

Cohabitation as a young adult: Examining relationship interactions & outcomes and financial characteristics and economic well-being

by

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B.B.A., University of Iowa, 2011
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AN ABSTRACT OF A DISSERTATION

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School of Family Studies and Human Services
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Abstract

This dissertation employed two different frameworks to investigate the effects that cohabitation and finances have on young adult couples' relationships using the National Longitudinal Survey of Youth 1997 (NLSY97) and the Marriage Matters Panel Survey of Newlywed Couples, Louisiana. Understanding young adult's financial and relationship characteristics and outcomes is increasingly important for the financial planning profession given the shift towards holistic financial planning. Cohabitation has been increasing each decade while research indicates it to have drastic financial and relational consequences. It is important to understand how cohabitation impacts young adults' financial and relational lives.

Essay one investigated whether financial implications and perceived benefits and costs in a relationship mediated the relationship between relationship quality at Time 1 (i.e., age 24) and relationship quality at Time 3 (i.e., age 26), and the subsequent impact of whether the relationship dissolves. Using a sample of 508 young adults, 330 of which had cohabited prior to marriage and 178 which had not, essay one revealed no major differences between those who cohabited and those who did not. Initial relationship quality did have positive effects on later relationship quality and staying in a relationship. Financial assets, debt, and income appeared to have no effect on relationship quality.

Essay two examined the rate of change in relationship satisfaction in a group of 479 recently married couples. The results showed that cohabitation had no effect on initial levels of, and the rate of change in, relationship satisfaction experienced by both husbands and wives. Income and debt had no effect on the trajectories of relationship satisfaction, but perceived economic well-being did appear to have a positive association with the initial levels of relationship satisfaction experienced by both wives and husbands.

Essay three employed an actor partner interdependence model (APIM) to examine how economic hardships such as low income, debt, and not having a job prior to marriage influence not only the respondent's economic pressure (as measured through economic well-being) but also their partner's economic pressure. Further, the study tested how economic pressure influences both the warmth and conflict experienced by themselves, as well as their partner, and ultimately how that all influences their own relationship satisfaction and the marital perceptions of their partner. Further, to tease out the effect of cohabitation, the current study employed a multiple group comparison on those who cohabited prior to marriage against those who did not. Consistent with essay one and two, cohabitation did not have much of an impact but results of essay three indicate that there are both actor and partner effects on our relationship outcomes when finances are concerned.

Overall, results indicate that with data of this millennium, cohabitation may not have as detrimental effects to the financial and relational lives of young adults as previously thought. Financial and mental health professionals can utilize actor partner frameworks in their work with clients to ensure both couples are on track and working together.

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Dedication

This dissertation is dedicated to my family. First and foremost, to my wife, Ashley, for your continued support and encouragement throughout this process, and for the continued butt kicking when I delayed! To my parents, Todd and Sonya, for instilling in me a good work ethic and teaching me to not give up when something gets hard. To my in-laws, Joe and Jessica, and grandparent's in-law, Irene and Richard, for their continued love and support through this process.

Chapter 1 - Introduction

Introduction and Statement of the Problem

Cohabitation (residing with a significant other prior to marriage) is on the rise in the United States, having increased by approximately 900% in the last five to six decades (Kuperberg, 2014). Researchers have pointed out that in the 16-year period from 1996 to 2012, the number of people in a cohabiting relationship had increased from 2.9 million to 7.8 million (Kuperberg, 2014; Vespa, Lewis, & Kreider, 2013). Copen, Daniels, and Mosher (2013) showed that the number of people who had cohabited as their first union type rose from 33% in 1995 to 48% by the end of 2010. This is concerning because numerous research findings have historically found cohabitation to be a curse to one's marriage (Copen et al., 2013; Copen, Daniels, Vespa, & Mosher, 2012; Kamp Dush, Cohan, & Amato, 2003; Kuperberg, 2014). Further problematic is that the United States divorce rate is approximately 50%, although approximately 20% of marriages are expected to end in divorce in their first five years (known as the "honeymoon period"; Copen et al., 2012). Exacerbating the problem is that those who started in a cohabiting union were more likely to end in divorce (Copen et al., 2012).

Consumer debt may be a likely culprit of marital discord. Consumer debt is on the rise and many more couples are marrying with some sort of debt than prior generations. Research by Ramsey Solutions found that nearly two out of every three couples (63%) had debt that they brought into the marital union (Cruze, 2018). This is a problem because money is emotional and couples tend to have heated financial arguments (Dew, 2007), which leads to lower levels of relationship satisfaction (Dew & Dakin, 2011). Central to this dissertation is the choice of cohabiting prior to marriage and the impact that decision has on economic well-being, relationship interactions and relationship outcomes. The overarching research question is simply:

what is the effect of cohabitation given newer data? Three essays are presented in which a comparison of those who cohabited versus those who did not cohabit is examined.

Purpose

The purpose of this dissertation is three-fold, hence the need for three research studies (Chapters 2, 3, and 4). First, the purpose of essay one was to investigate the group differences in relationship quality, financial characteristics, and whether individuals stay in their relationship among those who are married, and either cohabited or did not cohabit prior to marriage. Essay one used a more recent dataset, the NLSY97, to help provide a foundation as to how young adults' income, assets, and debt all factor into their later relationship quality. Another strength of essay one is that it utilized newer data since much research on cohabitation has used data from the 1980s and 90s, when cohabitation was less socially acceptable (Kuperberg, 2014).

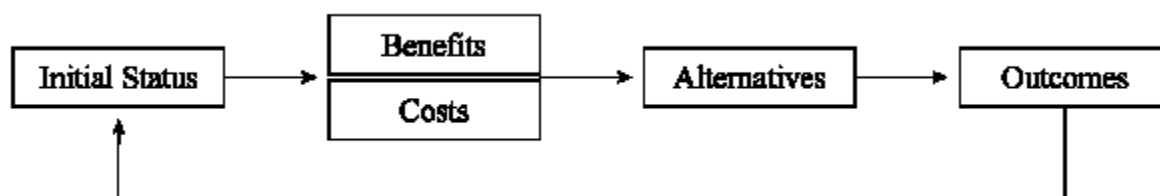
The second purpose, addressed by essay two, was to determine how relationship satisfaction develops over time differently among a group of recently married young adults who did cohabit prior to marriage versus those who did not cohabit prior to their marriage. Further, essay two explored how income, assets and debts brought into the relationship, and economic well-being before marriage impact the initial levels and the rate of change in relationship satisfaction. The purpose of essay three was to examine how each partner's own financial characteristics brought into the relationship impact not only individual feelings of economic well-being, spousal warmth, spousal conflict, and ultimately how those constructs all influence relationship satisfaction, but also that of the partner. Lastly, essay three compares these constructs for those who did cohabit versus those who did not cohabit prior to marriage.

Description of Studies

Essay One

Using social exchange theory as a framework, essay one attempted to address how potential benefits (e.g., high financial assets, low financial debt) and potential costs (e.g., high financial debt, low income) to the couple relationship at Time 2 (T2) mediate the association between a person's relationship quality at Time 1 (T1) and their relationship quality at Time 3 (T3). It also explored whether those individuals ultimately make a change to their relationship status. Essay one also addressed how gender moderates the relationship between relationship quality at T1 and the financial aspects of T2. Finally, essay one examined group differences to see how the effects vary between those who are married and did not cohabit prior to marriage with those who are married and did cohabit prior to marriage. Key variables included: (a) assets at age 25, (b) debt at age 25, (c) income at age 25, (d) latent constructs measuring relationship quality at age 24 and 26, and (d) relationship dissolution. As depicted in Figure 1.1, social exchange theory posits that people have a starting point, consider a benefit-cost analysis and then weigh that analysis against alternatives available to them before deciding on some outcome, such as determining whether or not it is worthwhile for them to continue in a committed relationship (Emerson, 1976).

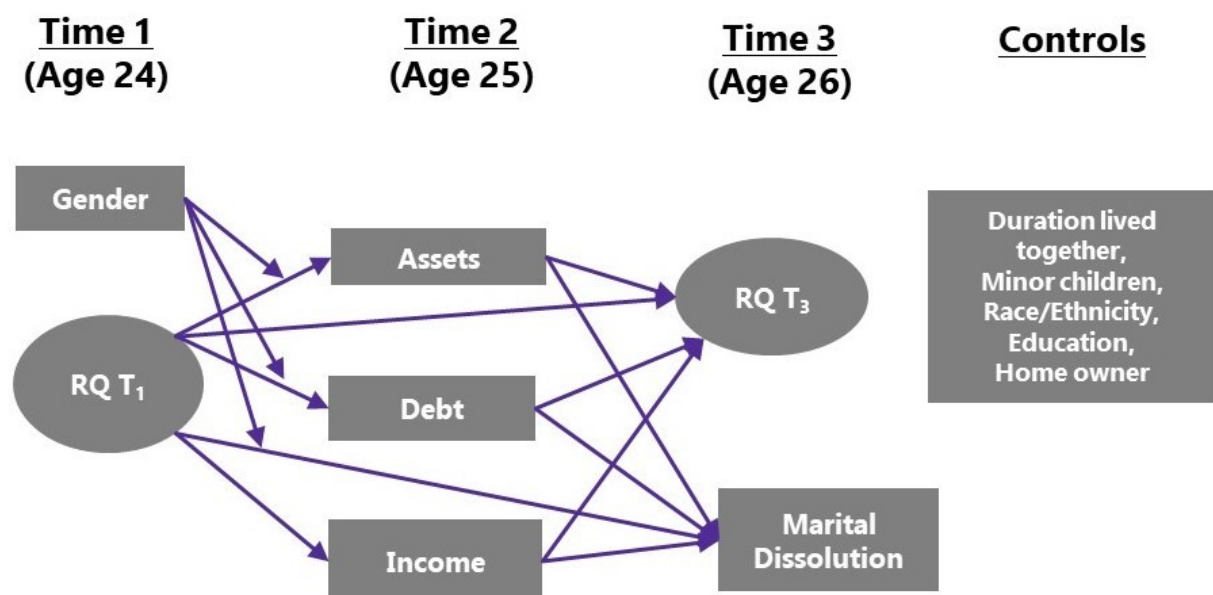
Figure 1.1 A conceptual model of social exchange theory.



Using the NLSY97, a longitudinal study of young adults born between 1980 and 1984, a structural equation model was employed to investigate the potential of financial assets, debt, and

income (i.e., a benefit-to-cost analysis) as a mediating variables between a respondents' initial relationship quality (i.e., initial status) and their relationship quality at a later time (i.e., outcome), and to explore whether gender moderates this path. Essay one's focus is on the effects of the couple's assets, debt, and income levels leading directly to outcomes rather than alternatives, so alternatives were not considered. Figure 1.2 provides a detailed description of the empirical model used for the structural model measurement.

Figure 1.2 An empirical model of social exchange theory for the mediating effects of assets, debt, and income on relationship quality, and the moderating effects of gender on assets, debt, and income.



Social exchange theory posits that individuals undergo a benefit-cost analysis and that if they perceive the relationship as being at least as good as the alternatives they perceive available to them, they will continue to stay in the relationship but if they perceive aspects of the current relationship to be more costly for them they will seek alternatives and look to dissolve their

current relationship. With that framework, the following hypotheses will be explored in essay one:

- H1: Time 1 relationship quality will be positively associated with financial assets at Time 2.
- H2: Time 1 relationship quality will be negatively associated with financial debts (excluding mortgage debt) at Time 2.
- H3: Time 1 relationship quality will be positively related to relationship quality at Time 3.
- H4: Time 1 relationship quality will be negatively related to relationship dissolution at Time 3.
- H5: Financial assets at Time 2 will be positively associated with relationship quality at Time 3.
- H6: Financial debts (excluding mortgage debt) at Time 2 will be negatively associated with relationship quality at Time 3.
- H7: Income at Time 2 will be positively associated with relationship quality at Time 3.
- H8: Financial assets at Time 2 will be negatively associated with relationship dissolution at Time 3.
- H9: Financial debts (excluding mortgage debt) at Time 2 will be positively associated with relationship dissolution at Time 3.
- H10: Income at Time 2 will be negatively associated with relationship dissolution at Time 3.
- H11: Financial assets will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.

- H12: Financial debts (excluding mortgage debt) will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.
- H13: Income will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.
- H14: Financial assets will mediate the relationship between relationship quality at Time 1 and relationship dissolution at 3.
- H15: Financial debts (excluding mortgage debt) will mediate the relationship between relationship quality at Time 1 and relationship dissolution at Time 3.
- H16: Income will mediate the relationship between relationship quality at Time 1 and relationship dissolution at Time 3.
- H17: Gender will moderate the relationship between relationship quality at Time 1 and financial assets at Time 2.
- H18: Gender will moderate the relationship between relationship quality at Time 1 and financial debts (excluding mortgage debt) at Time 2.
- H19: Gender will moderate the relationship between relationship quality at Time 1 and income at Time 2.
- H20: Gender will moderate the relationship between the assets at Time 2 and relationship quality at Time 3.
- H21: Gender will moderate the relationship between the debts at Time 2 and relationship quality at Time 3.
- H22: Gender will moderate the relationship between income at Time 2 and relationship quality at Time 3.

Essay Two

Essay two utilized the Marriage Matters Panel Survey of Newlywed Couples, Louisiana (Marriage Matters; Nock, Sanchez, & Wright, 2012) to first investigate the rate of change in relationship satisfaction in a group of recently married couples. Second, the study examined the impact that the covariates of income, debt, economic well-being, and having cohabited have on the rate of change in relationship satisfaction. Third, essay two employed a multiple group comparison latent growth curve analysis to explore differences that income, debt, and economic well-being have on the rate of change in relationship satisfaction over time for those who did versus did not cohabit prior to marriage.

Prior research has shown that the initial status of relationship satisfaction might be a determining factor in the rate of change in relationship satisfaction over time (Brown, Manning, & Payne, 2017; Manning & Cohen, 2012). Given that, social exchange theory provides a framework which suggests that (a) the initial level of relationship satisfaction is important to consider, (b) that individuals will engage in a benefit-cost analysis to help them determine the value of their current relationship, and (c) individuals will weigh costs against potential alternatives. Those who perceive relationship benefits as greater than relationship costs (i.e., a net profit) will maintain or strengthen their relationship, while those who perceive costs of the relationship to outweigh the benefits (i.e., a net loss) would have either a sharp decrease in relationship satisfaction or have dissolved their relationship entirely (Emerson, 1976). A review of the theoretical model can be found in Figure 1.1.

Empirically, two latent growth curve models were used to test the hypotheses listed below. The first model examined initial levels of relationship satisfaction and the rates of change in relationship satisfaction without covariates. Model two added in the covariates of income,

debt, economic well-being, and having cohabited to determine which, if any, of those influence both the starting levels relationship satisfaction as well as the trajectories of relationship satisfaction change over time. See Figure 1.3 for a review of the full empirical model.

H1: Relationship satisfaction will decrease over time.

H2: Higher levels of income brought into the relationship will be associated with a positive rate of change in relationship satisfaction over time.

H3: Higher levels of debt (i.e., credit card and “other” significant debt) brought into the relationship will be related with a negative rate of change in relationship satisfaction over time.

H4: Higher levels of economic well-being will be related with a positive rate of change in relationship satisfaction over time.

H5: Having cohabited prior to marriage will be related with a negative rate of change in relationship satisfaction over time.

H6: For those who did not cohabit compared to those who did, income will have a greater positive effect on the starting levels of relationship satisfaction.

H7: For those who did not cohabit compared to those who did, income will have a greater positive effect on the rate of change in relationship satisfaction over time.

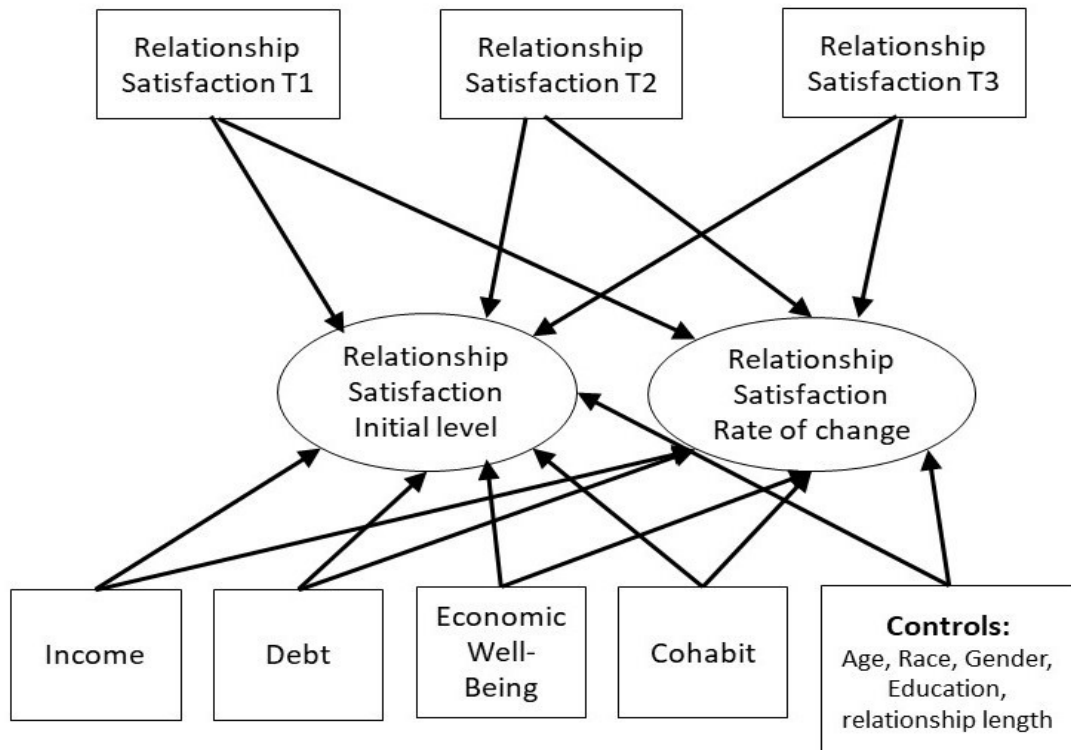
H8: For those who did not cohabit compared to those who did, debt (e.g., credit card and “other” significant debt) will have a greater negative effect on the starting levels of relationship satisfaction.

H9: For those who did not cohabit compared to those who did, debt (e.g., credit card and “other” significant debt) will have a greater negative effect on the rate of change in relationship satisfaction over time.

H10: For those who did not cohabit compared to those who did, economic well-being will have a greater positive effect on the starting levels of relationship satisfaction.

H11: For those who did not cohabit compared to those who did, economic well-being will have a greater positive effect on the rate of change in relationship satisfaction over time.

Figure 1.3 Empirical model of latent growth curve model measuring the initial level and rate of change in relationship satisfaction, as well as the effect of benefits and costs to the relationships as covariates.

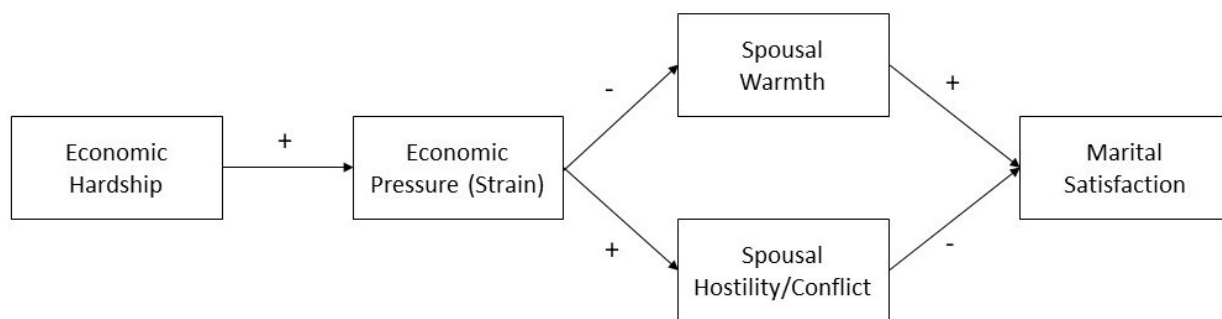


Essay Three

Essay three utilized the Marriage Matters dataset—a dyadic dataset—to explore the following research questions: (a) how does one partner’s characteristics of economic hardship

influence their own feelings of economic pressure (i.e., low levels of economic well-being) as well as that of their partner? (b) Does one's own feelings of economic pressure influence their own levels of spousal warmth and spousal conflict and that of their spouse's? (c) How does spousal warmth and conflict exhibited by each partner influence their own level of marital satisfaction and that of their partner? To investigate these questions, a revised version of Conger et al.'s (1990) economic family stress theory was utilized (see Figure 1.4).

Figure 1.4 Conger et al.'s (1990) economic family stress model.



According to the economic family stress model (Conger et al., 1990), economic hardship results from negative financial events such as low income, unemployment, or debt. This, in turn, leads to economic pressure, which has been explained as a, “state of distress brought about by worry over one’s finances, having to cut back in consumption, and becoming dissatisfied with one’s finances” (Dew, 2007, p. 91). Those who exhibit lower perceived economic well-being experience more bouts of relationship conflict with their partners and consequently, less warming interactions with their partners. The compounding effect of multiple negative marital interactions (i.e., increased conflict, decreased warmth) yield lower relationship satisfaction with their partners (Conger et al., 1993, 1990).

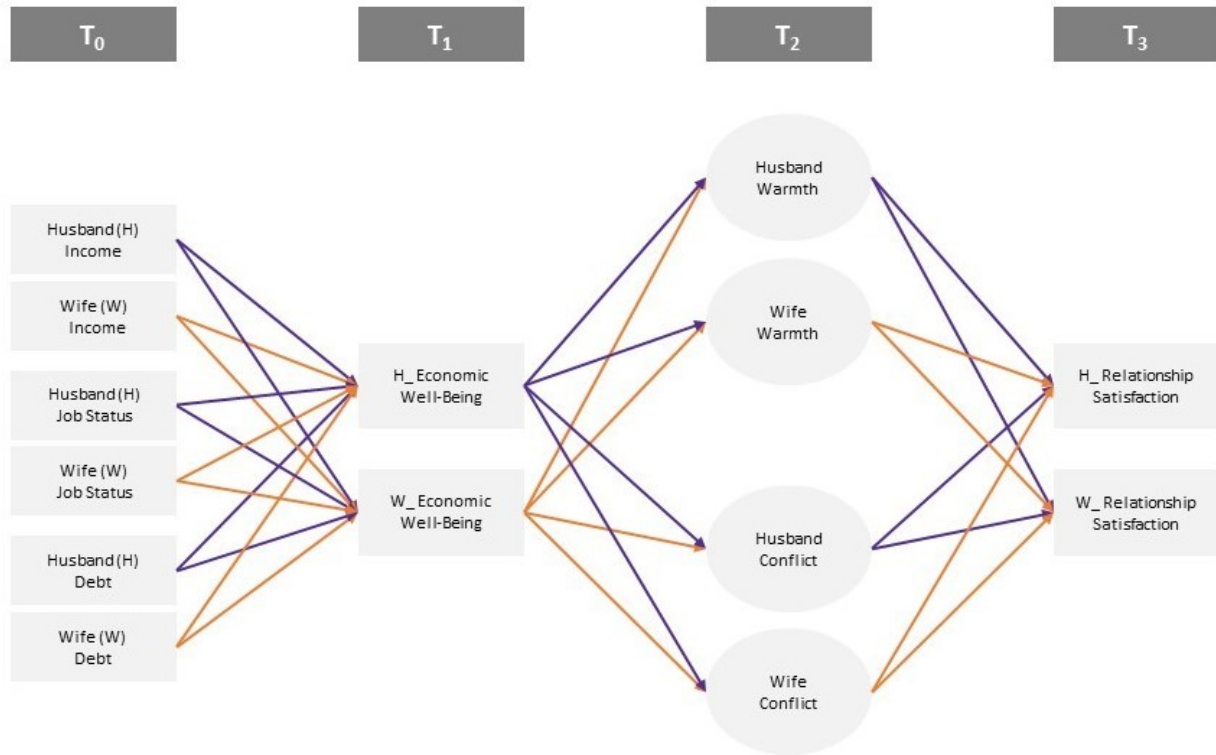
Essay three, then, examined how economic hardships such as low income and debt, and how simply cohabiting prior to marriage influence not only the respondent’s economic pressure

(as measured through economic well-being) but also their partner's economic pressure and how those influence both the warmth and conflict experienced by themselves, as well as their partner. It ultimately shows how that all influences a respondent's own relationship satisfaction and the marital perceptions of their partner. The following hypotheses were analyzed:

- H1: Income will be positively associated with economic well-being for both partners
- H2: Job status will be positively associated with economic well-being for both partners.
- H3: Debt (i.e., credit card and "other" significant debt) will be negatively associated with economic well-being for both partners.
- H4: Economic well-being will be positively associated with partner warmth for both partners.
- H5: Economic well-being will be negatively associated with partner conflict for both partners.
- H6: Partner warmth will be positively related to relationship satisfaction for both partners.
- H7: Partner conflict will be negatively related to relationship satisfaction for both partners.

The empirical model for essay three is provided in Figure 1.5.

Figure 1.5 Empirical model of full Actor-Partner Interdependence Structural Model. Blue lines represent husband's effects, red lines represent wife's effects.



Potential Implications & Summary

This dissertation has the potential to provide a handful of meaningful and relevant implications for both financial and mental health professionals, their clients and/or patients, and researchers. The results of essay one may help financial planners better understand how people consider financial implications with respect to their quality of marriage. Financial practitioners want to be able to keep clients happy and ensure no marital discord is present. If assets, debt, and income play a factor different for those who cohabit versus those who marry without ever cohabiting, that would be an important source of information to provide to the clients. Results of essay two will help those working with clients better understand how income, debt, and economic well-being influence the trajectories of relationship satisfaction change. This is

important because the results might help financial and mental health practitioners better identify which clients could be on a poor trajectory in terms of relationship satisfaction given specific financial characteristics.

With respect to essay three, understanding how cohabitation influences economic pressure and the impact that has on not only the client's warmth and conflict with their partner, but also the spouse of the client's warmth and conflict is important. Clients with large debt levels may not feel comfortable discussing their troubles with money and their long-term goals and concerns because of their debt. On that note, helping clients open up about such problematic financial situations and encouraging them to a conversation, most notably, with their partner may go a long way in helping resolve couple conflict, and ultimately help save a relationship. For financial practitioners, it could also be the difference between keeping clients and losing clients due to relationships dissolving. Therefore, the current study aims to help professionals working with clients better understand the driving components of why the clients might feel economic pressure and how those key components may impact their relationship satisfaction later. Having such an understanding can help the financial practitioner drive the conversations and work with their clients to the things that matter most, and of which will help increase, not decrease, long-term relationship satisfaction.

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Chapter 2 - Relationship quality, perceived relationship benefits and costs, and the impact on relationship status of millennials

Introduction

Cohabitation (i.e., residing with a significant other prior to marriage) has increased nearly 900% since the 1960s (Kuperberg, 2014). In 2012, there were approximately 7.8 million people cohabiting, a significant increase from the 2.9 million people cohabiting in 1996 (Kuperberg, 2014; Vespa, Lewis, & Kreider, 2013). Furthermore, Kuperberg (2014) showed that two-thirds of young-adult marriages between 2000 and 2009 began with cohabitation. Taken together, evidence for an upward trend in cohabitation exists, which may be troubling given that much of the literature on cohabitation has resulted in numerous findings suggesting that cohabiting with a significant other prior to marriage likely increases relationship dissolution (Copen, Daniels, & Mosher, 2013; Copen, Daniels, Vespa, & Mosher, 2012; Kamp Dush, Cohan, & Amato, 2003; Kuperberg, 2014). Individuals who are married are not protected from dissolution risks either. It has been estimated that 40-50% of all marriages end in divorce (American Psychological Association [APA], 2017), while 64% of women and 66% of men had marriages last at least 10 years (Goodwin, Mosher, & Chandra, 2010). The overarching purpose of the current study is to examine if and how relationship quality is explained (i.e., mediated) by financial implications for young married adults. Further, the study examines if cohabiting influences (i.e., moderates) the relationship between initial relationship quality and resulting relationship quality, as well as the effect of the financial implications on relationship quality.

Individuals who chose to cohabit likely did so because of the opportunity to pool their resources and share expenses (Huang, Smock, Manning, & Bergstrom-Lynch, 2011). Pooling resources affords young adults the opportunity for upward mobility (Huang et al., 2011). Addo

(2017) found that cohabiting couples who chose to share both their credit cards and bank accounts were more likely to marry, and that approximately 30% of cohabiting couples who eventually married, also jointly held a mortgage while cohabiting, further indicating that the pooling of resources is ideal for individuals who want to eventually tie the knot. Due to the pooling of resources for greater economies of scale, marital duration has been shown to have a positive effect on the wealth of married couples (Zissimopoulos, Karney, & Rauer, 2015).

Marital duration is associated with increased wealth (as measured by financial and housing wealth; Zissimopoulos et al., 2015). When compared to married people, cohabiting individuals have less overall wealth (Wilmoth & Koso, 2002). Negative financial characteristics, such as debt have been associated with an increased risk in dissolution of relationship (Dew, 2007). Economic hardships are also associated with dissolution of relationships (Halliday Hardie & Lucas, 2010; Kalmijn, Loeve, & Manting, 2007; Lewin, 2005; Ono, 1998; White & Rogers, 2000). Economic well-being (e.g., a positive combination of income, assets, and debt) has been found to be positively associated with relationship length and eventual marriage (Edin & Reed, 2005; Sweeney, 2002). Assets are positively linked with wives' marital satisfaction (Dew, 2009), and marriage is associated with greater economic well-being for wives (Light & Ureta, 2004; Schmidt & Sevak, 2006), suggesting that there may be gender differences for the effect of financial assets on resulting relationship quality and ultimately, a change in relationship status (Dew, 2011a).

Much of the previous research examining cohabitation used data from the 1970s to mid-1990s (Kuperberg, 2014), a time where nearly half of the population did not approve of cohabiting (Jayson, 2014). Research using data from the 2000s has found that people are more supportive of cohabitation than they were in the late 1990s, and view it as a method to test the

waters prior to marriage (Huang et al., 2011; Hughes, 2014; Manning & Cohen, 2012; Reinhold, 2010). Despite the trend in cohabitation, there is little research that has examined how assets and debt influence the association between current relationship quality and the resulting relationship status of young adults.

