

**PSYCHOLOGICAL WELL-BEING AND ACADEMIC ADJUSTMENT OF  
YOUNG ADULT CHILDREN OF DIVORCE (YACOD):  
A SYSTEMATIC REVIEW AND META-ANALYSIS**

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## *Abstract*

This study first examines the literature conducted in the past ten years on young-adults who experienced parental divorce in childhood and the associated predictors of adjustment and general well-being using the PRISMA model of systematic reviews. Secondly, based on these findings, a meta-analysis was conducted to identify any robust findings in the research that has been published on this topic. A total of 53 articles were included in the systematic review and 21 were included in the meta-analysis. Results demonstrate that it is not the event of parental divorce itself that presents a challenge to many young-adults in the later years, but rather extraneous factors such as lower amounts of parental support, higher parental conflict, and lower parental well-being. Despite the high degree of dispersion and variability present in the studies that were included in the analysis, results indicate that there were lasting mental health implications including depression and behavioural concerns. The most important factors in mitigating any long-term negative consequences include more parental support, high quality parent-child relationships, less parental conflict, and healthy coping styles of these young-adults.

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## **Examining the Psychological Well-being and Academic Adjustment of Young Adult Children of Divorce**

Divorce rates increased drastically starting in the 1960's in many parts of the world including Europe, (European Commission, 2015) the United States (Kreider & Ellis, 2011) and Canada (Milan, 2013) but recently seem to have plateaued. Divorce is defined as the dissolution of a marriage and can impact families in many ways. For instance, the negative consequences of divorce can include a decrease in parental mental and physical health, increased child behavioural problems, and decreases in children's mental health status (e.g., (Afifi, Boman, Fleisher, & Sareen, 2009; Amato , 2010; Huurre, Junkkari, & Aro, 2006; Jurma, 2015; Sirvanli-Ozen, 2005). However, divorce also represents a transition process that can begin long before divorce papers are signed and end well after the family splits up, which is known as the *Divorce-Stress-Adjustment Perspective* (Amato, 2000). This perspective suggests that the divorce process has various short- and long-term consequences and affects parts of the family unit, collectively as a whole and individually. The stress that both parents and their children often endure during this process increases the risk that they will experience negative emotional, behavioural, and health outcomes initially and in the long term. These adverse outcomes vary between people and are influenced by moderating or protective factors, which can lead an individual to successfully adjust or poorly adjust to divorced life either initially and/or later on (Amato, 2000; Bray &



Hetherington, 1993; Markman, Rhoades, Stanley, & Peterson, 2013; Richardson & McCabe, 2001).

There are many premorbid factors that that can play a role in the impact that divorce can have on family members. Often, parents are not able to get along; there is stress in the household, and sometimes the family dissolves before the divorce process is fully finalized. After the actual divorce, there are many parts of the family's life that continue to change. Parents move into different houses, custody and visitation schedules of children are implemented, a change in schools may occur, and children and parents may not see certain family members or have as much social support as they once did. Additionally, going from a two-parent to one-parent income is a shift that many families have a difficult time adjusting to.

Aside from the many disruptions that divorce can cause, it may also present an opportunity for the growth and development of the family members involved (Bray & Hetherington, 1993). This may be the boost individuals need to further their education or seek additional occupational training to further their independence. The ending of unhappy and unhealthy relationships also allows people to later develop new, more fulfilling relationships (Bray & Hetherington, 1993). Divorce may also be a positive event in some families who have experienced turmoil for so long (Bourassa & Sbarra, 2015; Hetherington, 1991). Ending conflict in the family may actually be a blessing and overall result in a happier, healthier environment.

For other families, the process can be devastating and have lasting negative consequences. What is clear is that we now have a surge of adults who experienced their parents' divorce during childhood. While we have studied extensively how their childhood has been impacted by the divorce, we now have the opportunity to investigate the potential long-term consequences of divorce on these adults- in particular during their transition to adulthood. To better understand these potential impacts, we must first understand the various factors that may play a role in the long-term psychosocial adjustment of children of divorce, namely factors related to parent, child and family variables.

### **The Impact of Divorce on Parents**

As a result of the increased prevalence of divorce between the 1960s and 2000s, much research has investigated how this event can impact families in the initial years following family dissolution. Compared to married families, divorced men and women tend to experience more negative outcomes compared to their non-divorced counterparts (Amato, 2010; Heatherington, 1999; Lorenz, Wickrama, Conger, & Elder, 2006; Sbarra, Emery, Beam, & Ocker, 2014; Sbarra, Hasselmo, & Nojopranoto, 2012). For example, divorced individuals report less psychological well-being, more health problems, an increased risk of substance abuse and a greater risk of death compared to married or common-law couples (Amato, 2010; Amato, 2000). In particular,

divorced men are more likely to experience negative consequences associated with physical health and mortality compared to women, although divorced women also report poorer overall well-being than their married counterparts (Amato, 2010; Heatherington, 1986). There are several hypotheses as to why divorced parents are at an increased risk of experiencing negative outcomes. One perspective suggests that overall divorce is a stressful process for people to endure (Amato, 2010). There are many changes happening such as the ending of relationships, intense feelings of anger, sadness, and loss, the changing of residences, and adapting to a single life-style. All of these losses and changes contribute to stress and this, combined with less social and emotional support from a partner can leave an individual feeling overwhelmed and more vulnerable to mental and physical health problems (Pearlin, Scheiman, Fazio, & Meersman, 2005). Other researchers have found that individuals who experienced divorce had poorer mental health prior to divorcing, however their mental health status continued to decline after the split (Wade & Pevalin, 2004). This suggests that poor mental health may be a causative or contributing factor to divorce. Divorced families are also more likely to have a lower socio-economic status and experience social isolation as compared to married families (Wallerstein, Lewis, & Rosenthal, 2013).

These findings are especially true of single-mother families who have custody of their children and thus are more likely to suffer from the economic consequences of marital

dissolution (Grall, 2011). Divorced mothers often have higher levels of depression and anxiety than their married counterparts, which can lead them to adopt hostile or absent parenting styles (Jurma, 2015). An interesting longitudinal, qualitative study conducted by Wallerstein and colleagues (2013) examined the relationship between a sample of 48 single mothers and their children (110 children in total) following divorce. Women in this study were grouped into three categories; Group A were mothers who continued good parenting, Group B were mothers who experienced a downturn in parenting but often restored good parenting practices, and Group C in which mothers demonstrated a collapse in maternal parenting. All of group A mothers adjusted smoothly to single-parenthood and prioritized their children's needs. Some of these mothers went on to remarry, while others remained single. Most of the children of mothers in this group reported strong parent-child bonds and a loving and supportive relationship. The key difference between children in this group lies between children whose mother remained single and children whose mother remarried. In this group, children of mothers who remained single reported that they felt more responsibility and pressure to take care of their mother (Wallerstein, Lewis, & Packer Rosenthal, 2013). This emphasizes the idea that even when children have a healthy relationship with their parents after a divorce, they may feel the need to take care of a parent as they age, especially if that parent remains single.

The group B families often experienced turmoil and chaos in their lives prior to divorcing and mothers reported feeling overwhelmed during the post-divorce adjustment phase. Many mothers enrolled in educational or vocational training programs while trying to balance single-parenthood. Children in this group reported feeling overlooked and lonely and as a result the relationship between mother and child began to erode. Due to the lapse in healthy parenting during critical years of child development, these now adolescents became resentful. In this group, the majority of mothers and children were able to reconcile after a few years once they adjusted to the demands of single-parenthood.

Many of the mothers in group C struggled with physical and psychological health issues prior to the divorce that included alcoholism, depression, and hospitalizations. The support and resources from their marriage allowed them to focus on their health concerns while also parenting competently with hired help. Post-divorce, their decline in resources and support led to a diminished capacity to parent as they often struggled with daily living. The children and adolescents in this group often had to take on more responsibility as their mothers were often absent or unable to parent. In some cases, other family members took in the children but most still lived with their mother and often had to take on the caregiver role themselves. This study provides an in-depth view of how divorce can affect families, especially children in many different ways. Most of the children experienced divorce in childhood but it was not until

adolescence that many of the problems arose. For example, some of the children in group B and group C displayed many risky behaviours such as acting aggressively towards friends and family, turning to drugs or alcohol, engaging in promiscuous sexual behaviour, and dropping out of school (Wallerstein, Lewis, & Packer Rosenthal, 2013). This study highlights the importance of competent and consistently available parenting as a moderator on children's longer-term outcomes post-divorce. It should be noted that although this longitudinal study provides interesting insight to changes over time, there is limitations to the generalizability of results due to the small homogenous sample size.

Another study that examined how parenting styles may mediate the influence of divorce on mother's and children's well-being was conducted by Jurma in 2015. This correlational study compared mothers and children of divorced families to those of intact families on a variety of outcomes. One of main findings from this study was that mothers who experienced divorce had significantly more psychological distress than mothers who did not. This included having higher symptoms of somatization, depression, hostility, and phobic anxiety (Jurma, 2015). Furthermore, divorced mothers with these intense psychological symptoms, specifically depression and somatization were more likely to have children with emotional problems, conduct issues, hyperactivity, and difficulty socializing with peers (Jurma, 2015). When mothers were high in psychological distress, mothers from divorced families were more likely to adopt hostile

parenting techniques while mothers of intact families were more likely to use an over-reactive parenting style. While it is difficult to tease apart the direction of the relationships described here, it is clear that mother's psychological well-being is influenced by support and resources after a divorce and this can have an influence on her relationship and parenting-style with her children. Overall, this study's findings suggest that mothers' own well-being can impact the degree to which children experience behavioural and emotional difficulties both initially and over time.

### **The Impact of Divorce on Children**

The transitions that come with divorce, such as living with one parent, moving out of the family home, changing schools, and living with a decreased income can significantly impact the children in the family. These factors combined with parental well-being and parenting styles can have varied consequences on how the child adjusts. Some children may show some positive consequences of escaping a high conflict marriage through divorce, while other children show little to no change (Hetherington, 2006). For a small but significant minority of children, problems develop during the transitions associated with divorce that can persist into adulthood (Amato, 2010; Hetherington, 2006). Most research in the area of divorce and its consequences has focused on children and their adjustment and psychological well-being in the short to

medium term (before reaching adulthood). For example, children and adolescents living with single mothers are more likely than children from intact homes to experience emotional, behavioural and social problems, especially if their mother is struggling with her own emotional problems (Amato, 2001; Jurma, 2015; Sirvanli-Ozen, 2008). As they develop into adolescence, these youngsters continue to be at risk for psychological and conduct problems, as well as reduced academic performance. Struggling with the transitions of divorce and having limited supervision, these adolescents are susceptible to peer influence and can turn to drugs, alcohol and delinquent behaviour (Wallerstein, Lewis, & Rosenthal, 2013).

While much research has examined the short-term consequences of divorce in childhood, recently there has been an interest in investigating any long-term effects that may be seen with these individuals who are now entering adulthood and establishing their own families. Research in this area is less established and to date there has been no meta-analysis conducted on this topic. However, there is general agreement in the literature that while the majority of children adjust well after the divorce as they develop into adults, a significant proportion experience persisting problems (Amato, 2010; Hetherington, 2006).

Several perspectives exist as to why some children of divorce may experience adverse outcomes later in life. One perspective, known as the *Selection Perspective* (Amato, 2000), posits that parents often divorce because of dysfunctional traits that one or both of the parents



possess that contribute to poor communication or antisocial tendencies. Furthermore, the children are thought to inherit these personality traits and the cycle continues (Amato, 2000). This is evidenced by a study conducted by Jockin, McGue, and Lykken (1996). They found that compared to dizygotic twins, monozygotic twins were more likely to experience divorce, suggesting a genetic component of the traits associated with divorce.

Another suggestion as to why these individuals experience issues later in life is that they adopt similar attitudes and beliefs about marriage and divorce as their parents. Compared to intact families, offspring of divorced families are more likely to cohabit with their partner as opposed to getting married, and those who do get married are more likely to delay the marriage or get divorced (Burns & Dunlop, 2000; Martin, Mills, & Le Bourdais, 2005; Storksen, Roysamb, Gjessing, Moum, & Tambs, 2007). In addition, adult children of divorce (ACOD) are more likely to have a negative view of marriage and a positive view of divorce, perhaps leading them to be less committed and trusting in their current relationship, which can ultimately lead to a divorce (Cui & Fincham, 2010).

Another hypothesis is that the quality of the relationship between parent and child plays an important role in their psychosocial adjustment and well-being into adulthood. For instance, King (2002) suggested that adult children who maintained strong relationships with both parents after they divorce were more likely to have stronger, more trusting relationships in general. At

the same time, ACOD are also more likely to experience disturbances in their intimate relationships. These individuals are more likely than their married counterparts to have a higher number of sexual partners, have their first sexual experience at a younger age and stay in relationships for a shorter period of time (Jonsson, Njardvik, Olafsdottir, & Gretarsson, 2000). This avoidance of stable, intimate relationships may be a result of lack of trust due to their parents' divorce or a need to ensure their partner is fully committed to them before entering in a long-term relationship (Conway, Christensen, & Herlihy, 2003). Not only are ACOD parents more likely to experience marital discord and divorce themselves but they are also more vulnerable to experiencing distress, low self-esteem and general unhappiness when parent-child relationships are weakened (Amato & Sobolewski, 2001). Some have argued that a strong, stable relationship, such as parent-child or partner, could mitigate these negative effects in adulthood (Richardson & McCabe, 2001).

Wauterickx and colleagues (2006) also suggest that ACOD are more likely to experience financial issues, and this combined with the increased chance of their own divorce may lead to a risk of depression in these individuals. It is clear from the research conducted on the adjustment of ACOD that there are various pathways one can take after a divorce and many factors that mediate an individual's outcome. Parental conflict and the multiple family transitions following divorce can leave a child in a lower economic status, without social support and ultimately lead

to maladjustment and stress that have long term consequences. On the other hand, having strong family relationships and social ties can act as protective factors and build resilience in the child that can persist throughout their adult life.

### **The Importance of the Developmental Period of Transition to Adulthood**

Aside from processing and coping with stressful events such as parental divorce, navigating the transition from adolescence into young-adulthood can also be a challenging developmental period. According to one theory proposed by Arnett (2000), this period of development is defined as *emerging adulthood*, as these individuals are transitioning from adolescents into young-adults but have not yet reached a period of complete adulthood. This time is defined as the life-span stage between the ages of 18-25, a period after graduation from high school and the variability and instability that occurs until the point at which one reaches young-adulthood, sometimes continuing into the early 30's. However, these are not set parameters as emerging adulthood is a time of flexibility and fluidity. According to Arnett (2000), emerging adulthood is a relatively new concept that came about as a result of changes in society, with most people between the ages of 18-25 pursuing higher education, experiencing employment instability and change, marrying and starting families later in life, and overall experiencing more instability than same-age peers 50 plus years ago.

According to this theory, there are five key features that define this developmental period and contribute to the challenges and growth that occurs for these individuals. The first feature is the age of identity exploration which has continued to grow from adolescence. These young people are trying out new roles, forming new relationships, and solidifying their goals and values. The second feature is the age of instability, which is marked by multiple transitions, a number of life changes, including new living environments, more responsibility, new relationships, and changes in job and academic roles. The third feature is the age of self-focus, which describes the transition from living with parents and following their rules and the routine of high school to living more independently and having the freedom and flexibility to choose and try new paths. This is a time to reflect on their own desires and to pursue their own dreams and goals. The fourth feature included in this model is the age of feeling 'in between'. This describes the challenges of emerging adults who are moving away from the constraints of adolescence and taking on more independence and responsibility associated with adulthood, but who do not fully feel like an adult. The fifth, and final feature is the age of possibilities, which is characterized by the hope and optimism that the future holds of these individuals. It is clear from the details of this theory, that while the new opportunities that arise during this time are exciting and fulfilling, this can also be a time of great stress.

The adjustment to college/university itself can also present with its own challenges and barriers. With the increase in responsibility and independence, as well as the academic pressure and stress, college-age students are more likely than the general population to suffer from poor mental health (Saleh, Camart, & Romo, 2017). For example, the prevalence rate of depression among college students exceeds those found in the general population, specifically 30.6% compared to 10.6% for 12-month prevalence rates and a 20.6% lifetime prevalence (Hasin, et al., 2018; Ibrahim, Kelly, Adams, & Glazebrook, 2013). Additionally, anxiety disorders are among the most common mental health concerns that university students face (Pedrelli, Nyer, Yeung, Zulauf, & Wilens, 2015). According to these authors, while most often individuals experience their first onset on mental health issues earlier in life, the stresses and pressures from adjusting to college life may exacerbate these symptoms or trigger a relapse. As a result of the culture and lifestyle of many college-age students, increasing alcohol consumption and substance use is more frequent as well as the increase in risky behaviour (Pedrelli et al., 2015). Social support, especially parental emotional support during these times can be very important in the management, recovery, and success of these students and strong parent-child relationships represent a protective factor against worsening mental health symptoms (Kamen, Cosgrove, McKellar, Cronkite, & Moos, 2011). This research highlights the importance of strong family

support during this transition period from adolescence into emerging adulthood, especially for more vulnerable individuals.

### **This Dissertation**

Based on the high quality of work that can be yielded from conducting a systematic review and meta- analysis, the purpose of this dissertation was to 1) conduct a systematic review on the predictors of psychological and academic adjustment of young-adult children of divorce (YACOD) in order to summarize and gain a better understanding of the main trends emerging from research accomplished here and elsewhere in the world; 2) identify any gaps in the current literature on this topic and suggest areas for future research. This systematic review will then form the basis for conducting 3) a meta-analysis on this topic to identify the most robust findings associated with the psychological and academic adjustment of YACOD. The clinical application of this systematic review will aim to provide a more in-depth understanding of how divorce in childhood may impact the development of emerging adults, which may have lasting impressions into one's adult life. It will be important for clinicians to understand the barriers, strengths, and perspectives of these individuals so they are better able to provide the best possible care.

## **Data Synthesis as a Mechanism to Inform the Development of New Research.**

In trying to expand the literature on evidence-based practice in psychology, various forms of literature reviews and data synthesis can be conducted in the field. Grant and colleagues (2009) identified 14 types of reviews and associated methodologies published in the health literature. While there are several options to aggregate literature on a particular topic, such as a systematic map, systematic search and review, or a systematized review, these all fall short of the rigour and comprehensiveness of a systematic review. Unlike the systematic map and systematized review, a systematic review aims for an exhaustive search of the literature while adhering to guidelines. Furthermore, a systematic review requires careful documentation of the entire process to allow for replication. The systematic search and review also aim for an exhaustive search of the literature; however, they may fail to include quality assessment procedures and guidelines, falling short of the critical analysis that a systematic review allows for. A systematic review appears to be the most comprehensive and thorough method to search, appraise, and synthesize research. Through careful documentation of the search criteria as well as the exclusion and inclusion criteria, this process is transparent and allows other researchers to replicate the procedure. Thus, a systematic review is the most comprehensive and unbiased way to combine all of the research that has been conducted on a particular topic. From this work it is

possible to identify any gaps in the current literature to address in future research. Systematic reviews are also useful for summarizing research on a particular topic. They are also a time-efficient way for researchers and practitioners to continue to develop competence and stay up to date on the current research that has been done in a particular field.

Researchers are also able to synthesize the results of multiple studies using a procedure known as a meta-analysis. Meta-analysis is another important technique to further establish the evidence-based practice of psychology and can be conducted based on the results of a systematic review. This process allows studies that are similar in methodology to have their effect sizes compared to provide precise estimates of the magnitude of the results of each study. By using the findings from a systematic review, the meta-analysis presents the most comprehensive research strategies and provides unbiased statistical results. The systematic review provides a description of all the literature on a particular topic while the meta-analysis aggregates all of the results to provide a more meaningful description of what the results mean.

## **Method: Systematic Review**

### **Phase I**

#### **Literature search.**



In order to have a complete understanding of the research on YACOD, a systematic review was conducted. A systematic review is a carefully documented and rigorous process in which a researcher examines all of the research conducted on specific topic (Hemingway & Brereton, 2009). For the purposes of this study, aspects of the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) model was used. The PRISMA statement includes a 27-item checklist and a four-phased flow diagram that will be followed (see Appendix A for more information on the PRISMA model and which components were included in this dissertation). For the systematic review, an exploratory analysis of the published research on this topic was conducted. For the meta-analysis, the primary research question will be to determine if emerging YACOD differ in their psychological and academic outcomes compared to emerging adults raised in intact families. Based on the literature focusing on children and adolescents of divorced families, it was hypothesized that overall, YACOD would report similar academic adjustment and achievement as their intact counterparts. In looking at mental health outcomes, it was hypothesized that there would be little to no differences between YACOD and YA from intact families with mental health functioning than those from intact families. However, as found in previous research, it may be likely that a small portion of YACOD might experience challenges in these areas.

## **Participations, Interventions, Comparisons, Outcomes, and Study Design (PICOS)**

### **Criteria:**

Participants: Young adults (at least in their first year of university or age 18) who experienced divorce in childhood

Interventions: Not applicable

Comparisons: For the systematic review, as it was exploratory in nature to capture the full experiences of YACOD, no comparison group was required. For the meta-analysis, the comparison group were young-adults (at least in their first year of university or age 18) who did not experience divorce in childhood.

Outcomes: Studies that reported either a psychological or academic outcome.

