum, partial mediation was found in both samples with youth who
endorsed more positive schemas having more positive perceptions of their relationships with their parents and more satisfaction with their life, regardless of mental health status.

To test the second hypothesized mechanism, a moderation analysis was run. The results revealed that positive schemas did not act as a moderator in this sample. Both perceived parental context ($\beta = .233, p=.01$) and positive schemas ($\beta = .343, p=.001$) significantly predicted life satisfaction. However, when combined to create a third variable the relationship between the interaction term and outcome was non-significant ($\beta= -.001, p=.279$). These results suggest positive schemas acted uniquely as a mediator in this study. In sum, these results suggest that although there may be differences between these two groups the model as well as the mechanism behind this relationship may be the same.

**Discussion**

The primary objective of this study was to examine which parental factors significantly predicted life satisfaction in university students with and without self-reported mental health diagnoses. We found that parental communication, parental alienation, and parental trust accounted for the most variance in this model. It is important to remember that lower scores on the IPPA indicate more positive parental relations (i.e. openness to communication, accepting, and trustworthy). As a result, these results support the association between positive parental relations and high life satisfaction. These findings are consistent with previous research in this area that suggests perceived parental openness to communication is associated with reductions in alcohol consumption and association with peers who drink in university (Abar & Turrisi, 2008). Furthermore, positive parental relations, as measured by these variables, have been associated with emotional adjustment (Engels, Finkenauer, Meeus, & Dekovic, 2001) as well as freedom from guilt, anxiety, and resentment towards one’s parents in university students (Leondari &
These results suggest that factors related to the parent-child relationship specifically communication, alienation, and trust may have a lasting influence on life satisfaction in young adults and continue to play an important role among university students.

To assess the second study aim we examined the differences between the means of all factors for those with and without a mental health diagnosis. When comparing the means of the main factors between subgroups, the clinical sample endorsed positive schemas significantly less than the non-clinical sample, reported more negative relationships with their parents, and reported significantly lower levels of life satisfaction than those in the non-clinical group. These differences are not surprising as those with a mental health diagnosis face various additional challenges than those without a mental health problem may never experience (i.e. stigma, increased emotional difficulty, relationship problems, etc.). Findings also validate the distinction between the clinical and non-clinical group in this regard. Research has shown that youth who self-identify as receiving a mental health diagnosis are more likely to be immersed in families with high expressed emotion (i.e, critical comments, hostility, parental rejection; Wintre & Yaffe, 2000). Furthermore, parental psychological control and acceptance may have particular importance in this population (Cheng & Furnham, 2004; Kakahara, Tilton-Weaver, Kerr, & Stattin, 2010; Wolfradt et al, 2003). Additional factors unique to those with a mental illness, such as stigma, can greatly influence one’s self-esteem and self-perception (Staring et al., 2009).

Following from this, all of these factors can influence one’s life satisfaction in addition to medication compliance and symptom stability, which affects quality of life in these individuals as well (Blader, 2004; Greer et al., 1995). Taken together, these results suggest that there are differences in how youth perceive their parenting relationship, endorse positive schemas, and view their life as satisfying based on mental health status.
Positive parental relationships are associated with positive self-esteem, academic achievement, and lower levels of mental health (Abar & Turrisi, 2008; Mattanah, et al, 2004; Mounts, et al., 2006; Spera, 2005; Turner, Chandler, & Heffer, 2009; Wintre & Yaffe, 2000). Furthermore, the attainment of positive schemas have been theorized to influence similar constructs (Ho, Cheung, & Cheung, 2010; Jose, Ryan, & Pryor, 2012; Mann, Hosman, Schaalma, & de Vries, 2004). However, despite the mean differences in these variables between the clinical and non-clinical groups the pattern of relationship among the variables is strikingly similar. In each case, positive schemas partially mediated (and not moderated) the relationship between perceived parenting context and life satisfaction among University students. These results hold particular importance as they suggest that despite mental health challenges, similar developmental processes may be at play in youth with differing mental health experiences. These results are also consistent with the literature that advocates the importance of parental context and positive schemas in young adult’s development.