Using data from the NLSY97, the current study seeks to advance the literature by exploring if financial implications and perceived benefits and costs in a relationship mediate the relationship between relationship quality at Time 1 (i.e., age 24) and the resulting relationship quality at Time 3 (i.e., age 26), and the subsequent impact of whether there is a relationship dissolution, among a younger cohort of individuals born between 1980 and 1984. Much of the prior literature has focused on older adults and the accumulation of financial assets and/or housing wealth. Literature is scant on the financial implications for married young adults, and previous studies that have examined cohabiting and married young adults have mostly looked at income. Furthermore, there is little research examining group differences while simultaneously testing gender as a moderator of financial implications and resulting relationship quality. With the use of a more recent dataset, the purpose of this study is to add to the body of literature on cohabitation and marriage, namely how individuals' perceived benefits and costs in the relationship, with a focus on financial aspects, influence both their relationship quality and their decisions to remain in the same relationship later.

Theoretical Framework and Related Literature

Social exchange theory provides hypotheses for how relationship quality, financial assets, income, and financial debt are associated with an individual breaking up or staying in a committed relationship with their partner. Social exchange theory asserts that individuals undergo a benefit-cost analysis to make the determination to stay in, or advance, a committed

relationship or not. Given this, financial factors were conceptualized as relationship rewards (i.e., higher levels of financial assets or income, lower levels of financial debt) or costs (i.e., higher levels of financial debt, lower levels of financial assets or income), that influence both the relationship quality and the likelihood of a relationship change.

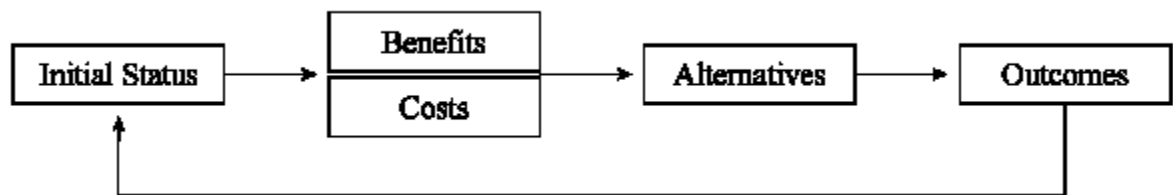
Social Exchange Theory

Given the focus on Time 3 relationship quality and marital dissolution as outcome variables, social exchange theory (SET) has been utilized in the current study to investigate how perceived beneficial and costly financial implications experienced during the relationship mediate the association between relationship quality at Time 1 and resulting relationship status at Time 3, as well as relationship quality at Time 1 and whether the couple dissolved their marriage or not. Empirical evidence has supported the use of SET in explaining finances and relationships (Britt, Grable, Goff, & White, 2008; Dew, 2008, 2009, 2011a; Dew, Britt, & Huston, 2012; Kerkmann, Lee, Lown, & Allgood, 2000). Basic assumptions of social exchange theory are: (a) individuals seek out choices that maximize their benefits because they are self-interested; (b) individuals are rational and can readily calculate benefits and costs; and (c) individuals calculate benefits and costs differently (White & Klein, 2002).

There are four components to social exchange theory: (a) benefits, (b) costs, (c) alternatives, and (d) outcomes (See Figure 2.1 for the interaction among the components). Benefits are any social, physical, or psychological benefit to an individual. Costs have been considered a negative benefit, or opportunity costs. A ratio of benefits-to-costs are calculated by the individual and weighed against alternatives that the individual has available to him or her (White & Klein, 2002). Under SET, alternatives have been known to take two forms. First, individuals will have considered their situation in comparison to others with similar attributes

(i.e., a comparison level approach). The second form has dealt with how individuals have perceived themselves in relation to others outside of their position (i.e., a comparison level alternative approach). An example is a married person that has compared their benefit-to-cost ratio to single people. Outcomes, then, are the result of a benefit-cost analysis compared to such alternatives.

Figure 2.1 A conceptual model of social exchange theory.



Research has indicated that only about one-third of cohabiting couples will remain cohabiting after three years, another 40% of cohabiting relationships will have transitioned to marriage, and approximately 27% will have dissolved (Copen et al., 2013). Therefore, it is important to consider how cohabiting may result in differences in relationship quality, and how that relationship quality influences the couple's ability to remain together throughout their relationship. While there has been significant research reviewing the relationship quality of married individuals, it was not until the last 20 or 30 years that researchers began to examine the differences between married couples and cohabiting couples, which has shown that relationship quality does seem to differ based upon cohabitation prior to marriage. Specifically, younger cohabiters tend to have lower relationship quality than do their married counterparts (Brown & Booth, 1996). Within the framework of SET, relationship quality can be utilized to operationalize the concepts of both initial status (i.e., relationship quality at Time 1) and outcomes (i.e., relationship quality at Time 3). Further, outcomes can also be operationalized

through the use of relationship dissolution – whether the respondent remained married or they split from their spouse.

Relationship Quality

There is little consensus on the definition of the term relationship quality (Fincham & Rogge, 2010). Due to this, relationship quality is often used interchangeably with terms such as relationship or marital satisfaction, relationship happiness, relationship or marital stability, and/or relationship adjustment, even though these terms are not considered the same (Reynolds, Houlston, & Coleman, 2014). Therefore, it is important to define what is meant by the term “relationship quality” here. According to Reynolds et al. (2014), there are two ways in which to approach relationship quality. The first is to focus on partner interactions through means of communication, positive behaviors, conflict, and how time is spent with each other. That is, it is an interpersonal approach to relationship quality. The second approach is the intrapersonal approach (Reynolds et al., 2014) and attempts to only examine the subjective response to how each partner rates their own happiness or satisfaction with their relationship (Fincham & Rogge, 2010). The current study considered the first approach to relationship quality. Accordingly, measures of respondents’ feelings about being close to their partner, believing their partner cared about them, and feeling committed to their partner were considered as indicators of relationship quality.

Relationship quality and cohabitation. Brown and Booth (1996) used data from the 1987-1988 National Survey of Families and Households (NSFH) to compare the relationship quality of individuals aged 19-48 who cohabited versus whom were married. They found, after controlling for relationship length and demographic characteristics, such as age, race, gender, and education, that the relationship quality of cohabiters was moderately lower than that of their

married counterparts. However, once they factored in the marital plans of cohabiters, the differences in relationship quality no longer existed, inferring that those who cohabit with intentions to marry likely view it as a precursor to marriage. As a result, there were no differences in relationship quality for cohabiters who had planned to marry their significant other when compared to married individuals. This was also confirmed by Brown (2003) who, in addition to looking at plans to marry, examined how relationship duration influenced relationship quality. However, data on cohabitation from the twentieth century may not be reflective of more recent societal views as more people view cohabitation as a path to marriage, and have fewer negative feelings about it (Kuperberg, 2014). Using the National Survey of Family Growth with data coming from 2006 through 2008, Manning and Cohen (2012) reviewed pre-marital cohabiting individuals and found that there was a neutral relationship with the risk of the relationship status having negatively changed (e.g., dissolved).

Relationship quality and relationship duration. Another important consideration of relationship quality and the long-term outlook of a relationship is the duration of the relationship (Lavner & Bradbury, 2010). Previous research has shown that relationship quality undergoes a U-shaped curve across the duration of the marriage (Adelmann, Chadwick, & Baerger, 1996; Glenn, 1998) while other research posits that duration is negatively associated with marital quality (Brown, 2003) and divorce (Britt & Huston, 2012). Using the NSFH, Brown (2003) specifically looked at the differences in the effect of duration on relationship quality between those who cohabited and individuals who were married. Findings suggested that for both cohabiting and married individuals, duration was negatively associated with relationship satisfaction. However, relationship quality was lower for cohabiting individuals than their married counterparts. Finally, the longer an individual cohabited, the less stable their relationship

became. This effect was not found for married individuals, indicating that the duration of a couple's cohabitation is associated with the likelihood of relationship dissolution. Brown (2003) also discussed that women who transitioned from cohabitation to marriage yielded higher relationship quality than women who did not get married. This affect was not found for men, indicating that gender may moderate the relationship between relationship status and relationship quality. Due to the findings of previous research, controlling for relationship duration is imperative.

Relationship quality and age at marriage/cohabiting onset. Prior research has shown a strong negative affect between age upon marrying and divorce risk (Booth & Edwards, 1985; Heaton, 1991; Lee & Shehan, 1989; Raley & Bumpass, 2003; South, 1995; J. D. Teachman, 2002). Teachman (2003) found a gender effect, too, showing that the risk of divorce was stronger for women than men. Although, it should be noted that in later work, results by Teachman (2010) indicated that age was not significant. As cohabitation has become more the norm, researchers have begun to take an interest in the age upon cohabiting, rather than marrying, as the beginning marker to study. Kuperberg (2014) sought to understand the effect of age at co-residence on relationship dissolution. Her results indicated the need to look at age at cohabitation for those who do cohabit, instead of age at marriage. The results showed that the association between cohabitation and marriage dissolution was no longer significant when controlling for age at cohabitation. This effect even held true when she re-ran the study with older datasets for those who married in the 1970s through mid-1990s, indicating that researchers should use age of cohabiting for those who cohabit and age of marriage for those who do not cohabit.

Relationship quality and relationship status. Much of the research examining the differences in relationship quality between individuals who cohabit and those who are married

utilized data from the 1990s (Kuperberg, 2014). Recent research using the 2010 Married and Cohabiting Couples Survey identified that relationship quality still does differ by relationship status (Brown, Manning, & Payne, 2017). Brown et al. (2017) considered four groups of relationship status: (a) directly married, (b) premaritally cohabited, (c) cohabitators with plans to marry, and (d) cohabitators with no plans to marry. Brown and colleagues (2017) found that, for women, relationship quality was highest for those who were directly married, and lowest for those who were cohabiting and not planning to marry. There was no significant difference between those who were premarital cohabitators and cohabitators with plans to marry, although premarital cohabitators had slightly lower relationship quality than cohabitators with plans to marry. For men, the order of relationship quality by group was the same. Only individuals who were cohabiting and not planning to get married significantly differed in relationship quality; no other differences existed between groups. Within group analysis indicated that no differences in relationship quality existed by gender (e.g., men and women who were cohabiting and planning to marry did not differ in relationship quality status). Dew (2011b) had also found similar results, having showed that marital satisfaction did not predict attrition in marital relationships and suggested that gender may not moderate the relationship as previously found.

Couples in a cohabitating relationship exhibit less happiness in their relationships when compared to their married counterparts (Hamplova & Le Bourdais, 2009; Marcussen, 2005; Nock, 1995). In examining how perceived spending behaviors influence relationship satisfaction, Britt et al. (2008) showed that married couples reported slightly more relationship satisfaction than did their cohabitating counterparts, supporting the findings of Nock (1995). However, the difference was not significant in the Britt et al. (2008) study, but the sample size comparison was 310 married subjects to 37 cohabitating participants. Brines and Joyner (1999) found that the

longer a couple is together the better chance they have at remaining a couple, regardless if they are married or not. Thus, the recent trend of cohabitation may not be negative, given that many millennials have delayed participating in marriage. In fact, they may be helping themselves by being in a cohabitating relationship to share costs with the result of marriage once they feel financially able to start a family. In any sense, it is still important to consider whether relational aspects differ for those who did and did not cohabit.

Relationship quality and financial outcomes. Prior research has shown an association between relationship quality and financial outcomes, typically such that adverse household economic conditions (Aseltine & Kessler, 1993) lead to lower relationship quality through less positive relational interactions (Fein, 2004). In turn, this leads to a cyclical negative situation as lower relationship quality among partners has been found to be related to more problems with finances (Trail & Karney, 2012). Couples with higher relationship quality also tend to manage their finances a bit differently as they have a greater likelihood of shared bank accounts and pooling their assets (Pasley, Sandras, & Edmondson, 1994; Vogler, Lyonette, & Wiggins, 2008), and less financial conflict (Dew, 2008). Archuleta (2013) showed that having shared goals and values as a couple is important and yielded greater relationship quality. There is clear evidence that those couples who have higher relationship quality also have more positive financial management practices which could lead to greater financial outcomes, and does, in turn, create a positive cycle in terms of enhanced relationship quality (Addo & Sassler, 2010).

Benefit-Cost Analysis and Alternatives

Within the framework of SET, individuals engage in a benefit-cost analysis of their current relationship and weigh that analysis against alternatives that the individual has, or are perceived to be, available to him or her before leading to some outcome. Alternatives, according

to White and Kline (2002) are what individuals compare their current situation to before an outcome occurs. The focus of the present study is to examine the respondents' benefit/cost analysis leading directly to outcomes rather than to alternatives. Benefits are thought to be any social, physical, or psychological benefit to an individual, while costs are considered a negative reward, or are opportunity costs (White & Klein, 2002). Within the scope of this paper, financial income and assets can be thought of as "benefits" to the relationship, while financial debt can be operationalized as the "costs" to the relationship.

Income. Mixed evidence exists with respect to the role that income can change relationship quality and its influences on eventual relationship dissolution. Using a sample of married people under the age of 55 in 1980, Rogers (2004) indicated that the likelihood of divorce was greatest when wives earned approximately 40-50% of the household income and when their marital happiness was either low or moderate as compared to having a level of marital happiness. Rogers suggested that the results might have been due to the fact that when women are less economically dependent on their husbands and have lower levels of marital happiness, they are more likely to seek alternatives to the relationship given that they are not economically dependent upon their spouse. Research by Britt and Huston (2012) confirmed Rogers' results. They examined the relationship satisfaction of married women in their first marriage via the NLSY79, and found that as wives' income increased, their relationship satisfaction decreased. Yet, research by Deutsch, Roksa, and Meeske (2003) indicated opposite findings. They found that regardless if women earned more than men, husbands' positive feelings about their partners increased as their partners' earnings increased.

Using the first two waves of the NSFH, Dew (2011b) looked at whether income was associated with relationship dissolution from wave 1 (interviewed in 1987 or 1988) to wave 2

(1992 or 1994). No association between income and relationship dissolution of married couples was found. Via the NLSY 1986-2010 cohort – a sample of children born to mothers of the NLSY79 cohort – Britt and Roy (2014) reviewed young adult couples (ages 18-39 in 2010) who were married or cohabiting. They found that differences in income between partners had no effect on relationship quality.

Financial Assets. A household's financial resources have been negatively linked with marital conflict (Dew, 2009, 2011b). This is important as previous research showed that conflict, specifically money arguments, were associated with lower levels of relationship satisfaction, and increased the chances of divorce in the early years of marriage (Britt & Huston, 2012; Dew et al., 2012). Using the NSFH, Dew (2007) looked at how economic pressure and a person's locus of control mediated the relationship between financial assets at Time 1 and marital satisfaction of married individuals at a later time by using a full structural equation model. While assets negatively predicted economic pressure, no indirect or direct effects were found to support the notion that assets influenced marital satisfaction.

There is some evidence suggesting that gender may moderate the effects of financial assets. Dew (2009) found that wives' characteristics explained the association between a household's financial assets and the couples' likelihood of divorce. More specifically, as household financial assets increased, wives' marital satisfaction increased, as did their perceived cost of getting out of the relationship via divorce. Neither of these relationships were found for men, which indicates that it makes sense to moderate the effects of financial assets by gender. Assets also play a role on an individual and couple's decision to progress their relationship to marriage. Using the NLSY97, Addo (2014) showed that financial assets were positively associated with the decision to move towards cohabitation or marriage from singlehood.

Financial Debt. Financial debt is a burden to the couple relationship as it is a burden on a couple's current and future financial assets, and leads to constrained choice (Dew, 2007). In turn, the constrained choice of one or both partners can lead to increased marital stress and conflict (Conger, Rueter, & Elder, 1999). Using the NSFH, Dew (2007) examined, among other things, the relationship between financial debt at Time 1 and marital conflict of married individuals at a later time using a full structural equation model. Results indicated that debt was positively associated with marital conflict. Additionally, even after controlling for initial levels of marital conflict, the association between debt and marital conflict five years out was still robust.

Using the NSFH, Dew (2008) reviewed whether changes in debt were associated with changes in marital satisfaction at a later time point of non-retired couples who were married less than five years. Results of the study indicated that changes in debt were negatively associated with changes in marital satisfaction. That is, a reduction in debt from one period to the next resulted in an increase in marital satisfaction between periods. Further analysis revealed that changes in consumer debt were significantly associated with changes in marital satisfaction, but mortgage debt and student loan debt did not significantly change marital satisfaction. This echoes the research by Conger et al., (1999) and Dew (2007) that consumer debt likely reduces choice, increasing marital conflict and, thus, the chances for relationship dissolution.

Dew (2011b) examined the association between consumer debt and the likelihood of divorce using two waves of longitudinal data from the NSFH. He found that debt was positively associated with the likelihood of divorce when controlling for assets, income, age, education, race/ethnicity, number of minor children, and number of marriages. This relationship was mediated by financial conflict for both husbands and wives. Relationship quality also mediated the relationship between consumer debt and divorce for women, but only partial mediation was

found for men. Results of the study also suggested that gender may moderate the effects of debt as well as relationship quality on relationship outcomes.

Debt may also play a role on the decision to marry. Using the NLSY97, Addo (2014) examined the role that credit card debt and student loan debt each had on young adults who were not married or cohabiting prior to age 20. The purpose was to see how debt influenced young adults' decisions to remain in the relationship, transition to cohabiting, or directly marry. Results indicated that debt, particularly student loan debt, was associated with a lower likelihood of the relationship transitioning to marriage. More explicitly, individuals who held debt and who were living by themselves were more likely to cohabit because of their debt, but couples who were cohabiting and held debt were less likely to transition to marriage due to their debt. Gender differences were found, suggesting potential for gender to moderate financial debt.

Children. The presence of minor children has possible detrimental effects for relationship quality (Brown, 2003). Specifically, Brown (2003) indicated that there were no differential effects of minor children present in the household on relationship quality between cohabiting and married individuals. For both relationship statuses, having minor children present reduced two of the three tested components of relationship quality, partner interaction and partner happiness, but not partner instability. The author then tested group differences (i.e., married versus cohabiting) in the interaction of relationship duration and the presence of minor children to see if there were negative effects on the three components of relationship quality. Results indicated that relationship quality differences did exist between cohabiting and married individuals, but for happiness and instability; partner interaction had no group differences. The authors explained that the results were likely due to the high rate of cohabiting unions having children from a previous partner.

Shapiro, Gottman, and Carrère (2000) found a negative association between children and relationship satisfaction, explaining that their results are consistent to previous findings – couples as new parents tend to experience a decrease in their marital relationship satisfaction due to an increase in conflict. When they compared wives' who had become mothers to a control group of non-mother wives, the wives who became mothers had a larger decrease in marital satisfaction. Lawrence, Rothman, Cobb, and Bradbury (2010) questioned to what extent the first child's arrival has on a couple's marriage satisfaction. They supported the findings of Shapiro et al. (2000) as Lawrence et al. (2010) showed that marital satisfaction declined once children were present. More precisely, Lawrence et al. (2010) found that marital satisfaction began to decline in the third trimester of pregnancy rather than immediately following birth. The authors noted that the decline in marital satisfaction could may be due to less time spent on joint leisurely activities and intimacy as the couple spends more time on household work in preparing for the birth of their child, and then caring for the child (Lawrence et al., 2010). On the other hand, Britt and Huston (2012) did not find the presence of children to influence relationship satisfaction. Given the results of prior studies, having minor children in the relationship should be controlled for at all time points within the current study's model.

Summary

In summary, SET suggests that individuals will have considered a benefit-cost analysis in order to determine whether it was worthwhile for them to have continued in a committed relationship. Individuals who perceived relationship benefits as greater than relationship costs (i.e., a net profit) would have opted to maintain or strengthen that relationship, while those who perceived the costs to be greater than the benefits (i.e., a net loss) would have dissolved their relationship (Emerson, 1976). This is because it is postulated that individuals have considered a

benefit-cost analysis in relation to the alternatives that were available to them at the time (Emerson, 1976; Sabatelli, 1988; Thibaut & Kelley, 1959).

Hypotheses

H1: Time 1 relationship quality will be positively associated with financial assets at Time 2.

H2: Time 1 relationship quality will be negatively associated with financial debts (excluding mortgage debt) at Time 2.

H3: Time 1 relationship quality will be positively related to relationship quality at Time 3.

H4: Time 1 relationship quality will be negatively related to relationship dissolution at Time 3.

H5: Financial assets at Time 2 will be positively associated with relationship quality at Time 3.

H6: Financial debts (excluding mortgage debt) at Time 2 will be negatively associated with relationship quality at Time 3.

H7: Income at Time 2 will be positively associated with relationship quality at Time 3.

H8: Financial assets at Time 2 will be negatively associated with relationship dissolution at Time 3.

H9: Financial debts (excluding mortgage debt) at Time 2 will be positively associated with relationship dissolution at Time 3.

H10: Income at Time 2 will be negatively associated with relationship dissolution at Time 3.

- H11: Financial assets will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.
- H12: Financial debts (excluding mortgage debt) will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.
- H13: Income will mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3.
- H14: Financial assets will mediate the relationship between relationship quality at Time 1 and relationship dissolution at 3.
- H15: Financial debts (excluding mortgage debt) will mediate the relationship between relationship quality at Time 1 and relationship dissolution at Time 3.
- H16: Income will mediate the relationship between relationship quality at Time 1 and relationship dissolution at Time 3.
- H17: Gender will moderate the relationship between relationship quality at Time 1 and financial assets at Time 2.
- H18: Gender will moderate the relationship between relationship quality at Time 1 and financial debts (excluding mortgage debt) at Time 2.
- H19: Gender will moderate the relationship between relationship quality at Time 1 and income at Time 2.
- H20: Gender will moderate the relationship between the assets at Time 2 and relationship quality at Time 3.
- H21: Gender will moderate the relationship between the debts at Time 2 and relationship quality at Time 3.

H22: Gender will moderate the relationship between income at Time 2 and relationship quality at Time 3.

Methods

Data

Data were obtained from the National Longitudinal Survey of the Youth, 1997 cohort (NLSY97), a longitudinal survey sponsored by the Bureau of Labor Statistics. The NLSY97 is comprised of two independent probability samples, a cross-sectional sample (N = 6,748) and an oversample of Black and Hispanic or Latino respondents (N = 2,236). Respondents had to be between the ages of 12 and 16 as of December 31, 1996 and were first interviewed in 1997 when they were between the ages of 12 and 17 (N = 8,984). To ensure accurate representations of the population in terms of income, age, region, and other factors, participant selection occurred in two phases.

In phase one, 100 primary sampling units were identified for both samples via the National Opinion Research Center's (NORC) 1990 master probability sample (NLS, 2017). From there, 1,748 sampling segments were selected with 96,512 housing units identified. Phase two identified eligible participants, where 75,291 households were screened and 9,907 individuals were identified as being eligible for the NLSY97 cohort (i.e., born between 1980 and 1984). Of those, 8,984 individuals responded, resulting in a 91% response rate.

Sample

The current study used data from four rounds, specifically survey rounds 9 (2005), 10 (2006), 11 (2007), and 12 (2008). This is because round 12 was the last round in which the NLSY97 asked respondents about their relationship quality. The NLSY97 asked respondents about their assets and debt at ages 20, 25, and 30. Given the restriction of using data from 2005-

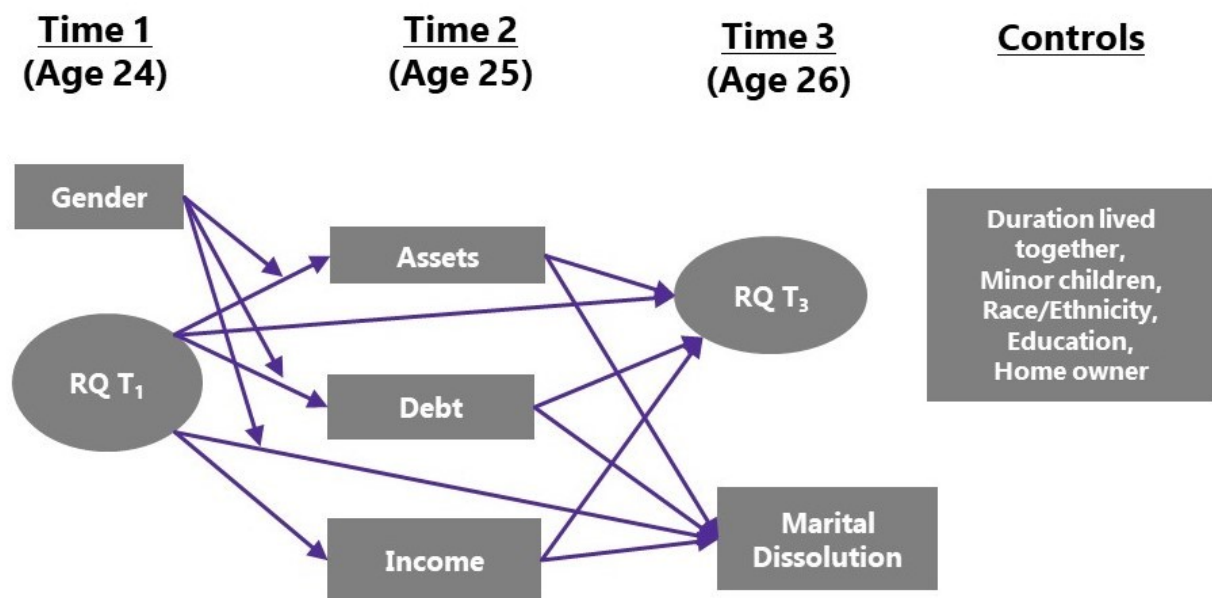
2008, asset and debt information at age 30 was not available because the oldest respondent was only 28 years old in 2008. Therefore, assets and debt at age 25 were both used as two of the mediating variables within the theoretical framework. Thus, the sample size was limited to respondents that were asked the asset and debt variables at age 25 (i.e., Rounds 10 (2006) and 11 (2007), so those under age 25 at the time of Round 11 were dropped due to no asset and debt information available. This reduced the sample to 4,122 individuals. Due to the focus of comparing heterosexual married young adults that cohabited prior to marriage with those who did not cohabit, respondents were further reduced to include only those who were married at Time 1 (i.e., age 24), reducing the sample to 596. Since time spent living together was utilized as a control for proxy of relationship duration, respondents who had negative time spent together were reduced from the sample. The final sample size was 508 individuals, with 330 having cohabited prior to marriage and 178 who did not cohabit prior to marriage.

Empirical Model

Within the context of the conceptual framework, relationship quality at Time 1 was considered as the proxy for initial status. The benefit-cost analysis portion of the framework utilized assets at age 25, debts at age 25, and income at age 25. These were all measured as separate mediating variables so that it would be possible to independently tease out the strength of the effects of each. Theoretically, it can be assumed that higher levels of assets and incomes and lower levels of debt should be considered a “benefit” to the relationship, while lower asset levels and incomes and higher levels of debt may be construed as a “cost.” Therefore, it is expected that both assets and income should be positively related to future relationship quality within the empirical framework, and that debts should be negatively related to future relationship quality. Including whether children were present in the household helped control for the cost of

time and energy as it relates to raising children in the relationship. Time spent living together, home ownership, race, and education were also variables used as controls. Figure 2.2 provides a detailed description of the empirical model used for the structural model measurement.

Figure 2.2 An empirical model of social exchange theory for the mediating effects of assets, debt, and income on relationship quality, and the moderating effects of gender on assets, debt, and income.



Variable Measurement

Relationship quality. Relationship quality at Time 1 (age 24) and Time 3 (age 26) was measured as a latent variable that comprised of three factors (i.e., questions) from the NLSY97 rounds 9 (2005) through 12 (2008) datasets. The first factor of the latent variable was measured by how close the respondent felt with their current partner via the following question: “On a scale of 1 to 10, where 0 is not close at all and 10 is very close, how close do you feel towards [current spouse or partner]?” The second factor of relationship quality dealt with how much the respondent believed their partner cared for them and was measured by, “How much do you feel

that [your spouse/partner] cares about you? Again, 0 means [your spouse/partner] does not care about you at all and 10 means [your spouse/partner] cares about you a lot.” Commitment to one’s spouse was the final factor of relationship quality and was measured via the question, “How committed would you say you are to [your current spouse/partner], all things considered? Use a scale of 0 to 10, where 0 is not committed at all and 10 is as committed as possible.”

Respondents who did not provide an answer were coded as missing.

The Time 1 and Time 3 latent variables were created based on when respondents were asked about age 25 assets and debts. Since financial information comprised the mediating (Time 2) variables, those respondents asked about age 25 assets and debts in round 10 (2006), the relationship quality measures utilized Round 9 (2005) data. For those respondents who were not asked the age 25 financial variables until Round 11 (2007), Round 10 (2006) relationship quality measures were utilized to get a Time 1 measure for each of the three indicators. The same methodology was utilized to create Time 3 measures for each indicator of relationship quality. That is, if Round 10 was used for the asset and debt info, then Round 11 was utilized to acquire the Time 3 relationship quality measures. For those asked in Round 11 about their age 25 assets and debt, then Round 12 (2008) relationship quality measures were used to acquire Time 3 information. In all cases, respondents were about age 24 at Time 1 for relationship quality and approximately age 26 at Time 3 relationship quality (varied slightly depending on timing of actual questionnaire). To ensure reliability and validity of the latent variable, confirmatory factor analysis (CFA) was utilized to determine how well each indicator loaded with the latent variable.

Time 1 standardized factor loadings for those who did cohabit were .84, .92, and .73 for caring, closeness, and commitment, respectively ($\alpha = .87$), and were .78, .89, and .63, respectively, for those who did not cohabit ($\alpha = .81$). Time 3 factor loadings for those who did

cohabit were .77, .87, and .79, respectively ($\alpha = .85$), and were .93, .90, and .73, respectively, for those who did not cohabit ($\alpha = .87$).

Marital status. A marital status variable for both Time 1 and Time 3 was created to help limit the sample size to marrieds only and to help us examine the impacts of marital dissolution. Respondents were classified in the NLSY by 10 categories of marital status where 1 = never married, cohabiting; 2 = never married, not cohabiting; 3 = married, spouse present; 4 = married, spouse absent; 5 = separated, cohabiting; 6 = separated, not cohabiting; 7 = divorced, cohabiting; 8 = divorced, not cohabiting; 9 = widowed, cohabiting; and 10 = widowed, not cohabiting. A binary variable was created to indicate “married” or “unmarried.” Married respondents were classified as married (marital status = 1) regardless of whether they lived with their spouse (categories 3 and 4). Respondents that indicated a 1 (never married, cohabiting) or 2 (never married, not cohabiting) were not part of the study. Respondents that marked a 5 – 10 were coded as unmarried (marital status = 0). Responses were taken from 2005 (for Time 1) and 2007 (for Time 3) if they participated in the Round 10 asset collection. Responses from 2006 (Time 1) and 2008 (Time 3) were utilized if the respondent participated in Round 11 asset collection).