Study Design: Studies that were qualitative or quantitative in nature and was an original piece of research. For the meta-analysis, only quantitative studies which included a comparison group of young-adults who grew up in intact families were included.

### **Database search.**

For this portion of the project, the author consulted a librarian who had experience designing and conducting systematic reviews. She helped identify the most appropriate databases

to include based on the research question. The online search included six electronic databases:

PsycInfo, PubMed, Social Services Abstracts, Social Work Abstracts, Cumulative Index of Nursing and Allied Health Literature (CINAHL) and Excerpta Medica Database (EMBASE).

PsycInfo was decided to be the primary database as it is the largest and most comprehensive database in the field of psychology. PubMed served as the secondary database because it is overall one of the largest and most prominent databases in the health and life sciences field.

CINAHL was chosen as the tertiary database for its literature coverage in the consumer health and allied health fields. EMBASE served as the quaternary database because of its wide range of medical research literature. Social Services Abstract and Social Work Abstract were chosen as supplementary databases because of their coverage of literature in the fields of family and social welfare, mental health, and community services.

The librarian also aided the author in constructing thorough search terms for each database. Search terms were initially developed in the computerized database PsycInfo using a controlled vocabulary search or thesaurus search, and then a keyword search. Thesaurus search terms are unique to each online database and allow researchers to search beyond the words contained in the title and abstract (Lefebvre, Manheimer, & Glanville, 2011). They allow researchers to access articles that use different words to describe the same concept. Keyword search terms are general descriptor words that the author of an article uses to describe and tag the

paper. For this study, the keywords were developed based on the facets of the study question: divorce or separation; child, offspring, mother, father; and psychological outcomes. The search was then conducted using a combination of keywords in either the title, abstract, or subject fields of the electronic database. Some of the databases used both controlled vocabulary and keyword searches while other used only keyword searches. The search topic was broken down into facets to obtain the most comprehensive results from the searches. Facets included the target population, various forms of psychosocial adjustment and well-being terms, and the event of divorce. The initial search was broad to ensure that no studies would be missed. A preliminary PsycInfo search using the keyword search terms was conducted. These results were then checked to ensure that it included the primary contributing researchers in the field.

This list of search terms was then adapted to other databases including PubMed, Social Services Abstracts, Social Work Abstracts, CINAHL and EMBASE. Based on our research question, studies from the past 25 years in the English and French languages were initially included in the systematic review. Due to the overwhelming number of studies that met inclusion criteria for the study, this date range was further refined. For the systematic review, the date range was limited to the past 10 years, specifically January 2006 to May 30, 2016 (the date of the search). Choosing this date range allowed us to include a wider range of psychological and academic outcomes while still having a manageable and interpretable data set. This also ensured

that the data were current and thus not plagued with cohort effects. Studies from the past 15 years were used in the meta-analysis in order to focus on more specific outcomes while still having a sufficient sample size. Thus, the databases were limited to the years January 2001 to May 30<sup>th</sup>, 2016 for the meta-analysis. All empirical pieces of research such as peer-reviewed journals, conference proceedings, technical reports, and dissertations were included in the systematic review. Once all searches were conducted, the articles were imported into RefWorks. The dates of all searches were recorded.

#### PsychInfo Thesaurus Search Terms

1. Adjustment/ or Emotional Adjustment/ or Occupational Adjustment/ or School Adjustment/ or Social Adjustment
2. Emotional Control/ or Identity Crisis/ or Adjustment Disorders/ or Well Being/
3. Life Satisfaction/or Marital Satisfaction/ or Need Satisfaction/ or Relationship Satisfaction/ or Role Satisfaction/ or Sexual Satisfaction/ or Work-Life Balance/
4. Life Experiences/ or Life Changes/ or Lifestyle Changes/ or Quality of Life/ or Quality of Work Life
5. Psychosocial Development/ or Personality Development/ or Psychosexual Development/ or Psychosocial Factors/ or Psychosocial Readjustment/
6. 1 or 2 or 3 or 4 or 5

7. Divorce/ or Marital Separation

8. 6 or 7

9. Limit 8 to English & French

10. Limit 13 to yr = "1991-2016

Keyword Search for PsychInfo, CINAHL, EMBASE, PubMed, Social Services Abstracts, and  
Social Work Abstracts

1. divorce OR "marital separation"

2. psychosocial OR adjust\* OR "well being" OR satisfaction OR development OR psychosexual  
OR personality)

3. child OR offspring OR parent OR mother OR father

4. 1 and 2 and 3

### **Hand searching.**

Hand searching is a manual method of searching literature for sources that are relevant to the systematic review. Hand searching included searching prominent journals in family psychology (e.g., Journal of Marriage and Family, Family Process, Journal of Divorce and Remarriage, The Family Journal: Counseling and Therapy for Couples and Families, Personal Relationships, Family Relations, and Journal of Family Psychology) as well as the reference lists

of our final sample. Hand searching is deemed essential to the systematic review process because it captures and identifies relevant articles that are not indexed or are improperly indexed. It also allows researchers to quickly scan relevant material from high impact journals and frequently cited articles. Finally, and most importantly, hand searching ensures that relevant studies are not overlooked.

### **Grey literature search.**

Grey literature is defined as any relevant material published by non-profit organizations or government organizations. For the purposes of this study, The Vanier Institute of the Family was contacted. This national organization is dedicated to conducting research to understand the complexity and diversity of families in Canada.

## **Phase II**

### **Preliminary screening of articles.**

The preliminary screening of the articles was a four-step process. To be retained for full-text review the article had to meet four eligibility requirements: singularity, article type, target population, and study focus. For this portion of the dissertation, reference database results were imported into RefWorks. Refworks is a commercial reference management software package,

used to manage large bibliographies and references. It was used to proceed with each step of the data analysis process to identify the final sample of studies included in the systematic review.

The first step in this process was to remove all of the duplicate articles and record the number of records retained. First, internal duplication was conducted whereby duplicate articles were removed from within each individual database. Then all the databases were combined, and external deduplication was conducted (the removal of articles that appeared in more than one database).

The second step involved removing all articles that were not original research (i.e., not qualitative, quantitative, or mixed methods). This resulted in the exclusion of literature reviews, systematic reviews, meta-analyses, books, book chapters, book reviews, announcements, newspapers, newsletters, bulletins, letters to the editor, meeting summaries, proceedings, clinical cases, commentaries, historical articles, images, and policy papers.

The third step in the title and abstract review was to remove articles where the target population was not appropriate. This involved removing articles pertaining to the well-being of young children (less than 18) or the well-being of another family member besides the adult child. Thus, articles were retained if the subjects in the study were adult-children of divorce who experienced divorce in childhood. This process yielded a higher number of studies remaining than anticipated, and thus the criteria was further refined to include only YACOD (i.e., college



age). It was decided to focus on YACOD of college age (18-25) to have a more homogeneous sample with participants who are part of a similar cohort (generation) of individuals.

The final step in this process was to determine if the scope and focus of the article was appropriate to address the research question. The initial scope of the study was to broadly include the psychosocial adjustment and well-being of ACOD. However, due to the high volume of results, these results were further refined to examine college adjustment and achievement, as well as mental health outcomes (see Appendix B for specific outcomes that were searched).

Throughout this process, two researchers reviewed the titles and abstracts of potentially relevant articles and if they met full eligibility criteria, the document was retained for full-text review.

The primary coder and main author was a doctoral student in psychology with some previous experience and training in coding. The second coder, an undergraduate psychological student had no prior training or experience in coding but was trained for the purposes of this study. The main author reviewed 100% of the records title and abstracts, while the second coder reviewed 20% of the records. Agreement between the two reviewers was measured using percent agreement. The number of records retained after this initial screening was recorded as well as the number of records excluded in each step.

### **Phase III**

Secondary screening of articles involved reading articles that were retained from Phase II in their entirety. The author read 100% of the articles while the second coder read 20%. Articles that did not meet eligibility requirements were recorded and excluded, along with the reasons for exclusion. All remaining articles were included in the systematic review. The overall goal was to present a balanced and unbiased summary of the literature on the topic of the psychological well-being and academic adjustment of YACOD.

### **Phase IV**

#### **Systematic review codebook.**

Once the final selection of records was retained for the systematic review a codebook was created. The purpose of this codebook was to extract essential data from each of the studies in order to organize the data and synthesize similar findings. The author extracted data from 100% of the studies while the second reviewer extracted data from 20% of the studies. The codebook contains important constructs based on the inclusion criteria and research question of the study.

The two reviewers coded for the following information:

Article type: (a) Quantitative (b) Qualitative (c) Mixed methods

Research type: (a) Cross-sectional (b) Longitudinal

Research Measures Used: (a) Self-reports (b) Behavioural Observations (c) Surveys (d)

Interviews

Academic outcome assessed

Psychological outcome assessed

Predictor Variable(s)

Moderator variable(s)

Summary of findings

Quality assessment of article

Participant characteristics were also recorded for each study along with the country where the study took place. The complete systematic review codebook can be seen in Appendix E.

### **Inter-rater agreement.**

Inter-rater agreement was conducted to ensure accurate data extraction. The second coder examined 20% of all articles in phase II of the screening. After step 1 of the title and abstract review (removal of all articles that are the wrong type of record) it was found that the second coder retained 15 records that the first coder did not. Upon further examination it was found that both coders agreed these records did not fit the first criteria and were removed. In step 2,

determining if the target population was appropriate, it was found that the second coder retained four articles that the first coder did not; two were appropriate and thus added to the total and two did not meet criteria and were removed. Step 3 of the title/abstract review focused on retaining articles where the focus of the study was appropriate. No differences were found between both coders retained articles at this step.

As mentioned in the Phase III section above, the number of articles remaining at the end of Phase II was exceedingly large for conducting full text reviews. Thus, the criteria were refined to include only college-age ACOD and exclude older adults. Full agreement was obtained between coders on which articles to retain and which to remove. Full agreement was also obtained between both coders on the final sample of articles retained.

Inter-rater agreement was also conducted when extracting data from the studies. Both the first and second coder extracted data from the full data set of studies. Full-agreement was obtained on the information extracted from the sample of studies.

### **Quality Assessment of Records.**

A thorough assessment of the study quality was conducted for all of the studies included in the systematic review. This evaluation first included a “study-level” assessment, which identifies components of the study susceptible to bias through a careful analysis of the quality of the study.

Additionally, an outcome-level assessment was conducted, which involves evaluating the reliability and validity of the findings for each important outcome of the study by determining the methods and statistical techniques used in each study. This procedure was based on a systematic review previously conducted in our laboratory and published in *Marriage and Family Review*, one of the most premier review journals in the area of Family Psychology (Hudon-ven der Buhs & Gosselin, 2018). The purpose of this is that the more methodologically sound a study is, the more likely it is to present unbiased conclusions about a particular topic. Including a wide range of databases and record types to minimize publication bias will also minimize bias in the systematic review itself. Studies with both significant and non-significant findings were also included to reduce selective outcome reporting bias. However, there is always the concern that selective outcome reporting bias is present in the published literature. Outside searches such as conference proceedings, dissertations, grey literature, and hand searching also serve to minimize this concern. See Appendix E for the quality assessment of each study included in the systematic review.

Paired t-tests were conducted to determine inter-rater agreement on the quality evaluation of each of the studies included in the final sample. Both coders rated all studies included in the analysis on the quality criterion. Seven t-tests were conducted in total, one for each of the criteria and one for the overall average quality. No significant differences were observed on any of the

quality criteria and as a result the primary coders ratings were included. Criteria 1:  $t = .511, p >.05, df = 53, d = .0910$ ; Criteria 2:  $t = .0703, p >.05, df = 53, d = .254$ ; Criteria 3:  $t = .0832, p >.05, df = 53, d = .243$ ; Criteria 4:  $t = .553, p >.05, df = 53, d = .0820$ ; Criteria 5  $t = .0325, p >.05, df = 53, d = .302$ ; Criteria 6:  $t = .243, p >.05, df = 53, d = .162$ . Furthermore, no significant differences were found between both coders' average overall quality evaluation,  $t = .0216, p >.05, df = 53, d = .325$ . In looking at the correlation coefficient between the ratings, a moderate to strong relationship was observed on all criterion ratings as follows: Criteria 1  $r = .584$ ; Criteria 2  $r = .859$ ; Criteria 3  $r = .772$ ; Criteria 4  $r = .655$ ; Criteria 5  $r = .905$ ; Criteria 6  $r = .628$ , overall  $r = .869$ .

A quality assessment of the final sample of articles was performed by assigning every article a number from 1 to 5 for each of the criteria as determined by the following scale.

***Criterion 1.***

The first criterion assessed whether the researchers provided a thorough literature review and rationale for conducting their study. It is important that hypotheses are based on a theoretical background and that the rationale for the current study has been carefully thought out in accordance to prior research in this area. A score of 1 was given if the researchers failed to provide a detailed review of the literature and little to no rationale for their study. A score of 5

was given if the researchers included a detailed review of the literature on the topic as well as a logical rationale for their study stemming from the theoretical background of the research.

The majority of studies in the final sample provided a sound literature review and rationale for their study. The average rating on criteria 1 was a score of 3.98/5 and ranged from two to five.

### ***Criterion 2.***

The second criteria assessed whether data on sampling procedures and participants were reported appropriately. This criterion included recruitment procedures, sample selection techniques, characteristics of the sample, and justified exclusion criteria. A score of 1 indicates that the research design failed to report key information about sampling and/or participants (e.g., sampling strategy or basic demographics) whereas a score of 5 indicates that the researchers gave a thorough description of both the sampling procedure and the individuals who took part in the study.

The average rating for this criterion was 3.64 and ranged from one to five. Many of the studies failed to include information on the characteristics of the sample such as mean age of each gender, number of males and females, and ethnicity of participants.

### ***Criterion 3.***

The third criterion assessed whether the measures used in the study was appropriate to answer the researcher's questions. When conducting research, there are a variety of measures to choose from, with some being more appropriate for certain types of questions. Measures can include structured or semi-structured interviews, behavioural observations, or self-report questionnaires. It is also important that the measures used are appropriate for the target population. A score of 1 was assigned if the researchers used inappropriate measures that do not allow them to draw the conclusions they set out to address, the researchers do not provide indices of reliability and validity for the measures, and finally if the measures used were not validated and standardized on the population of interest. A score of 5 was given if the researchers provide ample information on the reliability and validity of the measures as well as information on the appropriate population that the measure has been validated on. Furthermore, a score of 5 would indicate that the measures used were appropriate to draw the conclusions the researcher set out to address. In the case of a qualitative study, a score of 5 would indicate that the researcher described the rationale for the methodology and provided a description of the interview process.

The average score for this criterion was 3.62/5 and ranged from one to five. Often times a lower rating was given when the researchers used pieces of validated questionnaires instead of them in their entirety. Additionally, lower scores were given when the assessment battery given



to participants did not adequately address the purpose of the study. Usually, more questions or measures were needed to obtain a richer understanding of participants' experiences.

***Criterion 4.***

The fourth criterion concerns the type of statistical analysis the researchers chose to conduct. Different forms of statistical analysis allow researchers to draw various strengths of conclusions. For example, tightly controlled experimental designs that control for extraneous variables are often able to draw cause and effect conclusions. A score of 1 indicates that the statistical measures used in the study were inappropriate for the question the researcher aimed to address. A score of 5 was given to studies in which the statistical procedures were appropriate. In the case of a qualitative study, a score of 5 would be warranted if the researcher described in detail the procedure used to code the interview and that the procedure was based on existing literature that identified themes in the data.

For this criterion, an average score was 4.36/5 and ranged from 1 to 5. Overall, the statistical methodology chosen for each study was appropriate and allowed researchers to draw their conclusions.

***Criterion 5.***

The fifth criterion pertained to the control of extraneous variables in each study. Controlling for extraneous variables affects the conclusions that can be drawn from the findings.

A score of 1 was attributed to a methodology that had less control over extraneous variables while a score of 5 was assigned to a methodology with tightly controlled extraneous variables.

An average score of 3.77/5 was given to this category and scores ranged between 1 and 5.

Overall, the majority of articles controlled for extraneous variables allowing them to draw stronger conclusions about the effect the independent variable(s) had on the dependent variable(s). However, in some studies, lack of control over extraneous variables and failure to consider influencing factors may have impacted the results.

#### ***Criterion 6.***

This criterion examined how thorough the researchers were in capturing the psychosocial experience of YACOD. A score of 5 indicates that the researchers operationally defined their variables of interest and used appropriate measures to capture those variables. Additionally, a score of 5 also entailed the researchers describing the psychosocial constructs in detail with an explanation as to how this is affecting the person's life.

The average score in this category was 4.08/5 while scores ranged between 3 and 5, indicating that the researchers in most of the studies were adequately able to capture the participants' experiences of divorce.

#### ***Final score.***

A final score of quality assessment was determined for each study by calculating the average of all of the quality criterion. This included adding up the total for all of the 6 criterions and then dividing that number by 6. The highest overall quality score is 5 and the lowest quality score is 0.

The average overall score was 3.909 indicating that the research included in the final sample of this systematic review was of good quality. Scores on this criterion ranged from 2.5 to 4.83. Twenty-eight of the studies included rated 4 or higher overall with only two studies falling below a final score of 3 (Furr, 2008; Lacey, Bartley, Pikhart, Cable, & Stafford, 2010).

## **Results: Systematic Review**

### **Preliminary Results**

#### **Number of included and excluded studies.**

After conducting searches in all six databases, 7676 articles were retrieved. 5482 articles were retained after conducting internal and external deduplication in the Refworks program. The next step was to screen the titles and abstracts of articles. First articles were screened to determine if they were original pieces of research, to which 1087 records were removed. Articles were then assessed based on the target population. Three thousand and four hundred articles

were excluded because the main focus was not on adult-children of divorce. The remaining articles focused on primarily three groups of participants; YACOD, older ACOD, and adults of all ages who experienced a range of adverse childhood events. At this point in the process there were still 995 remaining and only one criterion left to screen for. It was decided that we should refine the focus of the study and examine only one of the groups of participants mentioned above. Thus, the target population was refined to include only YACOD. The rationale for this decision stems from a) young-adulthood is the next logical group to study in the divorce literature since systematic reviews have been conducted on childhood and adolescent populations, b) there has yet to be a systematic review that focuses on this particular group of people, and c) this work could serve future research in the supervisor's laboratory and lay the foundation for future studies with the university population. Thus, an additional 508 articles were removed because they focused on older adults or adults from adverse backgrounds. This left the sample at 487, which was still a larger number of articles than what is manageable for a systematic review. As a result, it was decided to refine the year of study from the past 25 years to the past 10 years. This removed 311 articles and 176 articles left to be reviewed to ensure the scope of the study pertained to the psychological and academic adjustment of the target population. After this review 87 articles were excluded, and 89 articles were then assessed in

their entirety for eligibility. After full text review, 49 articles were included from all electronic databases.

Hand searching was then conducted to identify other potentially relevant research articles. First, the author searched through seven prominent journals in the child and family psychology literature from the years 2006 to June 1<sup>st</sup>, 2016. Four articles were identified through this method and added to the final sample of the literature review. A full outline of the process of record screening can be found in Appendix F. Our review of the grey literature did not yield additional records to include.

### **Description of the sample.**

The final sample of records included 49 articles from electronic databases and four from hand searching for a total of 53 articles. A summary of each included study is provided in Table 1. This summary includes information such as location of study, type of study design, research type, and measures used. Additionally, other information such as participant characteristics, outcomes assessed, and predictor and moderator variables are included. The purpose of extracting this data were to ensure a thorough examination of each study so that no information was missed. Furthermore, a second coder reviewed 20% of the articles to ensure that the data were being extracted and coded appropriately. Extracting precise data from each study into a

table allowed the author to make connections between the data in different studies and facilitated the synthesis of information.

### **Study characteristics.**

The reference type of the articles fell into two categories; journal article and dissertations. A total of 34 records were articles published in psychology journals while 18 of the records were dissertations published in ProQuest Dissertations database.

All but six of the articles featured original quantitative research. Five of the remaining records took a qualitative approach to their study, while one used a mixed methods approach. While the strength of quantitative research is the reduction of subjectivity and researcher bias, it is good to have a mixture of quantitative and qualitative studies. The qualitative approach allows researchers to gather an abundance of data from the participant's point of view and with the researchers' interpretation of this view. In our review, the qualitative studies included allowed an in-depth look at the subjective experiences of young-adults who have grown up in divorced households and the impact this has had on them. In the quantitative studies, the main methods of data collection were questionnaires, surveys, rating scales, or objective measures such as college grades or grade point average (GPA) (e.g., Barkey, 2015; Hawkins, 2008; Schrodts & Ledbetter, 2007). These measures have their own limitations with participants being vulnerable to

subjectivity in how they report their symptoms. The qualitative studies primarily used in-depth semi-structured interviews (e.g., Eldar-Avidan, Haj-Yahia, & Greenbaum, 2009; Kick, 2014).

This allowed researchers to ask a number of standardized questions to all participants but to probe other discussion topics as they arose to get a nuanced understanding of each participant's unique perspective. The mixed method study used a combination of questionnaires, surveys, or scales in conjunction with semi-structured interviews (Server, Guttman, & Lazar, 2007).

The majority of research conducted in the final sample was cross-sectional in nature (44).