The mechanism behind the interaction between perceived parental context and life satisfaction has largely been speculated by researchers to be related to youth’s perceptions of the world (Messman-Moore & Coates, 2008; Stowkowy & Addington, 2012; and Thimm, 2010). The results from this study support this theoretical stance with schemas acting as a partial mediator in both subgroups. Partial and not full mediation suggests that parents act as a unique predictor of life satisfaction that cannot be fully explained by positive schemas. It also suggests there may be additional factors that influence the relationship between parental context and life satisfaction. According to Erikson (1968) late adolescence is a period of development where youth struggle to gain autonomy without feelings of guilt for separating from their parents. This developmental milestone is marked by an increased importance on peer relations including the
introduction of romantic relationships. O’Koon (1997) found that peers, in addition to perceived parental relations, greatly influence young adult self-perception, especially for females. Furthermore, Dennis, Phinney and Chuateco (2005) and Friedlander, Reid, Shupak, and Cribbie (2007) found that increased social support from peers was a more consistent predictor of successful adjustment while at university than parental support (i.e. socially, emotionally, and academically). In addition to the influence peers may have on adjustment while attending university, the struggle for independence can introduce other factors that may affect this relationship including the introduction of romantic relationships and the development of new skills, roles, and identities (Gootman & Eccles, 2002). Youth in this age range are still developing their core sense of self, which influences their self-awareness and ability to self-reflect (Finkenauer, Engels, Meeus, & Oostewegel, 2002). Without a core sense of identity, youth may not be able to accurately reflect on the concepts presented in this study. The influence of these factors are beyond the scope of this study but should be considered in the future.

Lastly, these results suggest that positive schemas uniquely act as a mediator in this model, explaining the relationship between perceived parental context and life satisfaction rather than influencing the strength or direction of the relationship (i.e. moderation). These findings are consistent with the literature that suggests schemas act as a mediator in the relationship between perceived parental relations and psychological outcome (Messman-Moore & Coates, 2008; Stowkowy & Addington, 2012; and Thimm, 2010). Additionally, supporting the literature that suggests early childhood schemas influence how youth continue to perceive the world at a later date (Baldwin, 1992; Bowlby, 1973; Feeney & Cassidy, 2003). These results highlight the importance of schemas with those who endorsed more positive schemas in this study being more likely to perceive their relationship with their parents as positive and report more satisfaction.
with life, regardless of mental health diagnosis. Overall, this study highlights the differences in positive schemas, parenting context, and life satisfaction in those with and without a mental health problem but it also highlights that despite these differences similar processes seem to be at play for all youth.

**Limitations and Future Directions**

This study had several limitations that should be noted. One limitation is that students’ ethnic identities were not reported. With this being said, previous studies in our lab have reported consistent demographics as those reported by the University of Guelph, the majority of participants reporting Caucasian ethnicity (~80%), approximately 11% reporting Asian decent, and the remaining reporting other ethnicities (Lumley & McArthur, 2013). The recency and stability of these demographics can aid their absence in this study.

Another limitation in this study is that all measures were completed via self-report. A reliance on self-report is debated in the literature with some researchers suggesting self-report is unreliable due to bias and social desirability (Huang, Lio, & Chang, 1998). However, Preyde et al. (2013) found youth were open and candid to discuss their experiences in a residential treatment centre. Furthermore, Williams and Nowatski (2005) found self-report of substance use to be valid in their study suggesting it may be a reliable method to collect data in this population. Related to the self-report issue, in creating the ‘clinical’ subsample we did not require participants to meet any clinical cutoff criteria per se. Rather they simply had to endorse being diagnosed with a mental health disorder on a questionnaire (i.e. answering “yes” to question #7 in the MHQ). Thus, this may be a very heterogeneous group and, in fact, be sub-clinical in actual level of mental health symptoms. This would make our test of group differences less likely to be
significant. In future research, therefore, it would be informative to test the model on a sample of youth having mental health issues that meet clinical cutoff criteria.

Lastly, there was a lack of randomization in the order of the questionnaires online. The order of questionnaires in an online study, similar to the order of items in a questionnaire, conveys important information to the participant and can affect participant’s responses (Schuman & Presser, 1996). However, the questionnaires in this study were not grouped based on topic and were thoughtfully selected based on their reliability and validity in this population, which may minimize the magnitude of order effects in this study.

Future research should consider the influence additional parental factors including psychological control and expressed emotion as well as the influence peers have on well-being in this population. Additionally, examining multiple perceptions of the parental context rather than solely youth’s could give a more thorough understanding of the influence these factors have on development. Furthermore, future research should consider adding multiple mediating factors including personality, identity development, and stigma. Lastly, it would be interesting to see how mental health functioning, specifically whether individuals are languishing or flourishing, influences this model. Keyes (2004, 2005, 2013) research would suggest this may be a better predictor than mental health status itself.