Cohabited. Having cohabited was coded as a binary variable (cohabited = 1, not cohabited = 0) and was utilized as the multiple group indicator. The NLSY asks respondents how many times they have cohabited. Respondents who indicated anything other than 0 were classified as having cohabited. For the final model, the current study looked at only married respondents, so further collapsing the cohabit grouping variable created above was necessary. The final grouping variable of having cohabited included respondents that both (a) indicated they cohabited and (b) indicated they were married (with a response of 3 or 4) in 2005 (if they

participated in the Round 10 asset collection), or 2006 (if they participated in the Round 11 asset collection), since this was a Time 1 variable.

Marital status change. A marital status change variable for Time 3 was created to examine another version of relationship outcomes. The change variable was created by subtracting the Time 3 marital status variable from the Time 1 marital status variable.

Financial Assets. While the NLSY97 collects a host of financial asset and debt information of respondents when they turn age 20, 25, 30, and 35 and the NLSY has summary variables of these. For the purposes of this study, financial asset information at age 25 (Time 2) was used. Since relationship quality (discussed below) is an integral part of this study but was not asked in the NLSY97 after round 12 (2008), when respondents were a maximum of 28 years old, this study could not utilize the financial asset at age 30 variable. For ease of interpretation, financial assets were divided by \$10,000 but left as a continuous variable. This variable was non-normal as skewness was above the acceptable range of 3 (5.06) and kurtosis was above 10 (30.94).

Debts. As with the financial assets, for the purposes of this study, financial debt information at age 25 (Time 2) was used. This is a total debt measure but does exclude mortgage values. Since relationship quality (discussed below) is an integral part of this study but was not asked in the NLSY97 after round 12 (2008), when respondents were a maximum of 28 years old, this study could not utilize the financial debt at age 30 variable. For ease of interpretation and consistency, debt was divided by \$10,000 but left as a continuous variable. This variable was non-normal as skewness was 4.92 and kurtosis was 36.96.

Income. Household family income was utilized in the current study as a Time 2 (age 25) variable. Each round the NLSY asks respondents what their gross family income was for the past

year. Income in 2006 was utilized when respondents were asked the financial variables in Round 10 (2006) and income in 2007 was utilized when respondents were asked about their age 25 financials in Round 11 (2007). For ease of interpretation and consistency, income was divided by \$10,000 but left as a continuous variable. This variable was non-normal kurtosis was 11.50, but skewness was within the acceptable range (2.73).

Demographic characteristics. Gender was a dichotomous variable (0 = female, 1 = male), and was used as the moderating variable to see if it influenced the strength of the paths between relationship quality at Time 1 and assets at Time 2, between relationship quality at Time 1 and income at Time 2, between relationship quality at Time 1 and debt at Time 2, and the paths between each of the financial mediating variables at Time 2 and relationship quality at Time 3. Owning a home was utilized as a control and measured as a binary variable (1 = own; 0 = do not own). Race was coded as a categorical variable where 1 = Black, 2 = Hispanic, 3 = White. Education was an ordered categorical variable (1 = no high school diploma/GED, 2 = high school diploma/GED, 3 = some college, 4 = bachelor's degree, 5 = graduate/professional degree). The presence of minor children in the household included biological and adopted children and was left as a continuous variable, but was done for Time 1, Time 2, and Time 3 to control for the effects of having a first child or having additional children. Finally, length living together was a continuous variable and measured only for Time 1 to control for the effects at the beginning of the study. For those who cohabited, it was measured by taking the respondent's current age less their age when they cohabited. For those who did not cohabit, it was measured by taking the respondent's current age less their age when they married.

Data Analysis Procedure

Initial data coding was completed in SAS 9.4. The current study utilized a structural equation model (SEM) using Mplus 8.3 to investigate the moderating effect of having cohabited on the relationship between early relationship quality and later relationship quality, as well as the mediating effect of financial variables between earlier and later relationship quality. Mplus 8.3 (Muthén & Muthén, 2018) was used to test the full structural equation model, and to model the mediating effects of the financial variables and the moderating effects of gender. Rather than deleting cases with missing data, full information maximum likelihood (FIML) was used to estimate missing data. FIML is different from multiple imputation in that missing values are not imputed but rather FIML considers all available information (e.g., means, variances, covariances) in order to provide maximum likelihood estimates of the parameters (Acock, 2005). Parameter estimates obtained from FIML provide more reliable and less biased information than ad hoc, such as listwise or pairwise deletion (Acock, 2005). Due to mediator variables, results will be bootstrapped with 2,000 iterations to adjust for standard errors (Kline, 2011), which provides estimates of variance that are closer to the true variance. Bootstrapped results will be interpreted based on a 95% confidence interval, meaning that if any indirect path has effects that include zero within the confidence interval, that indirect path will not be significant (Preacher & Hayes, 2004; 2008).

Model Testing. To test model fit statistics, Mplus 8.3 was used to analyze the unconstrained model chi-square test of model fit, standardized root mean square residual (SRMR), the root mean square error of approximation (RMSEA), Tucker Lewis index (TLI), and the comparative fit index (CFI). Values of less than .05 for SRMR and RMSEA indicate

excellent model fit (Kenny, 2015; Kline, 2011), while values of .95 or greater for TLI and CFI are considered excellent for model fit (Kenny, 2015).

Results

Descriptive Statistics

Over 70% of respondents who cohabited prior to marriage had a high school diploma, GED, or dropped out of school (12%), with only 17% holding a four-year degree or higher. For those who did not cohabit prior to marriage, nearly half (52%) had a high school diploma, GED or dropped out (5%), while 37% held a bachelor's degree or higher. Race and ethnicity was fairly even among the two groups as just over 10% of each group were Black (Cohab (C): 13%; No Cohab (NC): 14%), just under 30% were Hispanic (C: 26%; NC: 28%), and approximately 60% of respondents were White (C: 61%; NC: 58%). In terms of home ownership, a higher percentage of individuals who did not cohabit (50%) owned their home, while about one-third (36%) of those who cohabited owned their home. Forty-seven percent of respondents who did not cohabit were male while 35% of respondents who cohabited were male. Nearly one-in-six (16%) respondents who cohabited prior to marriage had either divorced or separated between Time 1 (age 24) and Time 3 (age 26), while only 3% of non-cohabiters had split in the same time period. As might be expected, the average number of years respondents had lived with their spouse up until age 24 was 4.41 ($SD = 2.01$; range = .2 – 10.4) for those who cohabited prior to marriage. Those who did not cohabit were pushing three years ($M = 2.85$, $SD = 1.78$, range = 0 – 8.2) of living together by age 24. The number of minor children present increased slightly each year for both groups, but those who cohabited ($M_{TI} = 1.34$, $SD_{TI} = 1.17$, range = 0-6) had slightly more children than those who did not cohabit ($M_{TI} = .99$, $SD_{TI} = 1.12$, range = 0-6).

Both those who cohabited ($M = \$57,600$, $SD = \$38,840$, range \$0 - \$32,120) and those who did not cohabit ($M = \$60,300$, $SD = \$41,500$, range \$1,000 - \$32,130) had high incomes. Those who cohabited appeared to have higher asset levels ($M = \$14,900$, $SD = \$48,500$, range \$0 - \$300,000) than those who did not cohabit ($M = \$12,900$, $SD = \$30,200$, range \$0 - \$250,800). Individuals who cohabited also had lower levels of debt ($M = \$14,900$, $SD = \$17,400$, range \$0-\$99,000) than those who did not cohabit prior to marriage ($M = \$17,100$, $SD = \$26,300$, range \$0-\$250,000).

Finally, across both groups, the indicators of relationship quality appeared to get slightly lower over time. Both those who cohabited prior to marriage and those who did not believed that their partner cared a lot about them (C: $M = 9.41$, $SD = 1.39$, range = 1 – 10; NC: $M = 9.51$, $SD = 0.97$, range = 5 – 10), they felt very close to their partner (C: $M = 9.12$, $SD = 1.73$, range = 0 – 10; NC: $M = 9.36$, $SD = 1.04$, range = 5 – 10), and believed they were about committed with their relationship as they possibly could be in Time 1 (C: $M = 9.48$, $SD = 1.54$, range = 0 – 10; NC: $M = 9.65$, $SD = 1.05$, range = 3 – 10). In sum, the relationship quality experienced in the respondents' relationships were very high at Time 1 for both groups (C: $M = 9.34$, $SD = 1.39$; range = 0.33 – 10; NC: $M = 9.51$, $SD = 0.87$; range = 5.67 - 10) and at Time 3 (C: $M = 9.32$, $SD = 1.18$; range = 3 – 10; NC: $M = 9.51$, $SD = 0.83$; range = 3.67 - 10). Full descriptive statistics are provided in Table 2.1.

Table 2.1 Descriptive Statistics ($N = 508$)

Variables	<i>n</i>	Cohabited (<i>n</i> = 330)		<i>n</i>	Did Not Cohabit (<i>n</i> = 178)	
		%/ <i>M</i> (<i>SD</i>)	Range		%/ <i>M</i> (<i>SD</i>)	Range
Relationship Quality – Time 1	308	9.34 (1.39)	0.33-10	173	9.51 (.87)	5.67-10

Variables	Cohabited			Did Not Cohabit		
	<i>n</i>	%/ <i>M</i> (<i>SD</i>)	Range	<i>n</i>	%/ <i>M</i> (<i>SD</i>)	Range
Caring – Time 1 (T1)	310	9.41 (1.39)	1-10	173	9.51 (.97)	5-10
Closeness – Time 1	310	9.12 (1.73)	0-10	173	9.36 (1.04)	5-10
Commitment – T1	308	9.48 (1.54)	0-10	173	9.65 (1.05)	3-10
Relationship Quality – Time 3	279	9.32 (1.18)	3-10	167	9.51 (.83)	3.67-10
Caring – Time 3 (T3)	291	9.26 (1.58)	0-10	169	9.44 (1.10)	1-10
Closeness – T3	289	8.79 (1.85)	0-10	170	9.09 (1.55)	0-10
Commitment – T3	289	9.21 (1.89)	0-10	167	9.50 (1.26)	1-10
Income – Time 2 ^a (T2)	285	\$5.76 (\$3.84)	0-32.12	156	\$6.03 (\$4.15)	.08-32.13
Debt – T2 ^a	314	\$1.49 (\$1.74)	0-9.90	174	\$1.71 (\$2.63)	0-25
Assets – T2 ^a	290	\$1.49 (\$4.85)	0-30	157	\$1.29 (\$3.02)	0-25.08
Length of Living Together ^b	330	4.41 (2.01)	.17-10.42	178	2.85 (1.78)	0-8.17
Number of Minor Children T1	329	1.34 (1.17)	0-6	177	.99 (1.12)	0-6
Number of Minor Children T2	330	1.51 (1.25)	0-7	178	1.13 (1.12)	0-6
Number of Minor Children T3	330	1.69 (1.32)	0-7	178	1.33 (1.14)	0-6
Number of People that Split Between T1 and T3	51	15.6%		5	2.8%	
Males (Females)	114	34.6%		83	46.6%	
Own Home	119	36.1%		89	50.0%	
Race/Ethnicity:						
Black	42	12.7%		25	14.0%	
Hispanic	86	26.1%		50	28.1%	
White	202	61.2%		103	57.9%	
Education:						
No HS Diploma	38	11.6%		9	5.1%	
HS Diploma/GED	198	60.2%		84	47.2%	
Associate's Degree	33	10.0%		18	10.1%	
Bachelor's Degree	43	13.1%		55	30.9%	
Graduate Degree	17	5.2%		12	6.7%	

^aIn tens of thousands (\$10,000). ^bIn years.

Bivariate Results

Pearson correlation coefficients on all key variables of interest were then run for those who cohabited and for those who did not cohabit. As shown in Table 2.2, relationship quality and Time 1 and Time 3 were positively correlated for both groups (cohabit: $r = .17, p < .01$; no cohabit: $r = .46, p < .001$), as were income and assets at Time 2 (cohabit: $r = .13, p < .05$; no cohabit: $r = .23, p < .05$). For both groups, relationship quality at Time 1 was negatively correlated with a change in relationship at Time 3 (cohabit: $r = -.28, p < .01$; no cohabit: $r = -.21, p < .01$). For those who did not cohabit, relationship quality at Time 1 was positively correlated with income at Time 2 ($r = .17, p < .05$), although this was not the case for those who cohabited. Income was positively correlated with debt ($r = .22, p < .01$) for those who cohabited, but not for those who did not cohabit. For complete bivariate correlations, see Table 4.2.

Table 2.2 Preliminary Correlations among Variables of Interest for those who Cohabited (bolded, $n = 178$) and those who did not Cohabit (non-bold, $n = 330$).

Variables	1	2	3	4	5	6
1. Relationship Quality – Time 1	–	.17**	.08	.09	.09	-.28***
2. Relationship Quality – Time 3	.46***	–	.05	-.05	.04	.05
3. Income – Time 2	.07	.17*	–	.22**	.13*	.03
4. Debt – Time 2	.08	.03	-.03	–	.07	-.09
5. Assets – Time 2	.13	.05	.23**	.00	–	-.06
6. Change in Relationship – Time 3	-.21**	.00	-.01	.05	-.05	–

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Measurement Model

Before conducting the full structural model, a measurement model was employed using Mplus 8.3 (Muthén & Muthén, 2018) to test the factor loadings and model fit of each

relationship quality (i.e., Time 1 and Time 3) latent variable, by group. All factor loadings were above .40. Acceptable model fit was achieved (Kenny, 2015; Kline, 2011; Little, 2013) with a CFI and TLI greater than .90 and a RMSEA less than .08. The model was a good fit to the data ($\chi^2 [12] = 8.58, p > .05$; $CFI = 1.00$; $TLI = 1.00$; $RMSEA = .01$; $SRMR = .03$). An analysis was conducted to test for measurement invariance between spouses for each group on the factor loadings. Constraining the factors to be equal worsened the model fit ($\chi^2_{\text{diff}} [8] = 214.42, p < .001$), so factor loadings were not constrained to be equal across gender. See Table 2.3 for all standardized factor loadings.

Table 2.3 Standardized Factor Loadings for Latent Variables.

Item	Cohabit	Did not Cohabit
Relationship Quality – Time 1		
Caring	.84	.78
Closeness	.92	.89
Commitment	.73	.63
Standardized Alpha	.87	.81
Relationship Quality – Time 1		
Caring	.77	.93
Closeness	.87	.90
Commitment	.79	.73
Standardized Alpha	.85	.87

Structural Model

A full structural model with grouping effects to assess the relationship between relationship quality at Time 1, income, assets, and debts at Time 2, and resulting relationship quality and relationship changes at Time 3 was employed. The model controlled for home ownership, race, education, time spent living together, and having minor children in the household. The proposed model was employed first with all paths freely estimated across groups. This unconstrained model was a good fit to the data ($\chi^2 [118] = 172.505, p < .001$; $CFI = .97$;

TLI = .94 *RMSEA* = .04; *SRMR* = .07) following the work of Kenny (2015) and Kline (2011).

Since the current study was also interested in exploring whether cohabitation moderated the results of the model, chi-square difference tests were examined on all paths and revealed no significant differences between those who cohabited and did not cohabit. Therefore, the unconstrained model was retained. Estimates of the direct effects of each path by subgroup are provided in Table 2.4 and Figure 2.3 (coefficients for those who cohabited are in bold).

Results of the final model indicated minimal effect of finances on relational outcomes for the young cohort. Relationship quality at Time 1 was positively related to Assets at Time 2 for those who cohabited ($b = .30, p < .001, \beta = .10$), but not for those who did not cohabit prior to marriage, partially supporting Hypothesis 1. Hypotheses 2 was not supported as no relationship existed between relationship quality at Time 1 and debt at Time 2. Hypothesis 3 was partially supported given the results showed that for those who did not cohabit there was a positively relationship between relationship quality at Time 1 and relationship quality at Time 3 ($b = 1.08, p < .001, \beta = .81$). Hypothesis 4 was also partially supported as a negative relationship between relationship quality at Time 1 and relationship dissolution was found for those who cohabited only ($b = -.07, p < .001, \beta = -.29$). Assets at Time 2 was not positively associated with relationship quality at Time 3, nor was income at Time 2, indicating no support of Hypotheses 5 and 7. Debt at Time 2 was negatively related to relationship quality at Time 3, but only for those who cohabited ($b = -.12, p < .05, \beta = -.17$), partially supporting Hypothesis 6. Hypotheses 8 through 10 were not supported as results did not show any relationship between assets, debt and income at Time 2 with relationship dissolution at Time 3. Hypothesis 7 was not supported as income had no relationship with relationship quality at Time 3.

Table 2.4 Unstandardized, Standardized, and Significance Levels for Model in Figure 2.3 for Cohabiting ($n = 330$) and Non-Cohabiting. ($n = 178$) Respondents. (Standard Errors in Parentheses)

<i>Parameter Estimate</i>	<i>Did not Cohabit</i>		<i>Cohabited</i>	
	<i>B (SE B)</i>	<i>β (SE β)</i>	<i>B (SE B)</i>	<i>β (SE β)</i>
Structural Model				
RQ T1 → Assets T2	.28 (.16)	.08 (.05)	.30 (.12)	.10 (.03)***
RQ T1 → Income T2	-.02 (.51)	.00 (.10)	.23 (.17)	.09 (.06)
RQ T1 → Debt T2	-.04 (.19)	-.01 (.06)	.08 (.06)	.07 (.04)
RQ T1 → RQ T3	1.08 (.20)	.81 (.26)***	.07 (.09)	.09 (.10)
RQ T1 → Marital Dissolution T3	-.04 (.03)	-.20 (.05)	-.07 (.02)	-.29 (.08)***
Assets T2 → RQ T3	-.01 (.03)	-.04 (.08)	.01 (.01)	.02 (.03)
Income T2 → RQ T3	-.01 (.02)	-.02 (.02)	-.00 (.02)	-.00 (.06)
Debt T2 → RQ T3	-.03 (.03)	-.07 (.06)	-.12 (.06)	-.17 (.08)*
Assets T2 → Marital Dissolution T3	-.00 (.00)	-.04 (.04)	-.00 (.00)	-.02 (.03)
Income T2 → Marital Dissolution T3	-.00 (.00)	.01 (.10)	.01 (.01)	.06 (.07)
Debt T2 → Marital Dissolution T3	.00 (.00)	.01 (.04)	-.02 (.01)	-.07 (.05)
Significant Controls				
White → Assets T2	.39 (.52)	-.04 (.04)	-1.50 (.71)	-.15 (.06)*
Own Home → Assets T2	.33 (.61)	-.08 (.06)	1.92 (.70)	.19 (.06)**
Kids T1 → Assets T2	-.10 (.21)	-.04 (.09)	-.48 (.26)	-.12 (.05)**
Kids T1 → Income T2	-.49 (.36)	-.13 (.09)	-.66 (.19)	-.20 (.06)**
White → Debt T2	-.23 (.52)	-.04 (.09)	.48 (.22)	.10 (.05)*
Education → Debt T2	.86 (.36)	.36 (.09)***	.59 (.13)	.35 (.07)***
Kids T2 → Relationship Quality T3	-.04 (.08)	-.04 (.08)	-.12 (.08)	-.12 (.06)*
Kids T2 → Marital Dissolution T3	-.03 (.02)	-.19 (.07)*	-.03 (.02)	-.11 (.05)*
Education → Marital Dissolution T3	-.02 (.01)	-.12 (.07)*	-.01 (.02)	-.02 (.06)
Own Home → Marital Dissolution T3	-.03 (.02)	-.08 (.06)	-.08 (.04)	-.11 (.05)*

Note: $\chi^2(118) = 172.51, p < .001$; TLI = .94; CFI = .97; RMSEA = .04; SRMR = .07;

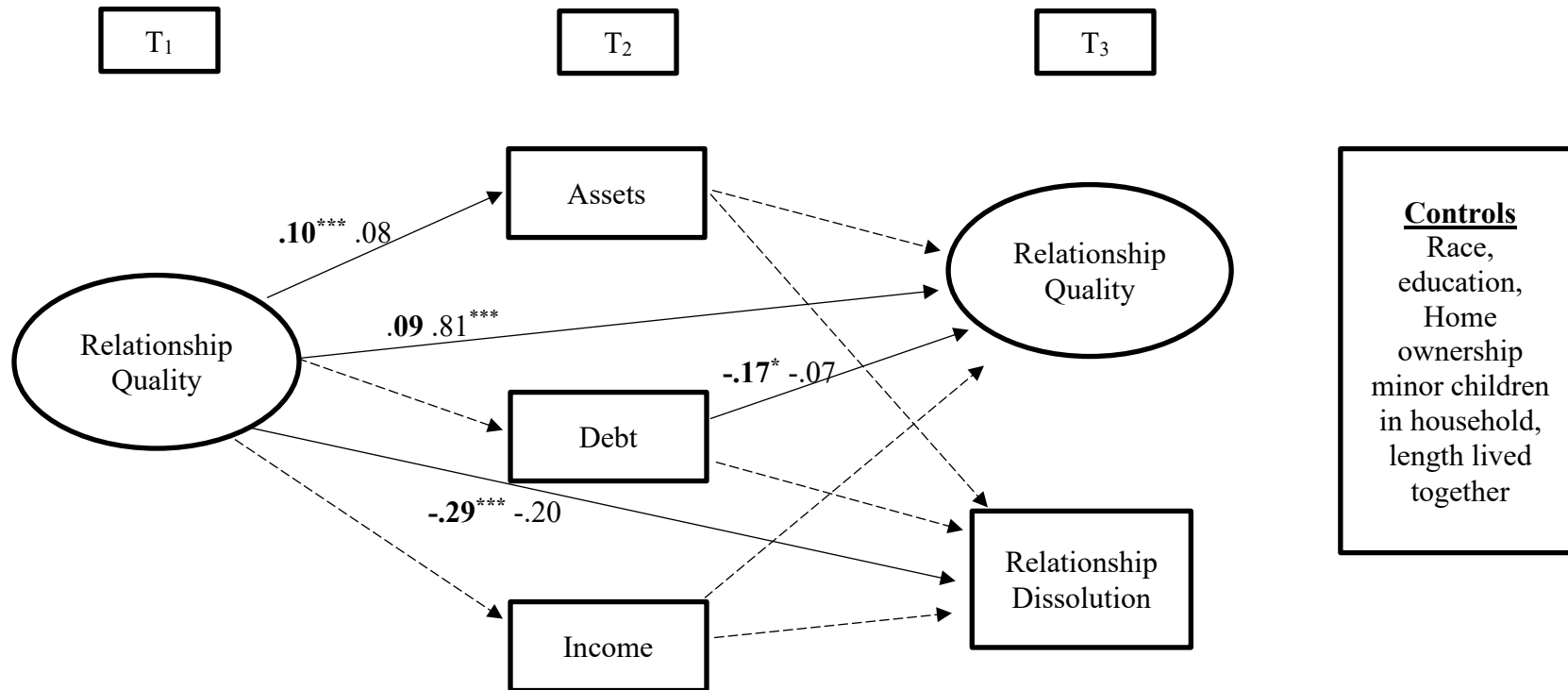
^aEcon WB = Economic Well-Being; ^bRS = Relationship Satisfaction.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Mediating effects of financials. No support for Hypotheses 11 through 16 were found as mediating effects were not found for any of the three financial variables at Time 2 That is, assets, income, and debt at age 25 all had no mediating effect between relationship quality at Time 1 and relationship quality at Time 3 or between relationship quality at Time 1 and experiencing a relationship dissolution, for either group.

Moderating effects of gender. No moderating effects of gender were found for any of the paths from relationship quality at Time 1 to any of the financial variables at Time 2 (i.e., assets, income, and debt) for both those who cohabited and did not cohabit. Nor were there any moderating effects of gender on the paths from the Time 2 financial variables to relationship quality at Time3 for both groups. Thus, Hypotheses 17 through 22 were not supported.

Figure 2.3 Full Structural Model for the effects of Financials on the Development of Relationship Satisfaction across the First five year of Marriage for Cohabiting (bolded, $n = 330$) and Non-Cohabiting (non-bold, $n = 178$) Respondents.



Note: Standardized estimates. For clarity, the paths from the control variables are not shown, but were included in the analysis. Solid lines = significant paths; dashed lines = non-significant paths.

Model fit indices: $\chi^2 [118] = 172.505, p < .001$; $CFI = .97$; $TLI = .94$; $RMSEA = .04$ (confidence interval [.03, .06]); $SRMR = .07$.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Discussion

From the lens of social exchange theory, it can be assumed that individuals undergo a benefit-cost analysis to make the determination to stay in a committed relationship or not. Within this framework, the current study tested whether financial factors such as financial assets, debt, and income mediate the relationship between relationship quality at Time 1 and relationship quality at Time 3 and whether married couples stay together. The study also compared the analysis between those who cohabited prior to marriage and those who did not. Results indicated that for cohabiting individuals, the path from relationship quality at Time 1 to Assets was positive and significant. This could be in line with research by Addo (2014) that found that when people viewed their relationship as a means to marriage and cohabitation was simply the next step, assets and relationship quality were higher. The results of the current study may suggest that those who cohabited likely had idea that they will be married later, treating the relationship more like a marriage and working towards greater financial asset accumulation. Financial debt was negatively associated with relationship quality at Time 3, supporting the findings of prior research suggesting that debt is a burden to the couple relationship (Addo, 2014; Conger et al., 1999; Dew, 2007, 2008). The findings also show that relationship quality at Time 1 was negatively associated with marital dissolution by Time 3. This effect may not have been prevalent for those who did not cohabit because only five respondents in the group who did not cohabit ended their relationship in the three-year period. For those who did not cohabit prior to marriage, relationship quality at Time 1 was positively related to relationship quality at Time 3. This suggests that when individuals started the relationship with high relationship quality, they tend to remain high, which supports research by Lorber, Erlanger, Heyman, and O'Leary (2015). They showed that relationship quality had three trajectories of relationship satisfaction: (a)

started low and remained low, (b) started high and quickly dropped, or (c) started high and remained high.

There were a handful of control variables that proved significant and worth a quick discussion. The most interesting thing is that nine paths were significant for the group who cohabited, yet only three paths were for those who did not cohabit. Having minor children at Time 1 was negatively related to assets and income at Time 2 for the group who cohabited. Minor children present in the home at Time 2 was negatively related to relationship quality at Time 3, supporting the results of prior researchers (Brown, 2003; Lawrence et al., 2010; Shapiro et al., 2000). Interestingly, but not unexpected, having children in the home at Time 2 was negatively related to marital dissolution at Time 3 for both those who did and did not cohabit. It appears that while relationship quality may decrease, young couples stick it out for the sake of their children. Owning a home was significantly related to not dissolving the relationship at Time 3, but only for those who cohabited, suggesting that couples may feel it is too difficult to leave a relationship if they own a large asset together. Since owning a home was not related with relationship quality, it could be that those who own a home together are happier and thus likely to not dissolve their relationship.

Implications

While the results of the study yielded only a few significant pathways, there are still a few implications that may prove beneficial for any helping professional working with married clients. The results may be more meaningful, though, to financial counselors, financial planners, and financial therapists working with young adult clients that are recently married. While there were some differences between those who directly married and those who cohabited prior to marriage, the results of the outcomes tell similar stories. Relationship quality at Time 1 was a

positive indicator of relationship quality at Time 3 for those who did not cohabit. For those who cohabited, relationship quality at Time 1 was a negative indicator of having dissolved their relationship by Time 3. The meaningful takeaway here is that having higher initial relationship quality scores is related to a positive relationship outcome, regardless if the client has cohabited or not prior to marrying their partner. To that extent, it may be helpful for the professional to assess their client's level of relationship quality in one of the first few meetings with their young clients. One way this can be achieved is by asking clients the same three questions that comprise the relationship satisfaction latent variable as described above. What is also important is what was not significant. For this small group of young adults, it appears that financial implications seemingly have minimal effect on relationship outcomes during the first few years of marriage. This could be attributed to the honeymoon period, which is typically thought of as approximately the first five years of marriage, a time in which relationship quality is quite high before declining (Lorber et al., 2015).

Limitations and Recommendations

Brown and Booth (1996) showed that differences in relationship quality between those who cohabited and those who did not cohabit prior to marriage no longer existed when intentions to marry were considered. Unfortunately, the dataset does not have variables that would enable the researcher to get at marital intentions, at least for the rounds (round 9 – 12) of data utilized in the current study. Future research that examines those who cohabit versus those who do not should consider utilizing a dataset with such information.

A second limitation of the study is regarding the use of social exchange theory as the theoretical framework. The theory assumes that individuals make rational decisions that are in their best interests. However, according to Shefrin and Thaler (1988), individuals tend to make

decisions that do not always align with their best interests. Social exchange theory also does not consider differing cultural norms, which might not consider something in exchange for a relationship (Zafirovski, 2005). It could be argued that Becker's theory of marriage (Becker, 1973, 1974) may be better suited for the examination of household economic information, such as assets and debt, because it stems heavily from economic models. Additionally, the theory of marriage allows for better examination of the expected utility of both spouses, and how each partner's utility plays into the overall household utility. However, the focus of the current paper was on individuals and their own benefit-cost analyses of whether to stay together or not; not on couples and how their individual utilities play into the household utility. Therefore, the current paper used social exchange theory as the framework. Future studies in the same domain should consider how each partner's utility plays a factor through methods, such as an actor partner interdependence model (APIM) or common fate model (CFM), depending on how the relational questions were asked (Ledermann & Kenny; 2012).

Examining additional groups, such as those who are currently in a relationship but not yet married, which is available through the NLSY97 data, could be meaningful to see group differences. Using data that would allow the age range of young adults to be broadened to 18 to 40 years of age, in accordance with Erik Erikson's eight stages of development, would allow for more participants to make the study more generalizable (Darling-Fisher & Leidy, 1988; "Erik Erikson's Theory of Psychosocial Development," 2017). Another limitation is that it is not possible to tell whether respondents who cohabited had planned to marry their partner that they were cohabiting with or not, which is important given research has shown that those who cohabit with plans to marry their partner have minimal differences in the effects on relationship satisfaction as those who directly married (Brown et al., 2017). Additionally, it is not possible to

tell if assets and debts were held individually or jointly, and if initially held individually, when respondents chose to combine assets and debts. A final limitation to the current study is that the data spanned three waves, which is only two total years between the initial collection of data and the third wave of data collection. Recall, the honeymoon effect is typically the first five years of marriage and is a time in which the relationship quality is often very high (Lorber et al., 2015). Future research should utilize longitudinal data over a longer period, ideally at least five years, to help tease out the honeymoon effect of marriage in the early years given that relationship quality appears to trend downward much more quickly for five, 10, and even 20 years post marriage (Copen et al., 2012).