This means that the researchers examined participants at one point in time with no follow-up assessment. While a cross-sectional approach is appealing to many researchers due to its cost-effectiveness and ease, it does possess several limitations. The main problem with cross-sectional research is that there are individual differences among participants that may contribute to their outcome rather than the independent variable and that one cannot infer causality or fully understand the direction of the relationship (Whitley & Kite, 2013). Especially in this type of research where you are looking at the event of divorce that happened in childhood and participants are reporting their well-being and adjustment in adulthood, there is the potential for other factors to influence their outcome. To compensate for this problem, most of the studies controlled for other factors that could potentially influence participants' outcomes such as socio-economic status and ethnicity.

Nine of the articles were longitudinal research whereby participants were assessed again at a follow-up period. Some of the studies followed participants through different developmental periods. For example, Wolchik and colleagues (2013) conducted a 15-year longitudinal study and assessed participants in childhood through to young-adulthood at five different points in time. Other studies examined participants' change in behaviour or performance over a shorter time period. Wintre et al. (2011) assessed university students the summer prior to starting university, again in the middle of their first year of university, and then conducted a final assessment of adjustment to college at the end of students' first year. There are several benefits to longitudinal research. First of all, researchers avoid plaguing their data with cohort effects since they follow the same group of people over time (Whitley & Kite, 2013). Additionally, this allows researchers to follow the developmental trends in participants overtime and monitor any changes in behaviour. The strength of including longitudinal studies in this review is that it allows researchers to draw stronger conclusions on how experiencing divorce in childhood can impact one's life in young-adulthood. Many of the longitudinal studies used similar measures for externalizing and internalizing problems in childhood, then repeated these measures at various other time points such as in adolescence and young-adulthood (e.g., Henke, 2015; Wolchik, et al., 2013). There are also several limitations to conducting longitudinal research. One of the most prominent issues is a high attrition rate, especially with long-term follow-up assessments. High



attrition can lead to a biased sample whereby participants who remain in the study for the long-term may possess different characteristics than those who dropped out. It is important to compare the characteristics of the completers and non-completers to ensure there are no significant differences between the two groups. Seven of the nine longitudinal studies reported attrition rates ranging from 10.4% to 50% (e.g., Thuen, Breivik, Wold, & Ulveseter, 2015; Wolchik et al., 2013). Of the seven studies that reported attrition rates, three of them followed-up by comparing completers versus non-completers. Wintre and colleagues (2011) found no significant differences among those who dropped out of the study and those who remained until final assessment. Two of the studies found some significant differences between the two groups but concluded that it was not a significant enough difference to affect the overall outcome of the study (Thuen et al., 2015; Sobolewski & Amato, 2007).

### **Participant characteristics.**

All of the records reported the number of participants included in the final sample. Sample sizes ranged from 2 in a qualitative study to 15970 in a large quantitative study. Thirty-seven of the records recruited participants from universities while 16 of the records recruited young-adults through other methods, including established database, health records, or court records. The majority of other recruitment methods included participants who were followed-up

from childhood or participants from the community. Thirty-three studies included participants mean age, while 20 failed to report this information. Authors who did not report mean age were not contacted for this data. The average age for these studies ranged from 17.9 to 29 years, which aligns with our original criteria of being 18 years of age minimum and largely fitting within the “emerging adulthood” range that states between 18-25 and can extend as late as 30.

Only 42 of the studies reported the gender of participants, while 11 failed to report any information on participant gender. Three studies included only female participants in their research (Pantelis, Bonotis, & Kandri, 2015; Shifren, Bauserman, Blackwood, Coles, & Hillman, 2015; Brewer, 2007), while one included male participants only (Holloway, 2008). Thirty-eight studies had a mixture of both males, females, and other-gendered participants, however the proportion of females significantly outweighed the proportion of males in the majority of the studies. There was a total of 14925 females, 13405 males, and 1 other-gender reported in the final sample of studies.

The final sample of records included studies from ten different countries. There was one study each from Greece, Finland, Norway, England, Portugal, and France. Israel and Canada, had two studies each, while Sweden had a total of three studies. The overwhelming majority of research on this topic in the past ten years has been conducted in the United States with a total of 40 studies.

## **Academic Outcomes of Young-Adult Children of Divorce**

The first outcome that were assessed was the academic achievement and adjustment to college in YACOD. A total of 13 studies, seven dissertations and six articles focused on this topic. Some studies looked at just the students' self-reported adjustment to college, some looked at more objective indications such as college grades or GPA, and other studies used a combination of both.

### **College adjustment.**

Barkey (2015) hypothesized that YACOD will have poorer adjustment to college than their intact counterparts due to their increased stress levels, and low motivation. Using the College Adjustment Scale (CAS), a self-report measure that looks at various factors of college adjustment, it was found that overall, college students from divorced families have a much harder time adjusting to college, experience more homesickness, display less positive affect and more negative affect than college students from intact families (CAS; Anton & Reed, 1991; Barkey, 2015). There were no significant differences found between males and females of divorce on the CAS. What was particularly strong in this study was that there were equal numbers of participants in both the divorced and non-divorced groups, and gender was balanced between both groups. This is not often the case with divorce research where there are higher

numbers of participants in the non-divorced groups, and overall more female participants. A similar study conducted by Connel and colleagues (2015) looked at how student engagement and perceived stress may be influenced by parental divorce. In contrast to Barkey (2015), these authors found no significant differences on measures of student engagement or stress between students from divorced families and those from intact families. While engagement and adjustment are not the same measures, it is likely that students who are more engaged in college and college-life will be better adjusted. Furthermore, these researchers found no gender differences in engagement and perceived stress in divorced and non-divorced college students (Connel, Hayes, & Carlson, 2015). While this study had an ethnically diverse sample of students, there were double the number of female participants compared to male participants, and almost double the number of students from intact families.

Wintre and colleagues (2011) used a longitudinal approach to look at how first year students of divorce transition to university compared to students from intact families. Using a large sample size (N = 2724) from six different universities they compared students' perceived stress (Perceived Stress Scale) and adjustment to university (Student Adaptation to College Questionnaire, SACQ; Students' Perception of the University Support and Structure, SPUSS) (PSS: Cohen, Kamarck, & Mermelstein, 1983; SACQ: Baker & Siryk, 1989; SPUSS: Wintre et al., 2009). The SACQ measured academic, social, personal-emotional, and school attachment

outcomes while the SPUSS measured students' sense of support from the university. In August, prior to starting university, baseline data were gathered on the two groups. Results demonstrate that males from divorced families have lower perceived stress than males from intact families, whereas there were no differences seen among females in both groups (Wintre et al., 2011).

After adjusting for these baseline differences, the researchers then compared gender in the two groups on measures of adjustment. Results show that during the first year of university, males from divorced families have better academic adjustment compared to males from intact families and females from divorced families. Females' level of academic adjustment was the same across groups. Female students from divorced families had poorer personal/emotional adjustment to college compared to females from intact families (Wintre, et al., 2011). Finally, female students from divorced families reported feeling less university support and structure than their male counterparts. The conclusions in this study are stronger due to the large and diverse sample size recruited from multiple universities as well as the comprehensive use of measurement for academic adjustment. Although these studies use different measures, they are all tapping into how well a student is adjusting to college life. With vastly different outcomes in each study, there is no coinciding evidence to support or refute differences in college adjustment outcomes in students from intact and divorced families based on this sample of studies.

While some studies have simply looked at how the event of divorce itself impacts young-adults, other studies have examined other factors that could influence this relationship. For example, Alford (2007) looked at how students' perception of interparental conflict influenced the relationship between divorce and college adjustment (CAS). Results indicate that students' who recall greater parental conflict have poorer adjustment to college, regardless of their family status. Perhaps it is not the event of divorce itself, but rather the quality of the home environment and parent conflict levels that can lead to poorer adjustment in young-adults. However, these results should be interpreted with caution as only 27% of the students contacted returned completed survey packets. Response bias may affect the results because the small percentage of students who returned the questionnaires might somehow differ (e.g., have experienced more parental conflict that they want to report on) compared to the non-completers. This is evidenced by the high number of responders who came from divorced households (62%) whereas in other studies, the number of students from intact families was typically higher than the number from divorced families.

In addition, all of the results thus far are based on questionnaires. While this does provide us with standardized information across groups that we can compare, it does not allow us to fully understand the perspective of YACOD and their adjustment to college life. In contrast, Graham (2014) conducted a qualitative study with nine undergraduate students with the goal of gaining a

greater understanding of the perspectives, experiences, and challenges of coming from a divorced family. Using grounded thematic analysis, several themes emerged across participants' interviews. This analysis involves identifying, analyzing and interpreting themes in the qualitative data (Braun & Clarke, 2006). First of all, these students assumed more responsibility and independence in adjusting to the divorce; therefore, they already had these skills when adjusting to college, making the transition easier. These students also reported in similar ways, that their motivation for attending college was to achieve a good paying career. The basis for this stems from living on a single-parent income after the divorce and wanting to secure a better financial future for themselves. Based on this qualitative study's findings, we have identified several reasons students from divorced families could be well adjusted when they get to college and motivated to succeed. Although qualitative studies generally have far fewer participants than quantitative research, this sample size was particularly small. Initially, they hoped to recruit 15 participants, based on previous studies with similar methodology. It is not clear if nine participants were enough to reach data saturation and thus capture a complete and accurate picture of these students' experiences.

### **College achievement.**

Research in this area also focused on the academic performance of YACOD. One study examined how parental nurturance and involvement mediated the relationship between family status and academic performance in college students (Finley & Schwartz, 2010). Overall, students from intact families reported more perceived parental nurturance and involvement than students from divorced families. Additionally, across both groups, parental involvement and nurturance were positively associated with academic performance. These findings suggest it is the amount of support students perceive they have and the quality of the relationship with parents that influences how college students perform academically. However, academic performance was measured poorly in this study, limiting the extent to which we can draw conclusions. Included were items assessing satisfaction with academic work, characterization of oneself in high school and college, and self-reported high school (GPA). While this information does provide readers with some information, this outcome could have been assessed more comprehensively to get a better understanding of college adjustment not just past performance in high school. Additionally, the majority of this sample was Hispanic, thus rendering the sample unrepresentative of the typical United States population. Another study assessed academic outcomes in a similar way, however they included several more questions on college grades and GPA, as well as academic importance and satisfaction (Sheehan, 2015). Again, these researchers examined the influence of parental nurturance and involvement on these academic outcomes in



both divorced and intact families. Results indicate that in intact families, both maternal and paternal nurturance were correlated and had a significant, positive effect, on YA's academic outcomes. In divorced families, it was found that parental nurturance was not correlated suggesting differing parenting styles and approaches after divorce. They found that college students from divorced families with higher maternal and paternal nurturance were slightly, yet significantly more likely to have favorable academic outcomes, with maternal nurturance showing stronger effects than paternal nurturance. When the data were split by gender and family form, results demonstrated that it was mothers' nurturance that had the strongest impact on sons' college GPA and satisfaction with work, while fathers' nurturance impacted their daughters' academic outcomes.

In another study, nonresidential father engagement and parental conflict was assessed to determine the effects on young-adult's academic outcomes (Modecki, et al., 2015). Academic outcomes included questions regarding highest level of education completed, which does not provide insight into how the students' actual achievement was affected. The majority of young-adults from divorced families were classified as having a high involvement/high conflict relationship with their nonresidential father (44%), with 20% having low involvement/moderate conflict, and 36% having moderate involvement/low conflict. Students' from the high involvement/high conflict group had significantly lower academic achievement scores

compared to the moderate involvement/low conflict group but not the low involvement/moderate contact group. The authors also controlled for factors such as quality of mother-child relationships and child mental health issues in adolescence. These results suggest that although fathers may have high involvement with their young-adult child, this does not outweigh the negative impact of interparental conflict on later academic outcomes.

In another study that looked at father involvement and academic outcomes, Furr (2008) reported that noncustodial, divorced fathers had a significantly lower impact on young-adults' college entrance exam scores than fathers from intact families. Even when these young-adults reported a supportive, encouraging, and involved relationship with their father, there was little to no improvement in exam scores. The main criticism for this study was the way in which outcomes were measured. For example, father encouragement was measured using only one likert-scale question and college achievement was measured using Scholastic Aptitude Test (SAT) scores, which has sustained controversy surrounding its validity and utility in predicting later college performance.

One study in the sample also looked at how the timing of parental divorce may influence the academic achievement of college students (Hamilton, 2012). The researcher in this study chose to focus on the middle ranges of both the Concrete and Formal operation stages in order to fully distinguish between the two stages and determine if adjustment differences exist between

those who experienced divorce at these two stages as well as comparing them to a non-divorced group. Initial analyses revealed that timing of parental divorce and gender was not significantly related to academic outcomes in young-adulthood. Furthermore, no differences were found between divorced and non-divorced YA on academic achievement measures in college.

However, because this study did not control for extraneous variables, such as risk or protective factors that may have influenced the adjustment of students of divorce, it is difficult to conclude that it is the event of childhood divorce itself leading to these outcomes in college. Hawkins (2008) also found no significant differences between offspring of divorce and offspring of intact families, when GPA was used as the academic achievement outcome. This was taken a step further by determining if divorce and subsequent remarriage was associated with lower GPA scores. This additional hypothesis was also rejected. In a final gender analysis, GPA scores were relatively similar across gender and family status.

In contrast to the above findings, Soria and Linder (2014) found that college students from divorced households had on average a .08 lower GPA score than their counterparts from intact families, which was a significantly lower GPA. Children of divorced families were also significantly less likely to persist into their second year of college compared to students from intact families. Another study found that students from divorced families were significantly more likely to fail a college course, however they were not more likely to have a lower GPA score

compared to those from intact families (Spain, 2008). It is worth noting that these authors failed to consider other factors that may impact course failure, such as number of classes taken, study habits, or other life stressors. Using measures that gather only partial information remains a limitation of many of the studies discussed above.

### **Emotional Well-being of Young-Adult Children of Divorce**

#### **Mental health symptoms.**

Several of the studies focused on how parental separation in childhood or adolescence impacted mental health symptoms in young-adult offspring. Finley and Schwartz (2010) aimed to look at psychological functioning and adjustment in offspring of divorce. Multiple measures and components of measures were used with no clear results outlined, making interpretations of their findings difficult. Differences in the family experience were found with parents from divorced families being less nurturing and involved than those of married families. In terms of symptomology, young-adult's (YA) from divorced families were significantly more likely to report higher levels psychological distress and anxiety (Finley & Schwartz, 2010). Due to the inconsistent use of complete measures of symptomology, it is unclear whether three of four questions from a symptom measure such as the Beck Anxiety Inventory are sufficient to

accurately measure an individuals' functioning. For this reason, these results should be interpreted with caution. Using a more general measure of psychological symptoms, Henderson and colleagues (2009) found that experiencing parental divorce was associated with an increased risk of anxiety, depression, and somatization compared to having married parents, however having a close relationship with a grandmother significantly mediated the relationship and predicted better psychological adjustment in these YA. These results speak to the importance of strong social support in children and YA of divorced families. Studies by both Pelkon and colleagues (2008) and Barkey (2015) found that experiencing parental divorce and having an overall poor home atmosphere significantly increased the risk of a depression in YA. Melo and Mota (2014) found that YACOD reported significantly more interparental conflict and higher levels of psychopathology, however they also reported greater resolutions to their parent conflict than did nondivorced participants (Melo & Mota, 2014).

A qualitative study of two YA females produced detailed insight into the difficulties children of divorce can face (Pantelis, Bonotis, & Kandri, 2015). For example, these participants described high negative emotions growing up, high family conflict, difficulty with identity development. Additionally, both participants had high negative emotions and disclosed seeking support from therapist to improve their mood (Pantelis et al., 2015). While this study does provide detailed information on the adjustment process of these participants, it is very subjective

and has a small sample size, limiting the generalizability of the findings. Harcourt and Adler-Beader (2016) found that high instability in home environment (more parental and sibling transitions and shorter durations of stability) had higher reported levels of depression than those in stable, nuclear homes. A study that looked at health records and office visits determined that, compared to those from intact families, those from divorced families had significantly higher rates of contact with child and adolescent psychiatric care, however no differences emerged later in life on outcomes of adult psychiatric care (Agarne-Lindberg & Wadsby 2012). This suggests that although young children of divorce may experience higher levels of mental health distress, these symptoms appear to subside to similar levels as those from intact families as they get older.

Several studies compared internalizing symptoms in YA of divorce versus married families and found no significant differences between the two groups. For example, although Brewer (2007) found that recent life stress and negative family factors (e.g., fathers' substance abuse and violence) were significantly higher in the divorced group, this did not lead to an increase in depressive symptomology in this group. Similarly, Lacey and colleagues (2010) found that parental separation was not significantly associated with psychological distress (Lacey, Bartley, Pikhart, Cable, & Stafford, 2010). Young and Ehrenberg (2007) also found no significant differences on measures of adjustment (anxiety and depressive symptoms) between intact and divorced offspring. A significant finding for them was that poorer adjustment in

offspring of divorce was related to less affection from parents and higher conflict. Furthermore, Krawkowski (2012) controlled for socio-economic status, gender, and ethnicity and found that YA from divorced, intact, and never married families did not differ significantly on measures of anxiety or depression, which suggests it is not the family structure itself that may lead to decreased psychological adjustment. Henke (2015) used a general measure of internalizing behaviours such as insomnia, moodiness, and suicidality in YA of married and divorced families. They found that the two groups did not significantly differ on these measures. In an overall comparison of divorced and non-divorced groups, Angarne-Lindberg and Wadsby (2009) found similar anxiety and depression scores. However, when they split the groups by age, women who were younger when they experienced parental divorce reported higher symptomology in all areas compared to the rest of the participants suggesting the combination of younger age and female gender as a possible risk factor for poorer outcomes after divorce. Shifren and colleagues (2015) looked only at women from divorced and married families and found that they did not differ on measures of depressive symptoms. Within the divorced group, women who had higher hardiness scores were less likely to experience depressive symptoms. Ashkenaki (2008) looked at differences between young-adults of divorced families and those from intact families. Overall, several group differences emerged, with those from divorced families reporting higher levels of conflict, less family cohesion, and relying more on emotion-focused coping than those from

married families, however no group differences emerged in terms of mental health symptoms (depression or anxiety). These researchers found that it was not parent marital status that predicted anxiety and depressive symptoms but rather the coping style they used, with more problem-focused coping being associated with a decrease in anxious and depressive symptoms and more dysfunctional coping associated with an increase in symptoms (Ashkenazi, 2008).

Similar findings emerged from another study that found nearly identical depression and anxiety scores for YA from divorced and intact families (Ross & Wynne, 2010). Within a divorced sample, Hough (2010) found no differences on anxiety or depression scores between YA who had grown up with sole custody versus those who had grown up in joint custody. In another divorced sample, results demonstrated that although females were more likely to report having high anxiety stemming from the divorce and conflict, the majority of participants felt more positive than negative outcomes (Server, et al 2007). An interesting study conducted by Gahler and Garriga (2013) looked at how psychological adjustment to parental divorce may have changed from the 1960's to the 2000's using general symptom questions to measure psychological problems (e.g.,, insomnia, depression, or nervous trouble). Consistent with previous findings, the researchers found that individuals were four times as likely to experience parental divorce in 2000 than they were in 1968, and thus a significant increase in rates of divorce. There was also a significant increase in the number of YA reporting psychological



problems recently than in the past (Gahler & Garriga, 2013). They also found that that experiencing family dissolution in childhood is significantly associated with higher reporting of psychological problems; however, when they controlled for family dissension, the results were no longer significant. The authors hypothesize that it is probably the high level of dissension or conflict within divorced families that are strongly influencing psychological problems in offspring. Finally, there was no evidence to suggest any differences in psychological functioning as a result of experiencing parental divorce in 1968 and 2000, suggesting that the impact of divorce has remained consistent over time (Gahler & Garriga, 2013).

While the evidence is insufficient to soundly conclude that parental divorce leads to depressive symptoms in YA, other research has suggested that it may not be the event of divorce itself that contributes to depressive symptoms but other factors that are influencing offspring psychological well-being. For example, results from one study suggest that higher levels of family conflict and an increased use of disengaged coping may predict increase depressive scores in YACOD, and furthermore that disengaged coping style fully mediates the relationship between family conflict and depression (Roubinov & Luecken, 2013). Gasper and colleagues (2008) concluded from their results that it is not the event of divorce itself that leads to poor psychological adjustment in offspring, but rather factors such as parental hostility, low parental cooperation, and less fathering contact. A final explanation that Windle and Mrug (2015) posit is

that gene-environment interactions may increase an individuals' risk of more depressive symptoms after parental divorce. They found significant gender differences whereby YA females who possessed a GG allele and who experienced divorce in adolescents reported significantly more depressive symptoms than males and more symptoms than females of divorced families with different alleles. This suggests a possible genetic predisposition to poorer psychological adjustment to parental divorce. In looking at interventions to mitigate the negative impact of divorce on YA, one study found that, in a 15-year follow-up of a randomized control trial, YA who had participated in an intervention with their mothers had fewer internalizing disorders and slower onset of internalizing symptoms than YA who were in the control group (Wolchik, et al., 2013).

