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Effective Parental Cooperation and Communication as Protective Factors
for Adult Offspring of Divorce

By:
Damla Til Ogut

A doctoral research project submitted to the School of Psychology at
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in
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We the undersigned committee hereby approve the attached thesis, “Effective Parental Cooperation and Communication as Protective Factors for Adult Offspring of Divorce” by Damla Til Ogut.

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Abstract

Title: Effective Parental Cooperation and Communication as Protective Factors for Adult Offspring of Divorce

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Research and society have focused attention on how divorce affects family dynamics for decades. The clinical literature points to significant discrepancies in psychological variables between offspring from divorced versus intact families, suggesting that divorce contributes to negative psychosocial outcomes. Accordingly, investigations have revealed the adverse effects of co-parental conflict and antagonistic communication on divorce offspring's psychological outcomes. Although parental cooperation and communication are suggested to serve as protective factors, more research is needed, given the current literature's reliance on measures of psychopathology, yet making conclusions on psychological wellness. Among 244 college students, results indicated that divorce offspring reported lower levels of *parental cooperation* and *communication*. Effective parental communication appeared to be associated with higher levels of wellbeing (*flourishing, quality of life)* and *self-esteem,* regardless of family structure. Similarly, high parental cooperation appeared to be associated with higher wellbeing (*mental and physical, and productivity)* and *self-esteem,* regardless of family structure. Participants from divorced families reported higher levels of *productivity wellbeing* in adulthood if their parents communicated effectively. Among parents who could not effectively communicate, offspring of divorce reported greater *quality of life* suggesting divorce may have been beneficial to the family. It can be speculated that the divorce improved offspring's quality of life in instances where there was significant preexisting turmoil and conflict in the family

while the parents were together. Important contributions to this study lie in the validation that negative effects thought to be associated solely with divorce, may not have been so clear cut. More over-arching factors related to how parents communicate and cooperate with one another in the aftermath of the separation, may have significant mediating contributions. It is equally noteworthy, that the current study was able to examine the offspring's effects within the context of psychological wellness, rather than simply focusing on observable symptoms of psychopathology, as has been traditionally done in the literature. From a clinical perspective, these findings also serve to inform a strength-based model for planning interventions that focus on fostering positive relationships between parents among divorced families for the optimal psychological wellbeing of their offspring.

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constant cooperation and never-ending commitment to my welfare were the greatest gift anyone has even given me and inspired me to dedicate my career to support others that need help through difficult times.

INTRODUCTION

Divorce and Its Aftermath

Within the second half of the 20th century, national divorce rates in the United States have drastically increased with estimates of approximately half of all marriages ending in dissolution (U.S. Census Bureau, 2004, as cited in Weaver & Schofield, 2015). More importantly, such initial marital failures serve as additional risk factors for even higher rates of divorce for subsequent second marriages (Amato & Sobolewski, 2001). Given the relatively high national prevalence rates, risk factors associated with marital conflict and dissolution, divorce-related processes, and consequences for divorcing couple and other family members have spurred much research interest. As a result, divorce has seemingly been one of the social issues, which has been stigmatized by media, the public, as well as mental health professionals and portrayed as a life event resulting in “seriously flawed structures and environments” (Kelly, 2000, p.963).

The years following divorce consist of a series of life transitions (Ahrons, 2006). Marital dissolution and divorce are typically followed by a myriad of negotiations and rearrangements regarding visitation schedules, financial planning, reestablishment of family roles and rules along with possible new relationships and remarriages, which significantly impact the divorcing couple’s offspring, especially when negative. Most children also experience residential changes following the parental divorce along with change of schools, and disruptions in the social domain

(Wallerstein & Lewis, 2004). To further complicate matters, a majority of children of divorce have at least one parent remarry in the subsequent years, which seems to set the stage for another set of life transitions for the whole family (Ahrons, 2006; Amato & Sobolewski, 2001), often resulting in added conflict with the introduction of additional family members who may have opposing perspectives. However, healthy child development requires stability and consistent structure, in order to lay the foundation for healthy adult psychological functioning and psychological wellbeing (Najman et al., 1997). Subsequently, school performance of children tends to deteriorate as the number of family transitions increases (Kurdek, Fine, & Sinclair, 1995; Martinez & Forgatch 2002).

A host of contributing factors associated with the negative impact on the offspring appears to stem from witnessing and being on the receiving end of the divorcing couple's negative conflictual relationship, which compromises effective parenting, if the divorce happens early, that is, during the offspring's childhood. These include less effective parenting from the custodial parent, a decrease in involvement with the noncustodial parent, exposure to continuing parental discord, and a decline in economic resources, which add additional stressors to the lives of the broken family (Amoto, 2000). Thus, the typical disruptive changes following a divorce, such as economic hardship and residential changes, tend to hamper the ability to create a solid familial structure that supports the healthy psychological development and resilience in the children's development, and require significant

parental cooperation and communication to successfully navigate homework, study schedules, and extra-curricular activities that subsequently impact children's competencies in not only the academic domain, but also their peers relationships as well as their psychological wellbeing. Hence, healthy parental coordination and communication serve to provide the stable and consistent structure that is required for healthy emotional and psychological development in children (Lamela, Figueiredo, Bastos, & Feinberg, 2016); and subsequently, becomes the foundational platform for psychologically healthy and well-formed adults. Yet often in circumstances of divorce, such healthy parental cooperation and communication are difficult to achieve with parents who are so at odds, that it leads to marital dissolution.

Long Lasting Negative Effects of Divorce from Childhood Through Adulthood on Offspring's Psychological Wellbeing and Self-Esteem

One might speculate that children would recover from stress related to divorce experienced at an early age in the family of origin, as they mature into independent adults and launch. However, research has documented the existence of a link between family structure (divorced vs. intact) and negative emotional and behavioral outcomes for offspring of divorce, and provided testimony of the enduring difficulties experienced by the offspring of divorce, which persist over

time into adolescence and later adulthood. Most of the supporting evidence comes from longitudinal studies and meta-analyses focusing on the aftermath of divorce.

Zill, Morrison, and Coiro (1993) used longitudinal data from The National Survey of Children to investigate whether the adverse effects of parental divorce persisted into young adulthood from 12 to 22 years following the marital dissolution. They analyzed data collected in all three waves of the study, consisting of 1,147 participants from divorced and intact families. The researchers reported that, even when demographic and socioeconomic differences were controlled, young adults (aged 18 to 22 years) who experienced parental divorce were more likely to report depressive symptomatology, and to have dropped out from high school compared to young adults from intact families. Also, both adolescent (aged 12 to 16 years) and young adult (aged 18 to 22 years) participants were more likely to exhibit problem behaviors compared to their peers from intact families. They also reported that for most of the measures they used, problems experienced by the participants were evident not only in adolescence, but also in adulthood. More concretely, their research data point to discrepancy between psychological wellbeing of offspring of divorce and their counterparts, which cannot be attributed to demographic and socioeconomic differences, speculating about a number of divorce-related factors jeopardizing the psychological wellbeing of offspring of divorce of all ages.

Amato and Sobolewski's (2001) longitudinal data over two generations also showed that offspring of divorce, regardless of being male or female, reported lower levels of self-esteem, higher levels of psychological distress symptoms, and lower satisfaction with various domains of their lives, such as employment, home, friends, neighborhood, and overall happiness with their lives, as compared to their intact family counterparts. In the same vein, the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development examined trajectories of child problem behaviors between ages of 5 and 15 (Weaver & Schofield, 2015). Researchers recruited families from hospitals across the United States, shortly after their children were born. The study, interested in comparing the level of internalizing and externalizing behavioral problems among children and adolescents from divorced and intact families, reported findings that children of divorce exhibited significantly higher levels of both externalizing and internalizing behavioral problems that persisted into adolescence (age 15), as reported by their mothers. Such behavioral difficulties were also evident in the sixth grade based on their teachers' reports. These findings that are based on data from multiple informants (teachers and parents), point to the long lasting and persistent negative effects of divorce-related factors, and seem pivotal in refuting potential beliefs that the effects of divorce are only short term.

The longitudinal *Binuclear Family Study* (Ahrons, 2006), one of the studies that investigated the longstanding implications of divorce, contributed to the

existing literature by conducting in-depth interviews with 173 adult participants 20 years following their parents' divorce. The findings suggested that the quality of the parents' relationship impacts the binuclear family, and these effects persist even 20 years after the divorce. Specifically, children describing their parents' relationship as cooperative also reported having better relationships with their parents as well as their other family members including grandparents, siblings, and stepparents (Ahrons, 2006). These findings highlighted the continuing and significant effect of the inter-parental relationship on the offspring's relationships with other family members, even decades after the divorce.

Amato and Sobolewski (2001) used 17-year longitudinal data (consisted of 655 participants) to suggest that experiencing parental divorce while growing up is associated with higher levels of distress and general unhappiness as well as lower levels of self-esteem in adulthood. Some other studies confirmed this statement by pointing to connections between family structure (divorced/separated vs. intact) and self-esteem among young and adolescent children of divorce. Poussin and Martin-Lebrun (2002) collected data from 3,098 French adolescents between the ages of 11 and 13 who filled out questionnaires describing their family situation and completed a psychological test of self-esteem. The results indicated that adolescents who experienced the separation of their parents reported a poorer self-image compared to their peers from intact families. On the other hand, Goodman and Pickens (2001) reported some contradictory findings. They studied 296

undergraduate students with the intention of investigating the discrepancy in terms of self-esteem among adults from divorced and intact families, using a series of current and retrospective measures of self-esteem, hypothesizing that adult offspring of divorce would report relatively lower current (at the time of the data collection) and retrospective (at the time of divorce) self-esteem. Findings showed that adult children of divorce had lower levels of retrospective self-esteem compared to their peers from intact families. However, based on the results, there was no significant discrepancy between current self-esteem scores of the two groups. As such, Goodman and Pickens (2001) speculated that there may have been improvements in self-esteem among individuals from divorced families, such that they were no different than their peers later in life. Goodman and Pickens (2001) referred to this phenomenon as "recovery" among the offspring of divorce, suggestive of only temporary effects of divorce.

Additionally, researchers have found empirical support for the notion that experiencing parental divorce tends to have an adverse impact on offspring's own marriages in adulthood (Whitton & Rhoades, 2008; Amato & DeBoer, 2001). Whitton and Rhoades (2008) assessed relationship commitment and relationship confidence of 265 engaged couples prior to their first marriage, and found that parental divorce was associated with lower levels of relationship commitment and confidence for females, but not males. These findings suggested that women coming from divorced families were inclined to have lower levels commitment to

and confidence in their own marriages, which might put their own marriages at greater risk for divorce. However, such associations were not found among the men.

Braithwaite, Doxey, Dowdle, & Fincham (2016) also examined the effects of parental conflict, parental divorce, and the interaction between the two, on adult romantic relationships, particularly with respect to relationship commitment, satisfaction, and stability among 353 college students. The results indicated that participants who experienced parental divorce had more favorable attitudes toward divorce, poorer conflict management ability, along with a more insecure attachment style. It was also shown that being exposed to parental conflict decreased young adult's relationship satisfaction indirectly, via negatively impacting the individual's level of relationship commitment. Interestingly, for individuals whose parents had a divorce, there was no association between parental conflict and relationship variables, namely relationship satisfaction, relationship commitment and attitudes toward divorce. However, participants whose parents did not divorce despite high levels of conflict reported lower levels of relationship commitment and in turn lower levels of relationship satisfaction when asked about their own relationships. No such association was found among participants whose parents had a divorce. These findings potentially suggest that it is the witnessing of conflict between one's parents that may be at the heart of the negative outcomes for offspring of divorce that have been reported for years as negatively impacting their own adult

marriages. It is conceivable that the lack of association with negative marital outcomes seen among the participants from divorced families was due to these individuals being less exposed to the conflict of their parents, who were not together. This level of exposure to parental conflict was in direct contrast to the experience of offspring from intact families who had a more proximal window into the conflict of their parents that they resided with in the same home. As such, one could take away that it is not necessarily the divorce that has deleterious effects on the offspring, but the offspring's witnessing, experiencing, and perceptions of their parents' conflict that can have negative long-lasting effects into the offspring's adulthood. In other words, ending a conflictual marital relationship may in fact buffer offspring from the weakening of marital commitment and satisfaction in their own adult romantic relationships.

To conclude, the aforementioned studies have been alluded to the offspring of divorce reporting lower levels of psychological wellbeing compared to their peers from intact families, even years after the parental divorce. However, other research serves to clarify that such findings may be mediated by the offspring's witnessing of parental conflict, given the discrepancy between offspring from intact versus divorced families, in which for the latter there was no association between parental conflict and marital attitudes, relationship commitment, and satisfaction. However, such counter-intuitive findings still leave questions regarding the underlying factors that may illuminate the preponderance of research that suggest

poor psychological outcomes for offspring of divorce. That is, while some divorce-related factors may put offspring at greater risk for having negative outcomes persisting into adolescence and adulthood, divorce by itself, may not necessarily be inherently detrimental for offspring.