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Chapter 3 - The development of relationship satisfaction over time:

Cohabitors vs. non-cohabitors

Introduction

An examination of marital happiness (or “marital satisfaction” as referred herein after) data from the General Social Survey in the United States showed that between 1973 and 2010, the percentage of respondents who indicated they are “very happy”, “pretty happy,” or “not too happy” with their relationship remained fairly stable (Reynolds, Houlston, & Coleman, 2014; Smith, 2011). From 1973 to 2010, the percentage of respondents who said they were “very happy” slightly decreased from 67% to 63%, while the “pretty happy” group grew from 30% to 34% in that same timespan. The “not too happy” group remained at approximately 3%, having fluctuated between 2-4% throughout the four decades (Smith, 2011). This data begs the question as to why the levels of relationship satisfaction have remained stable over time and why there has not been a dramatic increase in those experiencing negative views of their marriage given the increase in pre-marital cohabitation.

Pre-marital cohabitation – defined as residing with a significant other prior to marrying that person – has been on the rise for the last five or six decades (Kuperberg, 2014; Stanley, Whitton, & Markman, 2004). Over 70% of couples are said to have tried their hand at cohabiting prior to marrying (Stanley et al., 2004). Similarly, Kuperberg (2014) showed that two-thirds of young-adult marriages between 2000 and 2009 began with cohabitation. As of 2012, nearly 7.8 million young adults were said to be in a cohabiting relationship, a sharp increase from an estimated 2.9 million that were doing so in 1996 (Kuperberg, 2014; Vespa, Lewis, & Kreider, 2013). The concern, though, is that strong evidence exists indicating that pre-marital cohabitation

is associated with lower relationship satisfaction (Cohan & Kleinbaum, 2002; Rhoades, Stanley, & Markman, 2009; Stanley et al., 2004).

The purpose of the current study was to examine the rate of change in relationship satisfaction in a group of recently married couples and the impact that the covariates of income, debt brought into the relationship, economic well-being, and having cohabited have on the rate of change in relationship satisfaction. The present study also attempts to add to the body of literature given the design of the study as a multiple group comparison latent growth curve analysis comparing the differences that income, debt brought into the relationship, and economic well-being have on the initial levels and the rate of change in relationship satisfaction over time for those who did versus did not cohabit prior to marriage.

Theoretical Framework and Related Literature

Empirical evidence has supported the use of social exchange theory in explaining finances and relationships (Britt et al., 2008; Dew, 2008, 2009, 2011a; Dew, Britt, & Huston, 2012; Kerkmann, Lee, Lown, & Allgood, 2000). To that extent, social exchange theory (SET) can provide hypotheses for how relationship satisfaction develops over time, as well as how income and debt that an individual brings into the relationship, and each partner's economic well-being influences the change in relationship satisfaction. The theory also provides insight as to why relationship satisfaction may differ and develop differently between those who cohabit/live together prior to marriage versus those who do not cohabit prior to marriage. Refer to Chapter 2 for a description of social exchange theory, which is also used in this study.

The Development of Relationship Satisfaction

Understanding how relationship satisfaction develops over time is an important endeavor for those working with couples in any capacity. Prior research has shown that relationship

satisfaction declines over the course of a relationship (Kamp Dush, Taylor, & Kroeger, 2008; Kline et al., 2004; Lavner & Bradbury, 2010; Reynolds et al., 2014; Van Laningham, Johnson, & Amato, 2001). Yet, other research has shown a U-shaped curve to relationship satisfaction over time (Keizer & Schenk, 2012; Umberson, Williams, Powers, Chen, & Campbell, 2005). However, Umberson et al. (2005) found such effects only when initial levels of relationship satisfaction were low and could “bounce back” to mediocre levels of relationship satisfaction.

Initial status of relationship satisfaction appears to matter long-term, too. While relationship satisfaction has been found to change over time, prior research has identified trajectories of change based upon starting levels of relationship satisfaction (Birditt, Hope, Brown, & Orbach, 2012; Lavner & Bradbury, 2010; Proulx, Ermer, & Kanter, 2017; Umberson et al., 2005). Results of these studies has found that when partners rate themselves high in relationship satisfaction when beginning their marriage, they tend to have minimal to no declines in relationship satisfaction over time. On the flip side, couples who begin their relationship with lower levels of relationship satisfaction tend to experience more pronounced declines in relationship satisfaction over time. In each of the studies, the ultimate finding was that couples who began with low levels of relationship satisfaction eventually dissolved their relationship. Therefore, it is important to model the initial status of relationship satisfaction, which fits well into the SET framework as the starting point for couples when analyzing the effects of covariates such as income, debt, and economic well-being.

To examine the presence of the honeymoon effect in newlywed couples, Lorber, Erlanger, Heyman, and O’Leary (2015) performed a latent trajectory class model. The honeymoon effect occurs when relationship satisfaction begins high but decreases rapidly after approximately the first five years of marriage. Lorber and colleagues also sought out the risk

factors for declining marital satisfaction. They found that both men and women had three distinct classes of relationship satisfaction trajectories. Men either (a) started low and remained low, (b) started high and quickly dropped (i.e., exhibited the honeymoon effect), or (c) started high and remained high. Women showed two different classes: (a) started low and remained low, (b) started somewhat high and quickly dropped (i.e., exhibited the honeymoon effect, but not so the same degree as men), and (c) started high and slowly decreased. The authors helped to confirm the prior research findings that initial levels of relationship satisfaction matter, and clear trajectories in relationship satisfaction exist that need to continue to be explored.

Benefit-Cost Analysis and Alternatives

From the lens of SET, individuals engage in a benefit-cost analysis of their current relationship. These analyses are then compared against the alternatives that the individual has or are perceived to have available to him or her before leading to some outcome. White and Kline (2002) defined alternatives as potential “what-if” scenarios that individuals use to compare their current situation to before deciding on an outcome, such as staying in or leaving the relationship. The present study’s focus is to examine aspects of the respondents’ benefit/cost analysis leading directly to outcomes (i.e., rate of change in relationship satisfaction) rather than to alternatives. Benefits are thought to be any social, physical, or psychological benefit to an individual, while costs are considered a negative reward, or are opportunity costs (White & Klein, 2002). Within the scope of the current study, bringing in higher levels of income into the relationship, not bringing debt into the relationship and having high economic well-being are considered “benefits” to the relationship. Bringing significant financial debt to the relationship, having a low income, or having low economic well-being are considered “costs” to the relationship. Having cohabited prior to marriage may be a “cost” for those that did not engage in the relationship

dynamic prior to marriage while it may be a benefit for those that did engage in such dynamics prior to marriage.

Income. Mixed results remain when looking at the effect of income on relationship satisfaction. Prior research has shown that it might depend on who earns the income and how much of the household income each partner earns. For example, Britt and Huston (2012) found that when wives' in first marriages had increased incomes, their relationship satisfaction decreased. However, earlier research has contrasted this sentiment. Deutsch, Roksa, and Meeske (2003) showed that husbands' feelings about their partners increased as their partner's earnings increased, even when their partner (i.e., wife) out earned them. Britt and Roy (2014) reviewed the effects of income on relationship satisfaction for 18-39-year-olds and found no effect. There also appears to be a cohabiting effect with respect to income. When compared to married households, cohabiting households have lower incomes (Snyder & McLaughlin, 2006; Thomas & Sawhill, 2005), which might negatively impact their long-term financial stability and, ultimately, relationship satisfaction (Dew & Dakin, 2011).

Debt. The average credit card debt of young adults is significantly greater than that of their parents. Individuals born between 1980 and 1984 will have approximately \$5,700 more in credit card debt as compared to their parents' generation at this stage in their life (Jiang & Dunn, 2013). Having financial debt leads to a constrained cash flow and makes it difficult for couples to enjoy aspects that might help maintain or increase their relationship satisfaction. That is, greater levels of financial debt leads to a constraint in choice (Dew, 2007), which has been associated with increased levels of relationship conflict and stress (Conger, Rueter, & Elder, 1999), lower relationship satisfaction and increased rates of divorce (Dew, 2007, 2011).

Economic well-being. Economic well-being can be thought of as a “state of distress brought about by worry over one’s finances, having to cut back in consumption, and becoming dissatisfied with one’s finances” (Dew, 2007, p. 91). Prior research that examined both husbands and wives found that experiencing some level of financial worry or strain was extremely predictive of conflict for both partners (Britt, Hill, LeBaron, Lawson, & Bean, 2017). This is important because for both wives and husbands, conflict due to financial problems has been found to be associated with lower relationship satisfaction and divorce (Dew et al., 2012; Dew & Dakin, 2011).

Children. While not a focus of this study, research suggest that the presence of minor children in the home does have possible detrimental effects for relationship quality (Brown, 2003). Brown (2003) did show that there were no differential effects of minor children present in the household on relationship quality among cohabitating and married individuals. Regardless of the couple’s relationship status, the presences of minor children reduced two of the three tested components of relationship quality, partner interaction and partner happiness. Partner instability was the third component but was not statistically associated. A follow-up was done to examine group differences (i.e., married versus cohabiting) given the interaction of relationship duration with the presence of minor children to see if there were negative effects on the three components of relationship quality. Differences in relationship quality did exist between cohabiting and married individuals, again for happiness and instability; partner interaction had no group differences. The authors explained that the results were likely due to the high rate of cohabiting unions having children from a previous partner, suggesting that non-biological minor children could be a potential issue for future relationship quality.

Other researchers showed that a negative association exists between the first child being born and relationship and/or marital satisfaction (Lawrence, Rothman, Cobb, & Bradbury, 2010; Shapiro, Gottman, & Carrère, 2000). Lawrence et al. (2010) found that marital satisfaction began to decline not upon pregnancy but in the third trimester of pregnancy. The authors noted that the decline in marital satisfaction may be due to less time spent on joint leisurely activities and intimacy as the couple spends more time on household work in preparing for the birth of their child, and then caring for the child (Lawrence et al., 2010). However, Britt and Huston (2012) did not find the presence of minor children to influence relationship satisfaction. Given the results of prior studies, having minor children in the relationship should be used as a control variable.

Cohabitation

The social exchange framework applies to non-married couples who choose to live together/cohabit in much the same way as married couples. An exception is that it is simpler to exit a cohabiting union than a marital union, which could influence the perceived costs, benefits, and alternatives to the relationship. Addo (2014) looked at the effects of education loan debt, credit card debt, and total debt on the odds of transitioning their relationship status to either a cohabiting union or a marital union. Findings showed that there were differences by type of debt and by gender. Specifically, women who had total debt were more likely to enter a cohabiting relationship than remain single or directly marry. For women with higher levels of credit card debt, they were significantly more likely to enter a cohabiting relationship than directly marry. For men, though, the total debt had no effect. It was only having higher levels of credit card debt that was associated with entering a cohabiting union over a marital relationship.

Clarkberg (1999) examined the effects of cohabitation on economic well-being. Results of the study indicated that the association between cohabiting and economic well-being was weaker compared to their peers who did not cohabit. What is more, the effects varied by gender. The research also found that economic stability had a negative effect on the decision to cohabit. That is, those who had more secure employment, and thus stable income, were less likely to cohabit, potentially indicating that cohabitation is sought when economic well-being is low and/or income stability is low.

Historically, having cohabited has been associated with lower rates of relationship (or marital) satisfaction as compared to individuals who directly married (Brown & Booth, 1996; Kamp Dush, Cohan, & Amato, 2003; Nock, 1995; Skinner, Bahr, Crane, & Call, 2002). Most of that research used data from the late 1980s and 1990s, a time when cohabitation was less pronounced and was not viewed as favorably (Brown, Manning, & Payne, 2017). More recent research utilizing data in the last twenty years is painting a somewhat different picture. For example, Manning and Cohen (2012) showed that individuals who cohabit without plans to marry do indeed have lower relationship satisfaction than directly marrieds. What was different was that they also looked at cohabiters with plans to marry and compared that group with those who married and had not cohabited. Results from their work showed no significant differences in either group's levels of relationship satisfaction. A more recent study by Brown et al. (2017) confirmed Manning and Cohen's (2012) findings, suggesting that cohabitation may be poor for the relationship if there's no planned future. However, if it is a clear path to marriage, it may not be as negative to the relationship as once understood. To that extent, from a SET framework cohabitation may be thought of as a benefit for those with a clear path towards marriage and a cost for those without such a clear path.

Summary

In summary, prior research has indicated that the initial status of relationship satisfaction may go a long way in determining the change in relationship satisfaction over time. Social exchange theory helps provide a framework to suggest that the initial starting point of relationship satisfaction is vital, that individuals will go through a benefit-cost analysis in order to help them determine the value of their current relationship as compared to potential alternatives. Those who perceive relationship benefits as greater than relationship costs (i.e., a net profit) will work to maintain or strengthen their relationship quality, while those who perceived the costs to be greater than the benefits (i.e., a net loss) would have either a sharp decrease in relationship satisfaction or have dissolved their relationship entirely (Emerson, 1976).

Hypotheses

H1: Relationship satisfaction will decrease over time.

H2: Higher levels of income brought into the relationship will be associated with a positive rate of change in relationship satisfaction over time.

H3: Higher levels of debt (i.e., credit card and “other” significant debt) brought into the relationship will be related with a negative rate of change in relationship satisfaction over time.

H4: Higher levels of economic well-being will be related with a positive rate of change in relationship satisfaction over time.

H5: Having cohabited prior to marriage will be related with a negative rate of change in relationship satisfaction over time.

- H6: For those who did not cohabit compared to those who did, income will have a greater positive effect on the starting levels of relationship satisfaction.
- H7: For those who did not cohabit compared to those who did, income will have a greater positive effect on the rate of change in relationship satisfaction over time.
- H8: For those who did not cohabit compared to those who did, debt (e.g., credit card and “other” significant debt) will have a greater negative effect on the starting levels of relationship satisfaction.
- H9: For those who did not cohabit compared to those who did, debt (e.g., credit card and “other” significant debt) will have a greater negative effect on the rate of change in relationship satisfaction over time.
- H10: For those who did not cohabit compared to those who did, economic well-being will have a greater positive effect on the starting levels of relationship satisfaction.
- H11: For those who did not cohabit compared to those who did, economic well-being will have a greater positive effect on the rate of change in relationship satisfaction over time.

Methods

Data

Data were obtained from the Marriage Matters Panel Survey of Newlywed Couples, Louisiana (Marriage Matters; Nock, Sanchez, & Wright, 2012). In 1997, with the goal of making it more difficult for partners to both enter and exit a marriage, Louisiana enacted a covenant marriage law and required premarital counseling along with proof of fault for a subsequent divorce. The purpose of the Marriage Matters data was to examine the effects of Louisiana’s

covenant marriage law on relationship quality and marital dissolution rates, among other consequences (Nock et al., 2012).

The Marriage Matters study design consisted of three waves of self-administered questionnaires given to approximately equal numbers of standard and covenant marriage couples between 1998 and 2004. Sample selection occurred in two steps. First, the researchers randomly selected 17 of 60 Louisiana parishes. Then, from those parishes selected, the researchers drew all the covenant and standard marriage licenses that were filed, resulting in 1,714 valid marriage licenses. However, only 1,310 couples were able to be confirmed (Nock et al., 2012). Each spouse of the couple was surveyed independently at each wave, creating a dyadic dataset. When a couple filed for divorce, a divorce survey was also collected. Respondents were paid \$10 each time they completed a survey, resulting in a possibility to earn \$30 should they have completed all three rounds of surveys. The current study uses all three waves of publicly available data but does not consider the divorce survey data.

Wave 1 (T1) was collected three to six months after marriage and had a response rate of 49%, resulting in a total sample size of 1,271 individuals representing 707 married couples (307 of which were covenant marriages). The initial survey consisted of questions related to the respondent's recent marriage, the time leading up to the couple's recent marriage, premarital counseling, covenant marriage, previous marriages, if applicable, the respondent's children (if any) and feelings about children, their marital and divorce views and beliefs, religiosity, marital satisfaction, household tasks and responsibilities, their general health and happiness, social and political views, and the respondent's familial background, including their income situation.

Wave 2 (T2) was collected approximately 18 to 24 months after the first wave. Respondents were asked questions about their marriage today, their views and beliefs on

marriage and divorce, religiosity, marital satisfaction, household tasks and responsibilities, covenant marriage, biological and/or adopted children (if any), feelings about children, marital problems, counseling received (if any), their general health and happiness, their current employment, housing, and income situation, and wrapped up with social and political views, and the respondent's familial background.

Wave 3 (T3) was collected about 24 months after T2, around the five-year wedding anniversary. Respondents were asked questions about their marriage today, their views and beliefs on marriage and divorce, religiosity, marital satisfaction, celebration and handling of holidays, household tasks and responsibilities, covenant marriage, biological and/or adopted children (if any), feelings about children, marital problems, counseling received (if any), their general health and happiness, their current employment, housing, and income situation, and wrapped up with social and political views, and the respondent's familial background.

Demographic information collected across all three waves includes: age, gender, religious participation, employment status, education level, number of children birthed or adopted, household composition, and household income. Demographic information collected in T1 only included: race, religious affiliation, number of previous marriages, and political affiliation (Nock et al., 2012).

Before limiting the sample, an independent samples t-test was conducted to compare differences between the covenant (43%) and standard marriage (57%) couples on key predictor and outcome variables (see the variable measurement section below describing how covenant marriage was coded). Significant differences were found for wives who cohabited prior to a standard marriage ($M = 0.65$, $SD = 0.48$) as compared to a covenant marriage ($M = 0.28$, $SD = 0.45$); $t(655.07) = 10.27$, $p < 0.001$). Additionally, significant differences were found for

husbands who cohabited prior to a standard marriage ($M = 0.64$, $SD = 0.48$) as compared to a covenant marriage ($M = 0.27$, $SD = 0.45$); $t(566.02) = 9.36$, $p < 0.001$). Wives' income was also significantly different for those that entered a standard marriage ($M = 3.57$, $SD = 1.69$) versus those that entered a covenant marriage ($M = 3.30$, $SD = 1.39$); $t(658) = 2.22$, $p = 0.027$). Due to these differences, it is important to control for covenant marriage in the current study.

Sample

Outside of college students, there is limited research on young adults within the financial planning profession as the focus has historically been on retirees or individuals near retirement, given the traditional modalities of financial planning and the assets under management (AUM) method. With the rise of the XY Planning Network and their 500+ firms now focusing on younger clients, typically in their 20s and 30s, the current study limited the respondents to those couples where at least one partner is between the ages of 18 and 40. This age limit was utilized in accordance with Erik Erikson's eight stages of development (Darling-Fisher & Leidy, 1988; "Erik Erikson's Theory of Psychosocial Development," 2017). That is, Erikson stated that young adulthood ranges in age from about 18 to 21 years old to approximately 39 or 40 years of age.

Out of the 707 couples recruited, only one partner's data were collected for 143 of the couples (21 wives did not respond, and 122 husbands did not respond at any wave of data collection). These couples were omitted from the sample. Another 47 couples were deleted from our sample due to both partners being over the age of 40. Finally, because the goal of the study was to examine relationship satisfaction change over all time periods, couples that divorced between T1 and T3 were omitted from the sample ($n = 38$). The final sample size for the current study was 479 heterosexual couples.

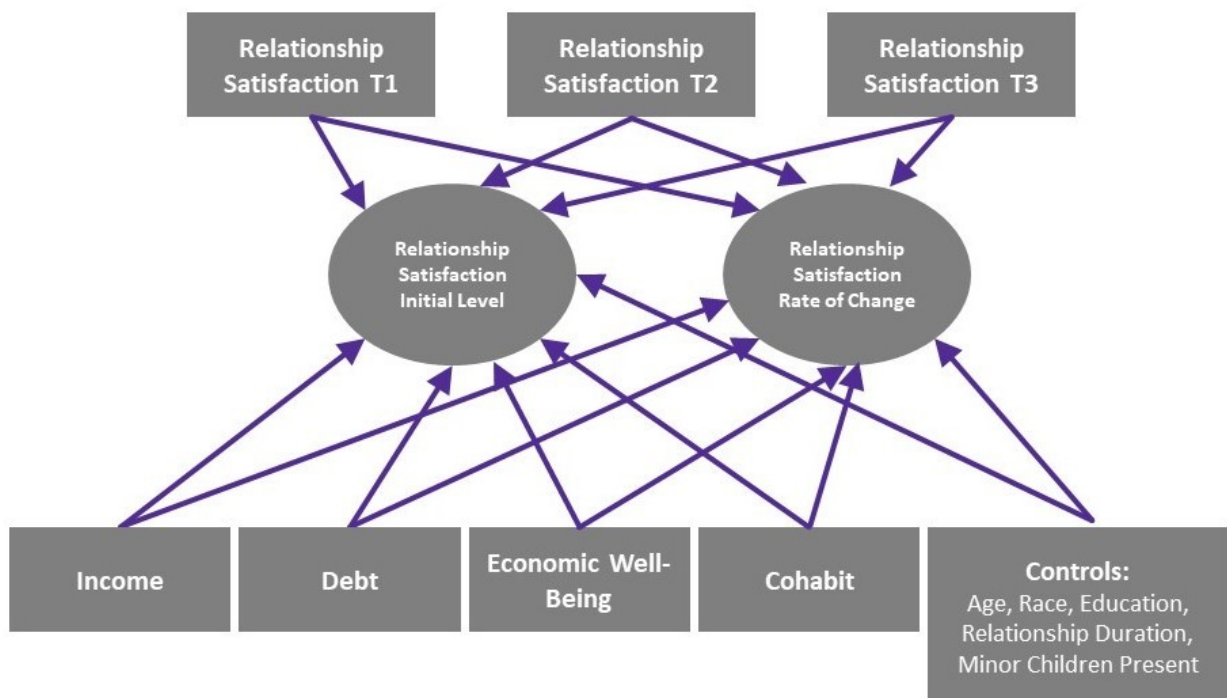
Empirical Model

The current study examines the initial status of relationship satisfaction as well as the rate of change of relationship satisfaction over time, utilizing aspects of benefits and costs to the relationship. Theoretically, income can be thought of as a benefit to the relationship in the sense that as income increases, relationship satisfaction should also increase, thereby relieving the partners of any doubts (pertaining to income) to the relationship and, effectively, making it more “costly” to leave. Economic well-being is considered a benefit to the relationship and, therefore, positively related to relationship satisfaction over time. That is, partners with higher levels of economic well-being may have more stable jobs, higher income, or otherwise beneficial characteristics from a relationship standpoint. Partners may not want to consider alternatives when their partner has higher levels of economic well-being, thereby making the relationship more satisfactory compared to alternative options.

Debt is hypothesized to represent a burden, or “cost,” to the relationship and is expected to be negatively associated with relationship satisfaction over time. Bringing large amounts of debt into the relationship may make it easier for the partner to consider alternative options and therefore, have a reduced, or negative, effect on relationship satisfaction. Finally, the first part of this study explores the effect of cohabitation on relationship satisfaction. Given prior research on the negative impact of cohabitation on economic well-being (Clarkberg, 1999) and the “cohabitation effect” (Rhoades, Stanley, & Markman, 2009; Stanley, Rhoades, & Markman, 2006) in terms of negative marital outcomes, having cohabited is considered a “cost” in the current study’s framework and, therefore, is hypothesized to be negatively related to change in relationship satisfaction over time.

Additionally, a second model will be conducted as a multiple group analysis comparing those who cohabited versus those who did not cohabit prior to marriage. This is, as discussed in the literature review, because research exists showing the differences in levels of income, debt, economic well-being, and relationship satisfaction for those who cohabited prior to marriage and those who did not. Therefore, the current study aims to show how relationship satisfaction develops over time with and without covariates, and then attempts to add to the body of literature given the design of the second study as a multiple comparison latent growth curve analysis. Figure 3.1 provides a pictorial description of the empirical model used for the current study.

Figure 3.1 Empirical model of latent growth curve model measuring the initial level and rate of change in relationship satisfaction, as well as the effect of benefits and costs to the relationships as covariates.



Variable Measurement

Relationship satisfaction. Relationship satisfaction was measured at T1, T2, and T3 using one item on a Likert type scale which asked, “On the scale below, a 10 means the best your marriage could possibly be and a 1 means the worst your marriage could possibly be. Taking all things together, please indicate where your marriage stands at the present moment.”

Income. Income at Time 0 was measured at T1, but was measured as last year’s income, prior to marriage. Both spouses were separately asked the following, “We would like to know about your family income from all sources last year before taxes and other deductions. Please check the box for you and for your partner.” Respondents could choose from “no income” (coded as 1) to “\$100,000 or more” (coded as 13) for both themselves and their partners. The publicly available data, however, had reduced the choices from “no income” (coded as 1) to “\$60,000 or more” (coded as 9). To stay consistent with the \$10,000 increments of income, respondents who chose “less than \$5,000” or “between \$5,000 and \$9,999” were combined so that there were eight income categories: (a) no income, (b) less than \$9,999, (c) \$10,000 to \$19,999, (d) \$20,000 to \$29,999, (e) \$30,000 to \$39,999, (f) \$40,000 to \$49,999, (g) \$50,000 to \$59,999, and (h) \$60,000 or more.

Debt. Respondents were asked in T1, “Some married couples start out with very little. Other marriages involve people who had a lot of advantages before the marriage. And still others begin with problems that need to be overcome. Please indicate whether you or your partner had [other significant debt] prior to your marriage” with responses of “Yes” (coded as 1) or “No” (coded as 0). The question prior to this asks if respondents have more than \$500 in credit card debt with responses of “Yes” coded as 1 and responses of “No” coded as 0. Those who responded to either of the two questions as “Yes” were coded as having some sort of debt (coded

as 1). Only respondents answering “No” to both questions were coded as having no debt (coded as 0).

Economic well-being. Economic well-being at T1 was measured as an observed variable. Respondents were asked in T1, “In every marriage, there are some things that are very good and other things that could use some improvement. Right now, how satisfied would you say you are with each of the following aspects of your marriage?” Economic well-being was the sixth of eight items and respondents could choose from “Very Dissatisfied” (coded as 1) to “Very Satisfied” (coded as 5), with “Neutral” (coded as 3) as a middle option. Respondents who did not provide an answer were coded as missing.

Cohabited. Respondents were asked in T1, “Nowadays, many couples live together for a while before they get married. That is, they cohabit. Did you and your current partner live together before your marriage?” Respondents could choose either “No” (coded as 0) or “Yes” (coded as 1). There were 12 instances in which couples did not match on their reporting of having cohabited (four occurrences in which wives marked cohabited while their husband did not; husbands = eight occurrences). To help assess final group placement for these 12 couples, a two-step cohabitation error dummy variable was coded for each gender. The first step involved taking the wives’ indication of having cohabited minus the husband’s indication of having cohabited. Scores for part one of the dummy variable ranged from -1 (the husband marked that they cohabited while the wife did not) to 1 (the wife marked that they cohabited while the husband did not). Step two created the final cohabitation error dummy variable to separate wives and husbands such that if the initial cohabitation error dummy variable = 1 then wife error on cohabitation = 1 and if the initial cohabitation error dummy variable = -1 then husband error on

cohabitation = 1. Effectively, the outcome was that a cohabitation error dummy variable by gender was created.

Next, a series of t-tests were conducted to compare those that did not match (i.e., the cohabitation error dummy variable by gender) with those who did cohabit on each of the three relationship satisfaction variables. This was done independently for both wives and husbands since those variables collectively measure the intercepts and slopes of relationship satisfaction in the latent growth analyses. For both wives and husbands, no significant differences existed. Therefore, couples where at least one partner reported having cohabited were labelled as such resulting in 230 couples having cohabited prior to marriage (and consequently 249 couples did not cohabit prior to marriage).

Control variables. Age, race, education, whether minor children were present in the household, relationship duration, and being in a covenant marriage were the control variables. To control for age, the T1 version was used and was left as a continuous variable. Race came from T1 and was constructed as a dichotomous variable where 0 = Non-White and 1 = White. Education was a T2 variable and comprised of the following categories: (a) high school diploma/GED or less, (b) some college, and (c) college degree or higher. It is not ideal to utilize a T2 variable when modeling the effects of covariates on initial levels of relationship satisfaction, but the T1 education variable was not sound. The dataset changed to a better and more meaningful question for Waves 2 and 3. Having minor children (a child under the age of 18 and biological to at least one of the parents) present in the household at T1 was also controlled for where 0 = no minor children and 1 = minor children present. Since the goal of the latent growth analysis is to model both initial values and rates of change in relationship satisfaction levels, having minor children in the household at T2 and T3 were not utilized as control

variables. This is because these would occur after initial levels, and thus could bias the results, and do not make conceptual sense to include in this model. For respondents who said they were in a relationship, they were asked about how long they had been in a committed relationship with their partner. Therefore, relationship duration at T1 was also a control variable. For those who were together less than one year, the number of months given were divided by 12 to acquire a fraction of one year in duration. Relationship duration was used instead of marital duration since all couples in T1 would have been married less than one year. Finally, as mentioned above, controlling for covenant marriage was added due to significant differences between respondents in a covenant marriage versus a standard marriage on a few key inclusion variables (cohabited prior to marriage for both husbands and wives, and wives' income). The respondents were asked whether they were in a covenant or standard marriage. Respondents who responded that they were in a covenant marriage were coded 1 and those who responded that they were in a standard marriage were coded 0.

Data Analysis Procedure

Initial data coding was completed in SAS 9.4. Structural equation modeling with Mplus 8.3 (Muthén & Muthén, 2018) was employed in a five-step process to (a) assess the impact of cohabitation as a covariate on relationship satisfaction and (b) assess the relationship satisfaction group differences comparing those who cohabited and those who did not cohabit prior to marriage.

Initial models. First, univariate latent growth curve analyses of the relationship satisfaction variable across the three time points were conducted without any predictor or control variables for husbands and wives separately. That is, a growth curve analysis was conducted for both husbands and wives, separately, to examine the initial levels of relationship satisfaction and

the rate of change in relationship satisfaction over the three waves of data. Second, dyadic parallel process latent growth curves were employed without covariates to examine husbands' and wives' trajectories of relationship satisfaction. Dyadic parallel process growth curves allow for the simultaneous estimation of the rate of change for distinguishable pairs (Acock, 2008), such as husbands and wives in this case, while also accounting for the partners' change, addressing the non-independence in the data (see Vennum & Johnson, 2014). All of these models had variable loadings on the intercept fixed to 1, while the loading for Wave 1 on slope was fixed at 0, Wave 2 on slope was fixed at 1, and Wave 3 on slope was fixed at 2 to specify a linear trend (Acock, 2008).

Covariate model. After the unconditional models were fit, covariates of each partner's income, debt, and economic well-being, as well as whether they cohabited or not were added as predictors of the initial values and changes in relationship satisfaction. This helps us understand the impact of cohabitation as a covariate. Additionally, controls were added for age, race, education, whether minor children were present in the household in T1, relationship duration in T1, and being in a covenant marriage.