Two articles examined how communication influences the relationship between parental divorce and YA's well-being and adjustment. First, Schrodtt and Ledbetter (2007) looked at how family communication patterns, and feeling caught between parents influenced YA's responses on measures of mental well-being (self-esteem, stress, and mental health). Using structural equation modeling, they found that YA who had witnessed higher conflict and pressure from their parents are significantly more likely to feel caught between parents, leading to high levels of anxiety and stress. This finding was true for both YA in divorced and intact households. They also found that having healthy family communication led to better mental well-being, especially

among YA from divorced households. The second study also looked at communication patterns within the parents as well as parental aggression and how these constructs influence YA mental well-being (mental health symptoms, self-esteem, and stress) (Shimkowski & Schrodt, 2012). Using a similar methodological approach these authors found that YA from divorced families reported higher levels of interparental conflict, less supportive parental communication, and poorer mental well-being than those from nondivorced families. Despite these differences, the structural equation model demonstrates that YA from both groups had poorer mental health when they experienced higher levels of demand/withdraw patterns from parents and more maternal aggression. Furthermore, the negative effects of parents demand/withdraw patterns and maternal aggression was partially mediated by hostile parental communication.

### **Self-esteem, stress, & subjective well-being.**

Several studies used various measures of self-esteem, stress, and subjective well-being to capture the experiences of YA offspring of divorce. Five of the nine studies that focused on this topic found significant negative outcomes that occur as a result of childhood divorce.

Specifically, Barkey (2015) found a strong negative effect of divorce on offspring self-esteem compared to those from married families. In this study respondents from divorced households reported significantly lower self-esteem scores, however these results are based on respondents

from a Facebook group. Although not inherently problematic, there may be some selection bias in who chose to be a part of the group and then those who chose to do the study. A broader recruitment approach would have led to more sound conclusions. Finley and Schwartz (2010) found that offspring of divorce were significantly more likely than the nondivorced group to experience what they termed a “divided world”, meaning differing parental involvement and nurturance. YA of divorce who reported more pronounced divided worlds had a significantly higher likelihood of reporting poorer self-esteem and life satisfaction and higher psychological distress (Finley and Schwartz, 2010). Studies by both Gasper and colleagues (2008) and Cabero (2005) found that YACOD were significantly more likely than their nondivorced counterparts to report lower levels of self-concept and self-esteem. They also found that factors such as parental conflict, parental hostility, and parental cooperation accounted for part of the variance between family form (intact or divorced) and adjustment measures, suggesting again that it is more than the event of divorce itself that are contributing to these negative outcomes. Furthermore, a longitudinal study compared offspring of divorced and intact families both in high conflict and in low conflict (Sobolewski & Amato, 2007). Results indicate that YA of divorce and those who experienced higher interparental conflict in general reported significantly lower levels of subjective well-being regardless of how close their relationship was with one or both parents.

In contrast to these findings, other studies have found that YA from divorced families do not necessarily have lower well-being and self-esteem compared to those from married families. One study compared YACOD to young-adults from high conflict marriages (Amato & Afifi, 2006). They found that only young-adults from high conflict marriages reported feelings of being caught between parents, and that these feelings were significantly associated with lower subjective well-being. Krakowski (2012) found no differences on measures of self-esteem and well-being between YA from divorced, intact, and never married households. Smith (2011) found similar findings by comparing college students who had 1) experienced death and parental divorce, 2) just divorce, 3) just death, or 4) neither death nor divorce. There were no reported differences on subjective well-being outcomes among the four groups, however sample sizes were unequal and small across the groups limiting the power of these findings. In another study, few differences were found between YA from divorced and intact families with no differences emerging on life satisfaction or positive affect measures (Yarnoz-Yaben & Garmendia, 2016). They did, however, find that YA from divorced families had significantly higher scores of negative affect. YA who were older at the time of the divorce and female participants showed the highest levels of negative affect. A study by Finley and Schwartz (2007) compared actual and desired father contact and how this relates to subjective well-being (self-esteem, life satisfaction,

and future expectations) in offspring of divorced and intact families. They found that higher levels of reported well-being were associated with being from an intact family but not associated with being from a divorced family. Those from divorced families reported higher desired father involvement, which may be a subtle indication of the distress or dissatisfaction they are experiencing. In looking at how custody arrangements in childhood and adolescence may influence current well-being in YA, Hough (2010) found that those who had joint custody had similar levels of psychological adjustment as those in sole custody arrangements.

### **Resiliency, coping, & life satisfaction.**

Five of the articles in the final sample discussed resiliency, coping, and or life satisfaction reported by YACOD. Three of the studies were qualitative in nature and two used a quantitative approach. Elder-Avidan and her colleagues (2009) conducted semi-structured, open-ended interviews with 22 YACOD from an Israeli city. Through grounded theory and data coding, three core themes emerged from the interviews: the centrality of family ties, the implications of divorce and resources that support coping, and divorce as perceived in young-adulthood. Three participant typologies also emerged with respect to how they viewed and interpreted parental divorce: resilience, survival, and vulnerability. Nine of the 22 participants identified resilient themes as emerging from their experience of parental divorce. This included interpreting the

divorce as meaningful and empowering, valuing its benefits. The majority of participants in this group valued family and had a close, supportive relationship with the custodial parent. Resilient participants also reported having a fair to close relationship with the noncustodial father and acknowledge that good communication between parents was helpful. Their perspective on the divorce was optimistic, stating that it was “a means to end an unsatisfactory relationship”, while also not neglecting the strong emotional pain they felt during the divorce. These participants overall were well adjusted to the divorce and felt they had more gains than losses. Eight of the 22 participants identified as survivors. They indicated that the divorce was a very complex and challenging event that required significant adjustment. While they described having close or ambivalent relationships with their parents, they did not view their parents as strong social supports during the divorce adjustment process. These YA view the gains as outweighing the losses; however their view of the divorce is critical and complex and as a result have a more difficult time adjusting. Five out of the 22 participants fell into the vulnerable category. These YA viewed the divorce as a painful event that had lasting negative implications on the rest of their life. They reported poorer relationships with parents, little social support, and a huge sense of loss. What is clear from this study is that although the process of divorce was difficult for all of the participants, having strong social support, healthy relationships with parents, and a more positive

perspective led to the majority of participants in this study being categorized as resilient or survivors.

A second study used Giorgi's descriptive phenomenological psychological method to understand the perspectives of seven YA from divorced households (Kick, 2014). All of the participants reported instability growing up, whether it be interparental fighting, changes in residency or custody, substance use issues with parents, abuse, few visitations with non-custodial parent, or remarriage. There were also high emotions that resulted from the divorce process such as fear and uncertainty, anger about the situation, stress, and sadness. These high emotions and the unstable home environment led to poorer self-reported adjustment in many of the participants. Despite these difficult experiences, three participants reported higher feelings of self-reliance and self-protection stating that the divorce adjustment process had made them a stronger and more independent person.

A third study by Matters (2009) explored the experience of parental divorce with seven YA. Several themes emerged from the interviews such as self-reliance and independence, mediation skills, confidence in handling adversity, flexibility, and support from family and friends. Most of the participants described that although the experience of parental divorce was challenging for them, many positive outcomes had come about. They had developed a stronger sense of independence and became more self-reliant. Although participants described that they



often felt stuck in the middle of their parents' conflict, they also developed good mediation and conflict management skills. Support from external family and friends was a strong source of comfort for these participants and helped them get through their difficult time. There were several limitations to this study that render the findings questionable. First of all, all students who participated in the study were from a graduate program in mental health related issues. Because these students have a background in mental health, they are likely more psychologically minded and are able to express themselves more clearly than other college students. Additionally, the students were aware that the study focused on the upside of divorce, this may have influenced what they chose to discuss in their interviews and again influenced the results. These qualitative approaches discussed above allow researchers and readers to understand the difficulties and stress these individuals have experienced, but also how they have turned their experiences into positive growth. Significant limitations to these studies in general are that many of them have small sample sizes and interviewer subjectivity and bias can more easily penetrate the interpretation of the results.

Two other studies also examined the positive outcomes YA experience from their parental divorce. Server and associates (2007) used a mixed methods approach that combined semi-structured in-depth interviews with questionnaires. In looking at general coping and adjustment, 35.7% of participants described their coping as successful while only 3.5% described

it as unsuccessful. Additionally, participants who reported having a supportive coping style (getting and providing support) had significantly better long-term outcomes of parental divorce such as empowerment, empathy, and relationship-savvy. Conversely, participants who reported having a defensive coping style had more negative long-term outcomes after parental divorce. This study also highlights that the majority of YACOD do adjust well post-divorce, yet for a select few the negative implications are lasting. A quantitative study by Chrismer (2010) found that YACOD had significantly poorer satisfaction with life compared to those from married families, despite reporting equal amounts of social support. However, participants from the divorced group who reported having more social support also reported more satisfaction with life indicating that this may mitigate the negative consequences of divorce. Furthermore, the older the child at the time of divorce, the poorer their reported life satisfaction scores indicating a potential vulnerability in older children who experience divorce. These findings have important clinical application for therapist working with this population. Clinicians should consider age at time of parental divorce and social support in the child's adjustment.

### **Behavioural Adjustment of Young-Adult Children of Divorce**

The next outcome assessed was behavioural adjustment in this sample. A total of nine records focused on behavioural outcomes as their independent variables. Looking at behavioural

outcomes is important as it extends the literature on adolescent risky behaviours and drug use into adulthood.

### **Engagement in risky behaviours.**

Six of the studies reported on outcomes that were classified as participants' engagement in risky behaviours. A longitudinal study that followed participants from adolescence into adulthood found that although children of divorce were at a higher risk for engaging in unhealthy behaviours such as drinking and smoking in adolescence, these significant differences decreased as participants aged into adulthood and became no longer significant (Thuen, Breivik, Wold, & Ulveseter, 2015). Self-reported lack of closeness with their father partially mediated the increased risk of YACOD smoking and drinking behaviours. This study's conclusions are strengthened by the large sample size and its longitudinal design, allowing for the study of trends in behaviours over time. It should be noted that high attrition rates, such as in this study, might impact the external validity of the study, especially at later data collection points. Similarly, Kaur (2015) also found that parent marital status was not a significant predictor in engagement in risky sexual or substance use behaviour in a sample of young-adults.

Several studies reported on gender or ethnicity factors. For example, one longitudinal study found that in a nationally representative sample, Hispanic youth of divorced families were

significantly more likely to be heavy drinkers in early adulthood than other ethnicities or Hispanic participants from intact families (Holloway, 2008). Another large-scale study found that parental divorce predicted an increased risk of early alcohol use, however it was associated with a reduced onset of alcohol dependence symptoms (Grant, et al., 2015). This indicates that although YACOD were more likely to start drinking earlier than their nondivorced peers, they were less likely to develop alcohol problems. Stringfellow and McAndrew (2010) found gender differences in self-reported ratings of sexual promiscuity and drinking behaviour, with male YACOD reporting significantly higher ratings than any other group. Interestingly, there were no significant differences between genders or family status on the actual frequency of sexual activity, suggesting that male ACOD's perception of themselves is different from females ACOD and those from intact families. Wolchik and colleagues (2013) conducted a longitudinal follow-up study of an intervention aimed at COD and their primary caregiver mothers with the goal of reducing negative outcomes later in life. They found gender differences in that male YACOD who participated in the program had significantly less substance use issues, substance-related disorders, and drug use compared to males who did not participate in the program. For female YACOD, there was actually an increase in alcohol consumption over the past month for those in the program compared to those in the control group. Finally, one study found that parental divorce alone was not a significant risk factor for later cannabis use in young-adulthood,

however having a parent with depression and experiencing parental separation was significant (Sakyi, Melchoir, Chollet, & Surkan, 2012).

### **Externalizing problems.**

Henke (2015) conducted a longitudinal study that looked at externalizing behaviours such as stealing, weapon use, and fighting of YACOD over four waves of data collection. During the first three waves, COD reported significantly more externalizing problems than their counterparts from intact married families, however by wave four, their behaviour had normalized, or decreased to match the low levels that the adult children from married families reported. Gasper and colleagues (2008) used mediation models to determine the influences of family status and other mediators that may increase YACOD risk of delinquent behaviours. They found that divorce alone was not a significant predictor of later delinquent behaviours, but parental hostility and low mother involvement was significantly related. Thus, YACOD who experienced low mothering and high parental hostility were significantly more likely to display delinquent behaviour such as rule breaking and acting out (Gasper, Stolberg, Macie, & Williams, 2008). Modecki and colleagues (2015) explored how parental conflict and father involvement impacted the relationship between experiencing childhood divorce and later externalizing problems. They found that experiencing high interparental conflict and low father involvement

was a significant risk factor for later externalizing issues compared to YACOD who experienced low conflict and moderate father involvement. Additionally, the low conflict/moderate involvement group were less likely to have externalizing issues compared to a high father contact/high conflict group, however these results did not reach significance. A further exploratory analysis suggested that YACOD who had no father contact experienced significantly more externalizing issues compared to YACOD who had moderate father involvement and low conflict (Modecki, Hagan, Sandler, & Wolchik, 2015). It appears as though father contact cannot fully make up for experiencing high interparental conflict. This study was the first to look at both parental conflict and father involvement as influencing the adjustment of YACOD. The longitudinal nature and self-reported adjustment of the YACOD allowed researchers to draw stronger conclusions about how these individuals perceive their adjustment over time. The researchers did not control for current interparental conflict, just conflict in childhood and adolescence thus we are not able to understand if or how conflict may still be occurring at present.

### **Summary of Findings**

The completion of the systematic review resulted in a larger number of studies than anticipated. The relevant studies were heterogeneous enough to cover a wide range of topics but

homogenous enough to be categorized and compared. Studies used a variety of methodological approaches in conducting their research, ranging from qualitative and quantitative to longitudinal and cross-sectional. This allowed us to gain a more comprehensive picture based on results from a variety of sources. Overall, there appears to be little consensus on the impact of divorce in childhood on young-adult academic and psychological outcomes. While some studies suggest that parental divorce leads to poorer academic outcomes and more mental health concerns, other studies find no differences between those who experienced parental divorce and those who did not. What does appear to contribute most consistently with poorer outcomes are factors such as high levels of parental conflict, lower levels of parental support, less parental engagement, and parental mental health concerns. To further investigate the relationship between parental divorce and academic and mental health outcomes, a meta-analysis will be conducted to examine overall effect sizes to clarify the effect of parental divorce on these outcomes.

### **Method: Meta-analysis**

Once the systematic review was completed, a meta-analysis was conducted on a quantitative subsample of the data set. A meta-analysis is a quantitative statistical technique that synthesizes findings from multiple independent sources (Crombie & Davies, 2009). There is no accepted consensus for a minimum number of studies that are required for a meta-analysis.

However, the Cochrane handbook states a minimum of 10 studies is required (Higgins & Green, 2011) while other authors suggest at least 6-10 studies for a continuous study-level variable (when the sizes of the included studies are moderate or large) (Fu, et al., 2011). Since the literature in the area of YACOD demonstrates inconsistent findings, a meta-analysis aims to capture an overall picture of the findings from these studies with the goal of identifying the most robust trends in the existing literature and to guide more targeted research in the future.

In reviewing the articles from the systematic review, 32 of the articles were removed from the sample for the meta-analysis. Six of the articles were removed because they were qualitative in nature. Twelve of the articles were removed because they used partial assessment measures or administered 1 or 2 questions from a measure instead of the entire measure. Another 14 articles were removed as they used assessment tools that had not been widely validated such as their own surveys or questionnaires.

For this portion of the dissertation, Comprehensive Meta-Analysis (CMA) was used to analyze data. CMA is a computational program specifically designed to perform meta-analysis and meta-regression. It can calculate effect sizes from heterogeneous statistics reported across studies, look at moderator variables, and consider various sub-groups of studies, as well as multiple outcomes within studies. As such, it is ideal for the purpose of this dissertation.



Data extraction forms were designed to accurately record the relevant information from each included study. This included information on the population, sample size, outcome measures, statistical findings, study quality, and effect sizes.

Individual effect sizes were calculated for each study using Standard Difference of Means via Comprehensive Meta-Analysis (CMA) [Version 3]. The random effects model was selected a priori, as it allows for variation of the different effect sizes in each study (Borenstein, Hedges, Higgins, & Rothstein, 2009). Hedge's  $g$  was the statistic calculated for effect size which qualifies small effects sizes (0.2), medium effect sizes (0.5), and large effect sizes (0.8). This model was also selected because it allows for the differences in observed effect sizes due to both sampling error and true variability in population parameters (Cooper, Hedges, & Valentine, 2009). Conducting a descriptive synthesis of the literature allows researchers to identify whether results from studies are consistent with one another (homogenous) or inconsistent (heterogeneous). Overall effect sizes were also calculated to capture trends in the data. Two summary statistics were conducted comparing college adjustment and mental health outcomes in YACOD and young-adults from intact families. Specifically, these two groups were compared on their college adjustment, their anxiety and stress scores (seven studies), depression scores (nine studies), general mental health using brief measures (seven studies), self-esteem scores (six studies), and their life satisfaction and social support (five studies). Given what we reported in

the previous section, examining moderating variables linking predictors and outcomes would have been important in the meta-analysis portion of this study. However, due to the limited number of studies within each analysis, inconsistency in measured outcomes, and the limited data available for each factor, we were unable to include it as part of our main set of analyses. We will therefore limit our analysis to assessing the projected differences between YA and YACOD for each of the main outcomes.

## **Results: Meta-analysis**

### **College Adjustment**

A total of six studies were included in calculating overall academic adjustment in this sample of YACOD. Figure 2 shows effect sizes across these studies and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. The size of the squares on the plot indicates the weight assigned to the study based on the sample size, with smaller squares representing smaller weights and larger squares representing larger weights. Means, standard deviations, and sample sizes for each outcome measure included were entered into the software. There was a total of 5401 participants included in this analysis with a mean age of 20.22 years. Of these participants 57.58% were female, however one study, Spain (2008) did not report the number of males and females in each group. The overall effect size for academic

adjustment was  $-0.096$  ( $SE = 0.154$ , 95%  $CI = -.398$  to  $0.206$ ). These results indicate that there were no significant differences on college adjustment between YACOD and those from intact homes (see Table 3).

The  $Q$  test of homogeneity was used to assess the degree of dispersion among academic outcome scores. The  $I^2$ , which indicates the extent to which the observed heterogeneity in outcome scores is due to true variability across sample sizes, was also calculated. The  $Q$  value for academic outcome was  $31.552$ ,  $p < .001$ , and the  $I^2$  value was  $84.153$ . The significant  $Q$  statistics and high  $I^2$  coefficient indicates that there is considerable variability in scores across the divorced and non-divorced groups.

In looking at the forest plot, one study Barkey (2007) appeared to deviate from the rest of the studies. This study was removed, and the analysis was run again. Removing this study did not significantly impact the results and indicates no differences between YACOD and their counterparts growing up in intact families, with an effect size of  $0.079$  ( $SE = 0.065$ , 95%  $CI = -0.048$  to  $0.206$ ).

### **Mental Health Outcomes**

Next an overall psychological outcome effect size was calculated to get a picture of the general psychological adjustment of YACOD. Figure 3 shows effect sizes across these studies

and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. Sixteen studies were included in this analysis with a total of 12 766 participants (mean age based on available data = 19.96 as four studies did not report mean age). Three studies did not include information on gender, but of those that did report it, 68.66% of participants were female. Seventeen studies were included in this analysis and yielded an effect size of 0.152,  $p < .001$  ( $SE = 0.033$ , 95% CI = 0.087 to 0.216) (Table 4). This indicates that YAC from intact families have better overall psychological adjustment compared to those from divorced families. There was also considerably less dispersion and variability between both groups reported psychological outcomes as noted by a non-significant  $Q$  value and low  $I^2$  value.

Upon visual inspection, several studies appeared to deviate from the rest. Smith (2011) appeared to deviate the most and was therefore removed first and the analysis rerun. Barkey (2007) also deviated and was removed second, while Agarne-Lindberg (2009) was removed third. Figure 4 shows the forest plot after the removal of all three studies. Table 5 shows the statistics after removal of each study. The removal of these studies did not change the significance of the effect size and there remained a significant difference between the two groups after the “remove-one” analysis.

### **Anxiety and stress.**

Due to the inclusion of a variety of psychological outcome measures, psychological adjustment was broken down further to obtain a more detailed picture of any differences between the two groups on more specific measures of psychological adjustment. Six studies that used measures of anxiety and stress were combined to produce an effect size of 0.089 ( $SE=0.135$ , 95%CI=-0.175 to 0.354) (Figure 5), indicating that there were no significant differences between YACOD and YAC from intact families on measures of anxiety and stress. The significant  $Q$  value = 31.440,  $p < .01$  and high  $I^2$  value = 84.096 indicate high levels of variability and dispersion among the results (see Table 5). The total number of participants in this group was 1954. Only three of the six studies reported mean ages, and of those the mean age overall was 19.53. Of the studies that reported on gender (one study did not), 73.13% of participants were female.

Upon inspection of the forest plot (Figure 5), two studies appeared to deviate from the others and were subsequently removed and the analysis re-ran. Figure 6 shows the statistics and forest plot with both studies removed. After removal of Brewer (2006), as it deviated the most, the effect size was 0.213,  $p=0.003$  ( $SE=0.071$ , 95%CI= 0.073 to 0.352), indicating that this study was an outlier and pulling the effect size in the opposite direction. Additionally, the  $Q$  value lowered to become non-significant and the  $I^2$  value fell within the low range suggesting that this study was adding a lot of dispersion to the overall results and with it removed the results were

more homogeneous. This result suggests that YACOD report higher levels of anxiety and stress than their intact counterparts. After removal of Angarne-Lindberg (2009) as it pulled in the opposite direction, results still remained significant, although slightly less so, and suggest that YACOD have significantly higher levels of anxiety and stress compared to those from non-divorced families.