New Trend in Examining Divorce-related Factors

With few exceptions, studies comparing outcomes in divorced and intact families inherently failed to go deeper to investigate the reasons of the duality in both negative and positive long-term outcomes with respect to psychological wellbeing and later adult romantic relationships. However, some studies (Cherlin, Chase-Lansdale, & McRae, 1998; Sun & Li, 2001) examining the developmental trajectories of children developing into adolescence and adulthood, provide evidence that divorce may not be the key predictor of the negative child behavioral outcomes. Instead, there is evidence that suggests that these speculated negative outcomes associated with divorce preceded the marital dissolution. Such findings, therefore, allude to a premorbid dysfunctional condition in the family that potentially resulted not only the negative child behavioral outcomes but the divorce as well.

Cherlin et al., (1998) followed a British cohort of children from birth to the age of 33 and found that individuals whose parents divorced along the way, compared to their intact peers, actually started to exhibit more internalizing

(described as overcontrolled behaviors such as anxiety or depression) and externalizing problems (described as undercontrolled behaviors such as aggression or disobedience) even before the marital dissolution. Accordingly, Sun & Li (2001), using a longitudinal data set from a nationally representative sample, supported the conclusion that these negative outcomes preceded the divorce. Their findings indicated that some of these negative outcomes, such as lower academic performance among offspring of divorce, were also demonstrated prior to the onset of parental divorce. Both these studies highlight a temporal association with the negative psychological outcomes that potentially illuminate other underlying etiological factors that may contribute to the occasion of divorce and potentiate these negative psychological outcomes, in much the same way they may lead to divorce. Thus again, supporting the notion that the negative picture observed after the divorce may not stem from the divorce itself, but may actually reflect the long-term results of some preexisting risk factors, which lead to marital dissolution itself, as well as psychological difficulties experienced by offspring of divorce. In this way, studies such as these were particularly valuable in bringing a new perspective by clarifying what appeared to be conflicting findings regarding divorce.

Accordingly, the game-changing findings from longitudinal studies opened up a new avenue of research, and the stigmatization of divorce gave way to the investigation of the complex mechanisms underlying psychological difficulties

experienced by individuals coming from divorced families (O 'connor, Caspi, Defries, & Plomin, 2000; Lansford, 2009). Newer research thereby focused on identifying the risk factors associated with divorce, such as the adverse family environment and negative interactions within the dissolved family, even in the pre-divorce period.

Parental Conflict as a Divorce-related Risk Factor

Thus, divorce, as a complex and ongoing process, begins long before parents physically separate, and continue even after the legal dissolution of the marriage (Amato & Sobolewski, 2001). High levels of conflict and discord among parents increases the likelihood of divorce (Amato and Sobolewski, 2001) and offspring of divorced couples report being exposed to higher levels of co-parental conflict and antagonistic communication compared to their peers from intact families (Shimkowski & Schrodt, 2012). However, divorce does not necessarily put the lid on parental conflict as the majority of individuals who experienced parental divorce reported that family tension was not relieved following the divorce of their parents (Laumann-Billings & Emery, 2000).

Numerous studies (e.g. Schick, 2002; Richardson & McCabe, 2001) used child, adolescent, and adult samples to examine the effects of parental conflict on the mental health and self-esteem of their offspring. Schick (2002) collected data from offspring of divorce in the 9–13 age range (n=66), comparing them to their

intact family counterparts (n=175). Schick (2002) found a significant discrepancy between offspring from divorced and intact families, which couldn't be explained by the divorce itself. Instead, their analyses pointed to the perceived destructiveness of the parental conflict as a notable factor that negatively influenced offspring's self-esteem as well as internalizing and externalizing behaviors. Richardson & McCabe (2001) were also interested in investigating the effects of parental divorce and parental conflict during the participants' adolescence on young adult adjustment. Accordingly, 167 undergraduate students were recruited (146 females and 21 males) and self-report data were collected on several domains of psychosocial adjustment including *life satisfaction*, *depression, anxiety, stress, opposite-sex relations, same-sex relations,* and *global self-concept*. The researchers found that young adult offspring of divorce reported significantly lower levels of life satisfaction and higher levels of anxiety compared to their peers from intact families. The analyses were also suggestive of a negative correlation between parental conflict and global self-concept and life satisfaction, and a positive correlation between parental conflict and depression, anxiety, and stress. Hence, the results confirmed the already established link between divorce and psychological outcomes, but more importantly, they pointed to parental conflict as a crucial factor that was associated with global self-concept, life satisfaction as well as depression, anxiety, and stress.

Turner and Kopiec's (2006) study used a sample of 649 college students, aged 18 through 29, to investigate the relationship between exposure to parental conflict and psychological outcomes including self-esteem and psychological distress. Their findings indicated that exposure to conflict between parents while growing up was associated with significantly lower levels of self-esteem and higher levels of psychological distress in young adulthood. Also, they suggested that individuals who experienced chronic parental conflict were more likely to experience major depressive disorders and alcohol abuse/dependency in adulthood. The researchers also noted that the associations existed among participants even when the experience of parental divorce, parent-to-parent violence and parent-to-child assault were controlled. Hence, being exposed to parental conflict in the family of origin while growing up was shown to be a salient risk factor impacting self-esteem and psychological wellbeing of adults regardless of the experience of divorce.

Semi-structured interviews helped the researchers obtain deeper understanding over adult offspring's perception and interpretation of parental divorce and related experiences. Drawing data from the longitudinal Binuclear Family Study, researchers interviewed 173 adult offspring of divorce 20 years after their parents' divorce to shed light on the long-term implications of divorce (Ahrons, 2006). Data were collected through in-depth telephone interviews with each person in the family. The interviews were semi-structured in nature, they were

tape-recorded, and subsequently transcribed to be coded by 2 clinical research assistants. Based on self-report data of adult offspring of divorce, having parents who remained in conflict was typically very distressful, as offspring felt they had to "maneuver between parents" (p.59). Occasions including birthday parties, graduation ceremonies, and weddings were reported as difficult dilemmas for the children to navigate (Ahrons, 2006). Considering the stressful nature of exposure to parental conflict, divorce itself does not appear to be inherently detrimental for offspring. In fact, ending a conflictual marital relationship might even potentially serve as a healing buffer for offspring, from the potential negative outcomes after witnessing parents being at odds in such a proximal nature as the home (Braithwaite et al., 2016).

Thus, it would seem safe to conclude that conflictual interactions and communication patterns between the parents, is one of the most salient risk factors associated with the negative psychological outcomes (including global self-concept, self-esteem, life satisfaction, and psychological distress) in both young and adult offspring of divorce. And while these are progressive steps in understanding the complex nature of the family dynamic that leads to negative psychological outcomes in offspring of divorce, the literature fails to unpack the underlying factors that may serve as buffers to the negative psychological outcomes. Thus, it seems that further studies are warranted that focus on identifying the underlying protective factors that would act as buffers against the

destructive effects of parental conflict on the psychological wellbeing and self-esteem of individuals, such as positive co-parenting skills and healthy parental communication patterns.

Definition and Subcategories of Co-parenting

In the family systems theory, there are a number of subsystems in each family (e.g. parent-parent, parent-child, siblings subsystems, etc.) and healthy boundaries between these subsystems help the system function well (Minuchin, 1974). Accordingly, a family system would not function effectively unless co-parents are the co-managers of the whole organization, and parent-parent subsystem have clear boundaries separating itself from others. At this point, it seems critical to note that with the newly emerging family forms, any set of individuals who "socialize and nurture" a child can be considered as co-parents, especially as one includes blended families with additional step-parents (McHale & Irace, 2001, p.17).

The notion of co-parenting is conceptually different from the notion of parenting as parenting focuses on "*vertical exchanges*" (exchanges between the caregiver and the child) while co-parenting refers to "*horizontal exchanges*" (exchanges between caregivers) (Lamela & Figueiredo, 2016, p.3). Conceptually, co-parenting refers to the existence of "two parental systems that function cooperatively, rather than being rigidly independent of each other" (Stolberg & Macie, 2003, p.92), focusing on parenting-related issues, and excluding the

romantic, sexual, emotional, financial, and legal aspects of the relationship between parents, that do not relate to childrearing (Feinberg, 2003).

Families go through a wide range of phases, requiring the family to adapt by identifying new family roles and drawing new lines of differentiation. Some families would make adjustments as an attempt to adapt to the new situation and changing needs of the members while others may struggle to do so at times of stress (Minuchin, 1974). Divorce dissolves the marriage between two adults, but contrary to common belief, it “does not dissolve the family” (Lamela & Figueiredo, 2016, p.4). This is especially true for families with children since the divorced couple often continues to interact and communicate on their children, as they continue to be parents even after the dissolution of the marital relationship. Therefore, divorce and separation could obviously be considered as stressful transitions, during which the family system would require several changes and adjustments, including establishing a working co-parental relationship while the marital relationship dissolves.

Maccoby, Depner, and Mnookin (1990, p.146) contributed to the existing literature by identifying categories of co-parenting. They used a sample of divorced parents (n= 656 families), asked a number of questions about their co-parenting practices, and analyzed the responses, which resulted in the emergence of four subcategories of co-parenting patterns following divorce (Figure 1).

		Discord	
		Low	**High**
Cooperative Communication	**Low**	Disengaged (n=186)	Conflicted (n=224)
	High	Cooperative (n=171)	Mixed (n=75)

Figure 1. Four subcategories of co-parenting patterns following divorce (Maccoby et al., 1990, p.146)

The first cluster (n=171) was labeled as "*cooperative*" referring to divorced parents prioritizing their parenting functions over their interpersonal problems and conflict by presenting a united front to children. The second cluster (n=224), labeled as "*conflicted*", referred to parents who exhibit low levels of cooperation and high levels of conflict, letting their interpersonal problems creep into their parenting practices and behaviors. The third cluster (n=186) was "*disengaged*" parenting characterized by no communication or coordination efforts as parents actively ignore each other as much as possible. The last cluster was named "*mixed*" (n=75) and parents in this category were reported to "discuss matters related to their children's welfare and attempt to coordinate schedules, but at the same time they maintain relatively high degrees of inter-parental conflict" (p. 147). The high level of conflict experienced by the "mixed" and "conflicted" groups was characterized by frequent arguments between parents, threats to cut off visitations, logistical challenges regarding visitation, and undermining each other's parenting.

These efforts of identifying co-parenting categories highlighted that co-parenting, as a concept, does not refer to the positive end of the continuum, but it is the name of the continuum itself (Figure 2 and Figure 3) since all co-parents, even the ones who are experiencing a very high level of conflict, have a co-parenting style. Therefore, it is important to identify specific aspects of the co-parenting relationship, such as co-parental communication and cooperation, and investigate how they shape the offspring's experiences.

Figure 2. Parental cooperation and communication and parental conflict are not two ends of the same continuum.

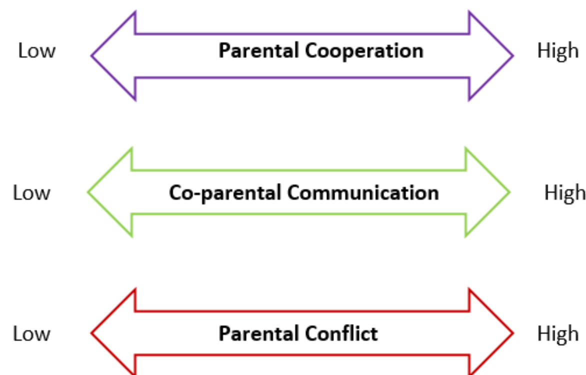

Figure 3. Parental cooperation, co-parental communication, and parental conflict are separate continuums.

McHale and Irace (2001) suggested that co-parenting, as a "joint enterprise," functions best when co-parents appreciate the unique needs and feelings of their child, cooperate to create a nurturing environment characterized by mutual understanding, communication and coordination, and make decisions together despite their different perspectives (p. 16). Pruett, Williams, Insabella, and Little (2003) examined the association between relations among family dynamics and the adjustment of 0-6-year-old children experiencing parental separation. The findings, which were baseline data of a larger longitudinal study, suggested that parental conflict was associated with parents viewing each other less positively, and having less paternal involvement following the dissolution of the marriage. Hence, it may be harder for the joint enterprise to functions effectively in the post-divorce period, as divorcing couples are inclined to be vulnerable to experiencing parenting difficulties following the dissolution of the marital relationship that impact the quality of their communication (Macie & Stolberg, 2003).