Moderated models. The current study also has an interest in examining if significant differences exist between those who cohabited prior to marriage versus those who did not. Therefore, a multiple group latent growth curve analysis of the relationship satisfaction variable across the three time points was conducted to compare individuals who cohabited ($n = 230$) with those who did not cohabit ($n = 249$) prior to marriage. A multiple group latent growth curve analysis is similar to the dyadic parallel process growth curve with covariates, but this allows us to examine differential effects among two or more groups, such as those who did and did not cohabit prior to marriage. Covariates of each partner's income, debt, and economic well-being

were added as predictors of the initial values and changes in relationship satisfaction over time, and the same control variables were included. Initially, all parameters were freely estimated across both groups and then each path was constrained progressively. Chi-square difference tests were employed to compare the fit of the constrained versus unconstrained model to determine if constraining the path to be equal across groups significantly reduced model fit. If so, it would suggest that those paths significantly differed between groups (Cheung & Rensvold, 2002).

Missing data. Rather than deleting cases with missing data, which ranged from 4% at Wave 1 to 20% at Wave 3, full information maximum likelihood (FIML) was utilized to estimate missing data. FIML is different from multiple imputation in that missing values are not imputed but rather FIML considers all available information (e.g., means, variances, covariances) in order to provide maximum likelihood estimates of the parameters (Acock, 2005). Parameter estimates obtained from FIML provide more reliable and less biased information than ad hoc procedures, such as listwise or pairwise deletion (Acock, 2005).

Model fit testing. To test model fit statistics, Mplus 8.3 was employed to analyze the unconstrained model chi-square test of model fit, standardized root mean square residual (SRMR), the root mean square error of approximation (RMSEA), Tucker Lewis Index (TLI), and the comparative fit index (CFI). Values of less than .05 for SRMR and RMSEA indicate excellent model fit (Kenny, 2015; Kline, 2011), while values of .95 or greater for TLI and CFI are considered excellent for model fit (Kenny, 2015) and a non-significant p-value ($> .05$) is considered good fit when the sample size is greater than 400 (Kenny, 2015).

Results

Descriptive Statistics

Almost half (46%) of the participants entered a covenant marriage. Most of the sample was white (wives: 80%; husbands: 82%) while the average age of the respondents was 26.6 ($SD = 6.3$) years for wives and 28.5 ($SD = 7.1$) years of age for husbands. Both wives and husbands had an average current relationship duration of 2.3 years. For husbands, approximately 48% cohabited prior to marriage while slightly over 46% of wives said they cohabited prior to marriage. Wives appeared to be more highly educated, as 46% held a college degree or higher while only 41% of husbands did. Nearly 42% of husbands had a high school diploma, GED, or less than a high school education while 35% of wives held such an education. Nearly one-third of the sample (wives: 33%; husbands: 32%) indicated that they had minor children present in the household at T1 (i.e., six months after marriage).

Just over half (57%) of the wives responded that they held debt prior to marriage, while 59% of husbands said they had some sort of debt they were taking into marriage. Wives appeared to have lower incomes than husbands as over half (59%) of the wives sampled had an income of less than \$20,000 while approximately 68% of the husbands had incomes over \$20,000. It should be noted that the income results do match the US Census Bureau's 2000 data on male and female incomes for the State of Louisiana. In 2000, the median income of female workers was \$22,069 and male workers was \$33,399 (U.S. Census Bureau, 2003).

Both, wives ($M = 3.72$, $SD = 1.05$, range 1-5) and husbands ($M = 3.58$, $SD = 1.00$) appeared to be somewhat satisfied with their economic well-being at T1. Finally, relationship satisfaction appeared to be fairly high for both wives ($M_{T1} = 8.22$, $SD_{T1} = 1.51$) and husbands ($M_{T1} = 8.08$, $SD_{T1} = 1.55$) but did decrease as time went on, with wives having a lower relationship

satisfaction score ($M_{T3} = 7.58$, $SD_{T3} = 1.63$) than their husbands ($M_{T3} = 7.80$, $SD_{T3} = 1.45$) at the end of the third survey wave. Full descriptive statistics are provided in Table 3.1.

Table 3.1 Descriptive Statistics ($N = 479$)

Variables	Wives		Husbands		Range
	%/ M	SD	%/ M	SD	
Relationship Satisfaction					
Time 1	8.22	1.51	8.08	1.55	1 – 10
Time 2	7.87	1.56	7.98	1.45	1 – 10
Time 3	7.58	1.63	7.80	1.45	1 – 10
Income					
No Income	7.1%		1.3%		
\$1 - \$9,999	27.9%		9.8%		
\$10,000 - \$19,999	23.6%		21.2%		
\$20,000 - \$29,999	20.6%		21.7%		
\$30,000 - \$39,999	12.6%		21.7%		
\$40,000 - \$49,999	4.1%		11.8%		
\$50,000 - \$59,999	2.0%		6.1%		
\$60,000 +	2.2%		6.5%		
Had Debt	56.8%		58.7%		
Economic Well-Being	3.72	1.05	3.58	1.00	1 – 5
Cohabited Prior to Marriage	46.4%		47.3%		
Age	26.63	6.26	28.48	7.14	18 – 56
Relationship Duration	2.25	2.12	2.25	2.09	1 – 16
White	80.4%		81.8%		
Covenant Marriage	46.0%		46.0%		
Education:					
High School/GED or Less	35.0%		41.5%		
Some College	19.1%		17.8%		
College Degree or Higher	45.9%		40.8%		
Minor Children in Household	32.7%		32.4%		

Initial Models

Wives only. The univariate growth curve model for wives only indicated good fit to the data ($\chi^2 [1] = 0.51$, $p = .475$; $CFI = 1.00$; $TLI = 1.00$; $RMSEA = .00$; $SRMR = .01$). The wives' growth curve indicated their initial scores of relationship satisfaction were 8.22 and declined by 0.33 points at each wave. Significant variance existed in both the slope and intercept.

Husbands only. The univariate growth curve model for husbands only indicated good fit to the data ($\chi^2 [1] = 0.47, p = .494$; $CFI = 1.00$; $TLI = 1.00$; $RMSEA = .00$; $SRMR = .01$). The husbands' growth curve indicated their initial scores of relationship satisfaction were 8.10 and declined by 0.17 points at each wave. Significant variance existed for the intercept, but not for slope.

Dyadic parallels process without covariates. The dyadic parallels process growth curve model in which husbands' and wives' trajectories of relationship satisfaction without covariates indicated good fit to the data ($\chi^2 [4] = 7.32, p = .120$; $CFI = 1.00$; $TLI = .98$; $RMSEA = .04$; $SRMR = .04$). This growth curve showed that wives' initial scores of relationship satisfaction were 8.22 but and decreased by 0.11 points at each wave, while initial scores for husbands were 8.10 and those declined by 0.10 points at each wave. These results support Hypothesis one. Significant variance existed for the intercepts of both husbands and wives, but not for slope. There was no direct effect found for the initial relationship satisfaction of husbands on the growth rate of wives' relationship satisfaction ($b = -.06, p = .58$) nor for the initial relationship satisfaction of wives on the growth rate of husbands' relationship satisfaction ($b = -.00, p = .94$).

Covariate Model

The next analysis examined the addition of income, debt, economic well-being, and having cohabited as predictors of wives' and husband's relationship satisfaction at the transition to marriage (i.e., their intercepts) and their rate of change over their first five years of marriage (i.e., their slopes), controlling for age, race, education, whether minor children were present in the household, relationship duration, and being in a covenant marriage. Correlations for the variables of interest in the covariate model can be found in Table 3.2. Model fit was good (χ^2

[86] = 108.525, $p > .05$; $CFI = .96$; $TLI = .94$; $RMSEA = .03$ (CI [.00, .04]); $SRMR = .04$), in line with the work of Kenny (2015) and Kline (2011).

Table 3.2 Correlation Matrix for Relationship Satisfaction and key Predictors ($N = 479$).

Variables	1	2	3	4	5	6	7
Relationship Satisfaction							
1. Wife Time 1	—	—	—	—	—	—	—
2. Husband Time 1	.44***	—	—	—	—	—	—
3. Wife Time 2	.48***	.30***	—	—	—	—	—
4. Husband Time 2	.28***	.39***	.53***	—	—	—	—
5. Wife Time 3	.30***	.24***	.42***	.29***	—	—	—
6. Husband Time 3	.27***	.44***	.44***	.52***	.52***	—	—
Predictors							
7. Income Wife	-.00	.02	-.04	-.04	.02	.05	—
8. Income Husband	.07	.09*	.05	.01	.01	.05	.36***
9. Debt Wife	-.08	.03	-.02	.04	.00	.06	.29***
10. Debt Husband	-.04	-.04	-.08	-.07	-.04	-.03	.18***
11. Economic Well-being Wife	.36***	.20***	.28***	.15**	.13**	.17***	.06
12. Economic Well-being Husband	.27***	.24***	.21***	.21***	.05	.19***	.09
13. Cohabited Wife	-.04	.03	-.00	.02	-.05	-.02	-.03
14. Cohabited Husband	-.05	-.00	-.02	-.00	-.02	-.02	-.02

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Variables	8	9	10	11	12	13	14
8. Income Husband	—	—	—	—	—	—	—
9. Debt Wife	.12*	—	—	—	—	—	—
10. Debt Husband	.15**	.29***	—	—	—	—	—
11. Economic Well-being Wife	.24***	-.12*	-.10*	—	—	—	—
12. Economic Well-being Husband	.15**	-.17***	-.16***	.45***	—	—	—
13. Cohabited Wife	.01	.14**	.04	-.13**	-.08	—	—
14. Cohabited Husband	-.00	.12**	.04	-.13**	-.09*	.95***	—

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Results of the covariate latent growth model indicated that the level of economic well-being experienced by both wives ($b = .41, p < .001, \beta = .36$) and husbands ($b = .19, p < .01, \beta = .22$) was significantly associated with initial levels of relationship satisfaction. Only wives' level of economic well-being was significantly associated with their rate of change in relationship satisfaction ($b = -.11, p < .01, \beta = -.22$), partially supporting hypothesis four. Hypotheses two, three, and five were not supported as the key predictors of income (H_2), debt brought into the relationship (H_3), and having cohabited prior to marriage (H_5) did not significantly predict wives' or husband's initial levels of relationship satisfaction nor their rates of change.

The initial level of relationship satisfaction for wives was positively associated with the rate of change in husbands' level of relationship satisfaction experienced over time ($b = .20, p < .05, \beta = .70$). Husband's initial levels of relationship satisfaction was not significantly associated with the rate of change in wives' level of relationship satisfaction experienced over time ($b = .05, p > .05, \beta = .08$). Full results, including controls, from the covariate latent growth model can be found in Table 3.3. A summary of results is also shown in Figure 3.2.

Moderated Models

The proposed model was employed first with all paths freely estimated across groups. This unconstrained model was a moderate fit to the data ($\chi^2 [158] = 200.700, p < .05; CFI = .94; TLI = .90 RMSEA = .04; SRMR = .06$), following the work of Kenny (2015) and Kline (2011). Correlations for both groups can be found in Table 3.4. Since the current study was interested in exploring whether cohabitation moderated the results of the covariate model, chi-square difference tests were examined on all paths and revealed no significant differences between those who cohabited and did not cohabit. Therefore, the unconstrained model was retained. Estimates of the direct effects of each covariate on the intercepts and slopes of both wives and husbands by

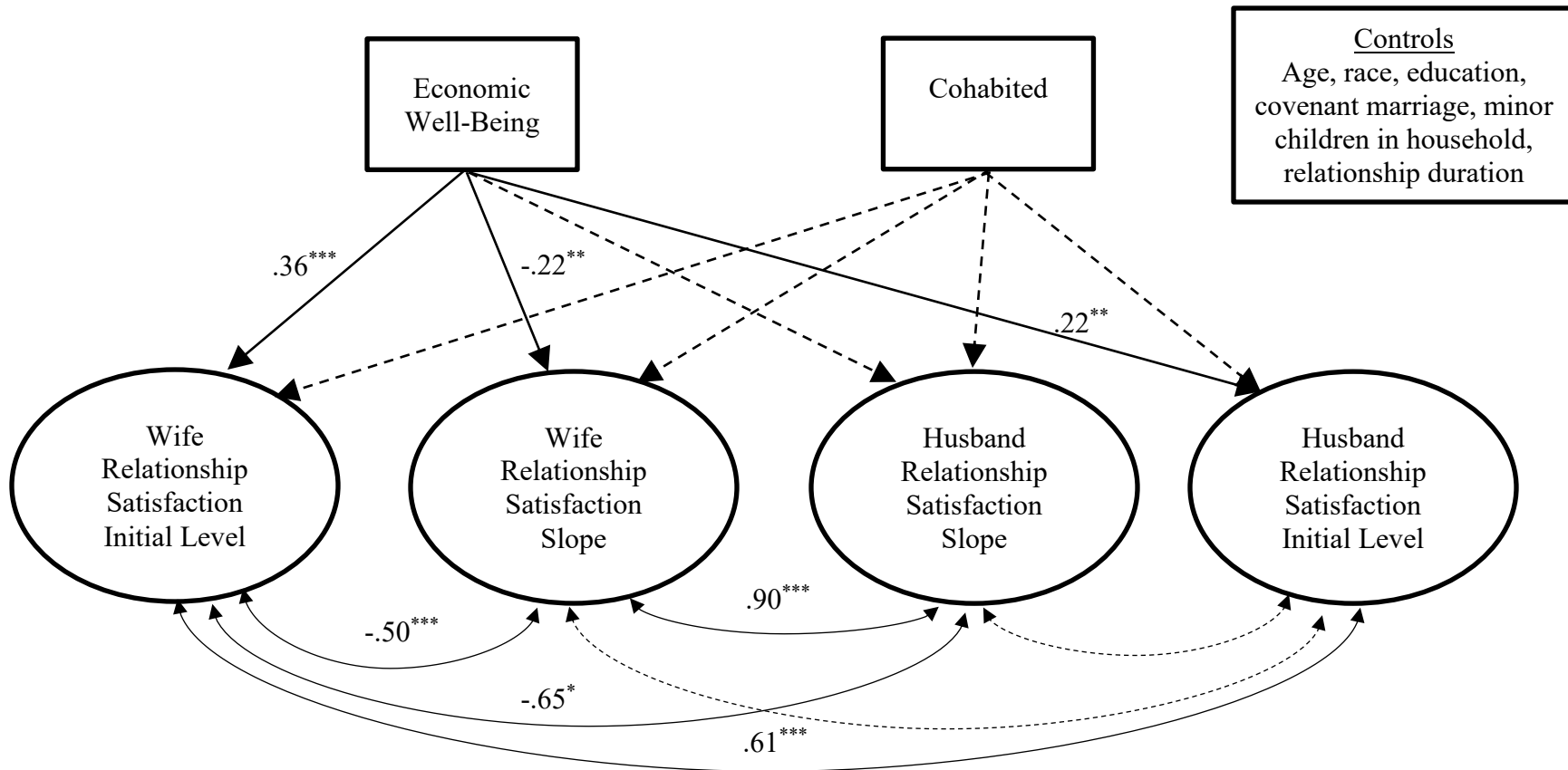
Table 3.3 Latent growth curve analysis of relationship satisfaction across the three time points; covariate model with effects of predictor and control variables ($N = 479$).

Predictor Variables	Wife		Husband	
	Intercept	Slope	Intercept	Slope
Income	-.07	.04	.10	-.22
Debt	-.04	.06	-.09	.17
Economic Well-being	.36***	-.22**	.22**	.01
Cohabited	-.05	-.07	.03	-.11
Control Variables (reference)				
Age	.02	-.06	-.01	.04
Relationship Duration	-.02	.08	.06	-.02
White	-.09	.09	.21**	-.08
Covenant Marriage	-.03	-.04	-.04	.04
Education (College)				
High School/GED or Less	-.05	.13	.15	-.29
Some College	.12	-.06	.00	.16
Minor Children in Household	-.03	.03	-.11	.19

Note: Standardized beta estimates.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Figure 3.2 Dyadic Growth Curve Model with Economic Well-being and having cohabited predicting Wives' and Husbands' Relationship Satisfaction across the First five year of Marriage. (N = 479 Couples).



Note: Standardized estimates. For clarity, the paths from income and debt, as well as the control variables to husbands' and wives' slope and intercept variables are not shown but were included in the analysis. The income and debt predictor variables had no effect. Cohabited was chosen to remain in the figure as it was the main variable of interest. Model fit indices: $\chi^2 [88] = 136.60, p < .001$; $CFI = .93$; $TLI = .88$; $RMSEA = .04$ (confidence interval [.03, .05]); $SRMR = .05$.
 $*p < .05$. $**p < .01$. $***p < .001$ (two-tailed).

Table 3.4 Correlation Matrix for Relationship Satisfaction and Key Predictors for those who Cohabited (bolded, $n = 230$) and those who did not Cohabit (non-bold, $n = 249$).

Variables	1	2	3	4	5	6	7
Relationship Satisfaction							
1. Wife Time 1	—	.55***	.41***	.34***	.28***	.30***	.02
2. Husband Time 1	.32***	—	.27***	.31***	.19**	.38***	.05
3. Wife Time 2	.56***	.33***	—	.52***	.36***	.42***	-.03
4. Husband Time 2	.22**	.45***	.54***	—	.24**	.50***	-.05
5. Wife Time 3	.32***	.29***	.48***	.34***	—	.43***	-.07
6. Husband Time 3	.25***	.49***	.45***	.54***	.58***	—	-.03
Predictors							
7. Income Wife	-.03	.00	-.05	-.02	.10	.13	—
8. Income Husband	.05	.07	.07	.05	.00	.13	.40***
9. Debt Wife	-.04	-.02	.02	-.04	.08	.01	.30***
10. Debt Husband	-.01	-.08	-.06	.03	-.06	-.07	.14*
11. Economic Well-being Wife	.31***	.26***	.24***	.18**	.12	.22***	.06
12. Economic Well-being Husband	.21**	.24***	.24***	.32***	.07	.23***	.11

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Variables	8	9	10	11	12
Relationship Satisfaction					
1. Wife Time 1	.10	-.10	-.07	.39***	.32***
2. Husband Time 1	.12	.08	-.00	.14*	.25***
3. Wife Time 2	.04	-.05	-.11	.34***	.18*
4. Husband Time 2	-.03	.12	-.19**	.13	.11
5. Wife Time 3	-.08	-.07	-.01	.14	.02
6. Husband Time 3	-.05	.13	.03	.12	.14
Predictors					
7. Income Wife	.30***	.29***	.23***	.06	.06
8. Income Husband	—	.09	.18**	.24***	.11
9. Debt Wife	.15*	—	.26***	-.14*	-.16*
10. Debt Husband	.13*	.32***	—	-.07	-.14*
11. Economic Well-being Wife	.24***	-.07	-.12	—	.43***
12. Economic Well-being Husband	.18**	-.16*	-.17*	.45***	—

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

subgroup is provided in Table 3.5 (coefficients for those who cohabited are in bold). Results of the final moderated latent growth model indicated that the level of economic well-being experienced by both wives ($b = .34, p < .001, \beta = .28$) and husbands ($b = .36, p < .01, \beta = .32$) was significantly associated with initial levels of relationship satisfaction for those who did not cohabit prior to marriage. For couples who cohabited prior to their marriage, the level of economic well-being experienced mattered only for wives' starting levels of relationship satisfaction ($b = .51, p < .001, \beta = .53$). The only key indicator variable to have a significant association with the rate of change in relationship satisfaction was wives' level of economic well-being, but for those who did not cohabit prior to marriage ($b = -.12, p < .05, \beta = -.18$). A chi-square difference test revealed a significant difference between economic well-being and the intercept of relationship satisfaction for husbands when comparing husbands who cohabited with those who did not ($\chi^2_{diff}[1] = 6.45, p < .001$), but no other group differences were found, partially supporting only Hypothesis 11. Hypotheses six through 10 were not supported. Unlike the covariate model, the moderated (i.e., group) model did not provide evidence for either group that the initial level of relationship satisfaction for wives was associated with the rate of change in husbands' level of relationship satisfaction experienced over time nor that husband's initial levels of relationship satisfaction were not significantly associated with the rate of change in wives' levels of relationship satisfaction experienced over time. Overall, the model explained 13% (23%) of the variability of the wives' (husbands') initial levels of relationship satisfaction for those who did not cohabit and 34% (16%) for those who did cohabit. The model explained approximately 16% (33%) of the variability of the wives' (husbands') rates of change in relationship satisfaction over time for those who did not cohabit and 52% (23%) for those who did cohabit. A summary of results is also shown in Figure 3.3.

Table 3.5 Latent growth curve analysis of relationship satisfaction across the three time points; covariate model with effects of predictor and control variables for those who cohabited (bolded, $n = 230$) and those who did not cohabit (non-bold, $n = 249$) prior to marriage.

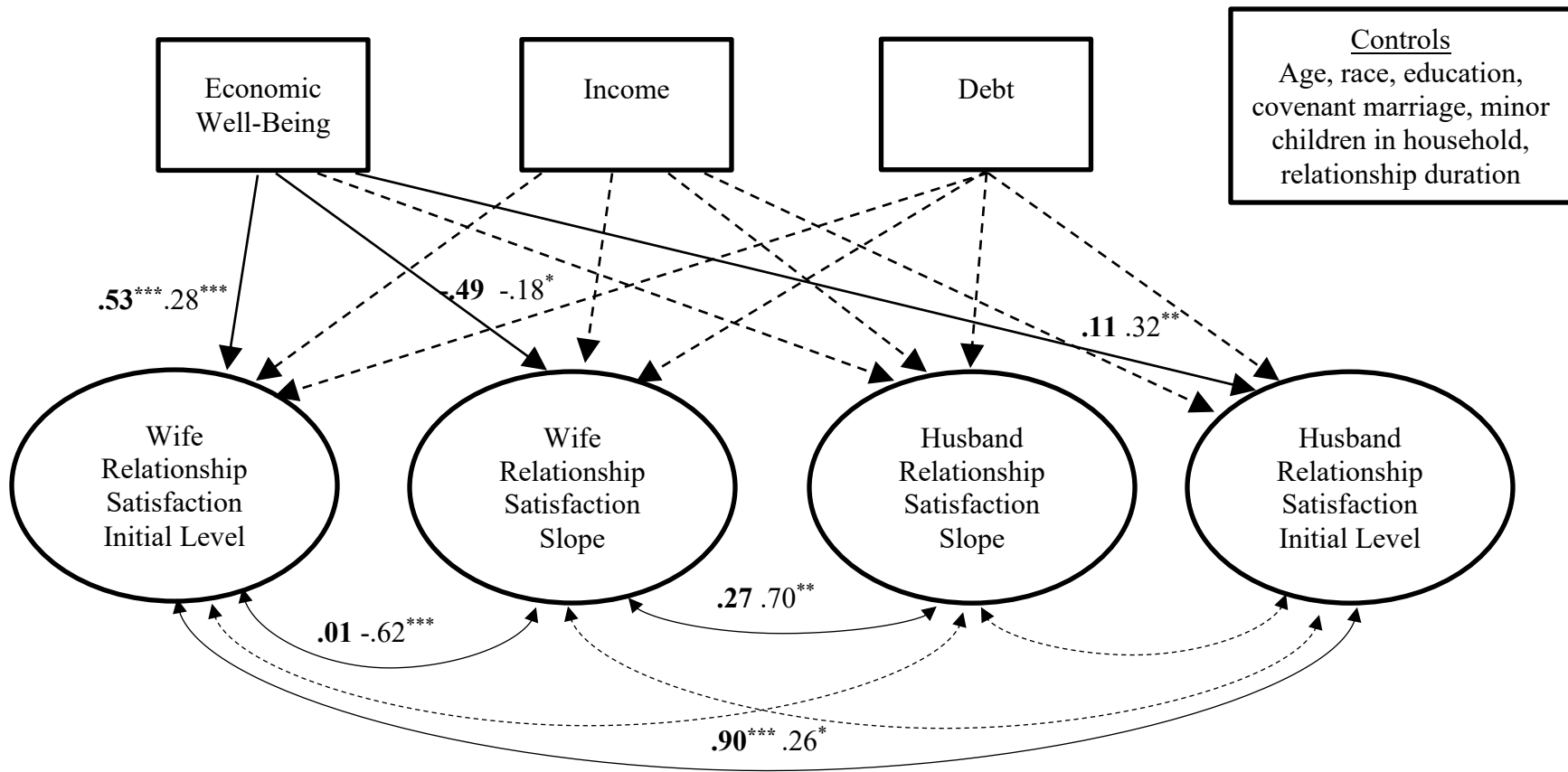
Predictor Variables	Wife		Husband	
	Intercept	Slope	Intercept	Slope
Income	-.14/ -.02	.11/ -.01	.13/ .07	-.15/ -.22
Debt	-.04/ -.11	.08/ .17	-.05/ -.04	.10/ .09
Economic Well-being	.28 ^{***} / .53^{***}	-.18 [*] / -.49	.32 ^{***} / .11	-.01/ -.02
Control Variables (reference)				
Age	.00/ .08	.11/ -.33	-.15/ .14	.18/ -.09
Relationship Duration	.00/ -.08	.01/ .31	.01/ .11	-.05/ -.01
White	-.08/ -.08	.02/ .15	.15/ .22[*]	-.08/ -.09
Covenant Marriage	.04/ -.10	-.04/ -.12	.12/ -.21	.25/ .27
Education (College)				
High School/GED or Less	-.19 [*] / .08	.15/ .23	.10/ .17	-.29/ -.22
Some College	.04/ .13	-.05/ -.01	-.04/ .01	.21/ .03
Minor Children in Household	.06/ -.13	-.17/ .05	-.09/ -.08	.16/ .10

Note: Standardized beta estimates. Model fit indices: $\chi^2 [88] = 136.60, p < .001$; $CFI = .93$; $TLI = .88$; $RMSEA = .04$ (confidence interval [.03, .05]); $SRMR = .05$.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Figure 3.3 Dyadic Growth Curve Model with Economic Well-Being, Income, and Debt Predicting Wives' and Husbands'

Relationship Satisfaction across the First five year of Marriage for Cohabiting (bolded, $n = 230$) and Non-Cohabiting (non-bold, $n = 249$) Couples.



Note: Standardized estimates. For clarity, the paths from the control variables to husbands' and wives' slope and intercept variables are not shown but were included in the analysis. Model fit indices: $\chi^2 [158] = 200.700, p < .05$; $CFI = .94$; $TLI = .90$; $RMSEA = .04$ (confidence interval [.02, .05]); $SRMR = .06$.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Discussion

Pre-marital cohabitation has been on the rise the last five-to-six decades (Kuperberg, 2014; Stanley et al., 2004), yet much of the prior research has shown cohabitation to have a negative effect on relationship satisfaction (Cohan & Kleinbaum, 2002; Rhoades et al., 2009; Stanley et al., 2004). Empirical evidence has supported the use of social exchange theory (SET) in explaining finances and relationships (Britt et al., 2008; Dew, 2008, 2009, 2011a; Dew, Britt, & Huston, 2012; Kerkmann, Lee, Lown, & Allgood, 2000). SET posits that we undergo a series of benefit (e.g., income and higher levels of economic well-being) to cost (e.g., debt and lower levels of economic well-being) analyses and weigh those decisions against alternatives that might be, or are perceived to be, available to us before deciding on an outcome (White & Klein, 2002), such as relationship satisfaction. Within this context, SET provides a framework for how income, debt, economic well-being, and having cohabited can influence a person's relationship satisfaction.

The purpose of the current study was to (a) examine the rate of change in relationship satisfaction in recently married couples and the impact that income, debt brought into the relationship, economic well-being, and having cohabited have on the rate of change in relationship satisfaction, and (b) add to the body of literature by utilizing a multiple group comparison latent growth curve analysis to compare the differences that income, debt brought into the relationship, and economic well-being have on the initial levels and the rate of change in relationship satisfaction over time for those who did versus did not cohabit prior to marriage.

The recurrent theme of our results is that cohabitation had a minimal effect on relationship satisfaction. For example, the covariate model (see Figure 3.2) showed that cohabitation had no association with the initial levels of relationship satisfaction experienced by

both wives and husbands, nor did it have a relationship with the rate of change in relationship satisfaction for both wives and husbands. The results match the work of others (see: Brown et al., 2017; Manning & Cohen, 2012) that have examined the effects of cohabitation on relationship satisfaction using more recent data compiled within the last twenty years. Thus, the results could be due to the fact that the perception of cohabitation has changed since the research published from the 1970s through mid-1990s. However, when viewing the moderated model (see Figure 3.3) a cohabiting effect for relationship satisfaction was found. For example, there was a positive correlation among wives' and husbands' initial levels of relationship satisfaction for both groups, and this correlation was very high for those who cohabited prior to marrying. Surprisingly, neither income nor debt brought into the relationship had any effect on initial levels of relationship satisfaction for both wives and husbands, nor was income and debt brought into the relationship associated with the initial levels of relationship satisfaction for both wives and husbands. With respect to income, this may make sense given that there is much mixed research to date on the effect of income on relationship satisfaction (Britt & Huston, 2012; Britt & Roy, 2014; Deutsch, Roksa, & Meeske, 2003; Dew & Dakin, 2011). The results for debt appear to be more surprising as research has shown that debt limits our ability to make economic choices (Dew, 2007), and that, in turn, is associated with increased levels of partner conflict and lower levels of relationship satisfaction (Conger et al., 1999; Dew, 2007, 2011). The results of income and debt on relationship satisfaction also remained consistent (i.e., no effect) for the grouping model. That is, there were no differences in the effect of income and debt brought into the relationship for those who did versus did not cohabit.

Another common finding throughout was that economic well-being did appear to have a positive association with the initial levels of relationship satisfaction experienced by both wives

and husbands. Interestingly, economic well-being had a negative effect on the rate of change in relationship satisfaction for wives, and no effect for husbands. That is important as previous research has shown that lower levels of economic well-being is associated with increased spousal conflict (Britt et al., 2017), which is related to lower relationship satisfaction (Dew et al., 2012; Dew & Dakin, 2011). What this may indicate from a social exchange perspective is that when wives feel more economically stable, they may sense that they do not need to rely on their partner as much financially. Thus, they feel freer to consider alternatives that may be available to them, which in turn lowers their current relationship satisfaction levels. The results of the multiple group model did indicate that there was a significant difference between husbands' who cohabited and those who did not with respect to the effect of economic well-being on their initial levels of relationship satisfaction. That is, for husbands who did not cohabit, economic well-being mattered and was positive. For husbands who did cohabit, economic well-being did not matter. These results match that of Clarkberg (1999) who showed that the relationship between economic well-being and relationship satisfaction was weaker for those who cohabited than those who did not. No other group differences were identified, which may suggest that cohabiting with a significant other prior to marriage may not be the start of the end of the relationship as previously thought. Although negative financial implications may exist if one decides to cohabit (Britt-Lutter, Dorius, & Lawson, 2018). One final thing to consider is that the effects for those who cohabited prior to marriage may not be as strong (or significant) because this group of cohabiters may have decided to cohabit with the plans of marrying their partner, which has been shown to have minimal negative relationship effects when compared to direct marrieds (Brown et al., 2017). It could be that since these couples had already been living

together prior to marriage they already understood each other, and relationship satisfactions levels had been adjusted already.