Conclusion

The results of this study highlight the differences between parental context, positive schemas, and life satisfaction in those with and without a mental health status. Those with a mental health diagnosis may encounter additional challenges that should be considered when examining their experience in university. However, despite the differences found between these
groups, the results point to the importance of parents, positive schemas, and the uniformity of the mechanism behind this relationship in both groups. These results support the importance of parents in youth’s adjustment while at university. Specifically, parental alienation, trust, and communication influence how satisfied youth are with their lives. Furthermore, this analysis suggests positive schemas also hold unique value in this sample. Those who endorse more positive schemas are more likely to perceive their relationship with their parents as positive and rate higher in life satisfaction, highlighting the importance of positive schemas as a psychological mechanism in youth’s perceptions of other aspects of their lives. Additionally, these results suggest that although there may be additional factors involved in this relationship that are beyond the scope of this study, the processes underlying it may be the same for all youth.

Overall the results of this research should be used to guide students throughout university as well as their parents. Parents should be aware of the unique influence they have on youth during this period and the amount of support students still need. Specifically, parents should be aware that the amount their children can trust in and feel accepted by them could predict the likelihood of their child completing their degree. Programs supporting adjustment in this age group should focus on positive schemas as targeting schemas may influence youth’s perceptions of other aspects of their lives.
References


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Table 1.

*Means and Standard Deviations for Factors in the Clinical and Non-Clinical Subgroups*

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Questionnaire</th>
<th>Mean ((\bar{x}))</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>PSQ</td>
<td>76.49</td>
<td>18.93</td>
</tr>
<tr>
<td></td>
<td>BMSLSS</td>
<td>27.77</td>
<td>5.89</td>
</tr>
<tr>
<td></td>
<td>IPPA</td>
<td>94.92</td>
<td>10.50</td>
</tr>
<tr>
<td>Non-Clinical</td>
<td>PSQ</td>
<td>90.68</td>
<td>16.33</td>
</tr>
<tr>
<td></td>
<td>BMSLSS</td>
<td>33.62</td>
<td>5.56</td>
</tr>
<tr>
<td></td>
<td>IPPA</td>
<td>99.54</td>
<td>9.29</td>
</tr>
</tbody>
</table>
Table 2.

Demographics and Item Responses to MHQ in the Clinical and Non-Clinical Subgroups

<table>
<thead>
<tr>
<th></th>
<th>Clinical</th>
<th>Non-Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>15.79% (17), 50% (18), 34.21% (19)</td>
<td>14.22% (17), 64.22% (18), 21.57% (19)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>85.96% female</td>
<td>75.98% female</td>
</tr>
<tr>
<td>1) In the past month, have you visited a mental health professional</td>
<td>31.48%</td>
<td>5.74%</td>
</tr>
<tr>
<td>2) In the past 6 months, have you visited a mental health professional</td>
<td>68.52%</td>
<td>8.13%</td>
</tr>
<tr>
<td>3) In the past year, have you visited a mental health professional?</td>
<td>76.85%</td>
<td>11.96%</td>
</tr>
<tr>
<td>4) Have you ever visited a mental health professional?</td>
<td>94.44%</td>
<td>17.22%</td>
</tr>
<tr>
<td>5) If you have visited a mental health professional how frequently did you attend?</td>
<td>Not Applicable 8.3%</td>
<td>87%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>8.3%</td>
<td>87%</td>
</tr>
<tr>
<td>1 time every year</td>
<td>8.3%</td>
<td>4.81%</td>
</tr>
<tr>
<td>1 time every 6 months</td>
<td>2.7%</td>
<td>3.36%</td>
</tr>
<tr>
<td>1 time every 3 months</td>
<td>7.4%</td>
<td>1.44%</td>
</tr>
<tr>
<td>1 time a month</td>
<td>14.81%</td>
<td>0.96%</td>
</tr>
<tr>
<td>2 times a month</td>
<td>31.48%</td>
<td>0.96%</td>
</tr>
<tr>
<td>4 times a month</td>
<td>26.85%</td>
<td>1.44%</td>
</tr>
<tr>
<td>6) Have you ever taken medication to treat a mental health issue?</td>
<td>60.19%</td>
<td>0.47%</td>
</tr>
<tr>
<td>7) Have you ever received a mental health diagnosis (e.g., depression, anxiety, OCD, PTSD, etc.)?</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>8) Have you ever been sad, down, blue or highly stressed and anxious for a period of at least two weeks?</td>
<td>92.59%</td>
<td>28.71%</td>
</tr>
<tr>
<td>9) If so, did your mood or anxiety/stress interfere with your family, friends, or school/work functioning?</td>
<td>89.90%</td>
<td>20.10%</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>65.07%</td>
<td>5.50%</td>
</tr>
</tbody>
</table>
Table 3.