### **Depression.**

A total of eight studies that used measures of depression were combined and an analysis was ran. There was a total of 2290 participants in this group (mean age = 19.11). All but one of the studies reported on gender, and of those that did report this, a total of 77.77% of participants were female. Figure 7 shows effect sizes across these studies and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. These results indicate an effect size of 0.189,  $p=0.002$  ( $SE=0.061$ , 95% CI=0.070 to 0.308) (Table 6). These results suggest that YACOD are reporting significantly higher levels of depression than same-aged peers who grew up in intact families.

Upon examination of the forest plot, Smith (2011) was removed, as the error bars were very large. The results were not significantly impacted by this study and thus it was retained.

### **Other mental health & behavioural outcomes.**

There were six studies that used brief symptom inventories to compare the two groups on general mental health outcomes. These were outcomes that did not fit within the depression, anxiety, or behavioural concerns sections as they measured general mental health. The total sample size for this analysis was 9488 (mean age = 21.25). Two studies did not report on gender, while those that did report on gender had 57.38% female participants. These were combined, and an additional analysis was conducted. Figure 8 shows effect sizes across these studies and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. The results indicate that YAC from intact families report better mental health and behavioural adjustment than the divorced group, effect size=0.133,  $p < .001$  ( $SE=0.028$ , 95%CI= 0.079 to 0.187) (Table 7).

Upon visual inspection, Henke (2015) had a much higher weight than all of the other studies and thus it was removed, and the analysis was re-run. Results found that after removal of this study, the difference between the groups was no longer statistically significant, effect size= 0.122 ( $SE=0.066$ , 95%CI=-0.006 to 0.251) (Table 7). Although all of the other studies tended to pull in the direction that favored those from intact families, on their own they did not have

enough weight to generate a statistically significant difference on general mental health outcomes.

### **Self-Esteem & Self-concept**

Several of the articles used measures that assessed YACOD levels of self-esteem and self-concept. A total of six articles were combined that looked at these measures and an analysis was conducted with a total of 1975 participants (mean age = 21.27, 63.65% female). Figure 9 shows effect sizes across these studies and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. Results indicate that there are no significant differences on self-esteem or self-concept measures between YACOD and YAC from intact families, effect size=-0.093 ( $SE=0.147$ , 95%CI= -0.381 to 0.196) (Table 8).

Two studies were identified that deviated from the rest as identified by the forest plot. Cabero (2005) was removed first. The removal of this study did not significantly impact the previous results. Barkey (2007) was then also removed as it pulled in the opposite direction. Removal of both of these studies did not significantly impact the previous results and thus both studies were retained. Their removal did however significantly lower the dispersion as evident by changing the  $Q$  statistic to a non-significant value and  $I^2$  score to fall within the low range.



## **Life Satisfaction & Social Support**

The final analysis was conducted using studies that examined life satisfaction and social support. A total of four studies were combined into this analysis for a total of 1986 participants (mean age = 22.13, 49.51% female). Figure 10 shows effect sizes across these studies and a corresponding forest plot to visually depict the effect sizes and weight of each of the studies. Results of this analysis show no significant differences on reported levels of life satisfaction and social support between YACOD and YAC from intact families, effect size =  $-.178$  ( $SE=0.166$ , 95% CI =  $-0.504$  to  $0.148$ ) (Table 9). The  $Q$  value for life satisfaction and social support outcome was  $14.930$ ,  $p = .005$ , and the  $I^2$  value was  $73.208$ . The significant  $Q$  statistics and high  $I^2$  coefficient indicates that there is considerable variability in these reported scores across groups.

Upon inspection of the forest plot, one study Smith (2011) was identified as deviating from the others due to its very wide error bars. This study was removed, and the analysis was re-run. Results after the removal of this study were not significantly different from previous results and thus the study was retained.

## **Discussion**

The purpose of this dissertation was to summarize and synthesize the available research on YACOD and their long-term academic and psychological outcomes, and to provide strategic

recommendations for future research in this field. To date, there has been an abundance of research, both systematic reviews and meta-analysis on childhood and adolescent outcomes after divorce, but no systematic review or meta-analysis conducted on young-adulthood (e.g., Amato & Keith, 1991; Amato, 2000; Nelson, 2009). The goal was to extend and synthesize the research on this topic published in the past ten years to develop an evidence-based understanding of the potential impacts that parental divorce may have on children as they age into adulthood.

Furthermore, the purpose of the systematic review was to qualitatively examine the associations of psychological and academic adjustments on YACOD to yield a more comprehensive understanding of protective and risk factors in this population. Finally, based on the results of the systematic review, a meta-analysis was completed to statistically determine the most robust findings in this body of literature. It was hypothesized that, similar to previous systematic reviews and meta-analyses conducted on younger populations, the majority of YACOD would report similar outcomes as their non-divorced counterparts. That is to say, we expected to find little to no differences between groups on psychological and academic outcomes.

To date there has not been as comprehensive of a review conducted on this YA population in comparison to those completed with children and adolescent populations (e.g., Amato, 2004; Nelson, 2009). Amato (2004) examined similar outcomes as those that were included in this study including: academic achievement, behavioural conduct, psychological

adjustment, and self-concept. In reviewing 95 studies with over 13 000 participants, they found that children of divorce experience a lower level of overall well-being compared to children from intact families. These effect sizes were small but statistically significant across all domains. These small effects sizes should be interpreted with caution in a meta-analysis of this size, however, given that there were no subgroup analyses completed, these effect sizes might be masking larger effects for particular sub-groups of YACOD who have had adjustment difficulties, but which we were unable to identify given that this analysis did not permit testing for moderators. The small effect size also suggests that these differences between YACOD and YA are unlikely to be reflected in meaningful differences among youths in general.

Several hypotheses as to what can explain the identified difficulties in child adjustment following parental divorce has been explored in the literature pertaining to children and youths. Amato (2004) found evidence to support the notion that parental absence may account for some of the adjustment challenges these children face with children of divorce and those who experienced parental death having lower overall outcomes than children from married families. However, children from divorced families still had poorer overall behavioural conduct and academic achievement scores suggesting other mechanisms may be at play that are contributing to adjustment. Similarly, mixed evidence was found to support the notion that the economic decline associated with divorce affects adjustment. Amato (2004) found that economic hardship

impacted children from divorced families more, even when income was controlled for. Strong evidence was demonstrated using the family conflict model which posits that the higher the conflict in the household, the less well-adjusted the offspring. Amato (2004) found that high conflict was associated with poorer outcomes across the board, and children from intact families who experienced high levels of conflict fared worse than those from intact families with less conflict. Similar findings were present in our own systematic review whereby parental and family conflict continued to be an important factor in a YA's successful psychosocial adjustment.

The goal of this dissertation was to extend the research to model the developmental trajectory of children of divorce over time as they enter young-adulthood and to determine if there were any lasting implications of parental divorce. For the systematic review, aspects of the PRISMA model was used that follows a comprehensive checklist and diagram to ensure thoroughness and the possibility of replication, see Appendix A (Moher, Liberati, Tetzlaff, & Altman, 2009). In examining the literature on academic achievement and adjustment, studies looked at how young-adults were adjusting to college life. Findings indicated vastly different results with some studies concluding significant differences in YACOD academic outcomes compared to those from intact families, while others suggested that no significant differences exist. Studies that looked at other factors that may influence achievement and adjustment to

college found that the quality of the home environment (e.g., parental support, parent-child relationships, and parental conflict) may be better predictor of adjustment to college than parental marital status itself (Alford, 2007). Based on these vastly differing research findings, it is difficult to conclude whether family marital status plays a significant role in YA adjustment to college life. Furthermore, these results can neither support nor refute the notion of a superior form of custody post-divorce for families with younger children as the literature is highly varied on this young-adult population. What does appear to be matter is the quality of parent-child relationship post-divorce, in that YACOD who reported a better relationship with parents after parental separation seem to report better outcomes during their transition to adulthood. The nature and process by which this occurs may be an area worthy of further study.

In looking at college achievement outcomes, there was also some diversity present in the results across these studies. Similar to the articles on academic adjustment, what appeared to play a crucial role in determining outcomes were protective and moderating factors and their influence on YA college achievement rather than the event of parental divorce itself. These studies found that what is most important in protecting YACOD from having poorer academic outcomes is the quality of the parent-child relationship, amount of perceived parental support, parental nurturance, and lower levels of parental conflict (Finley & Schwartz, 2010; Modecki, 2015, & Sheehan, 2015). These findings suggest that overall, quality of the parent-child

relationship and parental conflict are more important in a YA college performance and adjustment compared to parental marital status on its own – mirroring findings from reviews and meta-analyses completed on younger populations (Amato & Keith, 1991; Amato, 2000; Nelson, 2009). This continuity in findings suggest that these potential moderators should be included in any future prospective longitudinal study on the impact of divorce in childhood.

Psychosocial adjustment, including mental health symptoms were also included in this review. This area of research presented the most challenging to summarize as there were many inconsistencies and discrepancies in terms of the questionnaires used to measure symptoms and methods, making clear consensus on results impossible. Again, what appeared to be more important was examining moderating and protective factors. Strong social and parental support, good communication, increased parental affection, good coping skills, more parental cooperation, and more contact with father was found to mitigate mental health concerns in this population most consistently (e.g., Gasper, 2008; Harcourt & Adler-Beader, 2016; Roubinov & Luecken, 2013; & Schrodt & Ledbetter, 2007). Other factors such as quality of home environment, parental conflict and hostility, parental mental health and well-being were found to be important in influencing offspring mental health symptoms (Gasper, 2008; Melo & ota, 2014; Young & Ehrenberg, 2007). Taken together, these results are in line with previous findings that in general, the majority of YA adjust with little to no significant issues after experiencing

parental divorce. However, for a small but significant portion of YA experience long-term negative implications that are more likely influenced by other factors such as quality of the home environment and quality of the relationships within the family- more commonly referred to as 'family process' variables.

Similar moderating factors were also influential when looking at self-esteem, stress, and subjective well-being. Factors such as parental conflict, parental hostility, and parental cooperation accounted for part of the variance between family form (non-divorced or divorced) and adjustment measures, further suggesting that it is more than the event of divorce itself that are contributing to these negative outcomes (Cabero, 2005; Gasper, 2008; & Sobolewski & Amato, 2007).

A small number of studies focused on resiliency, coping, and life satisfaction within a young-adult population. The majority of the studies in this area were qualitative in nature and provided an in-depth and detailed understanding of the adjustment process through which many YACOD of divorce appear to experience. While many of the participants in these studies reported a difficult initial adjustment period, they also reported a lot of growth and positivity from this experience. In particular, themes of resiliency, coping, empowerment, strength, independence, self-reliance, and confidence throughout their adjustment journey were present (Elder-Avidan, 2009; Kick, 2014; Matters, 2009). Although YACOD initially reported some

struggles after parental divorce and reported higher levels of distress in childhood, once they reach YA, those with the aforementioned protective factors (e.g., low conflict, good coping) found that parental divorce was a positive thing for their family (Chrismer, 2010; Server, 2007).

The majority of studies did not yield significant differences between YACOD and non-YACOD on outcomes such as substance use, risky sexual behavior, or delinquency (e.g., Gasper, 2008; Henke, 2015; Kaur, 2015; Sakyi, Melchoir, Challet, & Surkan, 2012; Thuen, Breivick, Wold, & Ulvester, 2015). Furthermore, when protective and risk factors were examined, factors such as high parental hostility, low maternal and paternal contact, and high parental conflict were more likely to be associated with an increase in delinquent behaviours rather than parental divorce itself (Gasper, 2008; Modecki, Hagan, Sandler, & Wolchik, 2015).

Despite the high level of variability in the available literature, these findings highlight the need for research in the area of family and the impact of divorce on children to strive for stronger and more consistent methodology. Specifically, carrying out more longitudinal, larger scale studies will be important in examining differences over time between groups. Furthermore, studies using a strengths-based perspective that focuses on better understanding what contributes to resiliency and mitigating risk factors in the long-term adjustment and well-being of these young-adults. In addition, the more consistent use of validated measures would also improve the reliability of findings, and our ability to compare findings across studies using meta-analysis.



A meta-analysis was conducted to identify the most robust findings associated with the psychological and academic adjustment of YACOD. For the meta-analysis, all of the studies that were included in the systematic review were reviewed again in detail to determine if the authors reported enough information about the data to be included in the meta-analysis or if the study was appropriate to include in this analysis. For clarity and consistency purposes, studies that used similar measurements for outcomes and defined outcomes in a similar way were grouped together. Some of the articles in the meta-analysis were used several times as they looked at different outcomes and thus were included in different analyses.

Seven separate analyses were conducted for the meta-analysis. This included various areas of adjustment including academic outcomes, anxiety and stress, and depression, other mental health and behavioural outcomes, self-esteem and self-concept, and life satisfaction and social support outcomes. The latter five outcomes were also combined to form a general measure of psychological well-being. The results show that there were no differences between non-divorced and divorced YA on college adjustment outcomes, self-esteem outcomes, or life-satisfaction and social support outcomes (e.g., Connell, 2015; Smith, 2011). When mental health and psychosocial adjustment was examined, significant differences were found between groups with those from divorced families reporting more depression symptoms and behavioural concerns than those from non-divorced families (e.g., Barkey, 2015; Henderson, 2009; Pelkon,

2008). No differences were found on anxiety and stress outcomes between the two groups (e.g., Brewer, 2007; Lacey, 2010).

Due to the high degree of dispersion that was present in most of the analyses, there is likely a number of co-variables at play that hamper our ability to specifically single out the impact of divorce on long-term outcomes. This highlights the need for more longitudinal studies that would help tease apart these co-variables as this is currently a major problem with past studies' ability to create a comprehensive predictive model for later psychosocial and academic adjustment. Despite the high degree of dispersion that was present, there were still some significant differences on a few outcomes, suggesting that divorce has long reaching impacts that are very important to pay attention to. Specifically, mental-health outcomes such as symptoms of depression and some behavioural concerns were noted to have more lasting implications into young-adulthood. These findings are also consistent with the only other systematic review and meta-analysis conducted on adults that found parental divorce was significantly associated with higher depression scores (Sands, Thompson, & Gaysina, 2017). From the studies we included here, what appears most important in mitigating any long-lasting negative implications are the moderating factors such as amount of parental support, quality of parent-child relationship, level of parental conflict, and coping style (e.g., Finley & Schwartz, 2010; Gasper, 2008; Roubinov & Luecken, 2013; Schrodt & Ledbetter, 2007).

## **Cross-cultural comparisons**

We found a limited number of studies conducted in Canada (2) and Europe (11) compared to the United States (40) making cross cultural inferences difficult. This does speak to the need for more research to be done on YACOD in Canada and Europe as currently the majority of this type of research is being generated in the United States, which may not necessarily be generalizable to other parts of the world.

Canadian studies included in this review were conducted in larger provinces such as British Columbia and Ontario. The quality of these two studies rated just below average to above average on the quality review (3.83 and 4.33 out of 5). Specifically, the methodology, assessment measures, statistical analysis, control of extraneous variables, and their ability to capture participants' experiences were all rated between a 4 or a 5 out of 5. Wintre and colleagues (2011) recruited participants from across numerous universities, used longitudinal methodology to assess student responses over time, as well as considered several extraneous factors that may influence outcomes such as quality of the parent-child relationship and gender. In looking at college adjustment and overall mental health, these researchers found that females of divorced families reported higher levels of depressive symptomology than their peers from intact families. Furthermore, in looking at college adjustment, they found that females from

divorced families reported having a more difficult time and more personal-emotional adjustment issues to college than did those from married families. This study strongly highlighted the importance of gender differences in YACOD.

Similar methodology and quality were observed in the second Canadian study conducted by Young and Ehrenberg (2007) in British Columbia. These studies would serve as good examples for future Canadian studies on this topic. It would also be helpful to include populations from other provinces, as well populations that are not necessarily living in larger urban settings to ensure proper representation from a larger diversity of households.

### **Clinical Applications**

The main clinical application of this systematic review aimed to provide a more in-depth understanding of how divorce in childhood may impact the development of emerging adults, which may have lasting impressions into one's adult life. As previous research has concluded, this developmental period presents challenges for any emerging adult with increasing responsibility, difficult choices, increased independence, identity exploration, and numerous transitions and changes (Arnett, 2000). Based on the findings from this study, it is likely that taking a lifespan developmental approach as well as a family systems approach to understanding childhood divorce is important. According to Hetherington (1992), this approach considers not

just the event of divorce but the developmental status of each family member, life stage and experiences, as well as family dynamics. The disruption that occurs with the process of divorce likely has ripple effects throughout each family member's life, which is influenced by a number of risk and resilience factors including both individual characteristics of the family members and external environmental factors (Hetherington, Bridges, & Insabella, 1998). Despite the challenges that can occur during the adjustment process, many children who experience divorce go on to lead functional and fulfilling lives (Hetherington M. E., An overview of the Virginia longitudinal study of divorce and remarriage with a focus on early adolescence, 1993). Similarly to what is found in childhood and adolescence, there still remains a small but significant portion of YACOD who continue to experience struggles, particularly with symptoms of depression as was found here. Individual risk and resilience factors are important when considering adjustment to transitions such as divorce. Thus clinicians working with YACOD are encouraged to create an individual profile of the person's family environment in early childhood and throughout the developmental period leading into the transition to adulthood, with a particular focus on personal coping, quality of relationship with parental figures, the number and contexts in which family transitions occurred (e.g divorce and remarriage), as well as the level of conflict within and across households and how it was managed by the co-parental units.

Given the implications of possible long-term consequences of divorce, taking a preventative approach is also essential. When thinking about particular interventions, it will be important to focus on working on understanding and promoting healthy relationships with both parents after a divorce and not creating triangulations to help foster strong parent-child bonds devoid of loyalty conflicts.

Therapy targeting consistent and appropriate parenting skills could also be important for implementing consistency and routine into a child's life following a divorce. Having parents on the same page with discipline, consequences, rules, and expectations makes for a more resilient family. In fact, recent research supports that high-quality co-parenting after a divorce involves low levels of parental conflict as well as high levels of cooperation and communication (Sigal, Sandler, Wolchik, & Braver, 2011). It is also important for parents to think about their long-term parenting goals and how they want to approach future life events such as graduations and weddings. Cooperative co-parenting after divorce not only allows a child contact and a healthy relationship with both parents but also provides economic stability, which is in turn connected to child well-being, increased support and access to resources (Jackson, Preston, & Thomas, 2013). Finally, focusing prevention specifically on high-risk children and youths who have many of the risk factors identified above could be important. Using vulnerability focused interventions to improve the resilience of their families and strengthening coping strategies among this

population may be beneficial for preventing long-lasting negative implications and mitigating short-term concerns. Schools could be recruited in this effort to identify those most at risk and referred to proper community resources early on so that their particular needs can be addressed proactively.

Inter-parental and parent-child communication emerged from the literature we reviewed as being an important indicator of family functioning and adjustment. When working with YACOD, inquiring and fostering stronger and more effective communication between family members can be essential to building resilience. This can highlight an avenue through which processing, understanding, and coming to accept the process of their parent's divorce may be strengthened. Additionally, seeking support through friends or other family members during and after the process of parental divorce has been found to be essential in normalizing and making sense of their experiences (Morrison, Fife, & Hertlein, 2017). The timing of divorce can also influence identity development and self-confidence in children, which can have lasting implications into young-adulthood, a time already influenced by identity exploration. Clinicians can support and help these individuals create meaning from their past experiences and connect them with understanding their own values and life goals to live a more fulfilling life.

## **Limitations of the Current Study**

Despite the rigour and process taken to complete the systematic review and meta-analysis discussed in this paper, publication bias is always a concern when conducting this type of research. All efforts were made to search the grey literature and hand search journals as well as common databases, however it is still likely that the research that is available tends to favour significant outcomes. However, based on the limited number of significant differences that existed between non-divorced and divorced YA, it is likely that the reach available on this topic may be more balanced and accurate relative to other topics. A second limitation is the fact that the overwhelming majority of studies were conducted and published in the United States, making the overall findings of this study potentially less generalizable to YACOD from other countries. Finally, this study was exploratory in nature and intended to summarize the trends in research published on the area of academic adjustment and mental health in YACOD, so results vary in range and can appear broader in scope than if our analysis had been more focused on a specific subgroup and set of outcomes. This created a challenge for both data analysis and consolidation of findings, as well as determining what could be accomplished using meta-analytic analysis methods. For example, the systematic review strongly suggested that it was protective factors and moderating variables that matter most to YA outcomes, not the event of parental divorce



itself (something that is consistent with the literature pertaining to younger COD populations).

Unfortunately, we were not able to test for moderating variables in the meta-analysis. This highlights a strong avenue for future studies to expand on the broad scope included in this paper to look at each outcome in more detail and create the type of findings that could be incorporated into an expanded meta-analysis in the future.