Implications

Pre-marital cohabitation is significantly on the rise, and as such, cohabiting unions, like marriage, provide adults an opportunity to not only live in a committed relationship, but also pool resources to establish greater economies of scale, and possibly build a financial future together (Lundberg & Pollak, 2014). Young adults are quickly becoming the target of financial planning practices across the country, especially with the rise of the XY Planning Network, and due to the transition of wealth that is occurring. Thus, there is a large likelihood that financial planners will work with young couples who have cohabited. The current study offers support that the traditional views of marriage may not be sufficient in working with young couples of this millennium and that cohabiting prior to marriage may not have detrimental effects to the long-term relationship as historically thought. Further, income and debt may not drive what really matters to the couple relationship and so a focus on understanding the clients more deeply may be more important than focusing on purely income and/or debt-related aspects during the financial planning meeting. The study does offer one thing that might make sense to do with clients and that is to ask them, at least annually, how they would rate their current economic well-being on a scale of 1 (low) to 10 (high) so that the financial planner can track that, and then have a deeper conversation as to why that number increased or decreased from the prior year (or meeting), which may also increase rapport with the clients.

Limitations and Recommendations

Certain limitations must be considered before considering any implications of the research. First, the dataset is not generalizable given it was conducted in the state of Louisiana

only. Additionally, the data is nearly two decades old and may not provide an accurate measure of relationship satisfaction for the young couples of today's society. On that note, given that cohabiting is an increasing phenomenon, the data may not realistically measure group differences given the age of the dataset, albeit, it is still newer data than much of the previous cohabitation research has utilized. Future studies measuring the influence of cohabitation and financial aspects on relationship satisfaction would ideally use a more recent and nationally representative dataset for their sample. Another limitation to the study is endogeneity, which would require the question of whether the hypothesized relationships between key predictors and relationships satisfaction could be the other way around. That is, perhaps economic well-being does not lead to relationship satisfaction as much as relationship satisfaction informs the level of one's economic well-being instead. Another limitation is the dataset does not have financial asset information or any net worth measure, which could be more helpful than categorical income values and a binary response of having debt, especially when trying to get at financial implications. What is more, it is not possible to tell how income has changed over the course of the time analyzed. Changes in each partner's income, or the household, could have drastic results on the association between income and relationship satisfaction. Further, the debt variable only asked couples if they had more than \$500 in credit card debt and if they had other significant debt, which is subjective and does not allow us to get at what type of debt the couple held. While it may be limited, future research should utilize datasets that have continuous variables for net worth, financial assets, non-financial assets, and debt to allow the researcher to figure out how magnitudes of change in those variables influence relationship satisfaction. There was just one question measuring economic well-being, which may be fine but utilizing data that have more indicators of economic well-being, such as a scale like the Consumer Financial Protection

Bureau's (CFPB) financial well-being scale (CFPB, 2019) could be useful to ensure that economic (or financial in the case of the CFPB scale) well-being is truly measured. Finally, the questionnaires were mailed to respondents, and even though couples were asked to respond separately, they may not have. Therefore, it is unknown if one spouse answered both surveys for the couple.

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Chapter 4 - Economic well-being as predictors of marital warmth, conflict, and satisfaction

Introduction

While it may often be said that the divorce rate in the United States hovers around 50%, that number can be quite misleading. According to research via the 2006-2010 National Survey of Family Growth (Copen, Daniels, Vespa, & Mosher, 2012), the probability that a first marriage will end in divorce increases with marital duration. Approximately 20% of first marriages are expected to end in divorce within the first five years (i.e., the “honeymoon” period). That number increases to 32% for women (30% for men) by 10 years into the marriage, and eventually near the often-cited 50% number upon 20 years of marital duration (48% for women, 44% for men, respectively).

Cohabitation (i.e., residing with a significant other prior to marriage) has been on the rise for the last few decades, too. Cohabiting data from the 2006-2010 National Survey of Family Growth (Copen, Daniels, & Mosher, 2013) showed a clear increase in cohabitation as the first type of union among partners. In 1995, approximately one of every three (33%) couples cohabited as a first union type. In 2002, that number rose to 43% and by the end of 2010, the number was 48%. That is concerning given that prior literature on cohabitation has suggested that residing with a significant other prior to marriage would likely result in a dissolution of the relationship (Copen, Daniels, & Mosher, 2013; Copen, Daniels, Vespa, & Mosher, 2012; Kamp Dush, Cohan & Amato, 2003; Kuperberg, 2014). Results from the Copen et al. (2012) study also showed that the probability of first marriages that are expected to end in divorce is higher for those who cohabited versus those who did not cohabit. For both groups (cohabited and did not cohabit prior to marriage) and for both males and females, again, approximately 20% of first

marriages are expected to end in divorce within the first five years. Those numbers increased to 33% for women who cohabited (29% for male cohabiters) but was only 29% for women who did not cohabit prior to marriage (27% for men) by 10 years into the marriage. Twenty years into the marriage, 54% of women who cohabited prior to marrying had divorced (43% for men) while only 43% of women who had not cohabited had divorced (40% for men). Compounding problems, many more couples are experiencing financial hardships earlier on in life.

Exacerbating this problem is the consumer debt issue we face in the United States. The most recent debt statistics indicated that as of year-end 2018, American households owed over 4 trillion dollars, with 26% of that number as credit card debt – or 1.06 trillion (U.S. Federal Reserve, 2019). What that means is that many couples now have some sort of debt that they bring into the relationship prior to tying the knot with their loved one. A study by Ramsey Solutions in late 2017, showed that 63% of couples had debt prior to being married (Cruze, 2018). This problem is only being intensified as the study also found that 43% of couples who had been married for 25 or more years brought debt into their marriage but that 86% of couples who had been married for five or less years brought debt into their relationship. The results of the Ramsey Solutions study also confirmed that couples do fight about money, particularly if they were in debt, and that being in debt was positively related to financial arguments.

These findings raise concerns because money is an emotional topic, is not often discussed within or outside of families, and is sometimes said to be the last remaining taboo topic in our society (Trachtman, 1999). The American Psychological Association (APA) has continuously listed financial problems as a top stressor for Americans (American Psychological Association (APA), 2017). Prior research has shown that disagreement over financial matters is a significant source of couple conflict (Dew, 2007), a major predictor of relationship dissatisfaction (Dew &

Dakin, 2011), and ultimately, divorce (Britt & Huston, 2012; Dew, 2011; Dew, Britt, & Huston, 2012). Other studies of recently divorced individuals found major contributors to the respondents seeking a divorce were a lack of commitment, infidelity, conflict/arguing (Scott, Rhoades, Stanley, Allen, & Markman, 2013), and troubles with money management (Hawkins, Willoughby, & Doherty, 2012; Williamson, Nguyen, Bradbury, & Karney, 2016).

The purpose of the study was to add to the body of literature on how economic hardships such as low income, debt, and not having a job prior to marriage influence not only the respondent's economic pressure (as measured through economic well-being) but also their partner's economic pressure. Further, the study then addressed how one partner's economic pressure influences both individual and partner warmth and conflict experienced. Ultimately, the study attempted to address how that all influences a respondent's own relationship satisfaction and the marital perceptions of his or her partner. The ability to utilize dyadic data (i.e., data from both partners in the relationship) can help explain how what one partner brings into the relationship not only impacts individual long-term relationship satisfaction, but also that of the partner. To understand both partners in the relationship, the current study uses the Marriage Matters dataset (i.e., a dyadic dataset) with the use of structural equation modeling and an actor-partner interdependence model. Further, to tease out the effect of cohabitation, the current study employed a multiple group comparison on those who cohabited prior to marriage against those who did not.

Potential implications to this study are paramount to financial and mental health professionals who work with clients. Understanding how cohabitation influences economic pressure and the impact that has on not only the client's warmth and conflict with his or her partner, but also the spouse of the client's warmth and conflict is important. Clients with large

consumer debt levels may not want to discuss such concerns but it is important to help these clients open up about their problematic financial situation. Most importantly, helping spouses have a conversation with each other about their financial situation may go a long way in helping resolve couple conflict, and ultimately help save a relationship. For financial practitioners, it could also be the difference between keeping clients and losing clients due to relationships dissolving. Therefore, the current study aims to help professionals working with clients better understand the driving components of why the clients might feel economic pressure and how those key components may impact their relationship satisfaction later.

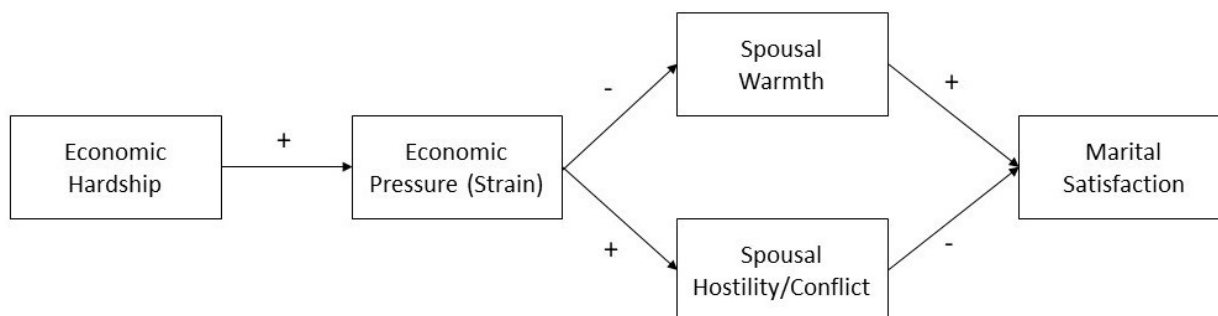
Theoretical Framework and Related Literature

Revised Family Financial Stress Model

A revised version of the family stress model has often been used by researchers interested in the relationship between financial problems and marital outcomes (Conger, Conger, Elder, Lorenz, & et al, 1993; Conger, Conger, & Martin, 2010; Conger et al., 1990; Conger, Rueter, & Elder, 1999; Dew, 2007). Within the context of the family stress model for finances, financial difficulties are thought to predict feelings of economic pressure or strain (Conger et al., 1993, 1990, 1999). Economic pressure is thought of as a state of worry or distress (i.e., a form of well-being) about one's financial situation, which are typically brought on by negative financial events or behaviors (i.e., hardships), such as job loss, low income, and/or high debt (Conger et al., 1990). The buildup of economic pressure (i.e., lower levels of economic well-being) is thought to result in increased partner negativity towards each other, increasing partner conflict at the expense of partners showing each other warmth and affection (Conger et al., 1990). Ultimately, Conger et al. (1990) hypothesized that this increased hostility and conflict would

lead to a diminishing perception of relationship quality. Figure 4.1 presents a revised family financial stress model adapted by Dew (2007) via the work of Conger et al. (1990).

Figure 4.1 Adaptation of Conger et al.'s (1990) family financial stress model.



Economic hardship and economic pressure. According to the family stress model adapted for finances (Conger et al., 1990), economic hardship can result from a multitude of negative financial events such as low income, job status or unemployment, or debt. Additionally, cohabitation prior to marriage has been shown to have a negative association with financial outcomes (Britt-Lutter, Dorius, & Lawson, 2018), which may be source of economic pressure. Income has been shown to negatively influence the economic pressure perceived by couples (Brines & Joyner, 1999; Lempers & Clark-Lempers, 1997; Neppl, Senia, & Donnellan, 2016) and also plays a role differently among husbands and wives (Bertrand, Kamenica, & Pan, 2015; Britt & Huston, 2012; Deutsch, Roksa, & Meeske, 2003; Killewald, 2016; Rogers, 2004; Teachman, 2010), so it is important to consider the effect of both partner's incomes separately. Gibson-Davis (Gibson-Davis, 2009) also showed that husbands' income levels were stronger predictors than that of wives' income, further justifying the separation of husband and wife income in the model. Using the family stress model, Ponnet (2014) reviewed the impact of various income levels (i.e., economic hardships) on familial financial stress and found an association with low income and greater economic pressures. Similarly, other researchers have

examined the impact of low income on economic pressure and found that lower income families had greater economic pressures (Neppl et al., 2016; Newland, Crnic, Cox, & Mills-Koonce, 2013). There also appears to be a cohabiting effect with respect to income. While cohabiting households have greater incomes than single family homes, when compared to households in which the partners are married, they have lower incomes (Snyder & McLaughlin, 2006; Thomas & Sawhill, 2005) and higher rates of poverty (Lerman, 2002), which negatively impacts their long-term financial stability and economic well-being. Thus, as Huang, Smock, Manning, and Bergstrom-Lynch (2011) found, individuals who chose to cohabit may have done so for economic purposes, such as the opportunity to pool their resources and share expenses.

Prior research has indicated that it is important to consider job status when comparing cohabiting individuals against non-cohabiting married individuals (Brown, 2000; Clarkberg, 1999; Conger et al., 2010; Teachman, 2010). Clarkberg (1999) showed that there is a gender effect, stating that when compared to their married counterparts, cohabiting men had less stable employment. Brown (2000) confirmed that notion, indicating cohabiting fathers work less hours than their non-cohabiting, married counterparts. Teachman (2010) explained that it is important to not only consider income, but also labor force participation on economic pressure or well-being, and that many studies using the family stress model have failed to do so, particularly within an actor-partner framework. Teachman showed that income and job status are correlated yet distinct constructs and could result in confounding results. Further, Conger et al. (2010) recommended that when utilizing the family stress model job status should be a variable of interest separate from income, and not as a control variable, when predicting economic pressure or well-being.

Financial hardships have a negative impact on feeling of economic pressure (Conger et al., 1993, 1990). Having significant amounts of debt, particularly negative debts (e.g., revolving debt with high interest rates), has been shown to have a negative impact on relationship quality through its increased effect on economic pressure (i.e., lower levels of economic well-being) (Conger et al., 1993; Dew, 2007, 2008). In a review of 1,078 recently married couples, Dew (2008) found that an increase in debt shortly after marriage was associated with financial stressors, arguments over money, less time spent with the new partner, and ultimately, a decline in marital satisfaction. In a qualitative study of 64 long-term couples, Skogrand, Johnson, Horrocks, and DeFrain (2011) analyzed couples who indicated that they had “great” marriages. The two main themes among the couples were that they lived with little to no debt and that they kept their spending in check (i.e., they stayed within their means).

Economic pressure and marital interactions. Dew (2007) explained that economic pressure is a “state of distress brought about by worry over one’s finances, having to cut back in consumption, and becoming dissatisfied with one’s finances” (p. 91). Conger et al. (1990, 1993, 1999) have explained that economic pressure can increase conflictive marital interactions while decreasing warming marital actions. This is problematic as arguments inside the relationship have been positively associated with familial health problems (Fincham, 2003). A host of research has shown economic pressures to be associated with conflict in the relationship (Archuleta, Britt, Tonn, & Grable, 2011; Britt, Hill, LeBaron, Lawson, & Bean, 2017; Dew & Dakin, 2011; Gudmunson, Beutler, Israelsen, McCoy, & Hill, 2007; Hill, Allsop, LeBaron, & Bean, Roy A., 2017; Mendiola, Mull, Archuleta, Klontz, & Torabi, 2017; Papp, Cummings, & Goeke-Morey, 2009; Rick, Small, & Finkel, 2011).

Recent research examining both husbands and wives found that experiencing financial worry (i.e., economic pressure) was extremely predictive of conflict for both partners (Britt et al., 2017). For both wives and husbands, conflict due to financial problems has been found to be associated with lower relationship satisfaction and divorce (Dew et al., 2012). Specifically, husbands who experienced financial worries had nine times the odds of reporting financial conflict than husbands who did not report having any financial worries. Wives who experienced financial worry had 13 times the odds of reporting financial conflict with their partners as compared to wives who did not experience financial worries. Another interesting study compared female breadwinners to non-breadwinners in a mixed methods approach to determine the content of their spousal arguments and what the differences were between the two groups (Mendiola et al., 2017). The authors reported that financial issues and money-related arguments were the top arguments among couples, for both groups of women; however, those arguments were experienced differently between the two groups.

A handful of research has suggested that couples can help mediate the relationship between economic pressure (i.e., low economic well-being), conflict and ultimately, relationship satisfaction (Archuleta, Grable, & Britt, 2013; Conger et al., 1999; Dew, LeBaron, & Allsop, 2018; Ellison, Henderson, Glenn, & Harkrider, 2011). Specifically, Archuleta et al. (2013) showed that being satisfied with one's financial status (i.e., having high economic well-being) was related to less harsh start-up (i.e., conflictual discussions with one's partner), increased shared goals and values, and ultimately increased relationship satisfaction. Dew et al. (2018) examined partner marital commitment after the 2007-2009 recession to see how partners acted amid such a significant financial stressor. Results were a bit conflicted in that when couples jointly experienced increased stress from the recession, they did not have increases in marital

commitment. However, when wives only reported stress increases due to the recession, they also experienced significant increases in the commitment to their marriage, suggesting the importance of using dyadic data to get both actor and partner effects. Another interesting finding was that marital sanctification – viewing marriage as a sacred character – was positively associated with commitment, similar to the findings by Ellison et al. (2011). Taken together, the limited research around this concept does help confirm that it is important to include the pathway from economic pressure to warmth when utilizing the family stress model for research. To that extent, following the work of Conger (1990, 1993, 2010), that path will be tested in the current study.

Summary

In summary, an adapted financial version of the family stress model (see Dew, 2007) suggested that individuals and families experience financial hardships. These financial hardships increase the economic pressure that is experienced by the family members, such that each partner experiences lower economic well-being. Individuals who have lower perceived economic well-being experience more significant relationship conflict with their partners and therefore, less warming interactions with their partners. These negative marital interactions (i.e., increased conflict, decreased warmth), in turn, result in lower relationship satisfaction with their partners (Conger et al., 1993, 1990).

Hypotheses

H1: Income will be positively associated with economic well-being for both partners

H2: Job status will be positively associated with economic well-being for both partners.

H3: Debt (i.e., credit card and “other” significant debt) will be negatively associated with economic well-being for both partners.

H4: Economic well-being will be positively associated with partner warmth for both partners.

H5: Economic well-being will be negatively associated with partner conflict for both partners.

H6: Partner warmth will be positively related to relationship satisfaction for both partners.

H7: Partner conflict will be negatively related to relationship satisfaction for both partners.

Methods

Data

Data were obtained from the Marriage Matters Panel Survey of Newlywed Couples, Louisiana (Marriage Matters; Nock, Sanchez, & Wright, 2012). In 1997, with the goal of making it more difficult for partners to both enter and exit a marriage, Louisiana enacted a covenant marriage law and required premarital counseling along with proof of fault for a subsequent divorce. The purpose of the Marriage Matters data was to examine the effects of Louisiana's covenant marriage law on relationship quality and marital dissolution rates, among other consequences (Nock et al., 2012). Chapter 3 details the Marriage Matters dataset and the t-test procedure comparing those that were in a covenant marriage against those who did not.

Sample Characteristics

Given the paucity of research available on young adults within the financial planning industry, the current study limits the respondents to those between the ages of 18 and 40 in accordance to Erikson's eight stages of development for young adulthood (Darling-Fisher & Leidy, 1988; "Erik Erikson's Theory of Psychosocial Development," 2017). Out of the 707

couples recruited, only one partner's data were collected for 143 of the couples (21 wives did not respond, and 122 husbands did not respond at any wave of data collection). These couples were omitted from the sample. Another 47 couples were deleted from our sample due to both partners being over the age of 40. Finally, because the goal of the study was to examine both actor and partner effects longitudinally on relationship satisfaction, couples that divorced before relationship satisfaction at Time 3 (T3) was measured were omitted from the sample ($n = 38$). The final sample size is 479 couples ($N = 958$ individuals).

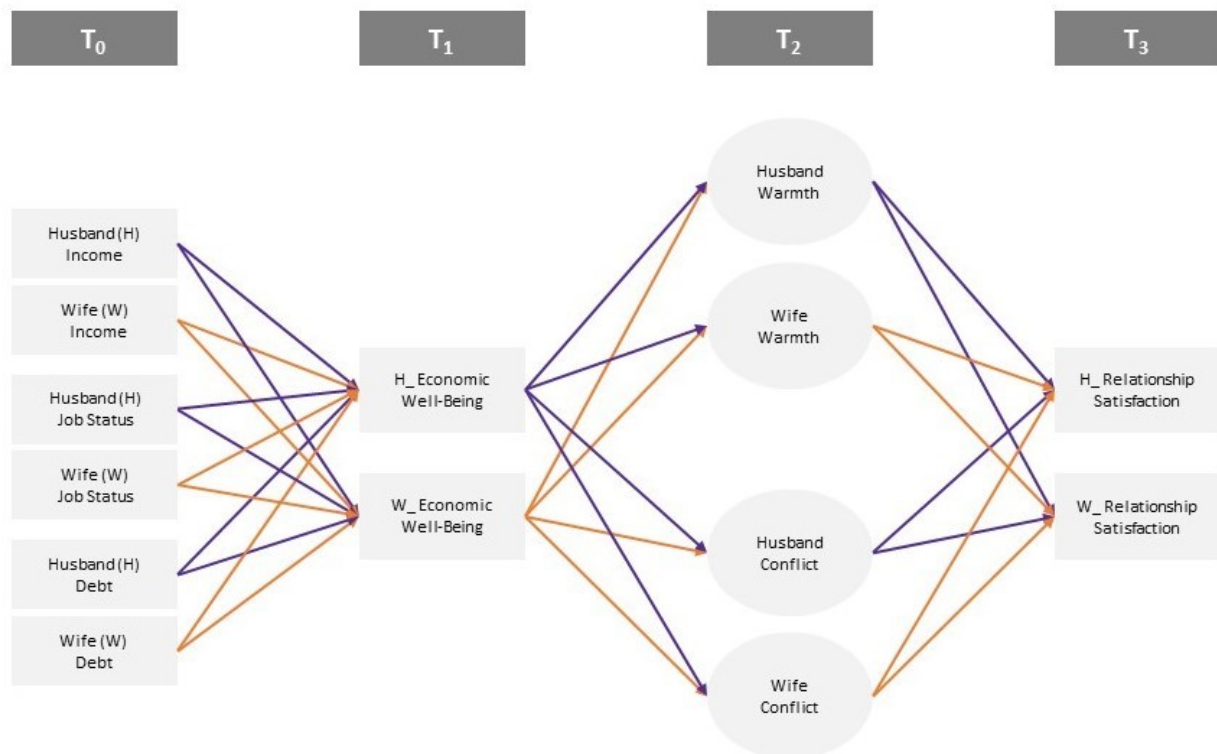
Empirical Model

Within the context of the conceptual framework the construct of economic hardship was broken up into various observed variables to separate the effect each has on economic well-being, which is utilized to operationalize the concept of economic pressure or strain. Conger et al. (2010) explained that future research using the family financial stress model should separate indicators of SES (e.g., income and job status) to examine the effects each has on the model, rather than control for them. Therefore, this study examines the effects that multiple aspects of potential economic hardship may have on economic pressure (i.e., economic well-being), and ultimately relationship satisfaction. In line with the theoretical framework, income prior to marriage, having a job prior to marriage, and having debt before marriage were all employed as independent factors that could influence economic pressure (measured via economic well-being). This is also somewhat like what Dew (2007) did in separating the effects of a positive (assets) and a negative (debts) economic variable on economic pressure.

It is possible to measure financial characteristics at Time 0 (T0) because respondents were also asked questions in Time 1 (T1) that had verbiage along the lines of “prior to your marriage” or “last year” (see the variable measurement subsection below). Economic well-being

at T1 was modeled as having a negative effect on spousal warmth and a positive effect on spousal hostility (Conger et al., 1990). Therefore, latent constructs of warmth and conflict at Time 2 (T2) were constructed. Finally, the observed variable of relationship satisfaction at Time T3 was utilized to proxy marital quality, like Dew (2007). Figure 4.2 provides a pictorial description of the empirical model used for the current study.

Figure 4.2 Empirical model of full Actor-Partner Interdependence Structural Model. Blue lines represent husband's effects, red lines represent wife's effects.



Variable Measurement

Cohabited. Having cohabited served as the grouping variable so that differences could be examined between those who did and did not cohabit prior to marriage. Respondents were asked in T1, “Nowadays, many couples live together for a while before they get married. That is,

they cohabit. Did you and your current partner live together before your marriage?” Respondents could choose either “No” (coded as 0) or “Yes” (coded as 1). There were 12 instances in which couples did not match on their reporting of having cohabited (four occurrences in which wives marked cohabited while their husband did not; husbands = eight occurrences). To help assess final group placement for these 12 couples, a two-step cohabitation error dummy variable was coded for each gender. The first step involved taking the wives’ indication of having cohabited minus the husband’s indication of having cohabited. Scores for part one of the dummy variable ranged from -1 (the husband marked that they cohabited while the wife did not) to 1 (the wife marked that they cohabited while the husband did not). Step two created the final cohabitation error dummy variable to separate wives and husbands such that if the initial cohabitation error dummy variable = 1 then wife error on cohabitation = 1 and if the initial cohabitation error dummy variable = -1 then husband error on cohabitation = 1. Effectively, the outcome was that a cohabitation error dummy variable by gender was created.

Next, a series of t-tests were conducted to compare those that did not match (i.e., the cohabitation error dummy variable by gender) with those who did cohabit on each of the exogenous and endogenous variables in the model. This was done independently for both wives and husbands. For both wives and husbands, no significant differences existed. Therefore, couples where at least one partner reported having cohabited were labelled as such, resulting in 230 couples having cohabited prior to marriage ($n = 249$ non-cohabiting couples).

Income. Income was measured at T1, but was measured as last year’s income, prior to marriage. Therefore, it is considered T0 variable. Both spouses were separately asked the following, “We would like to know about your family income from all sources last year before taxes and other deductions. Please check the box for you and for your partner.” Respondents

could choose from “no income” (coded as 1) to “\$100,000 or more” (coded as 13) for both themselves and their partners. The publicly available data, however, had reduced the choices from “no income” (coded as 1) to “\$60,000 or more” (coded as 9). To stay consistent with the \$10,000 increments of income, respondents who chose “less than \$5,000” or “between \$5,000 and \$9,999” were combined so that there were eight income categories: (a) no income, (b) less than \$9,999, (c) \$10,000 to \$19,999, (d) \$20,000 to \$29,999, (e) \$30,000 to \$39,999, (f) \$40,000 to \$49,999, (g) \$50,000 to \$59,999, and (h) \$60,000 or more.

Job status. Respondents were asked in T1, “Some married couples start out with very little. Other marriages involve people who had a lot of advantages before the marriage. And still others begin with problems that need to be overcome. Please indicate whether you or your partner had [a job] prior to your marriage” with responses of “Yes” (coded as 1) or “No” (coded as 0). The current study kept the same coding mechanism as the publicly available data such that 0 = no job and 1 = had a job.

Debt. Respondents were asked in T1, “Some married couples start out with very little. Other marriages involve people who had a lot of advantages before the marriage. And still others begin with problems that need to be overcome. Please indicate whether you or your partner had [other significant debt] prior to your marriage” with responses of “Yes” (coded as 1) or “No” (coded as 0). The question prior to this asks if respondents have more than \$500 in credit card debt with responses of “Yes” coded as 1 and responses of “No” coded as 0. Those who responded to either of the two questions as “Yes” were coded as having some sort of debt (coded as 1). Only respondents answering “No” to both questions were coded as having no debt (coded as 0).

Economic well-being. Economic well-being at T1 was measured as an observed variable. Respondents were asked in T1, “In every marriage, there are some things that are very good and other things that could use some improvement. Right now, how satisfied would you say you are with each of the following aspects of your marriage?” Economic well-being was the sixth of eight items and respondents could choose from “Very Dissatisfied” (coded as 1) to “Very Satisfied” (coded as 5), with “Neutral” (coded as 3) as a middle option. Respondents who did not provide an answer were coded as missing.

Warmth. Warmth at T2 was measured using a latent variable consisting of three items asking participants how satisfied they were with their physical intimacy in the relationship, the love they experience from their partner, and their emotional intimacy within the relationship. Respondents could choose from 1 (very dissatisfied) to 5 (very satisfied). Respondents who did not provide an answer were coded as missing. Factor loadings for the wives who did cohabit were .83, .88, and .86, respectively ($\alpha = .82$), while factors loadings for the wives who did not cohabit were .72, .88, and .91, respectively ($\alpha = .79$). For the husbands who did cohabit, the factor loadings were .80, .84, and .85, respectively ($\alpha = .78$), while the factor loadings for the husbands who did not cohabit were .84, .88, and .89, respectively ($\alpha = .84$). See Table 4.4 for a full list of items included in this latent variable.

Conflict. Conflict at T2 was measured using a latent variable consisting of three items asking participants how true each of the following statements with respect to disagreements and conflict were to them at that point: (a) “I feel unloved,” (b) “I get sarcastic (I say things intended to hurt my partner),” and (c) “I get hostile (I act like my partner and I are enemies).” Respondents could choose from 1 (not true at all) to 3 (very true), with high scores indicating more conflict. Respondents who did not provide an answer were coded as missing. Factor

loadings for the wives who cohabited prior to marriage were .75, .82, and .87, respectively ($\alpha = .74$), while the factor loadings for the wives who did not cohabit were .66, .79, and .86, respectively ($\alpha = .66$). For the husbands who cohabited, the factor loadings were .59, .80, and .80, respectively ($\alpha = .60$), while the factor loadings for husbands who did not cohabit were .45, .85, and .88, respectively ($\alpha = .60$). According to George and Mallery (2003), when the Cronbach's alpha is greater than or equal to .60, the items are said to be questionable but not unacceptable. Therefore, since the latent construct of conflict does have at least one acceptable Cronbach's alpha (for wives who cohabited), it was decided to retain the factors for the current study. See Table 4.4 for a full list of items included in this latent variable.

Relationship satisfaction. Relationship satisfaction at T3 was measured as an observed variable given the responses to the following T3 question, "On the scale below, a 10 means the best your marriage could possibly be and a 1 means the worst your marriage could possibly be. Taking all things together, please indicate where your marriage stands at the present moment." Respondents who did not provide an answer were coded as missing.