*Results of Simultaneous Regressions*

<table>
<thead>
<tr>
<th></th>
<th>Both Samples</th>
<th>Clinical</th>
<th>Nonclinical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCRI</strong></td>
<td>Satisfaction ($p&lt;.001$), Involvement ($p=.001$), Communication ($p&lt;.001$), Limitation setting ($p=.011$), and Role orientation ($p=.003)(\beta=.332$)</td>
<td>Satisfaction with parenting ($p=.001$), Communication ($p=.001$), and Role orientation ($p=.037)(\beta=.285$)</td>
<td>Involvement ($p&lt;.001$), Communication ($p&lt;.001$), and Autonomy granting ($p=.012)(\beta=.312$)</td>
</tr>
<tr>
<td><strong>CRPBI</strong></td>
<td>Acceptance ($p&lt;.001)(\beta=.339$)</td>
<td>Acceptance ($p&lt;.001)(\beta=.281$)</td>
<td>Acceptance ($p&lt;.001)(\beta=.305$)</td>
</tr>
<tr>
<td><strong>IPPA</strong></td>
<td>Trust ($p=.023$) and Alienation ($p&lt;.001)(\beta=.509$)</td>
<td>Alienation ($p&lt;.001)(\beta=.472$)</td>
<td>Trust ($p=.020$) and Alienation ($p=.001)(\beta=.380$)</td>
</tr>
</tbody>
</table>

*Note:* The Parent Child Relationship Inventory (PCRI); The Child Report of Parenting Behavior Inventory- Short form (CRPBI); The Inventory of Parent and Peer Attachment (IPPA).
Table 4.

*Fit Indices for Each Construct*

<table>
<thead>
<tr>
<th>Construct</th>
<th>( \chi^2 ) (Degrees of Freedom)</th>
<th>( \chi^2/df )</th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Context</td>
<td></td>
<td>2.11</td>
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<td>.948</td>
<td>.995</td>
<td>.059</td>
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<td>.979</td>
<td>.936</td>
<td>.993</td>
<td>.047</td>
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<tr>
<td>Parental Context &amp; Life</td>
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<td>.977</td>
<td>.886</td>
<td>.988</td>
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<tr>
<td>Satisfaction</td>
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<td></td>
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</table>

*Note:* For the purpose of this study acceptable fit was indicated by a non-significant CMIN or chi-square value (\( \chi^2 \)), a relative chi-square (\( \chi^2/df \)) of less than 5 (Schumacker & Lomax, 2004), a GFI value over .90, a AGFI value over .90, a CFI value over .93 (Bryne, 1994), and a RMSEA value under .08 (Browne & Cudeck, 1993) with values between .08-1.0 representing mediocre fit.
Figure 1: The basic model which consists solely of the independent variable and the dependent variable.
Figure 2: Structured model for the clinical and nonclinical sample (Note: $p < .001$ is denoted by ***).
Appendix A
Mental Health Screener

Mental Health Questionnaire

Many young adults experience significant emotional struggles and benefit from visiting a mental health professional. The following questions will ask you about your experience with mental health professionals.

1) In the past month, have you visited a mental health professional? (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

2) In the past 6 months, have you visited a mental health professional (e.g., psychologist, counselor, therapist, family doctor, etc.)? Yes/No

3) In the past year, have you visited a mental health professional? (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

4) Have you ever visited a mental health professional? (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

5) If you have visited a mental health professional how frequently did you attend?

4 times a month
2 times a month
1 time a month
1 time every 3 months
1 time every 6 months
1 time every year
Not Applicable

6) Have you ever taken medication to treat a mental health issue? Yes/No

7) Have you ever received a mental health diagnosis (e.g., depression, anxiety, OCD, PTSD, etc.)? Yes/No

8) Have you ever been sad, down, blue or highly stressed and anxious for a period of at least two weeks? Yes/No

9) If so, did your mood or anxiety/stress interfere with your family, friends, or school/work functioning?

Yes/No/ Not Applicable

DASS21
Please read each statement and circle a number 0, 1, 2 or 3 that indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found it hard to wind down</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>2</td>
<td>I was aware of dryness of my mouth</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>3</td>
<td>I couldn’t seem to experience any positive feeling at all</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>4</td>
<td>I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>5</td>
<td>I found it difficult to work up the initiative to do things</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>6</td>
<td>I tended to over-react to situations</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>7</td>
<td>I experienced trembling (eg, in the hands)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>8</td>
<td>I felt that I was using a lot of nervous energy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>9</td>
<td>I was worried about situations in which I might panic and make a fool of myself</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>10</td>
<td>I felt that I had nothing to look forward to</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>11</td>
<td>I found myself getting agitated</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>12</td>
<td>I found it difficult to relax</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>13</td>
<td>I felt down-hearted and blue</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>14</td>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>15</td>
<td>I felt I was close to panic</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>16</td>
<td>I was unable to become enthusiastic about anything</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>17</td>
<td>I felt I wasn’t worth much as a person</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>18</td>
<td>I felt that I was rather touchy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>19</td>
<td>I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>20</td>
<td>I felt scared without any good reason</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>21</td>
<td>I felt that life was meaningless</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
Information and Consent Form