Effective Co-parenting after Divorce as a Protective Factor

Risk factors are defined as factors "that increase risk or susceptibility" (Merriam-Webster Dictionary) while protective factors can be viewed as "buffering or protecting individuals from the effects of negative influences" (Feinberg, 2003, p.14). The divorce literature seems to suggest that divorce is not inherently destructive as once believed, although the negative aspects of co-

parenting, such as parental conflict, are salient risk factors associated with lower levels of psychological wellbeing (Ahrons, 2006; Turner & Kopiec, 2006; Schick, 2002; Richardson & McCabe, 2001). Therefore, one may extrapolate that the positive aspects of co-parenting including effective co-parental communication and cooperation may potentially buffer offspring in the presence of life stresses, such as divorce. Studies focusing on identifying divorce-related risk factors (e.g. Turner & Kopiec, 2006; Schick, 2002; Richardson & McCabe, 2001) seem to outnumber studies that aim to determine protective factors to buffer the psychological wellbeing of offspring in the post-divorce environment. Moreover, most of the already existing studies investigating the protective family factors in the post-divorce period use child and adolescent participants (e.g. Lamela et al., 2016; Lau, 2007; Camara & Resnick, 1989; Kelly & Emery, 2003), with a smaller number of studies interested in the long-term effects of those protective factors (e.g. Ahrons, 2006; Braithwaite et al., 2016).

Family therapy literature have documented the existence of a clear link between the quality of co-parenting and short-term and long-term adjustment of children in both post-divorce and intact family systems (McHale & Irace, 2011). Camara and Resnick (1989) found high levels of cooperation in the childrearing domain, rather than conflict in the marital relationship, to be linked to parental warmth and commitment along with positive child outcomes including self-esteem. The longitudinal Binuclear Family Study is one of few studies investigating the

long-term effects of co-parenting relationship on the psychological wellbeing of the divorcing couple's offspring, with results indicating that participants whose parents had a cooperative co-parenting relationship reported continuing their parent-child relationships with both parents, maintaining "their sense of biological family," while having better relationships with other family members even 20 years after the divorce (Ahrons, 2006, p.64). Ahrons (2006) concluded that "the ability of divorced parents to establish a supportive, low-conflict parental unit reverberates throughout the family even some 20 years later" (p. 60).

These findings shed light on why it would be erroneous to generally condemn divorce per se, rather than divorce-related risk factors (i.e. parental conflict). Accordingly, research in a more proactive way should build on already established literature that highlights the negative and dysfunctional nature of the divorce family, to instead ameliorate these negative effects through more focused investigations of protective factors, such as effective co-parenting and healthy parental communication. It seems crucial to note that divorce does not necessarily result in less exposure to parental conflict since parents might continue to have a conflictual relationship even after the divorce (Maccoby et al., 1990; Laumann-Billings & Emery, 2000). In other words, most individuals from divorced families are being exposed to high levels of co-parental conflict and lack of effective communication in the pre-divorce family environment, during the divorce, and in the aftermath of divorce.

The literature has shown that even though individuals experiencing parental divorce are not doomed to suffer damage, they are still at higher risk of developing a broad array of psychological problems that in some cases persist over time and continue affecting their psychological wellbeing in adulthood. Considering the severity of the situation, only when clinicians and researchers understand how divorce-related mechanisms are impacting individuals' psychological wellbeing, can they offer effective intervention and guidance on buffering both young and adult children of divorce from the potentially detrimental effects of marital dissolution.

As such, interventions should be focused on identifying the key functional skills to good healthy parenting, especially in the context of divorce, which best serves raising a healthy child with good positive psychological outcomes, for which the literature yet again seems to focus less on. Instead the tendency is to focus more on psychopathology or the absence of pathology, rather than the presence of core healthy psychological wellbeing, as indicated by good ego strength, healthy self-concept, self-mastery, and positive self-esteem.

Transforming Psychological Wellbeing Constructs from the Absence of Psychopathology to the presence of Positive Psychological Health and Wellness

Divorce literature seems to have mostly relied on measures assessing behavioral problems (e.g. Zill et al., 1993; Schofield & Weaver, 2015; Cherlin et

al., 1998; Schick, 2002), psychological disturbance and symptomatology associated with anxiety (e.g. Richardson & McCabe, 2001), depression (e.g. Zill et al., 1993; Richardson & McCabe, 2001; Turner & Kopiec, 2006), and alcohol abuse (e.g. Turner & Kopiec, 2006). Such studies have provided the framework for making conclusions regarding participants' psychological wellbeing. However, it is important to clarify that although related, the absence of psychopathology does not necessarily equate as a complete and accurate measurement of the positive construct of the presence of psychological wellbeing (Ryff, 1995). Additionally, Laumann-Billing and Emery (2000) go further to illuminate that studies that have predominantly used clinical cutoff scores on psychopathology measures, potentially obscure the accuracy of detecting the psychologically healthy population, because such methodologies include participants who may indeed demonstrate some marginal subclinical levels of pathological symptomatology. Accordingly, defining psychological wellbeing as the lack of psychological symptoms/distress, inherently leads to neglecting a group of individuals who do not experience any psychological symptomatology, yet have not achieved positive psychological wellbeing either (Ryff, 1995).

Further, Laumann-Billing and Emery's (2000) data consisting of adolescents and young adults (between the ages of 12 and 27) point to the prevalence of distress regarding parental divorce in the absence of psychological disturbance. The majority of distressed participants' scores were within normal

limits on both the Externalizing and Internalizing scales of Youth Self-Report (YSR; for participants ages 11 to 18; Achenbach, 1999), the Young Adult Self-Report (YASR; for participants ages 18 to 26; Achenbach, 1999) and the Beck Depression Inventory. On separate indicators of psychopathology and distress, Laumann-Billing and Emery (2000) reported that young adults from divorced families reported higher levels of distress without reporting more symptoms of depression or anxiety. Laumann-Billing and Emery (2000) went on to add that the literature examining group differences between divorced and intact families has been skewed by researchers' overwhelming reliance on objective measures of maladjustment (such as behavioral checklist scores, school dropout rates, etc.), which is typically designed to measure behavioral problems and maladjustment, rather than relying on measures that specifically assess the positive construct of the presence of psychological wellbeing. "*The absence of an observable behavior disorder is not the same as the absence of more subtle effects,*" nor the presence of psychological wellbeing/health, for which the latter two would represent two distinct groups that vary in gradient fashion for both the presence of psychological wellbeing/health and psychopathology (p.671). That is, those with the presence of psychological wellness in the absence of any symptomatology, as well as those with the absence of psychological wellness in the presence of some distress or psychological symptomatology that does not reach clinical cutoffs. Where previous research may have erred is grouping them together as participants not reaching

clinical cutoffs. Thus, relying solely on measures of maladjustment would potentially result in losing sight of psychological distress, which does not reach the cut-off score of the measures, or lack of psychological wellness despite the absence of distinct symptomatology.

Hence, despite being very valuable and informative, divorce literature would have been strengthened in its suppositions and conclusions regarding the late effects of psychological wellbeing as a result of divorce, if studies had included indexes and assessment tools measuring psychological wellbeing of offspring of divorce, rather than relying primarily on maladjustment and psychological symptomatology. In fact, to address the effects of divorce-related processes on the psychological wellbeing of adult offspring, one should take the breadth of psychological wellness into consideration rather than focusing on observable symptoms of psychological disorders (Laumann-Billing & Emery, 2000).

Summary and Study Rationale

Consequentially, substantial research over the past few decades concluded that divorce was a major and potentially stressful life transition affecting both the divorcing couple and their offspring. Most of the existing studies seemingly focused on the short-term effects of the divorce-related processes, with relatively fewer studies investigating the long-term psychological effects, specifically in the areas of self-esteem and psychological wellbeing, which are speculated to persist

into adulthood and subsequently impact one's quality of life as offspring of divorce. Moreover, the literature has not reached consensus, as there are some researchers (e.g. Goodman & Pickens, 2001) suggesting some negative effects of divorce-related factors, such as poorer self-esteem, are only short-lived during childhood, with offspring of divorce "recovering" over time into adulthood (p.129). Hence, the literature is in need of more research studies investigating the long-term psychological effects of divorce to determine if once speculated negative effects of divorce, as related to psychological disorders also remediate over time. This is especially important given the inherent methodological confound in how extrapolations were made regarding supposed poor psychological wellbeing, as a function of measures that were designed to measure psychopathology, the antithesis of psychological wellbeing. Accordingly, to answer the looming question of whether the effects of divorce on offspring are long lasting, future research must branch out from the child/adolescent samples predominantly used in former research, to more adult samples, in order to pose research questions that garner group differences among adult offspring of both intact and divorce families.

In addition, there are substantial studies (e.g. Turner & Kopiec, 2006; Ahrons, 2006; Braithwaite et al., 2016) that have concluded that divorce is not inherently as catastrophic as former research (e.g. Wallerstein & Lewis, 2004) had previously indicated. Instead, they have illuminated that conflictual interactions and negative communication patterns between the divorcing parents are the most salient

predictive risk factors associated with the negative psychological outcomes in both young and adult offspring of divorce. Even though the co-parenting literature suggests that having a cooperative co-parental relationship, and effective co-parental communication would ameliorate the potentially destructive effects of divorce, few studies (Camara & Resnick, 1989; Ahrons, 2006) have focused on the link of co-parenting variables and psychological wellbeing of adult offspring. This in tandem with psychological wellbeing being measured in relatively flawed ways, as discussed earlier, i.e. as indicated by lower levels of psychological disorders, the field currently requires more studies focusing on the protective factors that would act as buffers against the destructive effects of parental conflict. Subsequent studies will also need to include more accurate indicators of the positive construct of the presence of psychological wellbeing and self-esteem.

From this theoretical and empirical background, this study aims to test the following hypotheses:

1) Participants from divorced families will report lower levels of parental cooperation and co-parental communication.

2) Among participants from divorced families, those who report high levels of effective parental cooperation and co-parental communication following their parent's divorce/separation, will also report higher self-esteem and the presence of psychological wellbeing.

METHODS

Study Design

The present study is a 2x2x2 between subjects factorial design. The independent variables included 2-levels of FAMILY STRUCTURE (Parents Together: i.e. Intact Families vs. Parents NOT-Together: i.e. Separated/Divorced Families), 2-levels of PARENTAL COOPERATION (High vs. Low), and two levels of CO-PARENTAL COMMUNICATION (High vs. Low). Both PARENTAL COOPERATION and CO-PARENTAL COMMUNICATION were measured by Co-parenting Behavior Questionnaire (CBQ; Mullett & Stolberg, 1999). The dependent variables consisted of participants' *self-esteem* as measured by The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) and *psychological wellbeing* as measured by The Institute for Health and Productivity Management (IHPM) Wellbeing Questionnaire (Jones, Brown, & Minami, 2013).

Participants

Participants were recruited via online advertising on university forums, University Sona-system, and through social networking sites including Facebook. Participants were also recruited via flyers (Appendix A) that was placed in Community Psychological Centers in Brevard County. The online advertising and posts made on Facebook reached individuals throughout the United States while

local advertising via university forums and flyers reached individuals in eastern central Florida.

Initially, n=341 college students visited the survey site and read the informed consent with 2 declining to proceed, and 2 not responding to the question. Hence 98.8% of the participants (n=337) passed the informed consent section and proceeded to the survey. However, from the current sample size, in filling out the survey there was 24.9% attrition rate accounted for by individuals discontinuing the survey. Therefore, from the original sample size (n=341), the final response rate was 71.6% with a final sample size of n=244.

Among those who proceeded to the survey, 97.3% (n=328) answered the question regarding their gender. Of those, n=86 indicated being male, n=236 indicated female, n=1 indicated transitioning from male to female, n=2 indicated transitioning from female to male, and n=3 people did not select one of the provided options. Considering transitioning typically occurs in the adult years, this variable was recoded into a dichotomous variable for the purpose of determining the gender of the participant during childhood, consistent with the time of the parental separation/divorce, in which participants were queried. However, 27.8% of the completed sample of the present study (n=244) consisted of male participants (n=67), and 72.2% were female participants (n=174) after the variable was recoded. 3 participants did not provide this information.

The mean age reported by the final study participants was 24.03 years (SD = 5.52) with the age range spanning from 18 to 56 years. Despite this broad range, the vast majority of the participants were young adults, as 93.7% of the participants who answered this question indicated they were between ages of 18 and 30 years.

Among those who reported their races, 44.6% (n=152) were White/Caucasian, 26.4% (n=90) were Black/African American, 9.3% (n=32) were Hispanic/Latino/Latina, 26 (7.6%) were Asian, 3.5% (n=12) were Biracial, .3% (n=1) were Pacific Islander, .3% (n=1) was Native American, while 3.8% of the participants (n=13) selected the option “Other.” Most of the participants who selected “Other” indicated they actually belonged to one of the options provided. The majority of these participants who typed their race in, reported being Middle-Eastern. To be able to use those participants who reported their race as an open text, this variable was recoded. Given that only one respondent reported being Native American, they were removed from the sample. After careful examination of the open text answers, the final sample of this study (n=244) consisted of: White/Caucasian (45.4%, n=109), Black/African American (31.3%, n=75), Hispanic/Latino/Latina (9.6%; n=23), Asian/Pacific Islander (6.3%; n=15), Biracial (4.6%; n=11), and Arab/Middle Eastern (2.9%; n=7). 4 participants did not provide their race.