Control variables. Age, race, education, whether minor children were present in the household, relationship duration, and being in a covenant marriage were the control variables. To control for age, the T1 version was used and was left as a continuous variable. Race came from T1 and was constructed as a dichotomous variable where 0 = Non-White and 1 = White. Education was a T2 variable and comprised of the following categories: (a) high school diploma/GED or less, (b) some college, and (c) college degree or higher. Having minor children present in the household at T1 was also controlled for where 0 = no minor children and 1 = minor children present. Relationship duration at T1 was also a control variable. For those who were together less than one year, the number of months given were divided by 12 to acquire a

fraction of one year in duration. Relationship duration was used instead of marital duration since all couples in T1 would have been married less than one year. Finally, as mentioned above, controlling for covenant marriage was added due to significant differences between respondents in a covenant marriage versus a standard marriage on a few key inclusion variables (cohabited prior to marriage for both husbands and wives, and wives' income).

Data Analysis Procedure

Initial data coding, descriptive, and bivariate statistical testing was completed in SAS 9.4. Analyses were conducted in a five-step process. In the first step, descriptive statistics of all variables in the current study were run to gain a better understanding of the variables and sample being tested (see "Sample Characteristics" above). The second step involved preliminary bivariate correlations to measure the relationship among the variables. Recall, the current study was interested in exploring both "actor" (e.g., husband predictors of husband outcomes) and "partner" (e.g., husband predictors of wife outcomes) effects. Kenny (1996) showed that married partners' responses to surveys can often be correlated and/or non-independent. Therefore, an actor-partner interdependence model (APIM), which is utilized for analysis of dyadic data when observations of one individual are dependent upon and correlate with the other individual (Kenny, 1996), was conducted. However, when running this type of model, it is important to measure the degree of non-independence in the variables (Kenny, Kashy, & Cook, 2006) and since our dyads are distinguishable (i.e., they are husband and wife), the third step to our analysis involved running a series of partial correlations of each endogenous variable (i.e., economic well-being, spousal warmth, spousal conflict, and relationship satisfaction) while controlling for the variable(s) that predicted them (e.g., controlled for each partners' economic well-being while testing the correlation of spousal warmth for each partner).

Using Mplus 8.3 (Muthén & Muthén, 2018), step four involved creating a measurement model to test the factor loadings and model fit of each latent variable for both wife and husband warmth and conflict, and by group. Measurement invariance was then tested across spousal reports of the latent variables with WLSMV in Mplus, which allows for the comparison of the constructs between husbands and wives (Vandenberg & Lance, 2000). Finally, in step five, we conducted the full structural APIM with grouping effects to assess the links between husband and wife reports of economic variables at T0 that influence economic well-being at T1, latent constructs measuring warmth and conflict at T2, and the endogenous variable of relationship satisfaction at T3 for both the actor and partner paths. Age, race, education, relationship duration, having minor children in the household, and whether the couple were in a covenant marriage or not were utilized as control variables. Initially, all parameters were freely estimated across both groups and then each path was constrained progressively. Chi-square difference tests were employed to compare the fit of the constrained versus unconstrained model to determine if constraining the path to be equal across groups significantly reduced model fit. If so, it would suggest that those paths significantly differed between groups (Cheung & Rensvold, 2002).

It should also be noted that a common fate model (CFM) was not chosen given the wording of the questions in the survey. Ledermann and Kenny (2012) explained that questions that use the language of “I,” “me,” or “my” can be referred to as individual-level variables whereas those questions with the phrasing of “we,” “our,” or “us” should be referred to as the same object and thus are dyad-level responses. None of the variables in the current study utilized language that would indicate dyad-level responses. Further, the research objective was to study the dyad members’ individual-level variable responses in relation to their relationship-referential

variable responses. Ledermann and Kenny (2012) recommend the use of an APIM rather than a CFM in such instances.

Rather than deleting cases with missing data, full information maximum likelihood (FIML) was utilized to estimate missing data. FIML is different from multiple imputation in that missing values are not imputed but rather FIML considers all available information (e.g., means, variances, covariances) in order to provide maximum likelihood estimates of the parameters (Acock, 2005). Parameter estimates obtained from FIML provide more reliable and less biased information than ad hoc procedures such as listwise or pairwise deletion (Acock, 2005).

Model fit testing. To test model fit statistics, Mplus 8.3 was used to analyze the unconstrained model chi-square test of model fit, standardized root mean square residual (SRMR), the root mean square error of approximation (RMSEA), Tucker Lewis index (TLI), and the comparative fit index (CFI). Values of less than .05 for SRMR and RMSEA indicate excellent model fit (Kenny, 2015; Kline, 2011), while values of .95 or greater for TLI and CFI are considered excellent for model fit.

Results

Descriptive Statistics

Almost half (46%) of the participants entered a covenant marriage. Most of the sample was white (wives (W): 80%; husbands (H): 82%) while the average age of the respondents was 26.6 ($SD = 6.26$) years for wives and 28.5 ($SD = 7.14$) years of age for husbands. Both wives and husbands had an average current relationship duration of 2.3 years (W: $SD = 2.12$; H: $SD = 2.09$). For husbands, approximately 47% cohabited prior to marriage while slightly over 46% of wives said they cohabited prior to marriage. Wives appeared to be more highly educated, as 46% held a college degree or higher while only 41% of husbands did. Nearly 42% of husbands had a

high school diploma, GED, or less than a high school education while 35% of wives held such an education. Nearly one-third of the sample (W: 33%; H: 32%) indicated that they had minor children present in the household at T1 (i.e., six months after marriage).

Just over half (57%) of the wives responded that they held debt prior to marriage, while 59% of husbands said they had some sort of debt they were taking into marriage. Nearly everyone in the sample held a job prior to being married (W: 88%; H: 94%). Wives appeared to have lower incomes than husbands as over half (59%) of the wives sampled had an income of less than \$20,000 while approximately 68% of the husbands had incomes over \$20,000. It should be noted that the income results do match the US Census Bureau's 2000 data on male and female incomes for the State of Louisiana. In 2000, the median income of female workers was \$22,069 and male workers was \$33,399 (U.S. Census Bureau, 2003).

Both, wives ($M = 3.72$, $SD = 1.05$, range 1-5) and husbands ($M = 3.58$, $SD = 1.00$) appeared to be somewhat satisfied with their economic well-being at T1. Both, wives and husbands also reported being satisfied with their physical intimacy (W: $M = 3.93$, $SD = 1.02$; H: $M = 3.97$, $SD = 0.98$; range = 1-5) and emotional intimacy (W: $M = 4.05$, $SD = 1.00$; H: $M = 4.12$, $SD = 0.89$; range 1-5) and were very satisfied with the love experienced from their partner (W: $M = 4.43$, $SD = 0.85$; H: $M = 4.46$, $SD = 0.78$; range = 1-5). In sum, the warmth experienced at T2 in their relationships were high for both wives and husbands (W: $M = 4.14$, $SD = 0.81$; H: $M = 4.19$, $SD = 0.76$; range = 1-5).

Conflict at T2 between partners appeared to be somewhat low. Both wives and husbands said it was somewhat true to not true at all that they felt unloved in their relationship (W: $M = 1.46$, $SD = 0.69$; H: $M = 1.27$, $SD = 0.54$; range = 1-3), when it came to them saying hurtful things to their partner (W: $M = 1.74$, $SD = 0.73$; H: $M = 1.63$, $SD = 0.68$; range = 1-3), and being

hostile towards their partner (W: $M = 1.42$, $SD = 0.65$; H: $M = 1.31$, $SD = 0.55$; range = 1-3).

Finally, relationship satisfaction at T3 appeared to be quite high for both wives ($M = 7.58$, $SD = 1.63$, range 1-10) and husbands ($M = 7.80$, $SD = 1.45$). Full descriptive statistics are provided in Table 4.1.

Table 4.1 Descriptive Statistics ($N = 479$)

Variables	Wives		Husbands		Range
	%/M	SD	%/M	SD	
Income					
No Income	7.1%		1.3%		
\$1 - \$9,999	27.9%		9.8%		
\$10,000 - \$19,999	23.6%		21.2%		
\$20,000 - \$29,999	20.6%		21.7%		
\$30,000 - \$39,999	12.6%		21.7%		
\$40,000 - \$49,999	4.1%		11.8%		
\$50,000 - \$59,999	2.0%		6.1%		
\$60,000 +	2.2%		6.5%		
Had Debt	56.8%		58.7%		
Had Job	87.8%		94.3%		
Economic Well-Being	3.72	1.05	3.58	1.00	1 – 5
Warmth	4.14	.81	4.19	.76	1 – 5
Physical Intimacy	3.93	1.02	3.97	.98	1 – 5
Love Experienced	4.43	0.85	4.46	.78	1 – 5
Emotional Intimacy	4.05	1.00	4.12	.89	1 – 5
Conflict	1.54	.55	1.40	.44	1 – 3
Felt Unloved	1.46	.69	1.27	.54	1 – 3
Say Hurtful Things	1.74	.73	1.63	.68	1 – 3
Became Hostile	1.42	.65	1.31	.55	1 – 3
Relationship Satisfaction	7.58	1.63	7.80	1.45	1 – 10
Cohabited Prior to Marriage	46.4%		47.3%		
Age	26.63	6.26	28.48	7.14	18 – 56
Relationship Duration	2.25	2.12	2.25	2.09	1 – 16
White	80.4%		81.8%		
Covenant Marriage	46.0%		46.0%		
Education:					
High School/GED or Less	35.0%		41.5%		
Some College	19.1%		17.8%		
College Degree or Higher	45.9%		40.8%		
Minor Children in Household	32.7%		32.4%		

Bivariate Correlations

Pearson correlation coefficients on all key variables of interest were then run for those who cohabited and for those who did not cohabit. As shown in Table 4.2, wives' and husbands' relationship satisfaction at T3 were positively correlated for both groups (cohabit: $r = .43, p < .001$; no cohabit: $r = .58, p < .001$), as were wives' and husbands' warmth at T2 towards each other (cohabit: $r = .56, p < .001$; no cohabit: $r = .63, p < .001$), wives' and husbands' conflict at T2 with each other (cohabit: $r = .31, p < .001$; no cohabit: $r = .50, p < .001$), and wives' and husbands' economic well-being at T1 (cohabit: $r = .43, p < .001$; no cohabit: $r = .45, p < .001$). Both wives' and husbands' warmth at T2 was positively correlated with wives' relationship satisfaction at T3 (cohabit: W: $r = .18, p < .05$, H: $r = .32, p < .001$; no cohabit: W: $r = .29, p < .001$, H: $r = .30, p < .01$) as well as husbands' relationship satisfaction at T3 (cohabit: W: $r = .38, p < .001$, H: $r = .43, p < .001$; no cohabit: W: $r = .28, p < .001$, H: $r = .47, p < .001$).

For those who cohabited, husbands' conflict at T2 was negatively correlated with wives' relationship satisfaction at T3 ($r = -.20, p < .05$) but wives' conflict at T2 was not correlated ($r = -.11, p > .05$). However, for those who did not cohabit both wives' and husbands' conflict at T2 was negatively correlated with wives' relationship satisfaction at T3 (W: $r = -.36, p < .001$, H: $r = -.19, p < .05$). Both wives' and husbands' conflict at T2 was negatively correlated with husbands' relationship satisfaction at T3 (cohabit: W: $r = -.22, p < .01$, H: $r = -.18, p < .05$; no cohabit: W: $r = -.35, p < .001$, H: $r = -.16, p < .05$). Wives' conflict at T2 was also negatively correlated with both wives' warmth at T2 (cohabit: $r = -.47, p < .001$; no cohabit: $r = -.37, p < .001$) and husbands' warmth at T2 (cohabit: $r = -.31, p < .001$; no cohabit: $r = -.26, p < .001$), while husbands' conflict at T2 was negatively associated with wives' warmth at T2 for those who did not cohabit ($r = -.33, p < .001$) and with husbands' warmth at T2 for those who did not

cohabit ($r = -.28, p < .001$). Husbands' conflict at T2 was not correlated with either wives' or husbands' warmth at T2 for the group who cohabited. For complete bivariate correlations, see Table 4.2.

Table 4.2 Preliminary Correlations among Variables of Interest for those who Cohabited (bolded, $n = 230$) and those who did not Cohabit (non-bold, $n = 249$).

Variables	1	2	3	4	5	6	7
7. Wife Relationship Satisfaction	—	.43***	.18*	.32***	-.11	-.20*	.14
8. Husband Relationship Satisfaction	.58***	—	.38***	.43***	-.22**	-.18*	.12
9. Wife Warmth	.29***	.28***	—	.56***	-.47***	-.07	.20**
10. Husband Warmth	.30**	.47***	.63***	—	-.31***	-.10	.07
11. Wife Conflict	-.36***	-.35***	-.37***	-.26***	—	.31***	-.14
12. Husband Conflict	-.19*	-.16*	-.33***	-.28***	.50***	—	-.04
13. Wife Economic Well-Being	.12	.22**	.17*	.20**	-.14*	-.27***	—
14. Husband Economic Well-Being	.07	.23***	.05	.21**	-.13	-.23***	.45***
15. Wife Income	.10	.13	-.14	-.09	.02	.08	.06
16. Husband Income	.09	.13	.00	.10	-.02	-.02	.24***
17. Wife Job	.06	-.04	-.06	-.10	-.01	.07	.01
18. Husband Job	.04	.04	-.08	.01	-.04	-.14*	-.01
19. Wife Debt	.08	.01	.06	-.02	-.11	.07	.07
20. Husband Debt	-.06	-.07	.06	.00	-.07	-.00	-.12

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Variables	8	9	10	11	12	13	14
1. Wife Relationship Satisfaction	.02	-.08	-.08	.02	.02	-.07	-.01
2. Husband Relationship Satisfaction	.14	-.03	-.05	-.15*	.02	.13	.03
3. Wife Warmth	.08	-.04	-.01	-.17*	-.05	.09	-.16*
4. Husband Warmth	.10	-.01	-.03	-.04	.08	.15*	-.17*
5. Wife Conflict	-.24**	-.10	-.01	-.01	-.08	-.10	.00
6. Husband Conflict	-.09	-.07	-.12	.04	-.03	.04	-.04
7. Wife Economic Well-Being	.43***	.06	.24***	.02	.14*	-.14*	-.07
8. Husband Economic Well-Being	—	.06	.11	.01	.03	-.16*	-.14*
9. Wife Income	.11	—	.30***	.21**	-.06	.29***	.23***

Variables	8	9	10	11	12	13	14
10. Husband Income	.18**	.40***	—	.08	.20**	.09	.18**
11. Wife Job	.04	.24***	.07	—	.22***	.12	.07
12. Husband Job	.02	.03	.26***	.08	—	-.05	-.07
13. Wife Debt	-.16*	.30***	.15*	.11	.00	—	.26***
14. Husband Debt	-.17**	.14*	.13*	.04	.09	.32***	—

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Partial Correlations

The third step to our analysis involved running a series of partial correlations of each endogenous variable (i.e., economic well-being at T1, spousal warmth at T2, spousal conflict at T2, and relationship satisfaction at T3), controlling for the variable(s) that predicted them (e.g., controlled for each partners' economic well-being while testing the correlation of spousal warmth for each partner). Controlling for the independent variables slightly reduced the correlation between each partner variable. Wives' and husbands' economic well-being at T1 were positively correlated with each other (cohabit: $r = .42, p < .001$; no cohabit: $r = .40, p < .001$), as was wives' and husband's warmth at T2 (cohabit: $r = .56, p < .001$; no cohabit: $r = .63, p < .001$), wives' and husbands' conflict at T2 (cohabit: $r = .31, p < .001$; no cohabit: $r = .48, p < .001$), and wives' and husbands relationship satisfaction at T3 (cohabit: $r = .32, p < .001$; no cohabit: $r = .54, p < .001$). When analyzing dyadic data in which observations of one individual are dependent upon and correlate with the other individual, an APIM is suggested (Kenny, 1996). Here, the correlations are significant and range from as low as .32 to as high as .63, indicating that the responses of each partner are not fully independent (i.e., they have interdependence). Therefore, the use of the APIM as the structural model in the current study is supported. See Table 4.3 for a summary of the partial correlations.

Table 4.3 Partial Correlations for Endogenous Variables, Controlling for Exogenous Variables of Each Path for those who Cohabited (bolded, $n = 230$) and those who did not Cohabit (non-bold, $n = 249$).

Variables	r_1	r_2	r_3	r_4
1. Economic Well-Being ^a	.40^{***} .42^{***}	—	—	—
2. Warmth ^b	—	.63^{***} .56^{***}	—	—
3. Conflict ^b	—	—	.48^{***} .31^{***}	—
4. Relationship Satisfaction ^c	—	—	—	.54^{***} .32^{***}

Note: Variables are both wife and husband given the APIM and nature of the partial correlation.

^aControlled for with income, debt, and job status. ^bControlled for with economic well-being of both wives and husbands. ^cControlled for by both warmth and conflict of both husbands and wives.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Measurement Model

Before conducting the full APIM, a measurement model was employed using Mplus 8.3 (Muthén & Muthén, 2018) to test the factor loadings and model fit of each latent variable for both wife and husband warmth and conflict at T2, and by group. All factor loadings were above .40. Acceptable model fit was achieved (Kenny, 2015; Kline, 2011; Little, 2013) with a CFI and TLI greater than .90 and a RMSEA less than .08. The model fit the data well ($\chi^2 [337] = 423.55$, $p < .001$; $CFI = .96$; $TLI = .95$; $RMSEA = .03$; $SRMR = .06$). The χ^2 value was likely significant due to having a relatively large sample size as values 400 often yield a significant chi-square (Kenny, 2015). An analysis was conducted to test for measurement invariance between spouses for each group on warmth and conflict. Constraining the factors to be equal worsened the model fit ($\chi^2_{diff} [15] = 38.97$, $p < .001$), so factor loadings were not constrained to be equal across gender. See Table 4.4 for all factor loadings.

Table 4.4 Standardized Factor Loadings for Latent Variables, by Gender, for those who Cohabited (bolded, $n = 230$) and those who did not Cohabit (non-bold, $n = 249$).

Item	Females	Males
Warmth		
Physical Intimacy	.72 .83	.84 .80
Love Experienced	.91 .88	.88 .84
Emotional Intimacy	.91 .86	.89 .85
Standardized Alpha	.79 .82	.84 .78
Conflict		
Felt Unloved	.66 .75	.45 .59
Sarcastic Towards Partner	.79 .82	.85 .80
Hostile Towards Partner	.86 .87	.88 .80
Standardized Alpha	.66 .74	.60 .60

Structural Model

A full structural APIM with grouping effects to assess the empirical model as depicted in Figure 4.2, while controlling for age, race, education, relationship duration, having minor children in the household, and whether the couple were in a covenant marriage or not, was conducted. The proposed model was employed first with all paths freely estimated across groups. This unconstrained model was a moderate fit to the data ($\chi^2 [625] = 767.368, p < .001$; $CFI = .93$; $TLI = .90$ $RMSEA = .04$; $SRMR = .07$) following the work of Kenny (2015) and Kline (2011). Since the current study was also interested in exploring whether cohabitation moderated the results of the APIM, chi-square difference tests were examined on all paths and revealed no significant differences between those who cohabited and did not cohabit. Therefore, the unconstrained model was retained. Estimates of the direct effects of each path for both wives and

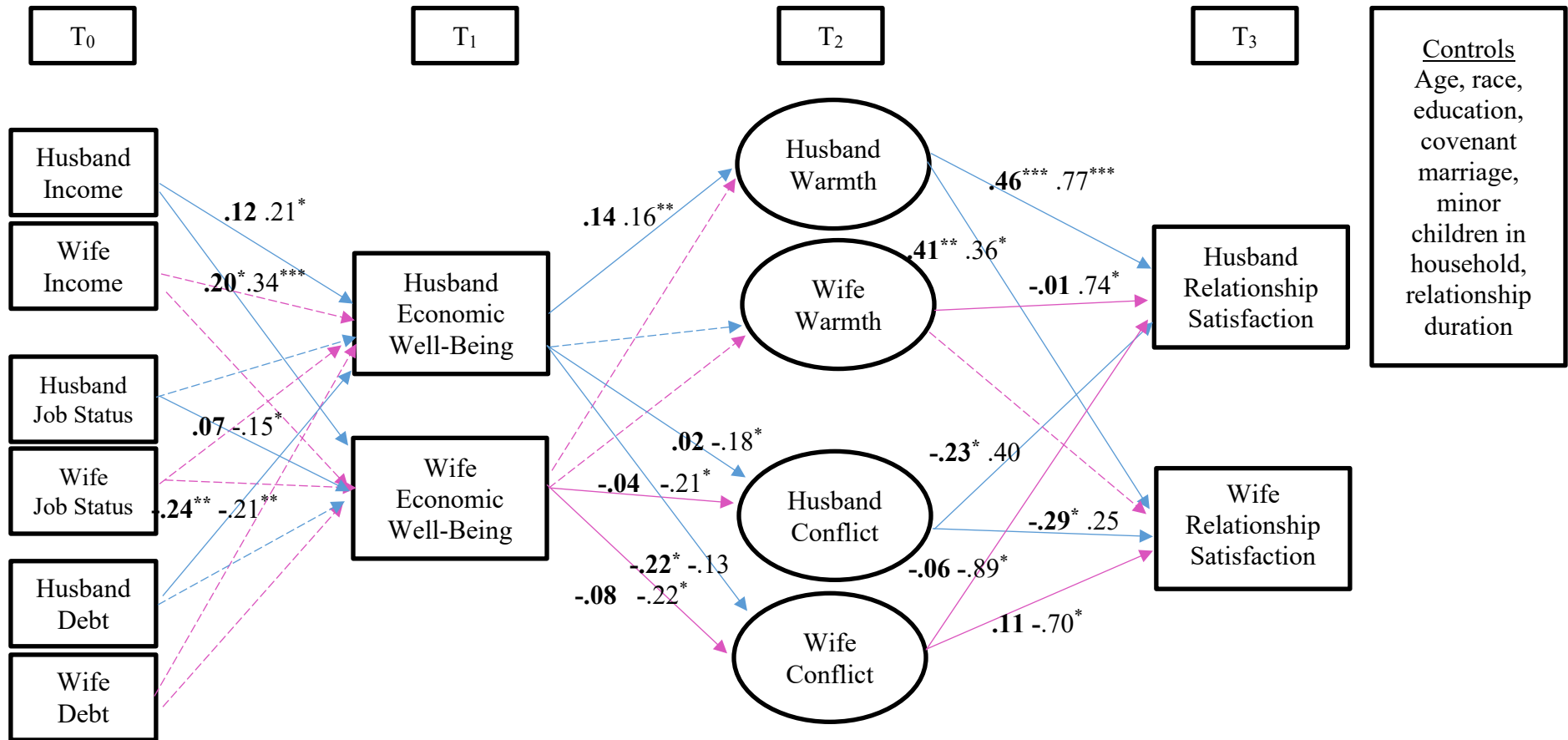
husbands by subgroup are provided in Table 4.5 and Figure 4.3 (coefficients for those who cohabited are in bold).

Results of the final moderated APIM indicate both actor and partner effects throughout the model. Focusing first on the effects of wives' economic well-being at T1 for both groups, results indicate that husbands' income brought into marriage is positively associated with wives' level of economic well-being at T1 for both those who did not cohabit prior to marriage ($b = .21$, $p < .001$, $\beta = .34$) and those who did ($b = .12$, $p < .05$, $\beta = .20$). These effects were not significantly different between groups. For those who did not cohabit, husbands with a job prior to marriage was shown to have a negative effect on wives' economic well-being at T1 ($b = -.61$, $p < .05$, $\beta = -.15$), but this puzzling effect was not shown for those who cohabited. Turning to the effects of husbands' economic well-being at T1 for both groups, results indicated that husbands' level of debt brought into marriage is negatively associated with husband's own level of economic well-being at T1 for both those who did not cohabit prior to marriage ($b = -.42$, $p < .01$, $\beta = -.21$) and those who did ($b = -.48$, $p < .01$, $\beta = -.24$). Again, these results were not significantly different between the two groups. For those who did not cohabit, husbands' income prior to marriage was shown to have a positive effect on their economic well-being at T1 ($b = .12$, $p < .05$, $\beta = .21$), but this effect was not shown for those who cohabited. Hypotheses 1 (income) and 3 (debt) were partially supported, but hypothesis 2 was not supported. Turning now to the relationship between economic well-being at T1 and warmth at T2, the only significant relationship was husbands' level of economic well-being was positively related to their own experiences of warmth in the relationship ($b = .16$, $p < .01$, $\beta = .23$) for those who did not cohabit prior to marriage. However, the effects between economic well-being at T1 and conflict at T2 were more prevalent. Wives' levels of economic well-being at T1 were negatively

associated with their own feelings of conflict at T2 in the relationship for those who did not cohabit ($b = -.08, p < .05, \beta = -.22$), but not for those who cohabited. However, for those who cohabited, there was a partner effect. That is, husbands' levels of economic well-being at T1 were negatively associated with wives' levels of conflict at T2 in the relationship for those who did cohabit ($b = -.11, p < .05, \beta = -.22$), but not for those who did not cohabit. With respect to the effects on husbands' levels of conflict at T2, both wives' levels of economic well-being at T1 ($b = -.03, p < .05, \beta = -.21$) and their (i.e., husbands') own levels of economic well-being at T1 ($b = -.03, p < .05, \beta = -.18$) were negatively related. However, this effect was only found in those who did not cohabit. Hypothesis 4 (i.e., effect of economic well-being at T1 on warmth at T2) was partially supported, but hypothesis 5 (i.e., effect of economic well-being at T1 on conflict at T2) was fully supported.

Finally, moving on to the effects of warmth at T2 and conflict at T2 on relationship satisfaction at T3. Results indicated that for both groups, husband's level of warmth at T2 had a positive relationship with wives' level of relationship satisfaction at T3 (cohabit: $b = 1.12, p < .01, \beta = .41$; no cohabit: $b = .80, p < .05, \beta = .36$) and on their own level of relationship satisfaction at T3 (cohabit: $b = 1.11, p < .001, \beta = .46$; no cohabit: $b = 1.70, p < .001, \beta = .77$). As has been the case, no differences in the effects between groups in either case existed. Wives' level of warmth at T2 was only associated with husbands' relationship satisfaction at T3 for those who did not cohabit ($b = 1.87, p < .05, \beta = .74$).

Figure 4.3 Actor Partner Interdependence Model (APIM) of the Effects on Long-Term Relationship Satisfaction across the First five year of Marriage for Cohabiting (bolded, $n = 230$) and Non-Cohabiting (non-bold, $n = 249$) Couples.



Note: Standardized estimates. For clarity, the paths from the control variables are not shown, but were included in the analysis. Blue lines represent husband effects, red lines represent wife effects. Solid lines = significant paths; dashed lines = non-significant paths. Model fit indices: $\chi^2 [625] = 767.368$, $p < .001$; $CFI = .93$; $TLI = .90$; $RMSEA = .04$ (confidence interval [.03, .04]); $SRMR = .07$. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Table 4.5 Unstandardized, Standardized, and Significance Levels for APIM in Figure 4.3 for

Cohabiting (bolded, $n = 230$) and Non-Cohabiting (non-bold, $n = 249$) Couples. (Standard Errors in Parentheses)

<i>Parameter Estimate</i>	<i>Did not Cohabit</i>		<i>Cohabited</i>	
	<i>B (SE B)</i>	<i>β (SE β)</i>	<i>B (SE B)</i>	<i>β (SE β)</i>
Structural Model				
Wife Income → Wife Econ WB ^a	-.02 (.06)	-.02 (.09)	.02 (.06)	.03 (.09)
Wife Debt → Wife Econ WB	-.07 (.17)	-.04 (.08)	-.23 (.18)	-.11 (.08)
Wife Job → Wife Econ WB	.02 (.22)	.01 (.07)	-.18 (.25)	-.06 (.08)
Husband Income → Wife Econ WB	.21 (.05)	.34 (.08)***	.12 (.05)	.20 (.08)*
Husband Debt → Wife Econ WB	-.21 (.16)	-.10 (.07)	-.17 (.17)	-.08 (.08)
Husband Job → Wife Econ WB	-.61 (.30)	-.15 (.08)*	.35 (.39)	.07 (.08)
Wife Income → Husband Econ WB	.05 (.06)	.09 (.09)	.05 (.06)	.07 (.09)
Wife Debt → Husband Econ WB	-.12 (.15)	-.06 (.08)	-.30 (.16)	-.15 (.08)
Wife Job → Husband Econ WB	.00 (.20)	.00 (.07)	-.19 (.24)	-.06 (.08)
Husband Income → Husband Econ WB	.12 (.05)	.21 (.08)*	.06 (.05)	.12 (.08)
Husband Debt → Husband Econ WB	-.42 (.15)	-.21 (.07)**	-.48 (.16)	-.24 (.08)**
Husband Job → Husband Econ WB	.02 (.27)	.01 (.08)	-.40 (.37)	-.09 (.08)
Wife Econ WB → Wife Warmth	.08 (.05)	.14 (.09)	.08 (.07)	.11 (.09)
Husband Econ WB → Wife Warmth	.03 (.06)	.04 (.10)	.01 (.07)	.02 (.09)
Wife Econ WB → Husband Warmth	.07 (.05)	.11 (.08)	-.04 (.06)	-.07 (.10)
Husband Econ WB → Husband Warmth	.16 (.06)	.23 (.08)**	.09 (.06)	.14 (.09)
Wife Econ WB → Wife Conflict	-.08 (.04)	-.22 (.10)*	-.04 (.05)	-.08 (.10)
Husband Econ WB → Wife Conflict	-.05 (.04)	-.13 (.10)	-.11 (.05)	-.22 (.10)*
Wife Econ WB → Husband Conflict	-.03 (.01)	-.21 (.09)*	.00 (.01)	-.04 (.12)
Husband Econ WB → Husband Conflict	-.03 (.02)	-.18 (.09)*	.00 (.01)	.02 (.11)
Wife Warmth → Wife RS ^b	-.88 (.72)	-.35 (.28)	-.13 (.36)	-.06 (.16)
Husband Warmth → Wife RS	.80 (.37)	.36 (.16)*	1.12 (.43)	.41 (.15)*
Wife Conflict → Wife RS	-2.80 (1.24)	-.70 (.28)*	.36 (.56)	.11 (.17)
Husband Conflict → Wife RS	2.68 (2.19)	.25 (.19)	-3.94 (2.00)	-.29 (.13)*
Wife Warmth → Husband RS	1.87 (.95)	.74 (.36)*	-.02 (.30)	-.01 (.15)
Husband Warmth → Husband RS	1.70 (.47)	.77 (.20)***	1.11 (.36)	.46 (.14)***
Wife Conflict → Husband RS	-3.56 (1.58)	-.89 (.35)*	-.17 (.46)	-.06 (.16)
Husband Conflict → Husband RS	4.35 (2.78)	.40 (.24)	-2.79 (1.56)	-.23 (.11)*
Significant Controls				
Wife Age → Wife Warmth	.00 (.01)	.04 (.09)	.02 (.01)	.18 (.07)**
Wife Age → Wife Conflict	-.00 (.01)	-.02 (.14)	-.04 (.01)	-.48 (.11)***
White Husband → Husband Warmth	.02 (.19)	.12 (.10)	.45 (.17)	.26 (.09)**
Husband Some College → Wife Econ WB	.10 (.23)	.09 (.09)	-.56 (.23)	-.21 (.09)*
Covenant Marriage → Husband Econ WB	-.24 (.15)	-.11 (.07)	.34 (.17)	.16 (.08)*

Note: $\chi^2(625) = 767.39, p < .001$; TLI = .90; CFI = .93; RMSEA = .04; SRMR = .07;

^aEcon WB = Economic Well-Being; ^bRS = Relationship Satisfaction; B = unstandardized estimates; β = standardized estimates. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Wives' level of conflict at T2 was negatively related to their own level of relationship satisfaction at T3 ($b = -2.80, p < .05, \beta = -.70$) as well as husbands' level of relationship satisfaction at T3 ($b = -3.56, p < .05, \beta = -.89$). These effects were found for those who did not cohabit only. However, for those who cohabited, husbands' level of conflict at T2 was negatively associated with wives' relationship satisfaction at T3 ($b = -3.94, p < .05, \beta = -.29$) and their (i.e., husbands') own level of relationship satisfaction at T3 ($b = -2.79, p < .05, \beta = -.23$). These associations were not found in the group who did not cohabit. Hypothesis 6 (i.e., effect of warmth at T2 on relationship satisfaction at T3) was partially supported, but Hypothesis 7 (i.e., effect of conflict at T2 on relationship satisfaction at T3) was fully supported.