Youth Mental Health Study:

Dr. Margaret Lumley

Department of Psychology

voice: (519) 824-4120 ext. 56798
fax: (519) 837-8629 e-mail: mlumley@uoguelph.ca

THE PASSWORD FOR THIS STUDY IS: 2013

Hello,

You recently completed the Psychology Mass Testing for your psychology class, and we would like to invite you to participate in our follow-up study. The goal of this study is to learn more about how past emotional difficulties during childhood, and/or different kinds of childhood experiences with family relate to self-concept, mood, anxiety, interpersonal relationships and well-being in young adulthood. Mood problems affect up to 25% of young adults and this research project seeks to understand more about factors that promote positive outcomes for young adults.

In this study, we will ask you to complete a series of questionnaires related to sensitive topics such as your childhood experiences (e.g., “Did your caretakers often fail to provide regular meals for you so that you had to go hungry, or eat whatever you could find in the house, or ask other people for food?”, ”Did anyone ever say they wished you were dead? ”, ”My parents believed that I was more difficult to care for than most children are.”), how you think about yourself (e.g., “I look on the bright side of things”), your feelings (i.e., questions about mood and anxiety) and also information about well-being (e.g., “I am fully satisfied with my family life”). This study will be completed online on your personal computer. If you choose to participate all information will be confidential. The study will take approximately 90 minutes.
and you will receive 1.5 credits for participation. If this sounds like something you would be interested in participating in please follow the link below for more information about the study.

THE PASSWORD FOR THIS STUDY IS: 2013

Kind Regards,
Margaret Lumley, Ph.D.
Phone: (519) 824-4120, ext. 56798

Appendix C
Information about the Study

UNIVERSITY
OF GUELPH

COLLEGE OF SOCIAL AND APPLIED HUMAN SCIENCES
Department of Psychology

Information and Consent Form

Youth Mental Health Study:
Dr. Margaret Lumley
Department of Psychology

voice: (519) 824-4120 ext. 56798
fax: (519) 837-8629 e-mail:mlumley@uoguelph.ca

Introduction: You are invited to participate in a research study conducted by Dr. Margaret Lumley and Ph.D. student Brae Anne McArthur from the Department of Psychology at the University of Guelph. The goal of this study is to learn more about how past emotional difficulties during childhood, and/or different kinds of childhood experiences with family relate to self-concept, mood, anxiety, interpersonal relationships and well-being in young adulthood. Mood problems affect up to 25% of young adults and this research project seeks to understand more about factors that promote positive outcomes for young adults.

Procedure: In this study, we will ask you to complete a series of questionnaires online on your personal computer. These will relate to your childhood experiences (e.g., “Did your caretakers often fail to provide regular meals for you so that you had to go hungry, or eat whatever you could find in the house, or ask other people for food?” ,” Did anyone ever say they wished you were dead? ”, ” My parents believed that I was more difficult to care for than most children are.”), how you think about yourself (e.g., “I look on the bright side of things”), your
feelings (i.e., questions about mood and anxiety) and also information about well-being (e.g., “I am fully satisfied with my family life”). Most everybody has some difficult experiences in childhood. We are trying to better understand how these difficulties relate to later outcomes. The questionnaires used in the study will cover sensitive topics, such as emotional maltreatment in childhood. There is a possibility that you may feel uncomfortable with some of the questions that are asked, and it is important that you know that you are not required to answer any questions you would rather not. You are free to stop participating in the study at any time. If you discontinue participation, there is no negative impact, your data will be destroyed, and you will still receive course credit. If you decide to participate in this research, it will take approximately 90 minutes of your time. You will receive one and a half course credits for your participation. In the event you are experiencing emotional distress, know that at the bottom of every page of the study, all participants will be given a link to information about mental health services available on campus and in Guelph. This information will also be provided to you at the end of the study.

Given that this is an online survey there is a social risk that others may view your responses if they have access to your computer. It is strongly recommended that you choose to complete this survey when you are in a private place and will not be interrupted by others. If you need to leave the survey at any time, it is recommended that you log out and log back on when you return. Do not leave your survey open where others can access your information. It is also recommended that you clear your browser history and cache so others cannot track your participation online: to do this type control-shift-delete. This should produce a “clear recent history” popup. You can then choose to clear your browser history and cache.