SES was calculated using the Hollingstead Index, a composite of the participant’s occupation and education level. The results were as follows: 4.9% of

participants (n=12) reported being Lower Class, 11.9% of participants (n=29) reported being Lower Middle Class, 51.4% participants (n=125) reported being Middle Class, 24.3% of them (n=59) reported being Upper-Middle Class, 7.4% of them (n=18) reported being Upper Class. 1 participant did not provide the information necessary to calculate the Hollingstead Index.

Fifty percent of participants who answered the question (n=142) indicated their parents are married to each other, 6.3% (n=18) indicated their parents have never been married but lived together, 10.6% (n=30) indicated their parents have never been married and never lived together, 6% (n=17) indicated their parents are separated, 24.6% (n=70) indicated their parents are divorced, 2.5% (n=7) indicated one of their parents passed away. For purposes of this study, family structure was categorized into two main groups: separated/divorced families versus intact families. Hence this variable was recoded into a dichotomous variable (separated/divorced vs. intact) and was used to determine the family structure of the participant. Accordingly, parents who were married to each other and parents who had never been married, but lived together were categorized as “intact,” while parents who were separated, divorced or had never been married and never lived together, were categorized as “divorced/separated.” After recoding, the final sample (n=244) consisted of 139 participants from intact families (57%) and 105 participants from separated/divorced families (43%).

Among the final sample (n=244), the mean age at the time of separation was 8.28 years (SD=6.31) with that age range spanning from birth to 29 years, and the mean age at the time of divorce was 10.78 years (SD = 6.96) with that age range spanning from birth to 29 years.

Procedures

Prior to data collection, approval from the Florida Institute of Technology Institutional Review Board (IRB) was obtained (Appendix H). Informed consent was obtained from each participant at the onset of the online survey questionnaires (Appendix B). Participants reporting being younger than 18 years of age, were not able to move on past the informed consent page to complete the questionnaires. Participants completed the *Qualtrics* online survey, which took approximately 30-45 minutes for each participant to complete. In the present study, participants were asked to complete a series of questionnaires including: The Co-parenting Behavior Questionnaire (CBQ) as a measure of *co-parental communication* and *cooperation after divorce*, the Rosenberg Self-Esteem Scale as a measure of *self-esteem,* and The Institute for Health and Productivity Management (IHPM) Wellbeing Questionnaire (Jones, Brown, & Minami, 2013) as a measure of *psychological wellbeing,* which are of particular interest to the present study. Additionally, participants completed a demographic questionnaire (Appendix C) asking them to indicate their race, age, sex, whether their parents were together or

separated/divorced when growing up and questions specifically concerned with the parental divorce/separation (e.g. age at the time of separation, age at the time of divorce, how well they adjusted to the divorce/separation, the most difficult aspect of the parental divorce, the custody arrangement).

Following the completion of the aforementioned questionnaires, participants were asked if they were interested in submitting themselves for a $25 Visa gift card raffle, and if interested they were given an email address and asked to submit their contact information via email to be able to enter into the drawing.

Independent Variables

Demographic questionnaire (Appendix C): Participants completed a demographic questionnaire assessing their race, age, sex, SES, and marital status. Additionally, participants were asked to indicate whether their parents were together or separated/divorced when growing up. Family structure of the participants was determined by item number nineteen of the questionnaire. Subsequent questions were asked related to participant's parental divorce/separation (e.g. their age at the time of the separation, whether parents remarried in the subsequent years, as well as assessing their perceptions of the divorce as being difficult or easy for them).

Co-parenting Behavior Questionnaire (CBQ, Mullet & Stolberg, 1999): CBQ (Appendix D) is originally a 139-item questionnaire measuring the quality of

parent-child interactions and co-parenting behaviors in a post-divorce environment. For the purposes of this study, the domains of parental cooperation and co-parental communication were assessed using the subscales of the same name.

The CBQ was originally developed using young adults (Mullett & Stolberg, 1999; Macie, 2002) but has since been used with children between the ages of 10 and 18 (Macie & Stolberg, 2003; Schum, 2003). The measure's most recent revision resulted in an 86-item version including 12 scales: *Conflict, Triangulation, Parental Respect/Cooperation, Co-parental Communication, Parental Warmth/Acceptance, Discipline, Monitoring, and Parent-Child Communication* (Macie & Stolberg, 2003). The instrument uses a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The following items are reversed scored: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 14, 15, 21, 22, 25, 27, 31, 35. For the purpose of this study, the items of the *Parental Respect/Cooperation and Co-parental Communication* of the CBQ were used, and participants were asked to answer based on their memory of their childhood experiences. To score, all the individual scores were entered into the Excel-based scoring program (provided by the test developer) to compute raw score values for each subscale, and then converted to *t* values with a mean of 50 and a standard deviation of 10.

For the scales, Cronbach's alpha coefficients range between .82 and .93, suggesting adequate internal consistency of the measure (Macie & Stolberg, 2003). For the purposes of the current study, the Parental Respect/Cooperation and Co-

parental Communication Scales were used with Cronbach alpha's of .87 and .86 respectively. Macie and Stolberg (2003) provided evidence for good concurrent validity concerning child adjustment and maladjustment as the CBQ scales collectively accounted for between 15% and 36% of the variance in the child behavior measures used including: total behavior problems (parent and child-report), self-esteem (child-report), acting out (parent and child-report), antisocial behavior (child-report), headstrong behavior (child-report), and anxiety/depression (child-report) (Macie & Stolberg, 2003).

Dependent Variables

<u>Rosenberg Self-Esteem Scale (Appendix E)</u>*:* The Rosenberg Self-Esteem Scale is a 10-item questionnaire, which aims to measure individuals' level of self-esteem. This scale uses a 4-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree.* While scoring, items marked as "*Strongly Agree*" are given 3 points, "*Agree*" 2 points, "*Disagree*" 1 point, and items marked as "*Strongly Disagree*" are given zero points (items 2, 5, 6, 8, and 9 are reverse scored). Total scores range from 0-30 points and higher scores suggest a higher level of self-esteem. Scores between 15 and 25 are considered to be within normal range while individuals receiving a score under 15 are considered to have a low self-esteem ("Rosenberg Self-Esteem Scale," 2017). The Rosenberg Self-Esteem Scale has adequate internal consistency, in that the Cronbach's alpha is 0.76. The test-retest

reliability was found to be 0.87 (*p* <.01) (Chabrol, Rousseau, & Callahan, 2006). The Rosenberg Self-Esteem Scale was found to significantly correlate with the Coopersmith Self-Esteem Inventory (*r* = .60, *p*<.001; Griffiths et. al, 1999), which has been found to have internal consistency ranging from .81 to .86 (Spatz & Johnson, 1973). In this study, Rosenberg Self-Esteem Scale was used to measure participants' level of self-esteem.

The Institute for Health and Productivity Management (IHPM) Wellbeing Questionnaire: IHPM Wellbeing Questionnaire (Appendix F) is a self-report questionnaire, which was used to assess psychological wellbeing of the participants. Jones, Brown, and Minami (2013) explain that this measure was developed using data from the ACORN data repository, consisting of questionnaires completed by over 300,000 adult psychotherapy clients, and its items reflecting clinical symptoms and emotional wellbeing have been tested using both clinical as well as non-clinical samples.

The Wellbeing Questionnaire consists of 21 items that cover five main domains indicated by the related literature: *Flourishing* (6 items), *Mental/Physical Heath* (7 items), *Quality of Life/Life Satisfaction* (3 items), *Productivity* (4 items), and *Substance Abuse* (1 item). Respondents were asked to rate the frequency of having certain experiences in the past two weeks. The questionnaire uses a five-point Likert scale, consisting of *Never, Rarely, Sometimes, Often,* and *Very Often.* For the items reflecting positive states (e.g. did you have the right amount of

sleep?), items marked “*Never”* are given 0 points*, “Rarely”* 1 point, “*Sometimes”* 2 points, “*Often”* 3 points, and “*Very often”* 4 points. Items reflecting negative states are reverse scored as follows: “*Never*” is given 4 points, “*Rarely*” 3 points, “*Sometimes*” 2 points, “*Often*” 1 point, and “*Very often*” 0 point. Mean scores were derived for each of the subscales as well as the total for The Wellbeing Scale. Hence, both subscales scores, and the full-scale score range from 0 to 4, with high scores reflecting higher levels of wellbeing, and low levels of distress (Jones et al., 2013).

For interpretation purposes, three severity ranges are determined. Scores ranging from 2.5 to 4 are indicative of *high levels* of wellbeing/no distress. Jones et. al (2013) explains that approximately 25% of scores obtained by outpatient mental health clients (at intake) and 75 % of scores obtained by a non-clinical community sample are expected to fall in the high wellbeing range. Scores ranging from 1.5 to 2.4 are reflective of *low levels* of wellbeing/moderate distress, with approximately half of an outpatient mental health sample (at intake) and 20 % of a non-clinical sample falling in the low level of wellbeing range. Finally, scores ranging from 1.4 to 0 are reflective of *very low levels* of wellbeing/severe distress, with approximately 25 % of outpatient mental health clients and fewer than 5 % of a non-clinical sample scoring in the very low levels of wellbeing range.

The internal consistency reliability coefficient of the scale, assessed by Cronbach’s coefficient alpha, is reported to be .91. The internal consistency

coefficients of the domains are reported as follows: *Flourishing*, .78; *Mental/Physical Health*, .84; *Quality of Life/Life Satisfaction*, .70; *Productivity*, .70. *Substance Abuse* domain, consisting one single item, was not suitable for assessment of internal consistency reliability ("Quality of Life and Wellbeing Questionnaires," 2017), and will only be used for calculating the total score of wellbeing.

In an effort to assess the concurrent validity, correlations between the items in the ACORN repository and other widely used measures were assessed. Measures used included the PHQ-9 (depression), Beck Depression Inventory, Beck Anxiety Inventory, Outcome Questionnaire-45, and Outcome Rating Scale and coefficients of correlation (Pearson's r) were reported to be very strong, falling in a narrow range around .80 (Jones et. al, 2013). The following are the correlations between each domain sub-scale and the global common factor of wellbeing: *Flourishing*, .87; *Mental/Physical Health*, .82; *Quality of Life*, .82; *Productivity*, .82; *Substance Abuse*, .20 ("Quality of Life and Wellbeing Questionnaires," 2017).

RESULTS

Preliminary Analyses

A series of correlations, and group level analyses in the form of chi squares, and ANOVA's were performed for several demographic variables to assess for group level differences and associations with all of the key main variables of

interests (i.e. both independent and dependent) that could serve as potential confounds. In particular, demographic variables such as participant's Race, Sex, Age, SES, and Age at the time of Parents' Separation and Divorce were assessed for significant group level differences related to *family structure, parental cooperation, co-parental communication, self-esteem,* and *psychological wellbeing*.

Preliminary Analyses: Correlations

A Pearson correlational matrix was performed including the following variables: *Age of the participant at the Time of Parents' Separation, Age of the participant at the Time of Parents' Divorce, SES, Race, Gender, Family Structure* (intact vs. divorced/separated), *Parental Cooperation, Parental Communication*, *Self-Esteem*, and the several Wellbeing Subscales: *Productivity, Quality of Life, Mental and Physical Health*, and *Flourishing*.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Age at the time of separation	8.24	6.27	-											
2 Age at the time of divorce	10.48	6.68	.949**	-										
3 SES of the participant	35.89	13.64	-0.061	-0.036	-									
4 Parental Cooperation	24.28	9.76	0.02	0.116	-0.083	-								
5 Parental Communication	17.44	6.93	0.028	0.084	-0.103	.811**	-							
6 Self-esteem	20.43	6.08	-0.036	0.039	-.194**	.309**	.238**	-						
7 Quality of Life	10.39	2.81	0.184	0.125	-.211**	.328**	.308**	.514**	-					
8 Mental and Physical Health	8.88	4.85	0.05	0.097	-0.108	.195**	0.055	.503**	.210**	-				
9 Productivity	4.57	2.51	-0.055	0.076	-.125*	0.067	0.001	.319**	0.016	.648**	-			
10 Flourishing	21.56	5.31	-0.087	-0.079	-.179**	.237**	.214**	.579**	.628**	.304**	.183**	-		
11 Family Structure	1.42	0.49	0.068	0.163	0.024	-.584**	-.610**	-0.005	-0.105	0.021	0.072	-0.002	-	
12 Gender	1.73	0.44	-0.025	-0.072	-0.108	-0.065	-0.038	0.033	-0.02	-0.009	0.033	-0.019	.120*	-

Table 1 Correlations Table

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

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

Correlations Between Age at the Time of Separation and Divorce

Findings included a positive correlation between Age at the time of separation and age at the time of divorce [$r(79) = .949$, $p < .0001$], such that participants who reported being younger at the time of separation also reported being younger at the time of divorce.