### **Future Directions**

One noticeable gap in the literature is a lack of a consistent and systematic way that psychosocial outcomes were measured across studies. Researchers often used certain items or subgroups of questions from self-report measures. Future research should aim to use measures more consistently and to use measures more appropriately to obtain more valid and representative results. As mentioned previously, there appears to be a gap in the number of longitudinal and qualitative studies that we were able to identify within our final sample. It was notable that there is much less of these types of studies published in this field. However, this area of research would certainly benefit from having more longitudinal, follow-up studies done on this population as well as having a more developed and in-depth understanding of the personal side of overcoming parental divorce in childhood and the first –hand impact it has in adulthood. It is important to note that the results of our meta-analysis were completely dependent on the

findings from the systematic review. Based on this, we were not able to include any of the moderating factors that presented in the systematic review in the meta-analysis as they were not measured systematically or consistently across studies. Thus, future research should look into clarifying the role of these potential moderators, particularly through the use of longitudinal studies, so that they could be included in future meta-analysis of this domain of research.

Furthermore, research should also focus on possible risk and protective factors that play a role in the adjustment and well-being of young-adults. This could also be achieved through conducting more large scale, longitudinal studies as well as more in-depth qualitative analysis to get a better understanding of the process of adjusting to parental divorce throughout formative years and into adulthood.

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Table 1

*Summary of Records Included in the Systematic Review*

Author(s) (year of publication)	Country	Reference Type; Article Type	Research Type	Total number of Participant s (mean age)	Research Measures Used	Academic Outcome(s)	Psychologica l Outcome(s)	Predictor Variable(s)	Moderator Variable(s)	Summary
Alford (2007)	United States	Dissertation/ Thesis; Quantitative	Cross- sectional	90(22) 34 Intact;56 divorced	Questionnaires: Children's Perception of Interparental Conflict (CPIC), College Adjustment Scale (CAS)	College adjustment		parental divorce, parental conflict (pre-& post- divorce), gender	Age at time of divorce	Interparental conflict significantly and negatively impacted ACOD adjustment to college independent of family marital status, gender, or age of divorce. Thus, no differences between intact and divorced families were observed on college adjustment.
Amato & Afifi (2006)	United States	Journal Article; Quantitative	Longitudi nal	632 (26.9) 500 intact; 132 divorced	Rosenberg Self- esteem, Langner Measure of Distress Symptoms		Self-esteem, distress	Parental divorce		Children whose parents display conflict are associated with lower subjective well-being and poorer quality relationships with their parents. Children with high-conflict two parent homes were less likely to have a relationship with their parents than low-conflict two-parent homes.
Angarne- Lindberg & Wadsby (2009)	Sweden	Journal Article; Quantitative	Cross- sectional	96 48 intact; 48 divorced	Symptom Checklist-90, Coddington Life Events Inventory		psychiatric symptoms, traumatic events	Parental divorce, life events	Age, gender	Individuals from divorced backgrounds had significantly higher scores on paranoid ideation and psychoticism subscales compared to individuals from married families. There were no significant differences on measures of mental health across genders. In looking at younger women, those in the divorce group scored significantly higher on all items of mental health compared to same age counterparts from married families and when compared to older females from divorced families. Overall, participants from divorced families experienced a greater number of life events that they rated more negatively and more difficult to adjust to than the control group.
Angarne- Lindberg & Wadsby (2012)	Sweden	Journal Article; Quantitative	Cross- sectional	478 239 intact; 239 divorced	DSM-IV diagnosis		Psychiatric diagnosis	Parental divorce,		The researchers examined past medical records to determine if any differences existed between children of divorce and children of intact families on mental health diagnosis. Results indicate that while in childhood children of divorce had more contact with psychiatric care, this difference did not persist into adulthood. In terms of diagnosis, again only in childhood did COD have more DSM diagnosis than their intact counterparts.
Ashkenazi (2008)	United States	Dissertation/ Thesis; Quantitative	Cross- sectional	235	College Chronic Life Stress Survey, Brief		stress, coping styles, cognitive	Divorce, family environment, coping		Results show that in students from divorced families, low family cohesion, high dysfunctional coping, and high negative appraisal uniquely predicted depression. Only

				169 intact; 66 divorced	Cope, Adult Cognitive Error Questionnaire, Adult Nowicki-Strickland Internal-External Control Scale, Family Environment Scale, Beck Anxiety Inventory, Beck Depression Inventory		errors, locus of control, anxiety, depression			high levels of dysfunctional coping significantly predicted anxiety in this group. Comparing both groups, those from divorced families had significantly more family conflict, less family cohesion and greater emotion-focused coping. Both groups did not significantly differ on levels of depression and anxiety and locus of control, coping style, negative appraisal, and family environment were stronger predictors of psychological adjustment than marital status.
Barkey (2015)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	113(19.4) 56 intact; 57 divorced	Questionnaires: College Adjustment Test (CAT), The Rosenberg Self-Esteem Scale (SES), Beck Depression Inventory-II (BDI-II), Multidimensional Relationship Questionnaire (MRQ)	College adjustment	Self-esteem, depression	Gender, parent marital status	Age at time of divorce	College age children of divorce had lower self-esteem and higher levels of depression compared to college age children from intact households with no differences found between genders. Also found that YACOD reported poorer overall adjustment and lower relationship satisfaction than those from intact families with no significant differences found between genders.
Brewer (2007)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	256(~19.4) 173 intact; 83 divorced	Zung Self-Rating Depression Scale, Life Experiences Survey,		Stress, depression	Parental divorce, parental relationship	age at time of divorce, parent-offspring relations and depression, remarriage of parent,	College women from divorced families experienced significantly more stress and negative family factors than the non-divorced group, but no differences in levels of depression were observed. In an exploratory analysis found that parent-offspring relationships was not a factor in levels of depression or stress nor was age at time of divorce or remarriage of parent. Father substance abuse and violence was experienced significantly more in the divorced group.
Cabero (2005)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	103(~21) 67 intact; 36 divorced	Relationship Scales Questionnaires, Personal Attribute Inventory, Family Relationship Questionnaire,		Self-concept	Parental divorce, parental conflict	Age, gender	Young adults from divorced families had lower levels of self-concept and reported higher levels of interparental conflict. Both groups did not differ on levels of attachment. Overall, those who reported more parental conflict had lower levels of self-concept and lower levels of secure attachment. Age at time of divorce was not related to secure attachment or self-concept scores.

Chrismer-Still (2010)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	132(20) 99 intact; 33 divorced	Satisfaction with Life, Perceived Social Support		Life satisfaction perceived social support	parental divorce, perceived social support, age at time of divorce,		Students from divorced families had significantly lower life satisfaction than those from intact families despite no differences in perceived amount of social support.
Connel, Hayes & Carlson (2015)	United States	Journal Article; Quantitative	Cross-sectional	161(20.39) 100 intact; 61 divorced	Questionnaires: Rosenberg self-esteem (RSE), Perception of Parental Reciprocity (POPRS), Student Engagement Instrument, Perception of Perceived Stress	College adjustment, student engagement	Self-esteem, parental reciprocity, stress	Parental marital status, gender	Age at time of divorce	Results indicate that there were no significant differences on measures of college adjustment between ACOD and AC of intact families. Additionally, there were no gender differences that emerged on these measures. A final analysis found a significant relationship between age of divorce and self-esteem indicating that the older an individual is when their parents get divorced, the higher their self-esteem.
Eldar-Avidan, Haj-Yahia, Greenbaum (2009)	Israel	Journal Article; Qualitative	Cross-sectional	22(23) divorced	In-depth, semi-structured, open-ended interviews		qualitative, subjective well-being, resilience, survival, vulnerability,			Themes emerged based in grounded theory that college age children of divorce surrounding family ties, implications of divorce, resources and coping, resilience, survival and vulnerability. Generally, students from divorce fell into one of three categories depending on their adjustment and coping: resilience, survival, or vulnerability.
Finley & Schwartz (2007)	United States	Journal Article; Quantitative	Cross-sectional	1989 (20.6) 1492 intact; 497 divorced	Questionnaires: Nurturing Fathering Scale, Father Involvement Scale, Young Adult Subjective Well-Being		General well-being	parental divorce, father nurturance, actual and desired father involvement		For divorced males and females, father relationship measures were not significantly related to well-being. However, desired father involvement was related to subjective well-being, specifically women expressed a stronger desire for more father involvement compared to males.
Finley & Schwartz (2010)	United States	Journal Article; Quantitative	Cross-sectional	1375(19.85) 1037 intact; 338 divorced	Nurturing Mothering and Fathering, Maternal and Paternal Involvement, Troubled Ruminations about Parents Scale, Coppersmith self Esteem scale, Purpose of Life, Life Satisfaction, Beck Anxiety, Epidemiological	Academic achievement	self-esteem, life satisfaction, distress, psychological symptoms (depression, anxiety),	Parental divorce	Gender, ethnicity	Results showed significantly lower maternal and paternal nurturance scores in the divorced family group regardless of gender or ethnicity. In looking at psychosocial adjustment, higher parental nurturance and involvement is associated with well-being and adjustment while lower parental scores are associated with negative outcomes and poor adjustment (self-esteem, distress, etc.)

					Studies Depression Scale, Friendship Quality, Academic performance					
Furr (2008)	United States	Journal Article; Quantitative	Cross-sectional	231 (<24) 138 intact; 93 divorced	aptitude tests	College exam scores	N/A	Family dynamics	College entrance exam	Fathers of intact families have more of an influence on their children's CEE scores than do non-custodial fathers.
Gahler (2013)	Sweden	Journal Article; Quantitative	Cross-cohort comparison	3093(26.2)	Survey of Psychological Problems		subjective well-being, symptoms (sleep, depression, anxiety)	Parental divorce	gender, age, country of origin, parent's education, economic hardship during upbringing, family dissension, respondent's year of education	The number of young people experiencing parental divorce and psychological issues has increased since the mid 90's. Furthermore, results indicate that there is no significant change in how divorce is related to young people's psychological problems over time. Both in the past and more recently, divorce is still significantly related to more psychological issues in young people.
Gasper, Stolberg, Macie, Williams (2008)	United States	Journal Article; Quantitative	Cross-sectional	340(19.6) 224 intact;116 divorced	Questionnaires: Coparenting Behaviour Questionnaire, Brief Symptom Inventory, Fear of Intimacy Scale, Occupational Work Ethic Inventory, Rosenberg Self-Esteem Scale, Young Adult Self-Report		General mental health, fear of intimacy with significant others, work ethic, self-esteem/sense of worth, externalizing and internalizing problems	parental divorce, perceived coparenting interactions and behaviours		Young adults from divorced families reported significantly higher scores on parental hostility and significantly lower scores on parental cooperation than their intact counterparts, which in turn leads to poorer mental health outcomes in students. When the mediation model was added, there was a significant and direct relationship between parental marital status and young-adult adjustment when controlling for parenting and coparenting practices.
Graham (2014)	United States	Dissertation/Thesis; Qualitative	Cross-sectional	9	Semi-structured, one-on-one interviews, journals	College adjustment				The researcher interviewed 9 ACOD currently enrolled in a university. Common themes emerged from the interviews including: being self-supportive due to parents providing less support after divorce, adjusting to parental divorce strengthened independence and thus adjustment to college, contradictions between participants perceived support and actual support, participants felt a burden of extra travel and visitation with parents and trying to



										juggle college and finances, motivation for reaching graduation is to earn good paying career.
Grant, Waldron, Sartor & Scherrer (2015)	United States	Journal Article; Quantitative	Cross-sectional	1828 (21) divorced	First alcohol drink, DSM-IV alcohol dependence symptoms		Alcoholism	Parental divorce, parental substance use,	Gender, age at interview,	Parental divorce was a significant risk factor for alcohol initiation at younger ages (12-15) than older ages (16 onward). It was also a significant predictor for alcohol use in adolescence and young-adulthood (12 onward)
Hamilton (2012)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	48 intact; 23 divorced	Survey (timing of divorce, gender, academic achievement), Grades/GPA	Academic achievement		Timing of divorce, gender		This study found that timing of divorce and gender did not influence academic achievement independently nor in interaction. ACOD who were 14-16 (Older) when parental divorce occurred had higher SAT and GPA scores than those who were younger (8-10). Additionally, there was no significant differences found on measures of academic achievement for both divorced and intact AC.
Harcourt, & Adler-Baeder (2016)	United States	Journal Article; Quantitative	Cross-sectional	536(19.70)	Depressive systems Likert scale; Problem Focused Style of Coping Questionnaire; Conflict management skills 5-point Likert scale		depression	Parental divorce	Conflict management skills	Highly stable nuclear and highly stable hybrid families report the lowest levels of depressive symptoms compared to highly unstable repartnered and later instability families.
Hawkins, (2008)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	324(20.02)	GPA, Psychological distress Likert Scale	Academic achievement (GPA)	General psychological distress	Parental divorce, age, gender	Students residential status	No significant differences were found on measure of psychological distress between students from divorced homes and students from intact homes when residential status was a covariate. Additionally, having parents who remarried was not significantly associated with more psychological distress in students from divorced families. Students from divorced families alone and from divorced families who remarried did not have significantly lower GPA scores than their intact counterparts. Furthermore, there were no gender differences found in either intact, divorced only, or remarried families on levels of psychological distress. There were also no gender differences in GPA scores in males and females from intact, divorced, and remarried homes.
Henderson, Hayslip, Sanders & Loudon (2009)	United States	Journal Article; Quantitative	Cross-sectional	324(18.7) 256 intact; 68 divorced	Inventory of Parent and Peer Attachment contact with grandmothers, Relationship Competence Scale, Self-Efficacy Scale, Hopkins Symptom Checklist		Psychological symptoms, self-efficacy	Parental divorce, grandmother relationship		In young-adults from divorced families, having a strong relationship with the grandmother was significantly related to better adjustment after parental divorce takes place

Henke (2015)	United States	Dissertation/Thesis; Quantitative	Longitudinal	7783 intact; 5607 divorced; 2176 divorced	Externalizing Behaviours, Internalizing Behaviours,		Risky behavior, internalizing, externalizing	Parental divorce, gender, time since divorce		After controlling for several factors, parental divorce is significantly linked to young-adult problem behaviours such as internalizing and externalizing problems.
Holloway (2008)	United States	Dissertation/Thesis; Quantitative	Longitudinal	2223 intact; 1777 divorced; 446 divorced	Drinking questionnaire		Risky behavior (alcohol)	Parental divorce, ethnicity, conflict, religion		Parental divorce, conflict, parent drinking patterns, and vulnerability in childhood was not associated with heavy drinking in young-adulthood. Healthy relationship behaviours such as feeling close and communicating with parents did not serve as protective factors against heavy drinking later in life. Hispanic youth who experienced marital disruption were significantly more likely to drink heavily in early adulthood compared to other ethnic groups
Hough (2010)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	100(19.39)	Psychological function (MMPI)		Depression, anxiety, self-esteem	Parental divorce, custody	Gender	Results indicate that type of parent custody (joint or single) did not influence psychological adjustment in young-adults from divorce. There were also no gender differences in young-adults from divorced, joint-custody arrangements on measures of adjustment.
Kaur (2015)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	114(24.3) intact; 97 divorced; 19 divorced	Parental Attachment Questionnaire, Parental Bonding Instrument, Safe Sex Behaviour Questionnaire, Restrospective Alcohol and Other Substance Use Measure, Social Desirability Scale		Risky sexual behavior, substance abuse	Parental divorce, perceived parental support		Results indicate that young-adults from divorced and intact families do not significantly differ on engagement in risky sexual behaviour or substance use.
Kick (2014)	United States	Dissertation/Thesis; Qualitative	Cross-sectional	7	Indepth semi-structured interviews		Qualitative, subjective well-being, behavioural			A qualitative description of 7 young-adults of divorce including behaviours, emotional, and social consequences of divorce and each participant's unique experience.
Krakowski (2012)	United States	Dissertation/Thesis; Quantitative	Cross-sectional	574 intact; 445 divorced; 129 divorced	Questionnaires: Centre for Epidemiology Studies Depression Scale, Experience in Close Relationships-Revised, Rosenberg Self-Esteem Scale,		Depression, self-esteem	parental divorce, interparental conflict, parent attachment, family structure/transitions	SES, ethnicity, gender	Students of divorce families did not significantly differ on reports of anxiety, self-esteem, or depression compared to intact families. The strength of mother-child relationship did not mediate the relationship between family structure and adjustment, however it was a predictor of adjustment regardless of family structure. Specifically, the stronger the relationship between mother and child, the lower the symptoms of depression and the higher the self-esteem scores.

					Children's Perception of Interparental Conflict Scale, Parent Attachment Questionnaire,					
Lacey, Bartley, Pikhart, Cable, & Stafford (2010)	England	Journal Article; Quantitative	Cross-sectional	15970	Rutter's Malaise Inventory		Psychological distress	Parental divorce,	Gender, familial mental illness	Parental separation significantly increased the odds of reporting psychological distress in both genders and these results have not changed over time.
Matters (2009)	United States	Dissertation/Thesis; Qualitative	Cross-sectional	8	In-depth, semi-structured, open-ended interviews		positive outcome: self-reliance/independence, development of mediation skills, flexibility, confidence in handling future adversity, external support	Parental divorce		A qualitative study that gather in-depth information about student's experiences of dealing with divorce and the resilience and positive outcomes that can occur. Themes emerged surrounding self-reliance, independence, mediation skills, flexibility, confidence in facing adversity and looking to external supports.
Melo & Mota (2014)	Portugal	Journal Article; Quantitative	Cross-sectional	827 (17.2) 574 intact; 245 divorced; 8 other	Brief Symptom Inventory		Psychological distress/ mental health	Parental divorce, parental conflict	Gender	Young adults from divorced families experienced more parental conflict and more psychological symptomology than those from intact families. Stronger intensity and more frequent parental conflicts as well as being a female predicted higher scores on psychological symptoms.
Modecki, Haran, Sandler & Wolchik (2015)	United States	Journal Article; Quantitative	Longitudinal	156	In person contact & telephone contact: 2 questions from Adolescent/Non-residential Parent Contact Scale; Questionnaires: Frequency & Intensity subscales of Children's Perception of Interparental Conflict Scales,	Academic achievement (GPA, highest level of education)	paternal psychosocial support, internalizing problems (depression), externalizing problems (aggressive & hostile behaviours)	contact with nonresidential father, parental divorce, exposure to interparental conflict, paternal psychosocial support, remarriage and relocation of father, remarriage and income of mother	Gender, age, intervention	Several profiles of paternal involvement and parental conflict emerged. Results indicate that young-adults who had moderate involvement with their fathers and came from low conflict parents had then highest levels of academic achievement and lowest levels of externalizing problems. No differences emerged between profiles on measures of internalizing problems.

					Father Support Scale, Children's Depression Inventory, Revised Children's Manifest Anxiety Scale, Internalizing Subscale of Achenbach's Young-Adult Self-Report Form, items from Divorce Adjustment Project Externalizing Scale, GPA, highest level of education					
Pantelis, Bonotis & Kandri (2015)	Greece	Journal Article; Qualitative	Cross-sectional	2(21&24)	Indepth semi-structured interviews		General psychological distress	Parental divorce		Two young women from divorced families were interviewed about their experiencing and coping with divorce.
Pelkonen, Marttunen, Kaprio, Huurre & Aro (2008)	Finland	Journal Article; Quantitative	Longitudinal	1262	Likert scales		Depression	Parental divorce		Mid-adolescent problems were found to be extended over the span of 16 years. The mid-adolescent risk factors consisted of episodic and persistent depression.
Ross & Wynne (2010)	United States	Journal Article; Quantitative	Cross-sectional	126(18.8) 98 intact; 28 divorced	Centre for Epidemiologic Studies Depression Scale, Trait Anxiety Scale, Retrospective Family Unpredictability Scale, Social Desirability Scale		Depression, anxiety	Parental divorce, parental unpredictability		Students from divorced families had nearly identical scores on mental health outcomes as those from non-divorced families, however divorced children were more likely to have a parent with depression.
Roubinov & Luecken (2013)	United States	Journal Article; Quantitative	Cross-sectional	126(19.6) 76 intact; 50 divorced	Family conflict, Responses to stress, Beck Depression Inventory-II, Survey-cannabis use, Young Adult		Depression	Parental divorce, coping style, family conflict		In young-adults from divorced families, having a disengaged coping style fully mediated the relationship between family conflict in childhood and depressive symptoms.