**Confidentiality:** Your responses on the online questionnaires will not be associated with your name you will be given a unique ID number. However your identity can be traced through the use of the online computer system. If you report emotional maltreatment, depression or anxiety on the computer questionnaires no action will be taken on any information we receive, as this is not a diagnostic study and we will not be providing any follow-up. Should you feel distressed please use the resources for mental health services provided to you on each page. All data will be kept indefinitely for future analysis and stored on a secure encrypted computer in a locked Psychology research laboratory.

This project has been reviewed and received ethics clearance by the Research Ethics Board of the University of Guelph. If you have any questions or concerns regarding your rights or treatment as a participant in the project, you may contact Sandy Auld in the Research Ethics Board at the University of Guelph at 519-824-4120 ext. 56606 (reb@uoguelph.ca), or Dr. Margaret Lumley, whose contact information is listed above.

If you are interested in participating in this study please continue to the next screen to complete the consent form.
CONSENT FORM: Youth Mental Health Project

By continuing on to complete this online survey you are indicating that:

I have volunteered to participate in this study on childhood experiences and feelings in young adulthood. I understand what is required for participation in this study. I understand that I will be asked to fill out questionnaires about my mental health history, my recollections of childhood experiences including emotional maltreatment and important relationships. I know that I will also be asked questions about how I think and feel about myself including my mood, anxiety and positive emotions. I know that these are sensitive topics and may cause me to feel some discomfort.

I understand that this study will take approximately one and a half hours, and that I will receive one and a half course credits for participation. I understand that there is a possibility that recalling negative childhood or relationships experiences, mood and anxiety symptoms, or negative thoughts I may have about myself, might be emotionally upsetting. I understand that I can choose not to answer any questions posed and that I am free to stop participating entirely at any time without a reason given and will still receive my credit.

I understand that my responses will be confidential. This means that the researchers will attach a unique ID to my data and will not use my name. However, my data can be traced to my identity through the online testing system. I understand that this study is not diagnostic in nature and that the researchers will not take action on reports of emotional maltreatment or mental health difficulties that I provide during the online survey. I understand that I will be provided contact information for community resources should I wish to talk to someone about any emotions or difficulties I am having.

YES- Continue with Survey

NO- I do not consent. Exit Survey
Appendix E
Questionnaires

Positive Schema Questionnaire (PSQ)

Now I would like to ask you a few questions about yourself. For each question I will ask you how true the statement is of you based on a scale from 1 to 6, where 1 is completely untrue of me and 6 means describes me perfectly.

1. I believe in myself

2. I feel I can depend on people to keep my secrets

3. I believe things will turn out well

4. I feel comfortable depending on other people

5. I have the ability to be successful

6. I can deal well with difficult situations

7. I know how to find something good in every situation

8. I think I have many good qualities

9. I trust other people

10. I can adapt to new situations

11. I usually see the positive side of things

12. If I try hard I can usually do well

13. I can respond well to challenges

14. I value many things about myself

15. I do well when I try my best

16. When things are bad I can still think of something good

17. I value myself

18. I feel comfortable telling people important things about myself

19. If I try I will succeed
20. I can deal with tough things

**Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS)**

These six questions ask about your satisfaction with different areas of your life. Circle the best answer for each.

1. I would describe my satisfaction with my family life as:
   a) Terrible e) Mostly satisfied
   b) Unhappy f) Pleased
   c) Mostly dissatisfied g) Delighted
   d) Mixed (about equally satisfied and dissatisfied)

2. I would describe my satisfaction with my friendships as:
   a) Terrible e) Mostly satisfied
   b) Unhappy f) Pleased
   c) Mostly dissatisfied g) Delighted
   d) Mixed (about equally satisfied and dissatisfied)

3. I would describe my satisfaction with my school experience as
   a) Terrible e) Mostly satisfied
   b) Unhappy f) Pleased
   c) Mostly dissatisfied g) Delighted
   d) Mixed (about equally satisfied and dissatisfied)

4. I would describe my satisfaction with myself as:
   a) Terrible e) Mostly satisfied
   b) Unhappy f) Pleased
   c) Mostly dissatisfied g) Delighted
   d) Mixed (about equally satisfied and dissatisfied)

5. I would describe my satisfaction with where I live as:
   a) Terrible e) Mostly satisfied
   b) Unhappy f) Pleased
c) Mostly dissatisfied  
g) Delighted

d) Mixed (about equally satisfied and dissatisfied)

6. I would describe my satisfaction with my overall life as:
   a) Terrible
   e) Mostly satisfied
   b) Unhappy
   f) Pleased
   c) Mostly dissatisfied
   g) Delighted
   d) Mixed (about equally satisfied and dissatisfied)

The Inventory of Parent and Peer Attachment (IPPA)