Correlation Between Parental Cooperation and Parental Communication

Findings indicated a positive correlation between parental cooperation and parental communication [$r(262) = .811$, $p < .0001$], such that participants who reported higher levels of parental cooperation in childhood also reported higher levels of parental communication in childhood.

Correlations Between Parental Cooperation, Family Structure, Self-esteem, and Wellbeing Subscales

Findings indicated a negative correlation between parental cooperation and family structure [$r(244) = -.584$, $p < .0001$], such that participants from divorced/separated families reported lower levels parental cooperation in childhood. Findings also indicated a positive correlation between parental cooperation and *self-esteem* [$r(259) = .309$, $p < .0001$], and wellbeing as depicted by one's *quality of life* [$r(253) = .328$, $p < .0001$], *physical and mental health* [$r(250) = .195$, $p < .01$], and *flourishing* [$r(253) = .237$, $p < .0001$]. It was such that

participants who reported higher levels of *parental cooperation* in childhood also reported higher levels of *self-esteem* in adulthood, and wellbeing as depicted by a better *quality of life*, better *physical and mental health* and better *flourishing* in adulthood.

Correlations Between Parental Communication, Family Structure, Self-esteem, and Wellbeing Subscales

Findings indicated a negative correlation between *parental communication* and family structure [$r(245) = -.610$, $p < .0001$], such that participants from divorced/separated families reported lower levels of effective parental communication in childhood. Findings also indicated a positive correlation between parental communication and *self-esteem* [$r(260) = .238$, $p < .0001$], *quality of life* [$r(253) = .308$, $p < .0001$] and *flourishing* [$r(254) = .214$, $p < .01$]. The relationship was such that participants who reported higher levels of parental communication in childhood also reported higher levels of self-esteem in adulthood and better wellbeing as depicted by one's self-reported better *quality of life* and *flourishing* in adulthood.

Correlation Between Self-Esteem and Wellbeing Subscales

Findings indicated that self-esteem was positively correlated with *quality of life* [$r(256) = .514$, $p < .0001$], *mental and physical health* [$r(254) = .503$, p

<.0001], and *productivity* [*r*(253) = .319, p <.0001], such that participants who reported higher levels of *self-esteem* also reported a better *quality of life*, *mental and physical health* and *productivity*.

Correlations Among the Wellbeing Subscales

As further validation of the sound psychometric properties and internal consistency of the overall psychological wellbeing measures, all subscales were positively correlated with one another. The preliminary findings indicated that *quality of life* was positively correlated with *mental and physical health* [*r*(253) = .210, p <.01] and *flourishing* [*r*(256) = .628, p <.0001], such that participants who reported a better *quality of life* in adulthood also reported better *mental and physical health* and *flourishing* in adulthood. Findings also indicated that *mental and physical health* was positively correlated to *productivity* [*r*(251) = .648, p <.0001] and *flourishing* [*r*(254) = .304, p <.0001], such that participants who reported better *mental and physical health* also reported better *productivity* and *flourishing*. Additionally, there was a positive correlation between *productivity* and *flourishing* [*r*(253) = .183, p <.01], such that participants who reported better productivity also reported better *flourishing*.

SES Correlations with respect to Self-esteem and Wellbeing Subscales

Because SES was inversely scored in a negative direction such that higher scores were indicative of lower SES, the correlational relationship with respect to *self-esteem, quality of life,* and p*roductivity* were also negative. Findings included a negative correlation between SES and *self-esteem* of the participant [$r(260) = -.194$, $p < .01$], such that participants who reported lower levels of SES also reported lower *self-esteem* in adulthood. Findings also included a negative correlation between SES and *quality of life* [$r(252) = -.211$, $p < .01$], *productivity* [$r(249) = -.125$, $p < .05$], *flourishing* [$r(254) = -.179$, $p < .01$]. This meant that participants who reported lower levels of SES also reported lower levels of *quality of life*, *productivity*, and *flourishing.*

Preliminary Analyses: Group Level Differences

Family Structure differences regarding SES

Additionally, Family Structure differences with respect to SES were assessed using an ANOVA in which FAMILY STRUCTURE was the independent variable and SES was the dependent variable. A non-significant main effect of FAMILY STRUCTURE [$F(1,274)=.163$, p=NS] revealed that there were no significant difference in SES between participants from intact and separated/divorced families.

Race differences regarding Family Structure and Psychological Wellbeing Scales, Parental Communication and Parental Cooperation

A two-way chi square of RACE x FAMILY STRUCTURE was conducted to ascertain if there were any racial differences in groups' endorsement of being either from an intact versus divorce/separated family. A significant chi square [$\chi 2$ (5)=12.04, $p<.05$] revealed that among Caucasians (62.1%) and Hispanics (66.7%) there were a greater proportion of participants who endorsed being from intact families as opposed to separated/divorced families (37.9% and 33.3% respectively). Among Asian-Pacific Islanders there were greater participants who endorsed being from intact families (81%) as opposed to divorced/separated families (19%). Although more equitable there were also more participants endorsing being from either intact or separated/divorced homes among Middle-Eastern participants (45.5% and 54.5% respectively), as well as participants reporting having a mixed race (57.1% and 42.9% respectively). Conversely, among African Americans, there was a slightly lower percentage of participants endorsing being from intact (45.8%) versus divorced/separated families (54.2%).

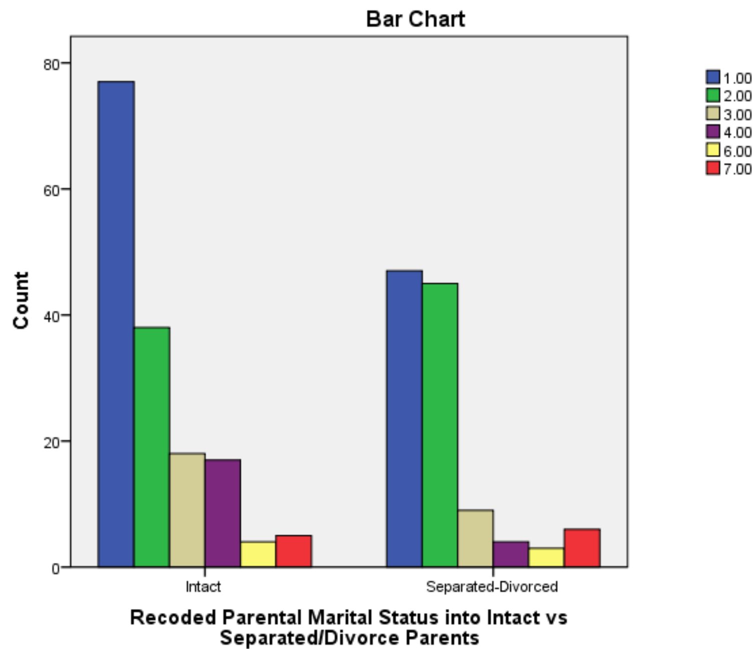

Figure 4. Chi-square bar chart RACE (1-Caucasian, 2-African American/Black, 3-Hispanic, 4-Asian/Pacific Islander, 6- Mixed, 7-Middle Eastern/ Arab)

Additionally, an ANOVA was run to assess for potential racial differences with respect to the dependent variables of the study. Therefore, RACE was used as the independent variable with the following dependent variables: *self-esteem, quality of life, productivity, flourishing, mental and physical health, parental cooperation,* and *parental communication*. At the multivariate level of analysis, there was significant main effect of RACE [F(7,245)=4.85, p<.0001]. At univariate level, a significant main effect of RACE was found for *quality of life* [F(5,245)=2.51, p<.05]. Even though Bonferroni simple effects tests that were

probing the multiple levels of race indicated that Caucasians and individuals with mixed race reported the highest quality of life, these differences were not significant. Also at univariate level, a significant main effect of RACE was found for *productivity* [$F(5,245)=2.28$, $p<.05$]. Bonferroni simple effects tests showed that African American participants ($M=5.29$, $SD=2.71$) reported significantly higher *productivity* compared to their Caucasian counterparts ($M=4.19$, $SD=2.20$).

Gender differences regarding Family Structure, Psychological Wellbeing Scales, Parental Communication, and Parental Cooperation

A two-way chi square of GENDER x FAMILY STRUCTURE was conducted to ascertain if there were any gender differences in groups' endorsement of being either from an intact versus divorce/separated family. A significant chi square [$\chi2\ (1)=3.97$, $p<.05$] revealed that there were significantly more males in the intact group (62.5%) compared to the separated/divorced group (32.5%). However, there were negligible differences among the females in the intact (54.3%) versus the separated/divorce (45.7%) group.

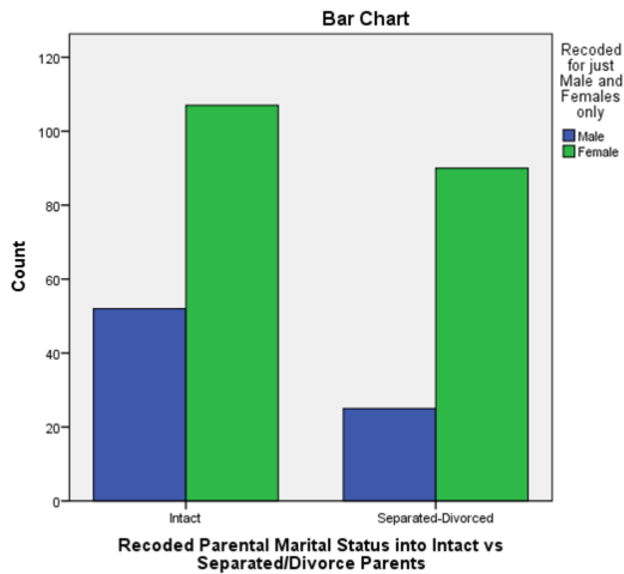

Figure 5. Chi-square bar chart GENDER

An ANOVA was run to assess for potential gender differences with respect to the dependent variables of the study. Therefore, GENDER was used as the independent variable with the following dependent variables: *self-esteem*, *quality of life*, *productivity*, *flourishing*, *mental and physical health*, *parental cooperation*, and *parental communication*. At multivariate level of analysis, GENDER did not have a significant main effect [F(1,246)=.702 p=NS].

Custody Arrangement and Divorce after Separation Differences on Psychological Wellbeing Scales, Parental Communication and Parental Cooperation

A series of ANOVA's were conducted to assess for group level differences with respect to CUSTODY ARRANGEMENT (i.e. who was the participant's primary caregiver as a child: maternal caregiver, paternal caregiver, shared

custody, extended family member, family friend) and WHETHER THE SEPARATION WAS FOLLOWED BY DIVORCE for the following dependent variables: *wellbeing subscales, self-esteem, parental cooperation,* and *parental communication*. At multivariate level, there was a significant main effect for CUSTODY ARRANGEMENT [F(7,93)=2.25 ,p<.05]. At the univariate level of analysis, CUSTODY ARRANGEMENT was significant for *parental communication* [F(3,93)=2.91, p<.05]. Individuals who reported that their mother had primary custody (M=12.13, SD=5.49) reported significantly lower levels of effective *parental communication* compared to individuals who reported that their parents had shared custody (M=16.79, SD=6.05). At multivariate level, there was no significant main effect for SEPARATION FOLLOWED BY DIVORCE [F(1,106)=.40, p=NS].

In summation, preliminary analyses conducted using the demographic variables including RACE, GENDER, SES, AGE, AGE at the time of SEPARATION, and AGE at the time of DIVORCE, revealed that there were a variety of significant main effects of RACE, GENDER, CUSTODY ARRANGEMENT, and SES with respect to several key variables in the current study. The associated key study variables included FAMILY STRUCURE, which is the independent variable and *parental communication*, and the wellbeing scales (*quality of life, flourishing, mental and physical health, and productivity*), which will serve as the current study's dependent variables.

As such, these significant demographic variables with respect to group level differences or associations were initially included as covariates in the subsequent main analyses to test the current study's hypotheses. Initial findings indicated that none of these variables proved to be significant in the main analyses MANCOVA models [RACE $F(5,230)=1.50$, $p=NS$, GENDER $F(5,231)=.76$, $p=NS$, AGE $F(5,128)=1.94$, $p=NS$, AGE at the time of DIVORCE $F(5,67)=.94$, $p=NS$, AGE at the time of SEPARATION $F(5,93)=1.59$, $p=NS$, CUSTODY ARRANGEMENT $F(5,87)=1.13$, $p=NS$], and thereby significantly diminished model power given the fewer students who responded to their stated ages at the time of separation and divorce. As such, subsequent analyses included individual MANCOVA's for each covariate. However, the only covariate that proved significant when entered into the main analysis was SES [$F(5,233)=2.89$ $p<.05$] with respect to the 2nd MANCOVA performed to test hypothesis #2. Thus, SES was the only covariate retained for the main analyses.