					Self-Report form (psychopathology)					
Sakyi, Melchior, Chollet & Surkan (2012)	France	Journal Article; Quantitative	Cross-sectional	1103(29) 889 intact; 154 intact; 60 other or NR	Survey-cannabis use, Young Adult Self-Report form (psychopathology)		Drug use, psychopathology	Parental divorce, parental sex, parental smoking		Parental divorce was not significantly associated with later cannabis use, only parental depression was. Young adults who experienced parental divorce and depression symptoms were significantly more likely to be current cannabis users.
Schrodt & Ledbetter (2007)	United States	Journal Article; Quantitative	Cross-sectional	567(20) 435intact; 132 divorced	Questionnaires: Revised Family Communication Patterns (RFCP), demand/withdraw subscale of Communication Patterns Questionnaire, Buchanan's Feeling Caught Scale, Rosenberg's Self-Esteem scale, perceived stress scale (PSS)Likert scale on overall self-worth, mental health subscale of Dornbusch, Mont-Reynaud, Ritter... physical and mental health symptom instrument		feelings of being caught, self-esteem, stress, general mental health (anxiety, depression, etc.)	family communication patterns, parents demand/withdraw patterns, feeling caught between parents, parental divorce		Significant differences emerged with respect to family composition. Emerging adults reported higher levels of demand/withdraw patterns and higher levels of feeling caught between parents than did those from intact families. Looking at young-adults from divorced families, having parents with high demand/withdraw patterns fully mediates the effects of family conformity orientations on feelings of being caught and mental well-being. Those from divorced families reported more feelings of being caught but this did not predict their well-being.
Sever, Guttmann & Lazar (2007)	Israel	Journal Article; Mixed Methods	Cross-sectional	158	Semi-structured interviews, General Functioning subscale of McMaster Family Assessment Device		positive outcomes (coping through support, defensive coping, empowerment, empathy, relationship savvy);	Parental divorce, gender		Showed the positive aspects and growth stemming from parental divorce. Themes such as empowerment, empathy and relationship-savvy were some positive long-term outcomes when young-adults used more supportive coping styles whereas negative coping styles led to less favorable outcomes such as painful feelings and fear of intimacy

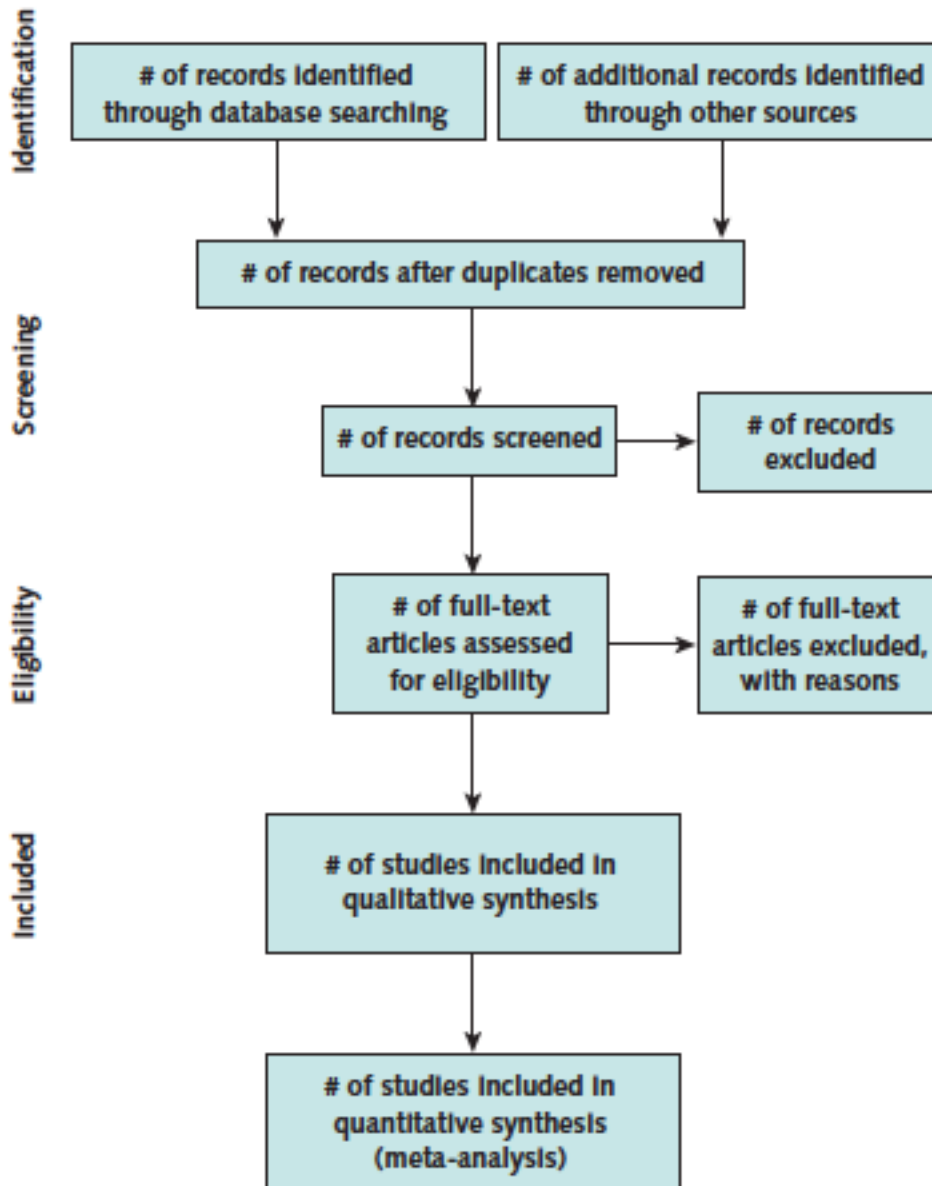
							Negative outcomes (painful feelings, fear of intimacy, loss of family togetherness)			
Sheehan (2015)	United States	Dissertation/ Thesis; Quantitative	Cross-sectional	1714 intact; 1046 divorced; 308 other	Questionnaires: Nurturing Fathering and Mothering Scales, Mother and Father Involvement Scales, GPA, Grades, Academic Importance & Academic Satisfaction	Academic Achievement (GPA, Grades)		Parental divorce, parental nurturance, parental involvement	Gender, family form	Mother and father nurturance is positively associated with child academic outcomes. In intact family's mother and father nurturance was significantly correlated but the same was not found for divorced families. Furthermore, maternal nurturance was associated with son's academic achievement while father nurturance appeared to be important for daughter's academic achievement. Again, looking at the relationship between mothers and sons, mother's involvement was strongly related to son's academic outcomes when from divorced families. Finally, sons from divorced families who desired more maternal involvement had less favorable academic outcomes
Shifren, Bauserman, Blackwood, Coles, Hillman, (2015)	United States	Journal Article; Quantitative	Cross-sectional	320(19.11) 126 intact; 194 divorced	Dispositional Resilience Scale, Center for Epidemiological Studies Depression Scale, Children's Perception of Interparental Conflict		Depression, resilience	Parental divorce		Women from the parental divorce group who scored higher on commitment, control, and challenge (hardiness variables) reported more well-being and less depressive symptoms than those who scored lower on these variables. Women's hardiness variables explained between 21 and 35 % of the variance in well-being and depressive symptoms for both groups. Women from the parental divorce group showed no difference in scores on well-being and depressive symptoms than those from intact families.
Shimkowski, & Schrodt (2012)	United States	Journal Article; Quantitative	Cross-sectional	493(20.3)	Communication patterns questionnaire, Conflict Tactics Scale, Physical and Mental Health symptom instrument		General psychological distress, aggression	Parental divorce, coparental communication		Young adults from divorced families reported higher levels of interparental conflict and poorer mental health than their married counterparts. However, it was found that coparental communication mediates the effect of witnessing parental violence on young-adult's mental health
Smith, (2011)	United States	Dissertation/ Thesis; Quantitative	Cross-sectional	267(20.79) 187 intact; 56 divorced; 24 other	Eysenck Personality Questionnaire, Internality, Powerful Others, and Chance Scales, Temporal Satisfaction		Positive and negative affect, mood, satisfaction with life, personality questionnaire	Parental divorce, personality		Those from divorced families scored no differently on measures of well-being than those from intact families.

					with Life Questionnaire, Positive and Negative Affect Schedule, Profile of Mood States, Loss Questionnaire					
Sobolewski & Amato (2007)	United States	Journal Article; Quantitative	Longitudinal	604 482 intact; 122 divorced	Self-reports; Rosenberg self-esteem questionnaire		Self-esteem, distress	Parental divorce, marital discord, parent child relationships		Offspring from low conflict, married families showed the best outcomes on subjective measures of well-being compared to offspring from high conflict divorced families. Parental relationship quality did not serve as a protective factor for offspring of divorce on their reports of well-being.
Soria & Linder (2014)	United States	Journal Article; Quantitative	Cross-sectional	4693(18.14) 3734 intact; 959 divorced	Survey: Cooperative Institutional Research Program (CIRP), GPA, retention to college	Academic achievement		Parental divorce, academic self-efficacy		Results demonstrate that students from divorced families have significantly poorer GPA and are less likely to continue into their second year of college than those from intact families.
Spain (2008)	United States	Journal Article; Quantitative	Cross-sectional	88(22.03) 66 intact; 21 divorced; 1 other	Self-reports	Academic achievement	NA	Divorce	GPA, failing a course	Students from divorced families are more likely to fail a course than students from intact families. However, divorced parents do not have an impact on student's GPA.
Stringfellow & McAndrew (2010)	United States	Journal Article; Quantitative	Cross-sectional	357 261 intact; 96 divorced	Online Survey		Risky behaviour: sexual behaviour/activity, promiscuity, drinking	Parental divorce, gender		They found that there was a significant and positive relationship between alcohol consumption and sexual activity. Males from divorced families were significantly more likely to rate themselves as more promiscuous and consume more alcohol than any other group, however they were not significantly different in terms of frequency or variety of sexual activity.
Thuen, Breivik, Wold, & Ulveter (2015)	Norway	Journal Article; Quantitative	Longitudinal	983 845 intact; 138 divorced	Questionnaires		Smoking, drug use, well-being	Parental divorce		Having a non-intact family can have significant effects on childhood physical/mental health behaviours.
Windle, Mrug, (2015)	United States	Journal Article; Quantitative	Cross-sectional	340 (17.93) 310 intact; 30 divorced	Center for Epidemiologic Studies Depression Scale, Oxytocin		Depression	Parental divorce	Gender, oxytocin	Young females from divorced families who had the GG oxytocin gene reported almost twice as many depressive symptoms as their peers who experienced divorced but had AA or AG genotype. The same was not found for males.
Wintre, Ames, Pancer, Pratt, Polivy,	Canada	Journal Article; Quantitative	Longitudinal	2724(23.5) 2272 intact; 452 divorced	Questionnaires: Radloff's Center for Epidemiological	College adjustment, students' sense of	Depression, parent reciprocity, stress	Gender, parent marital status	Time	No differences emerged between ACOD and adult children from intact families on measures of depression or stress during the first year of university. Male ACOD did not significantly differ from intact males on measures of

Birnie-Lefcovitch & Adams (2011)					Study of Depression scale (CES-D), Perceived Stress Scale- short version (PSS), Perception of Parental Reciprocity Scale (POPRS), Student Adaption to College Questionnaire (SACQ), Students' Perception of the University Support and Structure (SPUSS)	support from university				personal-emotional adjustment but reported better academic adjustment. Female ACOD reported poorer personal-emotional adjustment than intact females, however no differences emerged between the two groups on measures of academic adjustment or stress.
Wolchik, Sandler, Tein, Mahrer, Millsap, Winslow, & Reed, (2013)	United States	Journal Article; Quantitative	Longitudinal	240(25.6)	Diagnostic Interview; depression		Depression, drug use, alcohol use			The New Beginnings Program reduced the onset of internalizing disorders in young-adults compare to the literature control condition.
Yaernoz-Yaben, Garmendia (2015)	United States	Journal Article; Quantitative	Cross-sectional	955(20.82) 830 intact; 125 divorced	Satisfaction with life, PANAS		Subjective well-being, negative affect	Parental divorce		Young adults from divorced families show lower levels of life satisfaction and higher levels of negative affect
Young & Ehrenberg, (2007)	Canada	Journal Article; Quantitative	Cross-sectional	368(19.37) 256 intact; 112 divorced	Mental Health Inventory		General mental health	Parental divorce, conflict, quality of parenting		Students from divorced families differed in numerous ways from those in intact families. They had poorer parenting, exposure to conflict, less affection from parents and overall poorer mental health adjustment.



**Figure 1. Flow of information through the different phases of a systematic review.**



(Retrieved from Moher, Liberati, Tetzlaff, & Altman, 2009)

Table 2

*Quality Assessment of Records Included in the Systematic Review*

Author(s) (Year of Publication)	Criterion 1: Literature Review and rationale	Criterion 2: Sampling and participant information	Criterion 3: Appropriate use of measures	Criterion 4: Statistical analysis used	Criterion 5: Control of extraneous variables	Criterion 6: Capturing participants experiences	Final Score
Alford, Linda J. (2007)	5	4	5	5	4	5	4.66
Amato, P., & Afifi, T. D. (2006)	4	5	4	5	3	5	4.33
Angarne-Lindberg, T.; Wadsby, M. (2009)	3	2	3	5	3	3	3.17
Angarne-Lindberg, T. & Wadsby, M. (2012)	4	3	3	5	4	4	3.83
Ashkenazi, Renea (2008)	5	4	5	5	4	5	4.67
Barkey, Adam Daniel (2015)	5	4	5	5	3	5	4.5
Brewer, Rebecca (2007)	4	3	4	4	3	3	3.5
Cabero, Cheryl Franco (2005)	4	4	5	5	4	5	4.5
Chrismer- Still, Andrea (2010)	4	3	4	4	4	4	3.83
Connel, Breanna; Hayes, DeMarquis; Carlson, Maria (2015)	4	4	4	5	4	4	4.17
Eldar-Avidan, Dorit; Haj-Yahia, Muhammad; Greenbaum, Charles W. (2009)	4	4	4	5	3	5	4.17
Finley, Gordon E.; Schwartz, Seth J. (2007)	4	4	3	5	3	3	3.67
Finley, Gordon E.; Schwartz Seth J. (2010)	3	3	4	4	4	5	3.83

Furr, M.R. (2008)	3	3	1	3	3	4	2.83
Gahler, Michael; Garriga, Anna, (2013)	2	4	2	4	5	3	3.33
Gasper, Jill A. F.; Stolberg, Arnold L.; Macie, Katherine M.; Williams, Larry J. (2008)	3	5	4	5	5	3	4.17
Graham, Ryan S. (2014)	5	3	4	4	3	5	4
Grant, J., Waldron, M., .Bucholz, K. (2015)	4	4	5	4	5	5	4.5
Hamilton, Nicole V. (2012)	4	4	4	5	4	3	4
Harcourt, K. T., & Adler-Baeder, F. (2016)	4	3	2	4	5	4	3.67
Hawkins, Julie Ellen (2008)	5	5	2	5	5	3	4.17
Henderson, Craig E.; Hayslip, Bert Jr; Sanders, Leah M.; Loudon, Linda (2009)	3	3	4	4	4	4	3.67
Henke, Lucas J. (2015)	4	5	4	4	5	4	4.33
Holloway, Langdon L. (2008)	5	5	4	5	4	4	4.5
Hough, Pia (2010)	5	5	4	5	3	4	4.33
Kaur, Balwindar (2015)	5	3	4	5	3	3	3.83
Kick, Kimberly A. (2014)	5	3	4	4	5	5	4.33
Krakowski, Kristina Michelle (2012)	5	4	5	5	5	5	4.83
Lacey, R., Bartley, M., Pikhart, H., Cable, N., & Stafford, M. (2010)	2	1	1	4	4	3	2.5
Matters, Kasee Genevieve (2009)	5	2	4	3	3	5	3.67
Melo, O. & Mota, C. P. (2014)	5	5	4	5	3	4	4.33
Modecki, Kathryn Lynn; Hagan, Melissa J.; Sandler, Irwin; Wolchik, Sharlene A. (2015)	4	4	3	4	4	3	3.66
Pantelis, Konstantios; Bonotis, K.; Kandri, I. (2015)	4	3	4	1	1	5	3

Pelkonen M, Marttunen M, Kaprio J, Huurre T, Aro H (2008)	2	3	3	4	4	4	3.3
Pilowsky, D. J., Wickramaratne, P., Nomura, Y., & Weissman, M. M. (							
Ross, Lisa Thomson, Wynne, Stacie (2010)	3	3	4	5	3	4	4
Roubinov, Danielle S.; Luecken, Linda J. (2013)	5	3	4	5	4	4	4.17
Sakyi, Kwame S.; Melchior, Maria; Chollet, Aude; Surkan, Pamela J. (2012)	3	4	3	5	4	4	3.83
Schrodt, Paul; Ledbetter, Andrew M.	4	4	3	5	4	4	4
Sever, Ilana; Guttman, Joseph; Lazar, Amnon (2007)	3	3	2	4	3	4	3.17
Sheehan, Tara (2015)	5	4	3	5	3	4	4
Shifren, Kim; Bauserman, Robert L.; Blackwood, Jessica; Coles, Abby; Hillman, Andrea (2015)	4	4	4	4	5	4	4.17
Shimkowski, Jenna R.; Schrodt, Paul (2012)	5	4	4	4	3	4	3.83
Smith, Amanda Artell (2011)	5	4	4	4	4	5	4.33
Sobolewski, J.M., & Amato, P.R (2007)	4	2	2	4	3	4	3.17
Soria, Krista M.; Linder, Sarah (2014)	3	4	4	5	5	3	4
Spain, B. K. (2008)	5	3	3	3	4	5	3.83
Stringfellow, Erica L.; McAndrew, Francie T. (2010)	4	2	3	4	2	3	3
Thuen, F., Breivik, K., Wold, B., & Ulvester, G. (2015)	4	2	3	4	4	3.3	3.33
Windle, Michael; Mrug, Sylvie (2015)	4	4	4	5	4	3	4

Wintre,Maxine Gallander;Ames,Megan E.;Pancer,S. M.;Pratt,Michael W.;Polivy,Janet;Birnie- Lefcovitch,Shelly;Adams,Gerald R. (2011)	4	5	4	5	4	4	4.33
Wolchik, S. A., Sandler, I. N., Tein, J. Y., Mahrer, N. E., Millsap, R. E., Winslow, E., & Reed, A. (2013)	3	5	4	4	4	5	4.17
Yaerno- Yaben,Sagrario;Garmendia,Alaitz (2015)	4	5	5	3	4	5	4.33
Youbng, Laura; Ethrenberg, Marion F (2007)	2	4	4	4	4	5	3.83

Figure 2. Academic Outcomes Data

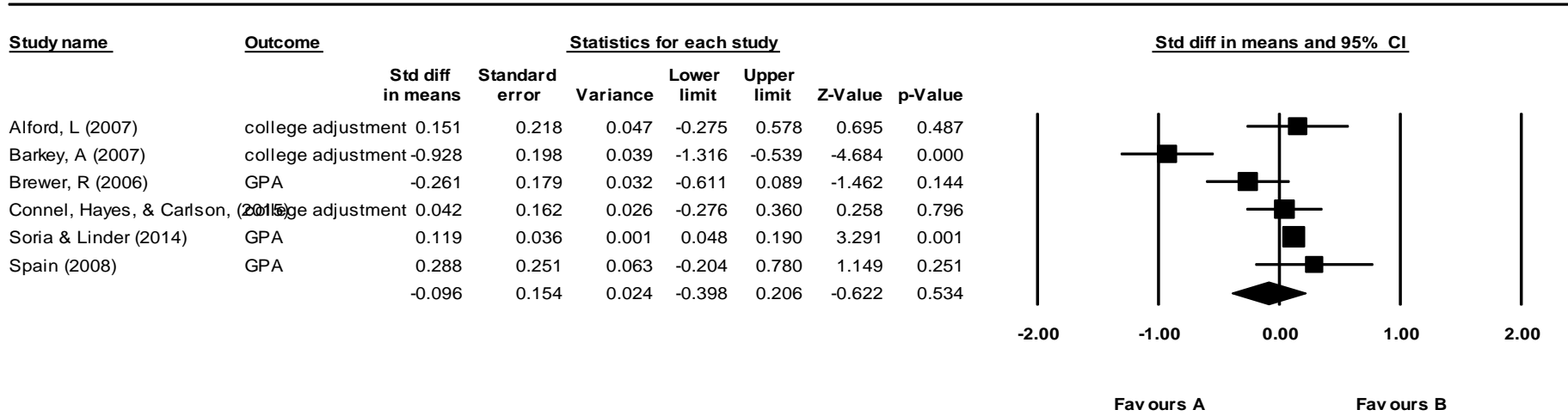


Table 3

*Academic Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
6	-0.096	0.154	0.024	-0.398	0.206	-0.622	0.534	31.552	5	0.00