Parent Scale Items

1. My parents respect my feelings.
2. My parents are good parents.
3. I wish I had different parents.
4. My parents accept me as I am.
5. I can’t depend on my parents to help me solve a problem.
6. I like to get my parents’ view on things I’m worried about.
7. It does not help to show my feelings when I am upset.
8. My parents can tell when I’m upset about something.
9. I feel silly or ashamed when I talk about my problems with my parents.
10. My parents expect too much from me.
11. I easily get upset at home.
11. I get upset a lot more than my parents know about.
12. When I talk about things with my parents they listen to what I think.
13. My parents listen to my opinions.
14. My parents have their own problems, so I don’t bother them with mine
15. My parents help me to understand myself better.
16. I tell my parents about my problems and troubles.
17. I feel angry with my parents.
18. I don’t get much attention at home.
19. My parents support me to talk about my worries.
20. My parents understand me.
21. I don’t know who I can depend on.
22. When I am angry about something, my parents try to understand.
23. I trust my parents.
24. My parents don’t understand my problems.
25. I can count on my parents when I need to talk about a problem.
26. No one understands me.
27. If my parents know that I am upset about something, they ask me about it.

Parent Child Relationship Inventory (PCRI)

Using the following rating scale, please indicate how much you agree with each statement based on your experiences as a child before the age of 15 years.

1) As a child I would generally tell my parents when something was bothering me.
2) My parents had trouble disciplining me.
3) I get as much satisfaction from having children as other parents do.
4) My parents had a hard time getting through to me.
5) My parents spent a great deal of time with me.
6) When it came to raising me, my parents felt alone most of the time.
7) My parents feelings about being a parent changed from day to day.
8) My parents believed that parents should protect their children from things that might make them unhappy.
9) If my parents had to say no to me, they tried to explain why.
10) My parents believed that I was more difficult to care for than most children are.
11) My parents believed that could tell by my face how I was feeling.
12) My parents worried a lot about money.
13) My parents sometimes wondered if they were making the right decisions about how to raise me as a child.
14) Being a parent came naturally to my parents.
15) My parents would sometimes give in to me to avoid a tantrum.
16) My parents loved me just the way I was.
17) My parents got a great deal of enjoyment from all aspects of their life.
18) My parents believed that as a child I was never jealous of others.
19) My parents often wondered what the rewards were in raising children.
20) My parents believed that I told them all about my friends.
21) My parents wished they could set firmer limits with me.
22) My parents got a great deal of satisfaction from having children.
23) My parents sometimes felt if they didn't have more time away from me they would go crazy.
24) My parents regretted having children.
25) My parents believed that children should be given most of the things they want.
26) My parents believed that I was out of control much of the time.
37) My parent believed that being a parent wasn't as satisfying as they thought it would be.

38) My parents felt that they could talk to me on my level.

39) My parents life was very stressful.

40) My parents never worried about me.

41) My parents wished that I would not interrupt when they were talking to someone else.

42) My parents believed that parents should give their children all those things the parents never had.

43) My parents generally felt good about themselves as parents.

44) My parents sometimes felt overburdened by their responsibilities as a parent.

45) My parents felt very close to me.

46) My parents were generally satisfied with the way their life was going.

47) My parents never had any problems with me.

48) My parents couldn’t stand the thought of me growing up.

49) My parents believed that I would say that they are good listeners.

50) My parents often lost their temper with me.

51) My parents were very involved with my sports and other activities.

52) My parents worked as a team in doing the chores around the house.

53) My parents have never been embarrassed by anything I said or did.

54) My parents believed that I really knew how to make them angry.

55) My parents believed that parents should be careful about whom they allow their children to have as friends.

56) My parents believed that when I had a problem, I usually came to them to talk things over.

57) My parents believed that I never put off doing things that should have been done right away.
58) My parents believed that being a parent was one of the most important things in their life.

59) My parents believed that women should stay home and take care of the children.

60) My parents believed that teenagers are not old enough to decide most things for themselves.

61) My parents believed that I kept many secrets from them.

62) My parents believed that mothers who work are harming their children.

63) My parents felt like they didn't really know me.

70) My parents sometimes found it hard to say no to me.

71) My parents wondered if they did the right thing by having children.

72) My parents would have rather done a lot of other things than spend time with me.

73) My parents believed that it's a parent's responsibility to protect his or her child from harm.

74) My parents sometimes wondered how they would survive if anything were to happen to me.

75) My parents missed the close relationship they had with me when I was younger.

76) My parents believed that I rarely talked to them unless I wanted something.

77) My parents believed that a father's major responsibility is to provide financially for his children.

78) My parents believed that it is better to reason with children than just to tell them what to do.

79) My parents spent very little time talking with me.