Main Analyses

In order to test the first hypothesis, which stated that participants from divorced families would report lower levels of parental cooperation and co-parental communication, a one-way MANCOVA was run. FAMILY STUCTURE with two levels (Intact vs. Separated/Divorced) served as the independent variable, and *parental cooperation* and *co-parental communication* were the dependent

variables[1]. Findings were such that at the multivariate level or analysis, there was a significant main effect of FAMILY STRUCTURE [F(2,244)=5.72, p=.0001] on *parental cooperation* [F(1, 244)=125.57, p<.0001] and *parental communication* [F(1, 244)=155.38, p<.0001] at the univariate levels of analysis. Consistent with hypothesis#1, findings were such that individuals from intact families had higher scores on *parental cooperation* (M=29.32, SD=8.02) and *parental communication* (M=21.32, SD=5.17), as compared to the scores of individuals from separated/divorced families on *parental cooperation* (M=17.87, SD=7.72) and *parental communication* (M=12.62, SD=5.69).

In order to test the 2nd hypothesis, which stated that among participants from divorced families, those who reported high levels of effective parental cooperation and co-parental communication following their parent's divorce/separation, would also report higher *self-esteem* and *psychological wellbeing*, a 3-way MANCOVA was run. The independent factors consisted of FAMILY STRUCTURE, PARENTAL COOPERATION, and CO-PARENTAL COMMUNICATION, with participant's *self-esteem* and psychological wellbeing subscales (i.e. *flourishing, mental & physical health, productivity,* and *quality of life*) serving as the dependent variables, and SES as the covariate.

[1] The original analysis conducted was a MANCOVA, in which SES was included as a covariate. However, SES proved to be nonsignificant [F(2,241)=1.24, NS], and was thereby removed from the model resulting in the final MANOVA reported above to preserve model power .

Findings were such that at the multivariate level of analysis there was a significant two-way interaction of FAMILY STRUCTURE x PARENTAL COMMUNICATION [$F(5,233)= 2.85$, $p<.05$] found for the dependent variable wellbeing subscales of *productivity* [$F(1,233)=6.52$, $p=.01$] and *quality of life* [$F(1,233)=6.83$, $p=.01$] at the univariate level. Subsequent ANOVAs were performed probing the interaction at every level of FAMILY STRUCTURE and HI vs. LO COMMUNICATION.

Consistent with hypothesis #2 with respect to *productive wellbeing*, levels of communication was only significant for divorced/separated families in which high communicators (M=6.00, SD=2.09) demonstrated greater *productive* wellbeing, as compared to their low communicating divorced/separated (M=4.36, SD=2.57) counterparts [$F(1,99)=9.88$, $p<.01$]. However, among intact families there was no significant difference in *productive wellbeing* between high (M=4.4, SD=2.41) versus low (M=2.48, SD=2.69) communicators [$F(1,136)=.03$, p=NS]. Accordingly, among high communicators, divorced families (M=6.00, SD=2.09) tended to demonstrate greater *productive wellbeing* as compared to their intact (M=4.4, SD=2.41) counterparts [$F(1,135)=9.44$, $p<.01$], whereas among low communicators there was no significant difference among divorce/separated (M=4.36, SD=2.57) and intact families (M=4.48, SD=2.69) [$F(1,135)=.03$, p=NS].

With respect to *quality of life wellbeing*, levels of communication was only significant among intact families in which high communicators (M=11.16,

SD=2.48) reported greater *quality of life wellbeing*, as compared to their low communicating intact (M=7.91, SD=2.31) counterparts [F(1,136)=32.21, p<.0001]. However, among divorced/separated families there was no significant difference in *quality of life wellbeing* between high (M=10.45, SD=2.86) versus low (M=9.72,SD=2.81) communicators [F(1,99)=2.08, p=NS]. Accordingly, among low communicators, divorced/separated families (M=9.72, SD=2.81) tended to report greater *quality of life wellbeing* compared to their intact (M=7.91, SD=2.31) counterparts [F(1,136)=32.21, p<.0001], whereas among high communicators there was no significant difference among divorce/separated (M=10.45, SD=2.86) and intact families (M=11.16, SD=2.48) [F(1,135)=.03, p=NS].

Additionally, at the multivariate level of analysis, there were three main effects of FAMILY STRUCTURE [F(5,233)=2.42, p<.05], PARENTAL COMMUNICATION [F (5,233)=3.75, p<.01], and PARENTAL COOPERATION [F(5,233)=3.11, p=.01]. At the univariate level of analysis, the main effect of FAMILY STRUCTURE was significant for *flourishing wellbeing* [F(1, 233)=8.21, p.<.01], *quality of life wellbeing* [F(1,233)=5.22, p<.05], and *self-esteem* [F(1,233)=10.19, p<.01].

Interestingly, participants from divorced/separated families reported experiencing greater *flourishing wellbeing* (M=22.53, SD=5.48)*, quality of life wellbeing* (M=10.38, SD=2.83)*, and self-esteem* (M=22.30, SD=6.34) as compared to their intact family counterparts, who reported lower *flourishing wellbeing*

(M=19.68, SD=4.98), *quality of life wellbeing* (M=9.19, SD=2.73) and *self-esteem* (M=18.54, SD=6.12).

At the univariate level of analysis, the main effect of PARENTAL COMMUNICATION was significant for *flourishing wellbeing* [F(1, 233)=9.72, p.<.01], *quality of life wellbeing* [F(1,233)=12.58, p<.0001], and *self-esteem* [F(1,233)=4.09, p<.05]. More specifically, participants who reported that their parents were high communicators also reported experiencing higher levels of *flourishing wellbeing* (M=22.66, SD=4.63)*, quality of life wellbeing* (M=10.71, SD=2.54)*, and self-esteem* (M=21.61, SD=5.69) as compared to participants who reported that their parents were low communicators, and thus reported experiencing lower *flourishing wellbeing* (M=19.55, SD=5.52), *quality of life wellbeing* (M=8.86, SD=2.81) and *self-esteem* (M=19.21, SD=6.56).

At the univariate level of analysis, the main effect of PARENTAL COOPERATION was significant for *mental/physical health wellbeing* [F(1,233)=12.51, p<.0001], and *self-esteem* [F(1,233)=7.90, p<.01]. There was also a marginally significant effect with respect to *productive wellbeing* experienced by participants as a function of parental cooperation [F(1,233)=3.35, p=.069]. More specifically, participants who reported that their parents demonstrated high levels of parental cooperation were more likely to report higher *mental physical health wellbeing* (M=10.69, SD=4.78) and higher levels of *self-esteem* (M=22.08, SD=5.64), as compared to participants who reported lower

parental cooperation among their parents during childhood, who reported lower *mental/physical health wellbeing* (M=7.29, SD=4.70), and *self-esteem* (M=18.75, SD=6.29). Similarly, there was a trend for participants of high cooperating parents to report higher *productive wellbeing* (M=5.50, SD=2.46), as compared to participants of low cooperating parents who reported lower levels of *productive wellbeing* (M=4.59, SD=2.51).

Post-hoc Analyses Regarding Participant's Difficulty and Adjustment in Relation with Parental Separation/Divorce

Of participants who endorsed being from separated/divorced families (n= 117), 90.6% (n=106) answered the question probing about the degree of difficulty in negotiating the logistics of their parents' separation. Of those who answered the question, 12.3% of participants (n=13) rated it as "very difficult," 13.2% (n=14) rated it as "difficult," 38.7% (n=41) rated it as "neither difficult nor easy," 25.5% (n=27) rated it as "easy," and 10.4% (n=11) rated it as "very easy."

A Pearson correlational matrix was performed including the following variables: *quality of life, productivity, flourishing, mental and physical health*, *self-esteem*, and *degree of difficulty in negotiating the logistics of parental divorce*. Findings included a positive correlation between *quality of life* and *degree of difficulty in negotiating the logistics of parental divorce* [r(110) = .184, p =.54], such that participants who reported having greater difficulty negotiating the

logistics of their parents' divorce as children, in adulthood reported having lower wellbeing with respect to their quality of life. *Flourishing* and *degree of difficulty in negotiating the logistics of parental divorce* were also positively correlated $r(111)= .296$, $p=.002$, such that participants who reported having greater difficulty negotiating the logistics of their parents' divorce as children, reported having lower wellbeing with regards to *flourishing* in adulthood. *Self-esteem* and *degree of difficulty in negotiating the logistics of parental divorce* were positively correlated, $r(114)=.282$, $p= .002$, such that participants who reported greater difficulty in negotiating the logistics of parental divorce in childhood also reported having lower levels of *self-esteem* in adulthood. *Parental communication* and *degree of difficulty in negotiating the logistics of parental divorce* were positively correlated, $r(114)= .223$, $p= .017$, such that participants who reported having lower levels of *parental communication* in childhood also reported having greater difficulty negotiating the logistics of their parents' divorce. *Parental cooperation* and *degree of difficulty in negotiating the logistics of parental divorce* were positively correlated, $r(114)=.249$, $p= .008$, such that participants who reported having lower levels of effective *parental cooperation* in childhood also reported having greater difficulty negotiating the logistics of their parents' divorce.

The question probing about participants' overall adjustment to their parents' separation was answered by 90.6% of participants from separated/divorced families (n=106). Of those who answered, 5.7% of participants (n=6) reported having "very

poor adjustment," 8.5% (n=9) reported having "poor adjustment," 35.8% (n=38) indicated they had "neutral" option, 32.1% (n=34) indicated they had "good adjustment," and 17.9% (n=19) reported having "very good adjustment."

A Pearson correlational matrix was performed including the following variables: *quality of life, productivity, flourishing, mental and physical health*, *self-esteem*, and *overall adjustment to parental separation/divorce. Flourishing* and *overall adjustment to parental separation/divorce* were positively correlated $r(111) = .264$, $p=.005$, such that participants who reported having poor adjustment to their parents' separation/divorce in childhood also reported having lower levels of wellbeing with regards to *flourishing* in adulthood. *Mental and physical health* and *overall adjustment to parental separation* were also positively correlated, $r(108) = .224$, $p = .020$, such that participants who reported having poor adjustment to their parents' separation/divorce in childhood also reported having lower levels of wellbeing with regards to mental and physical health in adulthood. *Self-esteem* and *overall adjustment to parental separation/divorce* were correlated*,* $r(114) = .331$, $p=.00$, such that participants who reported having poor adjustment to their parents' separation/divorce in childhood also reported having lower levels of self-esteem in adulthood. *Parental cooperation* and *overall adjustment to parental separation/divorce* were correlated*,* $r(114) = .238$, $p = .011$, such that participants who reported having lower levels of parental cooperation in childhood also reported poor adjustment to their parents' separation/divorce in childhood.

MANOVA with the Most Significant Negative Aspect of Separation

Participants were also asked to report the most significant negative aspect of their parents' separation for them to aid in the exploration of their experiences during that major life transition and 88% (n=103) of the participants answered that question. Of those who answered, 35.9% (n=37) selected "frequent conflict between parents," 21.4% (n=22) selected "personal difficulties parents experienced following separation," 18.4% (n=19) selected "financial difficulties following separation," 8.7% (n=9) selected "difficulties related to remarriage of parent(s)," 5.8% (n=6) selected "frequent residential changes following separation," 5.8% (n=6) selected "difficulties regarding visitation schedules," and 3.9% (n=4) selected "frequent change of schools following separation." A MANOVA was conducted with MOST SIGNIFICANT NEGATIVE ASPECT OF PARENTAL SEPARATION as independent variable; and *flourishing, quality of life, productivity, physical and mental health*, *difficulty in negotiating the logistics of parental divorce* and *overall adjustment to the parental separation/divorce* as dependent variables. At multivariate level, there was no significant main effect of MOST SIGNIFICANT NEGATIVE ASPECT OF PARENTAL SEPARATION [$F(7,102)= 1.24$, p=NS].

DISCUSSION

The first hypothesis of this study stated that among intact families there would be higher levels of parental communication and cooperation compared to their counterparts from separated/divorce families, which was supported by the current findings. In this study, participants from separated/divorced families indicated that their parents were less communicative and cooperative with one another throughout childhood. Also, low parental cooperation and poor parental communication were associated with greater difficulty negotiating the logistics of the parental separation/divorce and poor adjustment to the parental separation/divorce. According to Macie and Stolberg (2003), the backbone of a strong co-parenting relationship is mutual respect along with ability to effectively communicate and cooperate. As Minuchin (1974) clearly explains stressful life events that the family goes through (e.g. parental separation or divorce) leads to transitional stress, which inevitably results in conflict within family. Family conflict would subsequently lead to family dysfunction and if not resolved (Minuchin, 1974). Cooperative co-parenting may be harder in the post-divorce period as "divorcing couples are particularly susceptible to parenting problems due to the necessary severing of their relationship, and the reduced communications that result" (Macie & Stolberg, 2003, p.92). Accordingly, Maccoby, Depner, and Mnookin (1990) interviewed divorced parents (n= 656 families) with the intention of identifying categories of co-parenting. The analysis of responses indicated that

the majority of divorced parents reported lower levels of communication despite high levels of conflict following their divorce. The literature is in consensus that offspring of divorce report witnessing co-parental conflict and antagonistic communication more often compared to their counterparts from intact families, even after divorce (Shimkowski & Schrodt, 2012). Hence, the results of the present study are consistent with research showing that separation/divorce does not necessarily put the lid on family tension (Laumann-Billings & Emery, 2000) as parents tend to continue to communicate and cooperate poorly following the divorce.