I-squared	Tau Squared	SE	Variance	Tau
84.153	0.111	0.106	0.011	0.333

Figure 3. Psychological Outcomes Data

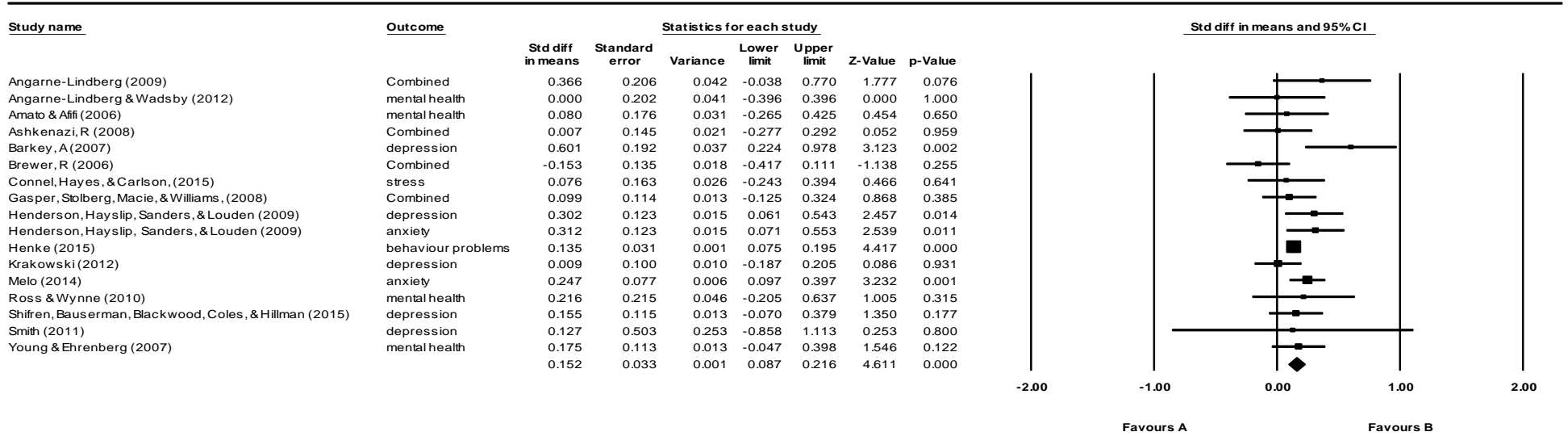




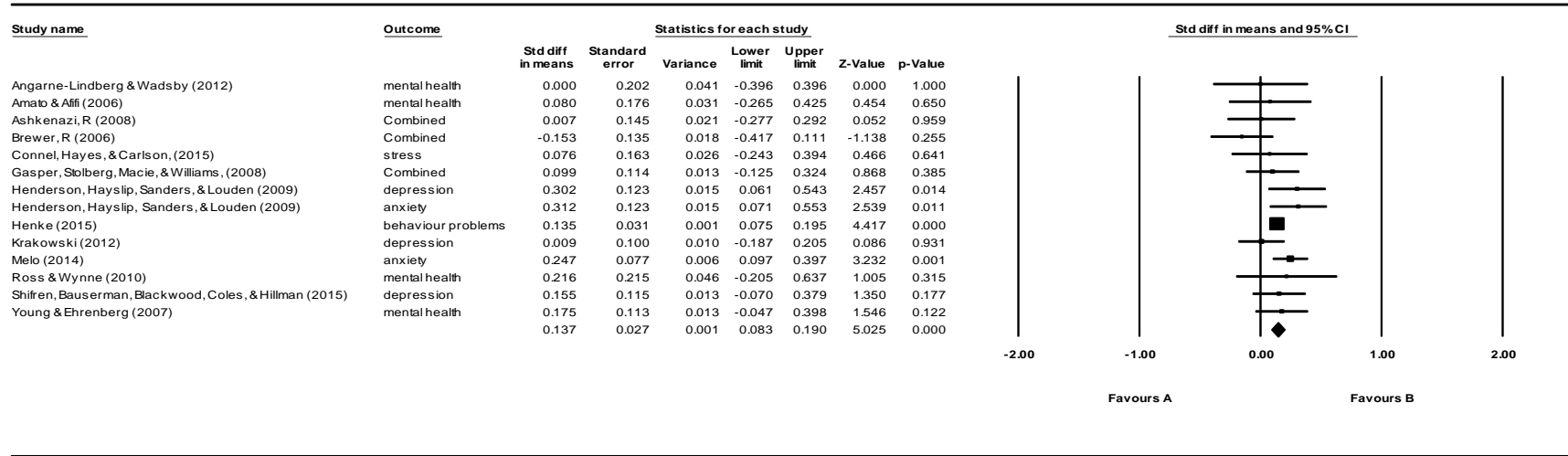
Table 4

*Psychological Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
17	0.152	0.033	0.001	0.087	0.216	4.611	0.00	20.980	16	0.179
16	0.152	0.034	0.001	0.085	0.219	4.462	0.00	20.978	15	0.138
15	0.140	0.027	0.001	0.087	0.194	5.112	0.00	15.316	14	0.357
14	0.137	0.027	0.001	0.083	0.190	5.025	0.00	14.096	13	0.367

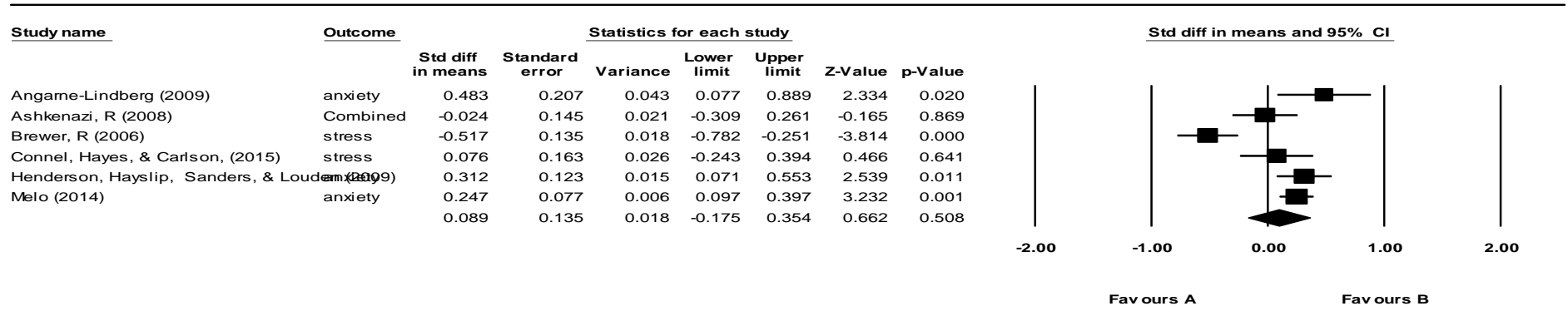
I-squared	Tau Squared	SE	Variance	Tau
23.736	0.004	0.006	0.00	0.061
28.498	0.004	0.006	0.00	0.066
8.591	0.001	0.004	0.00	0.032
7.774	0.001	0.004	0.00	0.029

Figure 4. Psychological Outcomes Data after Removal of Outlier Studies



Meta Analysis

Figure 5. Anxiety and Stress Outcomes Data



**Meta Analysis**

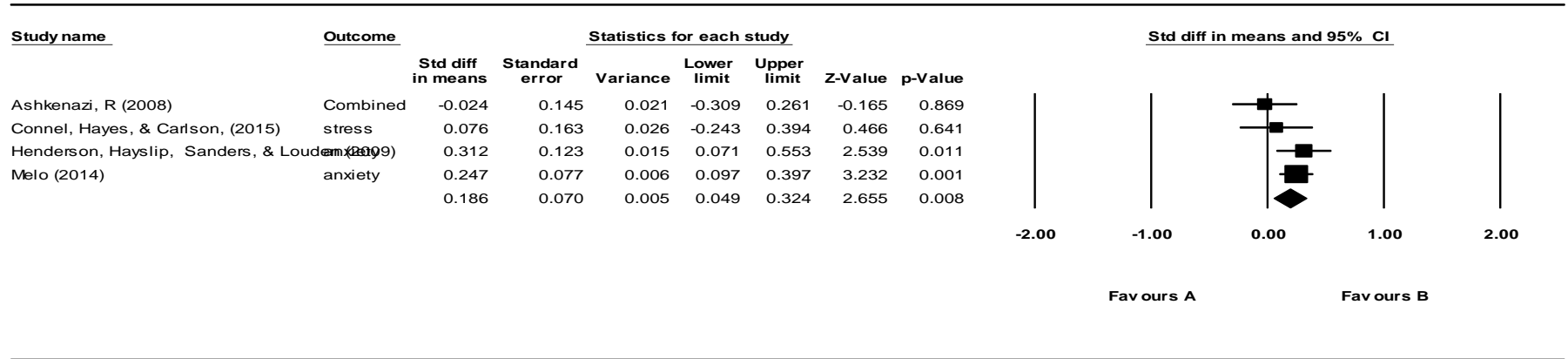
Table 5

*Anxiety and Stress Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
6	0.089	0.135	0.018	-0.175	0.354	0.662	0.508	31.440	5	0.00
5	0.213	0.071	0.005	0.073	0.352	2.987	0.003	5.919	4	0.205
4	0.186	0.070	0.005	0.049	0.324	2.655	0.008	4.182	3	0.243

I-squared	Tau Squared	SE	Variance	Tau
84.096	0.089	0.073	0.005	0.298
32.424	0.008	0.018	0.00	0.090
28.257	0.006	0.017	0.00	0.076

Figure 6. Anxiety and Stress Outcomes Data with Outliers Removed



**Meta Analysis**

Figure 7. Depression Outcomes Data

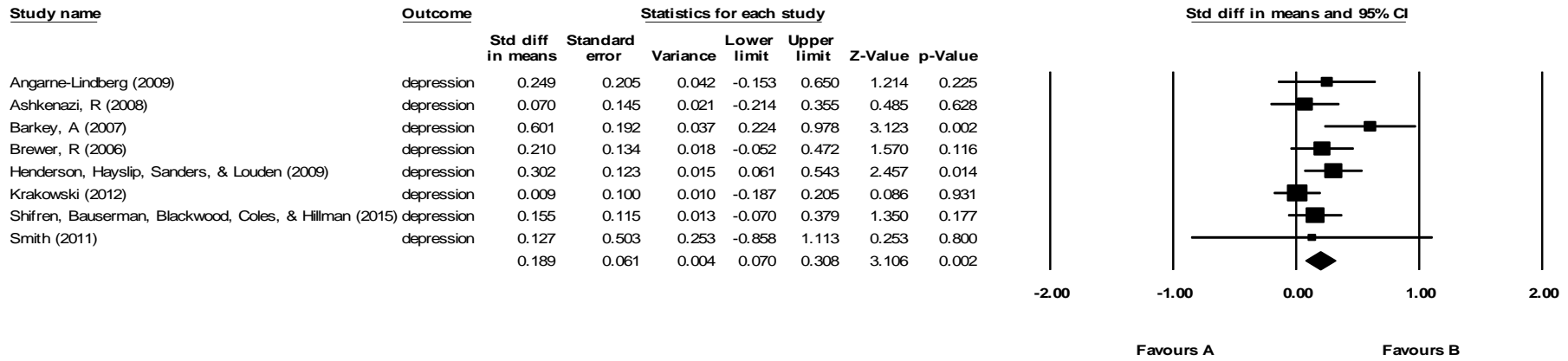


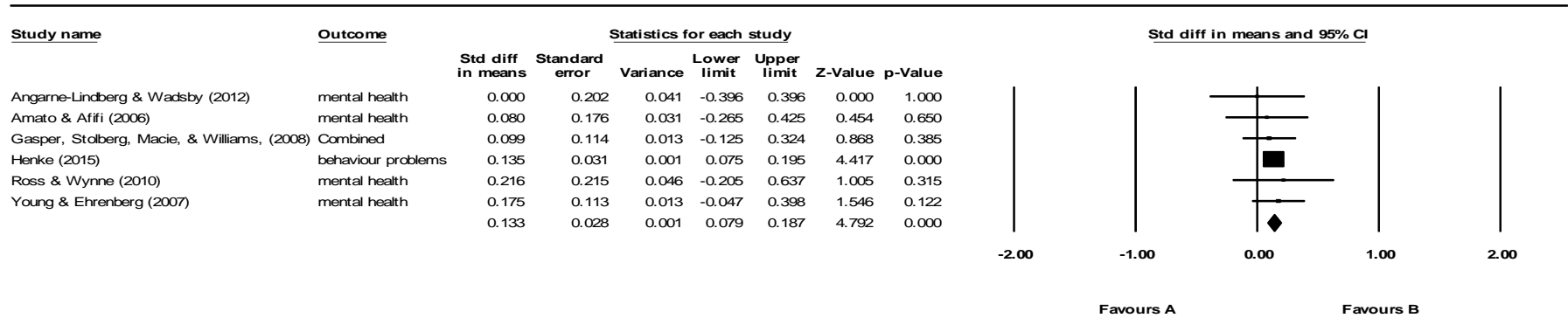
Table 6

*Depression Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
8	0.189	0.061	0.004	0.070	0.308	3.106	0.002	9.495	7	0.219

I-squared	Tau Squared	SE	Variance	Tau
26.274	0.007	0.015	0.000	0.087

Figure 8. Other Mental Health & Behavioural Outcomes Data



**Meta Analysis**



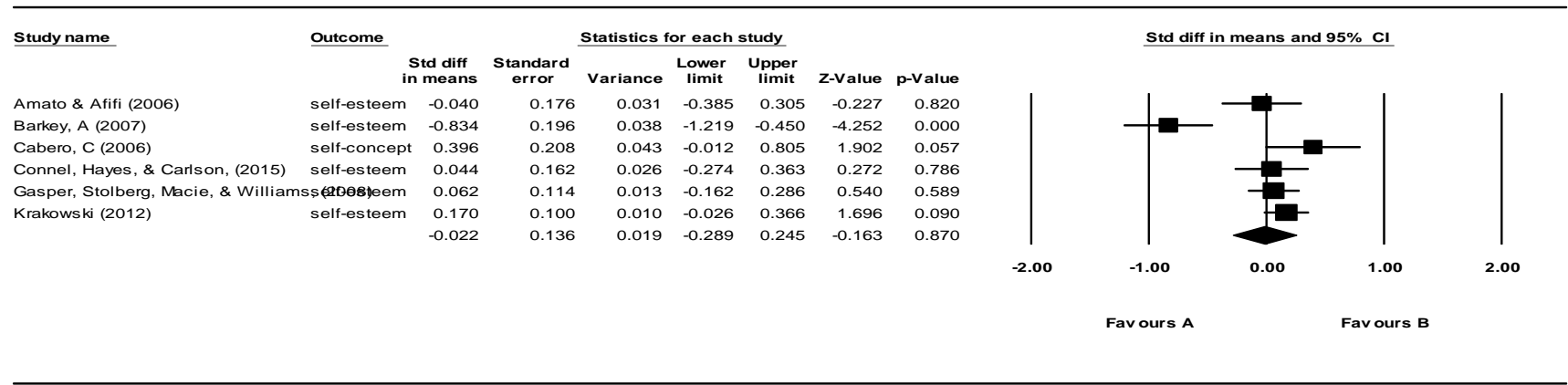
Table 7

*Other Mental Health & Behavioural Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
6	0.133	0.028	0.001	0.079	0.187	4.792	0.000	0.905	5	0.970
5	0.122	0.066	0.004	-0.006	0.251	1.867	0.062	0.874	4	0.928

I-squared	Tau Squared	SE	Variance	Tau
0.000	0.000	0.008	0.000	0.000
0.000	0.000	0.016	0.000	0.000

Figure 9. Self-esteem & Self-concept Outcomes Data



**Meta Analysis**

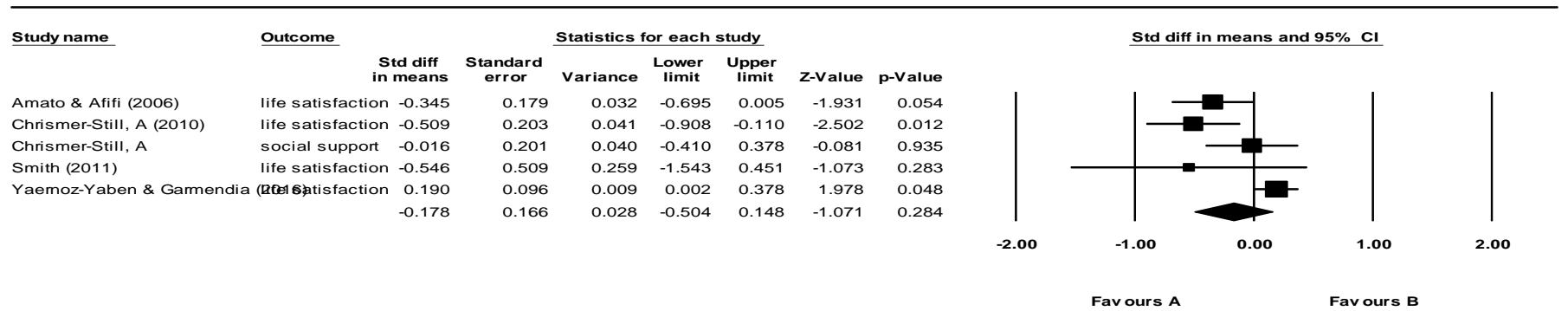
Table 8

*Self-esteem & Self-concept Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
6	-0.022	0.136	0.019	-0.289	0.245	-0.163	0.870	24.685	5	0.000

I-squared	Tau Squared	SE	Variance	Tau
79.745	0.086	0.074	0.0.005	0.293

Figure 10. Life Satisfaction & Social Support Outcomes Data



**Meta Analysis**

Table 9

*Life Satisfaction & Social Support Outcomes Test for Homogeneity Using Random Effects Model*

N	Effect Size	SE	Variance	Lower Limit	Upper Limit	Z	P	Q	df(Q)	P
5	-0.178	0.166	0.028	-0.504	0.148	-1.071	0.284	14.930	4	0.005

I-squared	Tau Squared	SE	Variance	Tau
73.208	0.091	0.099	0.010	0.302

Appendix A  
PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	i
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	ii
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	8
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	19
<b>METHODS</b>			
Protocols and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	N/A
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	108

Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	104
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	104
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	35/111
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	26
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	112
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	29/124
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	73
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I <sup>2</sup> ) for each meta-analysis.	73
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
<b>RESULTS</b>			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	111
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	112
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	73

Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	82
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	90
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	90
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	N/A





## Appendix B

### PICOS Criteria for Selecting Studies

The following criteria was used to select studies.

**Participants:** Young adults (at least one data point where participants were between ages 18-30) who experienced divorce in childhood (prior to age 16)

**Interventions:** Not applicable

**Comparisons:** For the systematic review, as it was exploratory in nature to capture the full experiences of YACOD, no comparison group was required. For the meta-analysis, the comparison group were young-adults (at least in their first year of university or age 18) who did not experience divorce in childhood.

**Outcomes:** Studies that reported either a psychological or academic outcome. The study reported one of the following types of psychological well-being: emotional well-being, behavioural outcomes, substance use, or the study reported one of the following measures of academic adjustment: college grades, GPA, subjective measures of academic adjustment or satisfaction.

Study Design: Studies that were qualitative or quantitative in nature and was an original piece of research. Studies published in the English language, between January 2006 and present date. The report is in press, a dissertation, conference material, in hard copy, or online. The record can be a longitudinal, cross-sectional or a mix-methods study. The study can look at moderating factors such as risk or protective factors and how they influence adult functioning in adult children of divorce

## Appendix C

### Systematic Review Codebook

Variable Name	Definition/Note	
Authors	Enter last name of the authors of the article	
Year	Record year of publication	
Title	Record title of the article	
Country	Record country where research was conducted	
Reference Type	Specify if the article is: a) Journal Article b) Dissertation	
Article Type	Specify if the article is: a) Original research: qualitative b) Original research: quantitative c) Original research: mixed methods	
Participants	1. Total Number	Note the total number of participants in the final sample
	2. Gender	Indicate the total number of female participants in the final sample
		Indicate the total number of male participants in the final sample
	3. Age	Indicate the mean age of participants in the final sample
		Indicate the mean age of female participants in the final sample
		Indicate the mean age of male participants in the final sample
	4. Level of Education	Indicate the mean level of education of the final sample
Research Type	Specify if the research is: a) Longitudinal b) Cross-sectional	
Research Measures	Specify the way(s) in which the researchers investigated the psychological/academic adjustment: a) Structured Interviews b) Unstructured Interviews c) Semi-structured Interviews d) Questionnaires (indicate which)	

		<p>e) Rating scale (ex. 5-point Likert Scale)</p> <p>f) Behavioural Observation</p> <p>g) Academic grade(s)/GPA</p>
Study Outcomes	1. Academic Outcomes	<p>Specify the type(s) of academic outcomes measured in the study:</p> <p>a) Academic achievement</p> <p>b) College adjustment</p>
	2. Psychological Outcomes	<p>Specify the type(s) of psychological outcomes measured in the study:</p> <p>a) Alcohol consumption</p> <p>b) Drug use</p> <p>c) Coping</p> <p>d) Emotional adjustment</p> <p>e) Externalizing difficulties</p> <p>f) General adjustment</p> <p>g) Internalizing difficulties</p> <p>h) Life satisfaction</p> <p>i) Negative affect</p> <p>j) Positive mental health</p> <p>k) Psychiatric diagnosis</p> <p>l) Psychiatric symptomology</p> <p>m) Resiliency</p> <p>n) Risky sexual behaviour</p> <p>o) Self-esteem</p> <p>p) Stress</p> <p>q) Subjective well-being</p>
Predictor Variable(s)		<p>Indicate the type(s) of predictor variables that were used in the study (e.g., parental divorce, parental conflict, custody arrangements).</p>
Moderator Variable(s)		<p>Indicate the type(s) of moderator variables that were used in the study (e.g., parental conflict, social support)</p>
Quality Assessment of Article		<p>Assess the quality of the article by assigning a number from 1 to 5, according to the following scale:</p> <p>1. Research design that:</p> <ul style="list-style-type: none"> <li>– Fails to provide a thorough rationale for the study</li> <li>– Fails to report key information about sampling and participants</li> <li>– Does not operationally define variables of interest</li> <li>– Uses non-standardized, subjective measures of psychological/academic</li> </ul>

	<p>outcomes and measures are inappropriate for addressing the research question</p> <ul style="list-style-type: none"> <li>- Uses inappropriate statistical analysis to address research question</li> <li>- Does not control for exogenous variables</li> </ul> <p>5. Research design that:</p> <ul style="list-style-type: none"> <li>- Provides a clear and thorough rationale for the study</li> <li>- Describes participant and sampling procedure thoroughly</li> <li>- Has a clear description of operational definitions</li> <li>- Uses standardized, non-subjective measures of psychological/academic outcomes and measures are appropriate for addressing the research question</li> <li>- Uses appropriate statistical analysis to address the research question</li> <li>- Has good control over exogenous variables</li> </ul>
Main Findings	Indicate the major findings of the research article

## Appendix D

### PRISMA Model Flow Diagram