80) My parents felt there was a great distance between me and them.

81) My parents believed that for a woman, having a challenging career is just as important as being a good mother.

82) My parents often threatened to punish me but never did.

83) If my parents had to do it over, they would probably not have children.

84) My parents believed that partners/spouses should help with child care.
85) My parents believed that mothers should work only if necessary.

86) My parents believe that some people would say that I was a bit spoiled.

87) My parents worried a lot about me getting hurt.

88) My parents seldom had time to spend with me.

89) My parents believed that below age four, most children are too young to be in a regular preschool or day-care.

90) My parents believed that a woman can have a satisfying career and be a good mother too.

91) My parents carried a photograph of me in their wallet or purse.

92) My parents had a hard time letting go of me.

93) My parents felt like they didn't know how to talk with me in a way that I understood.

94) My parents believed that having a full-time mother is best for a child.

**Child Report of Parent Behaviour Questionnaire (CRPBI)**

Now I would like to ask you a few questions about your mother. For each question I will ask you to tell me how true each statement is on a scale from 1 to 5, where 1 is not true at all and 5 is very true.

**MY MOTHER IS A PERSON WHO...**

1. makes me feel better after talking over my worries with her.

2. tells me of all the things he had done for me.

3. believes in having a lot of rules and sticking with them.

4. smiles at me very often.

5. says, if I really cared for her, I would not do things that cause her to worry.

6. insists that I must do exactly as I am told.

7. is able to make me feel better when I am upset.
8. is always telling me how I should behave.
9. is very strict with me.
10. enjoys doing things with me.
11. would like to be able to tell me what to do all the time.
12. gives hard punishment.
13. cheers me up when I am sad.
14. wants to control whatever I do.
15. is easy with me.
16. gives me a lot of care and attention.
17. is always trying to change me.
18. lets me off easy when I do something wrong.
19. makes me feel like the most important person in his life.
20. only keeps rules when it suits her.
21. gives me as much freedom as I want.
22. believes in showing his love for me.
23. is less friendly with me, if I do not see things his way.
24. lets me go any place I please without asking.
25. often praises me.
26. will avoid looking at me when I have disappointed her.
27. lets me go out any evening I want.
28. is easy to talk to.
29. if I have hurt his feelings, stops talking to me until I please her again.
30. lets me do anything I like to do.
Mental Health Questionnaire (MHQ)

Many young adults experience significant emotional struggles and benefit from visiting a mental health professional. The following questions will ask you about your experience with mental health professionals.

1) **In the past month, have you visited a mental health professional?** (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

2) **In the past 6 months, have you visited a mental health professional** (e.g., psychologist, counselor, therapist, family doctor, etc.)? Yes/No

3) **In the past year, have you visited a mental health professional?** (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

4) **Have you ever visited a mental health professional?** (e.g., psychologist, counselor, therapist, family doctor, etc.) Yes/No

5) If you have visited a mental health professional how frequently did you attend?

   - 4 times a month
   - 2 times a month
   - 1 time a month
   - 1 time every 3 months
   - 1 time every 6 months
   - 1 time every year
   - Not Applicable

6) Have you ever taken medication to treat a mental health issue? Yes/No

7) Have you ever received a mental health diagnosis (e.g., depression, anxiety, OCD, PTSD, etc.)? Yes/No

8) Have you ever been sad, down, blue or highly stressed and anxious for a period of at least two weeks? Yes/No

9) If so, did your mood or anxiety/stress interfere with your family, friends, or school/work functioning?

   Yes/No/ Not Applicable
Thank you very much for participating in this study. The purpose of the study is to learn more about how past emotional difficulties during childhood, and/or different kinds of childhood experiences with family relate to self-concept, mood, anxiety, interpersonal relationships and well-being in young adulthood. For example, there is evidence that how people think about themselves and relationships following negative childhood experiences plays a role in influencing mood or anxiety problems later in life. We are interested in looking at the factors that promote positive outcomes for individuals who have had negative early life experiences. We are also interested how parents play a role in the development of factors that promote resilience following negative childhood experiences.

Questions asked today about your childhood, your beliefs, or your mood or anxiety may bring up or make you aware of unpleasant memories or feelings.

Below is the contact number for agencies that can help if you would like to talk about these feelings further:
University of Guelph Counselling Services: (519) 824-4120 ext. 53244
Family Counselling and Support Services for Guelph and Wellington: (519) 824-2431
Community Torchlight Distress Line: (519) 821-3760

For maximum your privacy, it is recommended that you clear your browser history and cache so others cannot track your participation: to do this type control-shift-delete. This should produce a “clear recent history” popup. You can then choose to clear your browser history and cache.