The second hypothesis of the present study stated that among participants from separated/divorced families, those who reported higher levels of parental cooperation and communication would also report higher levels of psychological wellbeing and self-esteem. This hypothesis was partially supported with respect to *self-esteem* and several types of *psychological wellbeing subscales,* based on whether it was associated with parental cooperation or parental communication.

With respect to *productive wellbeing*, hypothesis #2 was supported among divorced families, such that high communicators had adult offspring who reported having greater *productive wellbeing* scores as compared to their low communicating counterparts. This is consistent with the former literature as it suggests that negative outcomes regarding offspring's wellbeing are associated with low levels of effective communication among the divorcing couple (Camara &

Resnick, 1989) rather than the divorce itself. However, hypothesis #2 was not supported with respect to *quality of life* wellbeing, as there were no differences in the quality of life reported by adult offspring of divorced/separated parents as a function of whether their parents were high versus low communicators.

Parents who were high communicators tended to have adult offspring who reported having a better *flourishing* and *quality of life* as well as *self-esteem*. Whereas, parents who cooperated highly, were more inclined to have adult offspring who reported having better *physical and mental wellbeing* as well as trends for better *productive wellbeing* and *self-esteem*. These results are consistent with literature that highlights the association between high levels of communication and cooperation between parents and better offspring wellbeing (McHale & Irace, 2011; Lamela & Figueiredo, 2016; Lamella et al., 2016).

Additionally, among high communicators, offspring of divorced/separated parents tended to be higher in *productive wellbeing* as compared to their counterparts from intact families. On the other hand, among low communicators, adult offspring of divorced/separated parents reported a greater *quality of life* as compared to their intact counterparts. This is consistent with literature suggesting that divorce, by itself, may not necessarily be inherently detrimental for offspring, as ending a conflictual marital relationship may in fact buffer offspring from the potential adverse effects of negative parental factors such as being exposed to antagonistic communication (Braithwaite et al., 2016). However, there were no

significant interactions of family structure and parental communication found with respect to the other wellbeing subscales of *flourishing* and *mental and physical health*. In addition, there were no interactions found with respect to Family Structure and Parental Cooperation for any of the wellbeing subscales: *productivity, quality of life, flourishing*, and *mental and physical health*.

Furthermore, post hoc analysis revealed that if adult offspring had experienced difficulty in negotiating the logistics of the parents' separations in terms of the childhood home life, that as adults they were likely to report lower levels of *self-esteem*, *quality of life* and *flourishing* wellbeing and lower *parental communication* and *parental cooperation*. Accordingly, those who reported lower levels of adjustment to the parental divorce/separation during their childhood also reported lower levels of *parental cooperation*, and *wellbeing* as depicted by *flourishing wellbeing, mental physical wellbeing,* and *self-esteem.*

Interestingly, participants from divorced/separated families reported experiencing greater *flourishing, quality of life*, and *self-esteem* compared to participants from intact families. As further detailed previously, a vast majority of former studies used child and adolescent participants and reported discrepancy in terms of self-esteem and wellbeing among young offspring from divorced and intact families (e.g. Poussin & Martin-Lebrun, 2002), highlighting the short-term negative effects of divorce on offspring's self-esteem and wellbeing. Fewer studies used adult participants and investigated long-term effects of divorce. Most of the

already existing studies suggested that negative effects of divorce are long-term, and offspring of divorce continue to have lower levels of self-esteem and/or wellbeing compared to their peers from intact families throughout adolescence and adulthood (e.g. Amato & Sobolewski, 2001; Richardson & McCabe, 2001). The meta-analysis conducted by Amato and Keith (1991) also indicated that adults who experienced parental divorce or permanent separation exhibited lower levels of wellbeing than did adults whose parents were continuously married. On the other hand, there are some studies that reported contradictory results. As an example, Goodman and Pickens (2001) studied undergraduate students hypothesizing that adult offspring of divorce would report lower current (at the time of data collection) and retrospective (at the time of divorce) self-esteem compared to their peers from intact families. The results indicated discrepancy in terms of retrospective self-esteem among offspring from divorced and intact families; however, they did not indicate any discrepancy in terms of current self-esteem. Accordingly, Goodman and Pickens concluded divorce has only temporary effects on self-esteem while offspring recover over time.

There are several possible explanations for the findings of the current study. The most prominent explanation appears to be the resiliency hypothesis. The concept of resilience refers to an achievement of positive adaptation in the face of severe adversity (Luthar, Cicchetti & Becker, 2000). Luthar et al. (2000) indicated that early research on resilience was focused on children of mothers with

schizophrenia, and gradually extended to other adverse conditions over the course of years. Luthar et al. (2000) described these empirical efforts as the quest of protective factors buffering children from high risk environments and resulting in well adjustment in the face of significant adversity.

Along the same lines, as part of the HOPE VI Panel Study (Cove, Eiseman & Popkin, 2005), investigators surveyed a sample of 887 caregivers and conducted in-depth interviews with 39 adult-child dyads in order to help policymakers and practitioners develop interventions to buffer at-risk youth from the hazards of their distressing environments. They defined resilience as the lack of behavioral problems, lack of involvement in delinquent activities, and more engagement with school. Their results indicated that one in five children in their study appeared to be more resilient than their peers, showing more positive profiles of adaptation. One may speculate that these children might be less vulnerable to experience emotional, social, and academic difficulties that affect so many of their peers.

The current study used predominantly undergraduate and graduate students at Florida Institute of Technology as a sample of convenience. Hence, the sample is composed of a relatively more successful and independent subgroup of adult offspring of divorce. It is possible that the sample of this study was composed of relatively more resilient individuals compared to their peers that also come from divorced/separated families. In other words, this sample might be that minority (one in five) that the HOPE IV Panel Study referred to, who were not adversely

affected by the difficulties they experienced in the past, possibly resulting in an even higher ability to adapt, excel, and flourish compare to their peers.

Contributions of the Present Study

The importance of the present study consists in investigating the long-term effects of co-parenting behaviors on psychological wellbeing and self-esteem of adult offspring of divorce while taking the breadth of psychological wellness into consideration rather than focusing only on observable symptoms of psychopathology (e.g. depression, anxiety).

The present study contributed to the growing literature investigating the key functional skills to healthy parenting, especially in the context of divorce, which best serves raising a healthy child with positive psychological outcomes. The view that parental separation/divorce is the primary cause behind low psychological wellbeing in offspring must be reconsidered in the light of newer literature documenting the critical importance of family-related factors such as effective co-parental communication and parental cooperation. From a clinical perspective, the results of this study highlighting the importance of effective parental communication and cooperation regardless of family structure can be useful for planning interventions for intact families as well as families going through marital dissolution. The findings of this study may also be used by counselors and mediators to educate parents on how their actions are likely to affect the wellbeing

of their offspring and to encourage parents to engage in cooperation and effective communication in their daily life in general and during the marital dissolution in particular. Additionally, the results of this study can be useful in conceptualization and treatment of adult clients from divorced families, reporting low levels of self-esteem and psychological wellbeing.

Limitations

Despite the contributions of the present study, there are several limitations. The proposed study is retrospective in nature, and as such the findings may be confounded by inaccurate or skewed memories by the participants. Additionally, as Mullett and Stolberg (1999) have indicated, often the recollection of parents and their offspring tend to be fairly disparate given their differing perspectives. Hence, such questions regarding participants' recollections may not be able to be ascertained given that no other collateral information from the parents or other siblings was collected.

This study is part of a larger study for which there were several other measures extending the administration time, which may have been long for some individuals to complete, resulting in either fatigue or premature termination of the survey. Additionally, the sample of convenience used in this study consisted predominantly of college students in a private university. As a result, the majority of participants of this study possibly are relatively higher functioning individuals

compared to the average young adult in the U.S., which might have hindered generalizability of the findings.

Finally, while this study is technically assessing an adult population in a college sample of convenience, the college sample consists of relatively young adults in close proximity to their adolescent years, which is similar to the critique presented regarding the previous research.

Future Research

The present study investigates the family-related protective factors, namely parental cooperation and co-parental communication, while no data was collected regarding potential family-related risk factors (e.g. the level of parental conflict). Considering parental cooperation, co-parental communication, and parental conflict are 3 separate yet closely related continuums, collecting data on the level of parental conflict in the pre-divorce and post-divorce periods would be of value, providing a more comprehensive assessment of family-related factors present prior to and after divorce/separation.

Additionally, it would be good to include an older adult population as well to have age wise comparisons among different age cohorts (i.e. young adults versus older adults). Such data would enable a better assessment of the stability of the late effects of psychological wellbeing and self-esteem over time. Additionally, it

would be better to include students from public universities and community colleges to diversify the sample in terms of socioeconomic status.

Also, it is well known that co-parenting behaviors and practices among divorced couples vary greatly between different cultures and nations. Hence, future research in this area should include further study among participants from the general population, a variety of age groups, and from different nations and cultures.

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APPENDIX A: Flyer for Participants

Win $$$

All you have to do is
FILL OUT A SURVEY!

Florida Tech Researchers want to
know about your childhood and your
relationships!

Hosted by FIT School of Psychology

APPENDIX B: Informed Consent Form

We are interested in examining the effects of your family structure and parenting behaviors on your overall wellbeing, achievement, and self-esteem. As part of your participation in this study you may find some therapeutic value in considering certain aspects of your life. Your participation will not subject you to any physical pain or risk, but because some of the interview questions seek to solicit some personal information, no identifying information such as your name will be asked.

Initially, you will be asked to complete a preliminary screening survey that asks a series of questions to determine your eligibility for participating in this study. If you meet criteria, you will be prompted to a series of surveys regarding your experiences as a child, as well as an adult. Certain surveys may repeat to determine your perception of your parents'/caregivers' parenting behaviors and attitude toward accomplishing goals, and your current psychological wellbeing, your current self-esteem, as well as your current relationships. There will also be questions regarding past and current relationship conflict. These surveys will take approximately 60 minutes to 90 minutes to complete. If for any reason you are uncomfortable completing the survey, you are free to stop at any time. If you have any concerns please feel free to contact the researchers, Damla Til Ogut, M.S., Keara Washington, M.S., and Felipa Chavez, Ph.D. We assure you that any reports about this research will contain only data of an anonymous or statistical nature.

Upon completion of the survey, you may elect to enter a raffle for an Amazon gift-card. If you choose to participate in the raffle, you will need to send your e-mail address as directed at the end of the survey. You will receive a codeword upon completion of your survey. Please include this codeword when you email your entrance into the raffle for the gift-card. Your e-mail address will in no way be linked to your responses to the survey questions.

Again, any questions you have regarding this research may be directed to the researchers, or the chair of the International Review Board (IRB), Lisa Steelman, Ph.D. Please find all contact information below.

Primary Investigator: Felipa Chavez, Ph.D., chavezf@my.fit.edu, T: 321.674.8104. Address: 150 West University Blvd., Melbourne, FL 32901

Co-Investigator: Damla Til Ogut, M.S., dtilogut2014@my.fit.edu, Address: 150 West University Blvd., Melbourne, FL 32901

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Chair of the International Review Board: Lisa Steelman, Ph.D., lsteelma@fit.edu, T: 321.674.8104. Address: 150 West University Blvd., Melbourne, FL 32901

Continuing with this survey indicates that you agree to participate in this research and that:

1. You have read and understand the information provided above.
2. You understand that participation is voluntary and that refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled; and,
3. You understand that you are free to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

4. You are 18 years of age or older.

I have read the preceding information and understand its meaning. By choosing "YES": I am agreeing to proceed with the survey and participate in the study. However, by choosing "NO": I am signifying that I do not want to proceed with the survey nor participate in the study. * Thank you again for your participation in this survey and we hope that you will consider participating in future surveys. O Yes O No

APPENDIX C: Demographic Screening Questions

Please fill out the following questions about yourself:

1. Please identify your gender identity.

   a. Male
   b. Female
   c. Transgender Male to Female
   d. Transgender Female to Male
   e. Self-Identify_________________

2. Please indicate your age in years. _________

3. What is your race/ethnicity?

   a) White/Caucasian White
   b) Black/African American Black
   c) Hispanic
   d) Latino
   e) Asian
   f) Pacific Islander
   g) Native American
   h) Biracial
   i) Other Specify (_____________)

4. What is your current city and state?

5. What is your current relationship status?

   a) Single (skip logic f/up: question #6)
   b) Cohabitating (skip logic f/up: How long have you been in your current relationship?)
   c) Married (skip logic f/up: How long have you been married?)
   d) Divorced (skip logic f/up: How long were you married?)
   e) Separated (skip logic f/up: How long were you together with your spouse?)
   f) Widowed (skip logic f/up: How long were you together with your spouse?)

6. Please identify the occupational description that most applies to you.

   a) Major executives of large companies, major professionals, and proprietors
   b) Lesser professionals and proprietors, and business managers
   c) Administrative personnel, owners of small business and minor professionals
   d) Clerical and sales workers, and technicians
   e) Skilled trades
   f) Machine operators and semiskilled workers

g) Unskilled employees
h) Homemaker
i) Other: ____________________

7. Please identify your education level?

a) Professionals (Master's degree, doctorate or professional degree)
b) College graduate
c) 1-3 years college or business school
d) High school graduate
e) 10-11 years of schooling
f) 7-9 years of schooling
g) Under 7 years of schooling

8. How many colleges did you attend?

a) 0
b) 1
c) 2
d) 3
e) 4
f) 5 or more

9. What is your major?_______________________

10. If you are still in school, what is your current GPA?________________________

11. What is your status in school?

a) Full-Time
b) Part-Time

12. Are you intending on pursuing an advanced degree?

a) Yes
b) No
c) Not sure

Questions Related to Family Structure

Please fill out the following information with regard to your parents.

13. What is your **maternal caregiver's** race/ethnicity?

a) White/Caucasian White
b) Black/African American Black

c) Hispanic
d) Latino
e) Asian
f) Pacific Islander
g) Native American
h) Biracial
i) Other Specify (_____________)

14. What is your **maternal caregiver's** education level?

a) Professionals (Master's degree, doctorate or professional degree)
b) College graduate
c) 1-3 years college or business school
d) High school graduate
e) 10-11 years of schooling
f) 7-9 years of schooling
g) Under 7 years of schooling

15. Please identify the occupational description that most applies to your **maternal caregiver**.

a) Major executives of large companies, major professionals, and proprietors
b) Lesser professionals and proprietors, and business managers
c) Administrative personnel, owners of small business and minor professionals
d) Clerical and sales workers, and technicians
e) Skilled trades
f) Machine operators and semiskilled workers
g) Unskilled employees
h) Homemaker
i) Other: ____________________

16. What is your **paternal caregiver's** race/ethnicity?

a) White/Caucasian White
b) Black/African American Black
c) Hispanic
d) Latino
e) Asian
f) Pacific Islander
g) Native American
h) Biracial
i) Other Specify (_____________)

17. What is your **paternal caregiver's** education level?

a) Professionals (Master's degree, doctorate or professional degree)

b) College graduate
c) 1-3 years college or business school
d) High school graduate
e) 10-11 years of schooling
f) 7-9 years of schooling
g) Under 7 years of schooling

18. Please identify the occupational description that most applies to your **paternal caregiver**.

a) Major executives of large companies, major professionals, and proprietors
b) Lesser professionals and proprietors, and business managers
c) Administrative personnel, owners of small business and minor professionals
d) Clerical and sales workers, and technicians
e) Skilled trades
f) Machine operators and semiskilled workers
g) Unskilled employees
h) Homemaker
i) Other: ____________________

19. My parents are:
*If you were adopted, please report the marital status of your adoptive parents.

a) Married (to each other)
b) Never been married, but lived together
c) Never been married, and never lived together
d) Separated
e) Divorced

20. Are either of your parents deceased?

a) Yes (Skip Logic→21)
b) No (Skip Logic→23)

21. Which parent?

a) Maternal Caregiver
b) Paternal Caregiver

22. How old were you when it happened?
____

23. Who was your primary caregiver during childhood?

a) Both Parents
b) Maternal Caregiver

c) Paternal Caregiver

24. Are your parents separated or divorced?

a) Yes
b) No (Skip Logic→43)

25. How old were you when your parents **separated**? ______

26. With whom did you live most of the time after the **separation**?

a) Maternal caregiver
b) Paternal caregiver
c) On average it was 50/50 time-sharing split between both caregivers

27. Was the separation followed by a **divorce**?

a) Yes
b) No (Skip Logic→ 30)

28. How old were you when your parents had a **divorce**?
____
______

29.With whom did you live most of the time after the **divorce**?

a) Maternal caregiver
b) Paternal caregiver
c) On average it was 50/50 time-sharing split between both caregivers

30. What was your parents' custody arrangement?

a) *Mother* had primary physical custody
b) *Father* had primary physical custody
c) *Shared* physical custody (equal time with both parents)
d) *Another family member* had primary physical custody
e) *Family Friend* had primary physical custody
f) I don't know

31. How often did you spend time with your non-custodial parent (the parent whom you did not live with most of the time)?

a) Never
b) Almost never
c) On holidays only
d) About once a month

e) About twice a month
f) Every other weekend
g) Every weekend
h) A couple times per week
i) I spend about equal time with both parents

32. Did your **mother** remarry?

a) Yes (Skip Logic →33)
b) No (Skip Logic →36)

33. How old were you when she remarried?_______________________________________

34. How many times?____

35. Is she currently married?

a) Yes
b) No

36. Did your father remarry?

a) Yes
b) No (skip logic →40)

37. How old were you when he remarried?_______________________________________

38. How many times? ____

39. Is he currently married?

a) Yes
b) No

40. Please rate the degree of difficulty in *negotiating the logistics* of your parents' separation:

1	2	3	4	5
Very Difficult	Difficult	Neither difficult/nor easy	Easy	Very easy

41. Based on your own opinion, rate *your overall adjustment* to your parents' separation:

1	2	3	4	5
Very Poor Adjustment Very Difficult time with the fact that my parents are separated	Poor Adjustment	Neutral Neither difficult time neither happy with the fact that my parents are separated	Good Adjustment	Very Good Adjustment Very happy with the fact that my parents are separated

42. What was the most significant negative aspect of your parents' separation for you? (What was the worst part about it for you?)

a) Frequent Conflict Between Parents
b) Difficulties Regarding Visitation Schedules
c) Financial Difficulties Following Separation
d) Frequent Residential Changes Following Separation
e) Frequent Change of Schools Following Separation
f) Disruptions in the Social Relationships Following Separation
g) Difficulties Related to Remarriage of the Parent(s)
h) Personal Difficulties Parent(s) Experienced Following Separation

*****If you were raised in a single mother household before the age of 18, please fill out the following questions about your maternal caregiver:**

43. How long were you raised in a single mother household? ____years______months

44. While your **parents were together**, was your maternal caregiver a stay at home caregiver?
□ Yes (Skip Logic→45)
□ No (Skip logic→46)

45. Please indicate for how long your maternal caregiver was a stay at home caregiver?
___Year ___ Months

46. While your **parents were separated**, was your maternal caregiver a stay at home caregiver?

a) Yes (Skip logic→47)
b) No (End)

47. Please indicate for how long your maternal caregiver was a stay at home caregiver?

___Year ___ Months

APPENDIX D: Co-Parenting Behavior Questionnaire

On the following pages, you will see sentences that have to do with you and your parents. Following each statement, there is a scale from 1 to 5 (1 = almost never, 3=sometimes, and 5= almost always).

If your parents are separated or divorced, please think about how things have been <u>AFTER</u> the separation/divorce and circle the number that tells HOW OFTEN this statement happened.

If your parents were never separated or never had a divorce, please think about how things had been in your childhood and circle the number that tells HOW OFTEN this statement happened.

	1 Almost Never	**2**	**3 Sometimes**	**4**	**5 Almost Always**
1. My parents complain about each other.					
2. My parents argue about money in front of me.					
3. When my parents talk to each other, they accuse each other of bad things.					
4. My parents talk nicely to each other.					
5. My parents argue in front of me.					
6. My dad gets angry at my mom.					
7. When my parents talk to each other, they get angry.					
8. My mom gets angry at my dad.					
9. My parents get along well.					
10. My parents yell at each other.					
11. My parents talk to each other about my problems.					
12. My parents talk to each other about how I feel about the divorce. ***If your parents did not have a divorce, please answer the question with regard to their relationship: "My parents talk to each other about how I feel about their relationship."**					
13. My parents talk to each other about my school and my health.					

14. My parents talk to each other about big choices in my life.					
15. My parents talk to each other at least once a week.					
16. My parents talk to each other about the good things I do.					
17. My mom wants me to be close to my dad.					
18. When my mom needs to make a change in my schedule, my dad helps.					
19. When my mom needs help with me, she asks my dad.					
20. My mom tells me good things about my dad.					
21. When my dad needs help with me, he asks my mom.					
22. My dad tells me good things about my mom.					
23. My dad wants me to be close to my mom.					
24. When my dad needs to make a change in my schedule, my mom helps.					

APPENDIX E: Rosenberg Self-Esteem Scale

The scale is a 10 item Likert scale with items answered on a four-point scale (strongly agree to strongly disagree).

Instructions: Below is a list of statements dealing with your general feelings about yourself.

If you strongly agree, circle SA.
If you agree with the statement, circle A.
If you disagree, circle D.
If you strongly disagree, circle SD.

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

APPENDIX F: Institute for Health and Productivity Management (IHPM) Well-being Questionnaire

How often in the last two weeks did you….	0 Never	1 Rarely	2 Sometimes	3 Often	4 Very Often
1. Feel good/positive about yourself?	0	1	2	3	4
2. Enjoy your leisure time?	0	1	2	3	4
3. Have a good energy level?	0	1	2	3	4
4. Enjoy spending time with family or friends?	0	1	2	3	4
5. Enjoy your work and other activities of daily life?	0	1	2	3	4
6. Have the right amount of sleep?	0	1	2	3	4
7. Have physical pain or other health problems?	0	1	2	3	4
8. Worry about a lot of things?	0	1	2	3	4
9. Feel unhappy or sad?	0	1	2	3	4
10. Feel nervous or anxious?	0	1	2	3	4
11. Cut back on activities due to physical or emotional health problems?	0	1	2	3	4
12. Feel hopeless about the future?	0	1	2	3	4

13. Feel lonely?	**0**	**1**	**2**	**3**	**4**
14. Worry about money?	**0**	**1**	**2**	**3**	**4**
15. Feel fulfilled in life?	**0**	**1**	**2**	**3**	**4**
16. Feel happy with your living situation?	**0**	**1**	**2**	**3**	**4**
17. Feel fortunate about your social relationships?	**0**	**1**	**2**	**3**	**4**
18. Feel unmotivated to do anything?	**0**	**1**	**2**	**3**	**4**
19. Feel unproductive at work or other daily activities?	**0**	**1**	**2**	**3**	**4**
20. Have a hard time paying attention?	**0**	**1**	**2**	**3**	**4**
21. Accomplish most of what you wanted to do?	**0**	**1**	**2**	**3**	**4**
22. Have problems at work, school or home due use of drugs or alcohol?	**0**	**1**	**2**	**3**	**4**

APPENDIX G: Debriefing Form

The goal of the proposed study is to investigate the impact of various childhood parenting strategies and attitudes on one's psychological wellbeing and self-esteem in adulthood.

If you are interested in entering the raffle for the $25 Amazon gift certificate, please email your name and email address to relationshipsurvey@yahoo.com and include the code word "relationship." In doing so, you will be automatically entered into the raffle. Your email address will not be associated with your answers in the survey, and no other information will be required from you if you win.

Any questions you have regarding this research may be directed to the researchers or the chair of the International Review Board (IRB), Dr. Lisa Steelman. Please find the necessary contact information below. Thank you for your participation in this research study. If you wish, a summary of the results will be provided to you, at a later time, by contacting the researchers at the following address.

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Chair of the International Review Board: Lisa Steelman, Ph.D., lsteelma@fit.edu, T:321.674.8104. Address: 150 West University Blvd., Melbourne, FL 32901.

References

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APPENDIX H: IRB APPROVAL

Florida Institute of Technology
Institutional Review Board

Notice of Exempt Review Status
Certificate of Clearance for Human Participants Research

Principal Investigator: Felipa Chavez

Date: April 12, 2017

IRB Number: 17-068

Study Title: Adult Relationship Survey

Your research protocol was reviewed and approved by the IRB Chairperson. Per federal regulations, 45 CFR 46.101, your study has been determined to be minimal risk for human subjects and exempt from 45 CFR46 federal regulations and further IRB review or renewal unless you change the protocol or add the use of participant identifiers.

All data, which may include signed consent form documents, must be retained in a secure location for a minimum of three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Access to data is limited to authorized individuals listed as key study personnel.

The category for which exempt status has been determined for this protocol is as follows:

2. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior so long as confidentiality is maintained.

   a. Information is recorded in such a manner that the subject cannot be identified, directly or through identifiers linked to the participant and/or
   b. Subject's responses, if know outside the research would not reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing, employability, or reputation.