Five paths for controls were significant, but only for the group who cohabited. Wives' age was positively associated with their own levels of warmth at T2 and negatively associated with their own levels of conflict at T2. When compared to non-white husbands, White husbands had a positive relationship with their own levels of warmth at T2 within the cohabiting group. Husbands that had some college as compared to husbands with a college degree were negatively related to wives' economic well-being at T1 within the group. Finally, covenant marriage was positively related to husbands' level of economic well-being at T1 for those who cohabited. No controls were significant for the group who did not cohabit. Overall, the model explained 37% (58%) of the variability of the wives' (husbands') resulting relationship satisfaction at T3 for those who did not cohabit and 23% (31%) for those who did cohabit.

Discussion

While unfortunate, the reality of marital relationships is that within the first five years of marriage, approximately 20% (i.e., one in five) are said to end in a divorce (Copen et al., 2012). To add, the last half century has seen a dramatic uptick in the rates of pre-marital cohabitation

(Kuperberg, 2014; Stanley et al., 2004), creating a potential relationship problem given that much of the prior research on cohabitation has shown it to have a negative effect on relationship satisfaction (Cohan & Kleinbaum, 2002; Rhoades et al., 2009; Stanley et al., 2004). Even more concerning is that prior literature suggests that cohabiting with a significant other prior to marriage would likely result in a dissolution of the relationship (Copen, Daniels, & Mosher, 2013; Copen et al., 2012; Kamp Dush et al., 2003; Kuperberg, 2014), and show that the probability of first marriages that are expected to end in divorce is higher for those who cohabited versus those who did not cohabit (Copen et al., 2012).

The revised family financial stress model adapted by Dew (2007) via the work of Conger et al. (1990) allows for the study of the impact that both positive and negative financial events have on long-term relationship satisfaction among couples. More specifically, the theoretical concept allows for researchers to model how negative (and/or positive) financial events impact economic well-being, which is said to influence warmth and conflict in partners, and ultimately relationship satisfaction. Through that lens, the purpose of the study is to add to the body of literature on how economic hardships such as low income, debt, and not having a job prior to marriage influence the respondent's and their partner's economic pressure (as measured through economic well-being). Furthermore, this study aimed to identify how respondents and their partner's economic well-being can influence both their own warmth and conflict. Ultimately, this study tested how these factors impact their own relationship satisfaction and the marital perceptions of their partner. To tease out the effect of cohabitation, a multiple group comparison on those who cohabited prior to marriage against those who did not was employed.

Unlike in chapter 3, the current study did show that cohabiting prior to marriage had some different effects than those who did not cohabit, when considering how one partner's

response influence their own later responses but also that of their partner's. However, when both groups had paths that were significant, cross group equality constraints indicated no difference in the effects of the paths between the groups. This implies there may be less of a difference among those who cohabit and those who do not than earlier research on cohabitation may lead us to believe. Turning to the current study's results, husband's income was positively related to both partner's level of economic well-being, which correlates to prior research that has shown higher levels of income reduce the economic pressure experienced (or perceived) by couples (Brines & Joyner, 1999; Lempers & Clark-Lempers, 1997; Neppl et al, 2016). Wives income had no effect in the current study, which may make sense given that they appeared to be the lower earner, and research has shown income to have a different effect for husbands and wives (Bertrand et al., 2015; Britt & Huston, 2012; Deutsch et al., 2003; Killewald, 2016; Rogers, 2004; Teachman, 2010) and a stronger effect for husbands (Gibson-Davis, 2009).

It was expected that job status would be positively related to economic well-being, and it was included in the model given Teachman (2010) explained that the inclusion of labor force participation on economic pressure or well-being is important within an actor-partner framework when utilizing the family stress model in any way. Further, Conger et al., (2010) provided recommendations that job status be included when utilizing some version of the family stress model. Yet, results from the current study indicated a minimal effect of job status on economic well-being, showing that husbands entering the marriage with a job negatively influenced wives' economic well-being. While the result is seemingly odd, Teachman (2010) showed that income and job status are correlated yet distinct constructs and could result in confounding results. As one might expect, and similar to prior research (Conger et al., 1993; Dew, 2007, 2008, Skogrand et al., 2011), the current study showed that debt was negatively related with economic well-

being. However, the current study found this effect only in husbands who entered marriage and the effect was on their own economic well-being the next year. Unfortunately, it is not known exactly what kinds of debt and how much debt either partner entered marriage with, so it is difficult to understand why wives' debt had no effect. A plausible answer could simply be that they had lower levels of debt relative to their husband.

As expected, economic well-being had a negative effect for both husbands and wives on their own levels of conflict and that of their partner, matching prior literature showing a negative relationship between some sort of conflict and relationship satisfaction (Archuleta et al., 2011; Britt et al., 2017; Dew & Dakin, 2011; Gudmunson et al., 2007; Hill et al., 2017; Mendiola et al., 2017; Papp et al., 2009; Rick et al., 2011). However, higher levels of economic well-being (i.e., lower levels of economic pressure) was only positively related to husbands' own levels of warmth – there was no actor effect. Wives' economic well-being had no effect on either partner's levels of warmth. According to the revised family stress model for finances, when a strenuous economic event takes place within the household, we may likely take it out on our loved ones in the form of relationship conflict. Finally, and as expected, husband warmth was positively related to relationship satisfaction for both wives and husbands for both groups, but the effects were not significantly different, indicating minimal cohabitation effects for warmth. Wife warmth was positively related to relationship satisfaction for both husbands and for only those who did not cohabit. Conflict, as expected, was also negatively related to relationship satisfaction for both partners. Interestingly, the effect of husbands' conflict was only significant for those who cohabited while the effect of wives' conflict was only significant for those who did not cohabit, indicating a potential cohabitation effect for both genders. That is, perhaps wives who cohabited already understand that conflict is part of a relationship and so when they experienced

it post marriage, it did not matter as much to their relationship satisfaction as compared to the wives who did not cohabit prior to marriage. For husbands, it might be that cohabiting prior to marriage may have led to more conflict upon marrying, reducing their level or relationship satisfaction as compared to husbands that directly married.

Implications

The results of the study mostly supported the framework in which economic occurrences influence economic well-being, which can influence the level of warmth or conflict between spouses and how that all impacts overall relationship satisfaction. That is, the framework is particularly useful for young adults who are entering or have recently entered a marital union, and which will have economic stressors in their life. With the new commitment to a loved one, it will be important to consider how income and debt brought into the marriage influence not only the person's but their partner's economic well-being and how that can affect the way they interact with each other in terms of positive (warmth) or negative (conflict) communication with each other, and ultimately the effect these all have on relationship satisfaction and trying to stay in the relationship beyond five years.

Given the increase in young adults as the target of financial planning practices across the country, there is a large likelihood that financial planners will work with young couples that have recently married to help them get their finances in order. The current study offers support that the traditional views of marriage may not be enough in working with young couples that came of age in the last two decades and that cohabiting prior to marriage may not have a detrimental effect to the long-term relationship as originally thought. Further, it appears that what really matters to both partners' perceived levels of well-being are the husband's income prior to marriage as well as the husband's level of debt. Providing strategies to the couple to help them potentially

increase income and a debt payoff strategy may prove helpful to help ease their economic burdens and increase their levels of economic well-being. Doing so could help reduce conflict within the relationship.

The results showed strong negative effects between economic well-being and conflict and then ultimately a negative relationship between conflict and relationship satisfaction. Therefore, financial practitioners may add value by utilizing the Consumer Financial Protections Bureau's (CFPB) financial well-being scale (CFPB, 2019) since it's only ten questions. Practitioners could simply ask the clients these questions in the data gathering and/or client goal setting session(s) so that clients are not completing the questionnaire themselves, rather the questionnaire is administered by a practitioner. Thus, allowing the practitioner the opportunity to follow up client responses with open-ended questions. This may help clients better establish rapport with the practitioner (Archuleta, Grable, & Burr, 2015). Should clients be experiencing low levels of economic well-being and a deeper understanding of the conflict in the relationship is revealed to the practitioner, it is vital to know that such conflict is related to lower levels of relationship satisfaction, and ultimately increased rates of divorce (Dew, 2007, 2011). Financial professionals should consider referrals to a Certified Financial Therapist or a Licensed Marriage and Family Therapist to help appropriately navigate those crucial relationship conversations, and to help clients get unstuck, when the skillset needed moves beyond their scope of practice. Doing so can allow the work that the financial practitioner and clients are doing together to move forward. Ignoring the relationship dynamics runs the risk of the couple in high conflict experiencing a divorce. Clearly, there are both actor and partner effects present. Due to that, financial practitioners should consider conversing with both partners when working with a couple because some things may resonate with one partner and not the other and vice-versa.

Limitations and Recommendations

There are two major limitations of this study. The first major limitation is that the data was obtained through a dataset that is not nationally representative since it was data obtained only in the state of Louisiana. Thus, results are not representative for the United States population. The second key limitation is the time period of the data. The data were obtained between 1998 and 2004, so that data are 15-20 years old, which could mean that the ideas expressed by the respondents may not be consistent with the socially accepted norms of today's views. For example, cohabitation in the last twenty years, as stated in the introduction, has seen a significant increase, part of which is likely due to it becoming a more culturally accepted norm than twenty-plus years ago. However, it should be noted that approximately 50% of the respondents in this sample cohabited prior to marriage, which is closer to the more recent (48%) numbers Copen et al. (2013) showed, as compared to their reports for 1995 (33% cohabited prior to marriage) and 2002 (43% cohabited). Therefore, future studies that want to examine the effect of cohabitation should utilize a nationally representative dataset with data that is newer to fully capture the socially accepted norms of today.

One other limitation of the study deals with the fact that asset information was not available, so it is not possible to compare assets to debts brought into the relationship with the given dataset, which would be a means to compare this sample to that of other research using a similar framework (e.g., Dew, 2007). Ideally, future studies examining relationship satisfaction utilize datasets with more complete financial information that is in a continuous rather than categorical form. Specifically, that would have been helpful in the current study to analyze how various incomes and debts, however drastic, impact levels of economic well-being differently. What is more, it is not possible to tell how income has changed over the course of the time

analyzed. Changes in each partner's income, or the household, could have drastic results on the association between income and relationship satisfaction. Further, the debt variable only asked couples if they had more than \$500 in credit card debt and if they had other significant debt, which is subjective and does not allow us to get at what type of debt the couple held. Another limitation to the study is endogeneity, which would require the question of whether the hypothesized relationships between key predictors and relationships satisfaction the other way around? That is, do partners have higher levels of relationship satisfaction because they experience warmth or are partners warm with each other because they have higher levels of relationship satisfaction? The same thing can be said for all paths in the model. The one caveat is that the model does use different time points that build upon each other, helping suggest causality within the study. Finally, Cronbach's alpha for the conflict latent variable is considered questionable for husbands of either group and for wives who did not cohabit, indicating that the reliability of the latent variable may be low. Future research with the same data should attempt to measure conflict in a different way (see: Vennum & Johnson, 2014).

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Chapter 5 - Conclusion

The overarching purpose of this dissertation was to investigate whether a cohabitation effect still exists given new data, and if so, the effects that cohabitation and finances have on young adult couples' relationships. This information is vital for supporting young adults as they build their careers, start families, and purchase homes for the first time. It is timely in the sense that young adults are quickly becoming the target of financial planning practices across the country, especially with the rise of the XY Planning Network, and due to the transition of wealth that is occurring. It is an important research endeavor as pre-marital cohabitation is significantly on the rise. Cohabitation provides adults with the benefit to live in a committed relationship, pool resources to establish greater economies of scale, and possibly build a financial future together (Lundberg & Pollak, 2014). Yet, prior research has continued to show cohabitation to have disastrous financial and relational consequences (Copen, Daniels, & Mosher, 2013; Copen, Daniels, Vespa, & Mosher, 2012; Kamp Dush, Cohan & Amato, 2003; Kuperberg, 2014).

The purpose of the current dissertation was accomplished through three separate essays, investigating the relationship between financial characteristics and relational outcomes as well as how cohabitation influenced the results. The first essay utilized data from the National Longitudinal Survey of Youth 1997 (NLSY97), a large longitudinal dataset. The second and third essays utilized the Marriage Matters Panel Survey of Newlywed Couples, Louisiana (Marriage Matters) dataset, a dyadic (i.e., both partners) dataset. The first two essays utilized social exchange theory as the primary framework about how individuals weight benefits and costs and compare their situation to alternatives before deciding on outcomes. The third essay utilized an adapted version from Dew (2007) of Conger et al.'s (1990) family stress model. This

lens, coupled with dyadic data, allowed for the use of an actor-partner model to test how the effects of one spouse not only influence their own later scores, but those of their partner as well.

Essay One

Essay one investigated the group differences in relationship quality, financial characteristics, and whether individuals chose to stay in their marriage among those that had cohabited prior to marriage and those who did not. Further, it reviewed the moderating effects gender might have on the paths to and from the financial characteristics. Essay one used a more recent dataset, the NLSY97, to help provide a foundation as to how young adults' income, assets, and debt all factor into their later relationship quality and their choice to stay with their current spouse, as per the social exchange theory framework. Results provided minimal support of the hypotheses. The most interesting and likely most impactful results show that relationship quality at Time 1 (age 24) was negatively associated with marital dissolution by Time 3 (age 26) for those who cohabited. For those who did not cohabit prior to marriage, relationship quality at Time 1 was positively related to relationship quality at Time 3. Taken together, it is possible that when individuals perceive that their marriage is high quality early on, they tend to remain in a high-quality relationship, supporting research by Lorber, Erlanger, Heyman, and O'Leary (2015). Financial debt at Time 2 (age 25) was also negatively related to relationship quality at Time 3. Interestingly, there was no support for the mediating effects of financial assets, debt, and income at Time 2 between relationship quality at Time 1 and relationship quality at Time 3, or for relationship quality at Time 1 and marital dissolution at Time 3. Further, gender did not moderate the relationship between relationship quality at Time 1 and assets, debt, or income at Time 2. Neither did gender moderate the relationship between assets, debt, or income at Time 2

and relationship quality at Time 3. Results indicate that cohabitation may not influence the relationship among financial and relational aspects as historically believed to be the case.

Essay Two

Prior research has shown that the initial status of relationship satisfaction might be a determining factor in the rate of change in relationship satisfaction over time (Brown, Manning, & Payne, 2017; Manning & Cohen, 2012). Thus, essay two examined the rate of change in relationship satisfaction in a group of recently married couples that had and had not cohabited. The second part of the study studied the impact that the covariates of income, debt, economic well-being, and cohabitation have on the rate of change in relationship satisfaction. Part three of essay two employed a multiple group comparison latent growth curve analysis to explore differences that income, debt, and economic well-being have on the initial levels of, and the rate of change in, relationship satisfaction over time for those who did versus did not cohabit prior to marriage.

Results indicated that wives' initial levels of relationship satisfaction were higher than that of husbands but wives' rate of change in relationship satisfaction declined more quickly than that of husbands. Results of the covariate latent growth model (part 2) indicated that the level of economic well-being experienced by both wives and husbands positively related to their initial levels of relationship satisfaction. Only wives' level of economic well-being was significantly associated with their rate of change in relationship satisfaction. Part three results showed group differences between couples who cohabited prior to their marriage and those who did not. For those who cohabited, the level of economic well-being experienced mattered only for wives' starting levels of relationship satisfaction. Another significant group difference was found

between economic well-being and the intercept of relationship satisfaction for husbands. Income and debt had no effect on initial levels of, and rates of change in, relationship satisfaction.

Essay Three

The purpose of essay three was to add to the body of literature on how economic hardships such as low income, debt, and not having a job prior to marriage influence the respondent's economic pressure (as measured through economic well-being) and their partner's economic pressure. It further examined the relationship between economic pressure and the level of warmth or conflict experienced by themselves, as well as their partner. Essay three then examined how warmth and conflict influenced their own relationship satisfaction and the marital perceptions of their partner. Consistent with essays one and two, to tease out the effect of cohabitation, essay three employed a multiple group comparison on those who cohabited prior to marriage against those who did not. The results of the study mostly supported the adapted version of Conger et al.'s (1990) family stress model as adapted by Dew (2007). Economic occurrences (i.e., income, having a job, holding debt) influenced economic well-being, which was related to the level of warmth or conflict between spouses. Warmth and conflict both predicted relationship satisfaction at Time 3. Therefore, the framework is particularly useful for young adults who are entering or have recently entered a marital union, and which will have economic stressors in their life.

Implications

Results of this dissertation reveal several relevant implications for financial professionals, mental health professionals, and researchers. First, results of each essay do not tend to support the prior literature suggesting that cohabitation has a negative effect on finances and relationship outcomes (Cohan & Kleinbaum, 2002; Copen, Daniels, & Mosher, 2013; Copen, Daniels, Vespa,

& Mosher, 2012; Kamp Dush et al., 2003; Kuperberg, 2014; Stanley, Whitton, & Markman, 2004). It does, however, support more recent research (Brown et al., 2017; Manning & Cohen, 2012), indicating cohabiting prior to marriage is not necessarily a detrimental undertaking. This is an important non-significant finding because nearly two thirds of marriages are reported to have begun in cohabitation (Kuperburg, 2014; Manning, 2013). What this means is that the times are changing. Cohabiting prior to marriage is more frequent as of the turn of the century and appears to, at least with this data, have minimal negative financial and relational effects. Unlike the essays one and two, essay three did show that cohabiting prior to marriage had some different effects than those who did not cohabit. However, when both groups had paths that were significant, cross group equality constraints indicated no significant difference in the effects of the paths between the groups. This finding implies there may be less of a difference among those who cohabit and those who do not than earlier research on cohabitation may lead us to believe, at least in the early years (first five years) of marriage. The cohabitation effect may not be significant because of the honeymoon period effect, which is typically thought of as approximately the first five years of marriage, a time in which relationship quality is quite high before declining (Lorber et al., 2015). Given the varying results among cohabitation studies, researchers should continue to look at whether there is a cohabitation effect with newer data, as evidence remains that there could still be negative financial implications of deciding to cohabit (Britt-Lutter, Dorius, & Lawson, 2018)

A second major implication from these studies is that financial characteristics were not a profound driving force in relationship outcomes among the young group of married adults. Specifically, we saw that in essay one, debt did have a negative impact on relationship quality the next year for those who cohabited, but that was it. Financial assets and income had no effect

on relationship outcomes the next year. Further, financial assets, income, and debt at age 25 did not mediate the relationship between earlier and later relationship quality. This phenomenon held true for essay two. In that study, both income and debt had no effect on initial levels of relationship satisfaction nor on the rates of change in relationship satisfaction over the first five years of marriage, for both husbands and wives. Essay three, though, did show that when reviewing the effects of each partner's characteristics on not only their own outcomes, but that of their spouse, financial characteristics did start to matter. It was found that husbands' income had positive effects on both the wife and the husband's perceived economic well-being, and husband's debt had negative effects on their own levels of well-being. It is interesting that wives' income and debts brought into the relationship had no effect, although this could be due to the timing of the data and the first wave occurring in the very late 1990s. A look at the income distribution for the sample in essay three shows that the wives in the study had much lower incomes. Nearly 60% of the wives had incomes of less than \$20,000 while approximately 30% of the husbands did.

The rise of the XY Planning network has helped provided young adults with holistic financial planning. The results of the three essays appear to indicate that financial assets, income, and debt may not drive what really matters to the young couple relationship. It is paramount that financial professionals working with young adults spend more time focusing on understanding the clients more deeply rather than focusing on their financial characteristics. Additionally, given the actor-partner effects present in essay three, it is important that financial planners begin to take a systemic approach to their work with financial planning clients. That is, ensure that both spouses are present and active in the meetings given that what effects one spouse may in turn effect the other spouse.

While financial assets, debt, and income may not seem to matter in the short run for relationship outcomes of recently married young adults, economic well-being did matter. This was not part of essay one, but essays two and three reveal that economic well-being is quite significant for relationship outcomes. Essay two revealed that increased economic well-being was predictive of higher initial relationship satisfaction levels for both wives and husbands. In essay three, results showed a strong negative relationship among economic well-being and conflict, and then ultimately a negative relationship between conflict and relationship satisfaction. Taken together, financial and mental health professionals working with couples may want to measure economic well-being levels at the onset of the relationship, and then follow-up periodically. As mentioned in the implications sections of chapter four, the Consumer Financial Protections Bureau (CFPB) has created a financial well-being scale (CFPB, 2019). It is only 10 questions and would be an easy assessment to add to the other client intake surveys. A potentially better alternative would be to ask these questions in the data gathering and/or client goal setting session(s). Doing so allows the practitioner the opportunity to follow up client responses with open-ended questions, which may help clients better establish rapport with the practitioner (Archuleta, Grable, & Burr, 2015).

The fourth implication of the studies was that the driving force for later relationship outcomes appeared to be earlier relationship characteristics. Essay one revealed that the relationship outcomes of relationship quality and marital dissolution were influenced by relationship quality two years earlier. Said another way, respondents with high initial relationship quality scores had positive relationship outcomes, regardless if the client had cohabited or not prior to marrying their partner. Essay two revealed that the relationship satisfaction experienced by both wives and husbands started very high and very slowly declined over the first five years

of marriage. Essay three showed that conflict was indeed negatively associated with relationship satisfaction about 18 months later, and that for the most part, warmth was positively related to relationship satisfaction about 18 months later. Wives' warmth had no effect on their levels of relationship satisfaction but did positively influence husbands' relationship satisfaction 18 months later. Husbands' warmth was positively related to both wives' and husband's level of later relationship satisfaction. In summary, results of the three studies indicate the initial relational characteristics do have a strong and important role to play with respect to later relationship outcomes.

It is vital that the helping professional assess both spouse's initial levels of relationship quality. Given how well the three questions of closeness, caring, and commitment towards their partner held together for essay one, it is recommended that professionals utilize those three questions when asking clients about their relationship. Due to conflict being a strong indicator of negative relationship satisfaction and the fact that economic well-being was related to conflict, it is important to ensure that if practitioners utilize the CFPB's financial well-being scale (CFPB, 2019). Should client scores be low, that may indicate greater conflict in the relationship and further exploration would be justified. An additional assessment may be recommended for those scoring low on the financial well-being scale. The Financial Anxiety Scale (Archuleta, Dale, & Spann, 2013), which measures client's financial anxiety, could be utilized quickly to help identify whether the clients are subject to financial anxiety. It is a simple seven-question assessment with scores ranging from 1 (low financial anxiety) to 7 (high financial anxiety). Scores are summed and range from 7 (very low financial anxiety) to 49 (very high financial anxiety). While it is not a diagnostic tool, it is still practical and clients that score low on the financial well-being scale and high in the financial anxiety scale may indicate that additional

help is needed beyond the financial professional's level of expertise. Practitioners not willing or able to go deeper due to a lack of understanding, training, and/or knowledge need to consider referring such clients to ensure clients get the help they need, and more harm is not done.

Conclusion

Prior research has indicated negative financial and relational effects of cohabiting prior to marriage (Copen et al., 2013; Copen et al., 2012; Kamp Dush et al., 2003; Kuperberg, 2014). Yet, the last 20 years has shown a significant increase in pre-marital cohabitation (Kuperberg, 2014), indicating a potential societal change in the act becoming more social accepted. Thus, it is important to consider if the negative financial and relational effects of cohabiting are still prevalent. Therefore, through three separate essays, this dissertation provides an important investigation of the effects that cohabitation and finances have on young adult couples' relationships over the first few years of marriage. Implications for professionals who work with clients in a financial and/or mental health setting are provided, as are suggestions for future research.

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Appendix A - NLSY97 SAS Code

```
LIBNAME IN
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\NLSY97\Disertation\Original Data';
LIBNAME OUT
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\NLSY97\Disertation';

DATA OUT.DISSWORKING;
SET IN.Disertation;

if Asset25Round ge 12 then delete;
if Asset25Round =9 then delete;

*****
*Marital Status* (T1, T3, & T4)
*****;
    *Drops those already separated, divorced, or widowed prior to study
period starting;
    if ms05 ge 5 then delete;
    if ms05 le 2 then delete;

if Asset25Round=11 then do;                *Drops those already separated,
divorced, or widowed prior to study period starting;
    if ms05 ge 5 then delete;
    if ms05 le 2 then delete;
    if ms06 ge 5 then delete;
    if ms06 le 2 then delete;
end;

*Creates variable to get at married that have vs. have not cohabited;
if xCohabit >0 then cohab=1; else cohab=0;

if ms05=3 or ms05=4 then mstat05=1;
if ms05=1 then mstat05=2;
if ms05=2 then mstat05=3;
if ms05 ge 5 then mstat05=0;

if ms06=3 or ms06=4 then mstat06=1;        *1 = married;
if ms06=1 then mstat06=2;                  *2 = cohabiting;
if ms06=2 then mstat06=3;                  *3 = not cohabiting;
IF ms06 ge 5 then mstat06=0;

if ms07=3 or ms07=4 then mstat07=1;
if ms07=1 then mstat07=2;
if ms07=2 then mstat07=3;
if ms07 ge 5 then mstat07=0;

if ms08=3 or ms08=4 then mstat08=1;
if ms08=1 then mstat08=2;
if ms08=2 then mstat08=3;
if ms08 ge 5 then mstat08=0;

if ms09=3 or ms08=4 then mstat09=1;
```

```

if ms09=1 then mstat09=2;
if ms09=2 then mstat09=3;
if ms09 ge 5 then mstat09=0;

if Asset25Round=10 then mstatT1=mstat05;  *mStatT1=final sample of only
married individuals at T1 for purpose of comparing cohabit vs. non-cohabit of
marrieds;
if Asset25Round=11 then mstatT1=mstat06;

if Asset25Round=10 then mstatT3=mstat07;
if Asset25Round=11 then mstatT3=mstat08;

if Asset25Round=10 then mstatT4=mstat08;
if Asset25Round=11 then mstatT4=mstat09;

mschg = mstatT1 - mstatT3 ;  *Because of the sample exclusions, mstatT1 =
only 1. MStatT3 can equal 0 (changed) or 1 (remained). Thus, 1 - 1 = 0 (no
change) and 1-0 = 1 changed);

*That is, no one, in this
sample, can have a 2 or 3 for mstat05_06_07_08_09, so this coding works.
Update if different sample;
mschg2 = mstatT1 - mstatT4;

*****
Cohab vs. Non-Cohab Grouping Variable
*****;
if cohab=1 and mstatt1=1 then cohabT1=1; else cohabT1=0;
if mstatt1="." then cohabT1=".";

*GENDER - moderating variable*;

IF sex=1 THEN male=1; ELSE male=0;

*****
CONTROLS
*****;

*RACE*;
IF race=1 THEN black=1; ELSE black=0;
IF race=2 THEN hispanic=1; ELSE hispanic=0;
IF race in (3,4) THEN white=1; ELSE white=0;

*Home Owner*;
if hometype25 in (1,2,3,4,5,7,8) then ownhome=1; else ownhome=0;

*EDUCATION*;
if education = 0 then educ=0;
if education in (1,2) then educ=1;
if education =3 then educ=2;
if education = 4 then educ=3;
if education in (5,6,7) then educ=4;

*No HS Degree;
*GED/HS Diploma;
*Associates;
*Bachelor's;
*Graduate;

*AGE*;
if Asset25Round=10 then AgeT1=age05;
if Asset25Round=11 then AgeT1=age06;
if Asset25Round=10 then AgeT3=age07;
if Asset25Round=11 then AgeT3=age08;

```

```

*KIDS;
if Asset25Round=10 then kidsT1=minor05;
if Asset25Round=11 then kidsT1=minor06;
if Asset25Round=10 then kidsT2=minor06;
if Asset25Round=11 then kidsT2=minor07;
if Asset25Round=10 then kidsT3=minor07;
if Asset25Round=11 then kidsT3=minor08;

*****
Live together length;
*****;
bdate_conmo = birthmo + (12*(birthyr-1981));

IF cohab=1 then LiveLengthT1 = AgeT3 - (firstcohabit_contmo/12);
IF cohab=0 then LiveLengthT1 = AgeT3 - (firstmarry_contmo/12);

If LiveLengthT1 < 0 then delete; *Omits those that actually cohabited or
married after the age 25 asset data collection;

*****
RQ Observed Vars (T1 & T3)
*****;

*conflict - reverse code;
r_conf05= 10-conf05;
r_conf06= 10-conf06;
r_conf07= 10-conf07;
r_conf08= 10-conf08;

if Asset25Round=10 then confT1=r_conf05;
if Asset25Round=11 then confT1=r_conf06;
if Asset25Round=10 then confT3=r_conf07;
if Asset25Round=11 then confT3=r_conf08;

*Cares;
if Asset25Round=10 then caresT1=cares05;
if Asset25Round=11 then caresT1=cares06;
if Asset25Round=10 then caresT3=cares07;
if Asset25Round=11 then caresT3=cares08;

*Close;
if Asset25Round=10 then closeT1=close05;
if Asset25Round=11 then closeT1=close06;
if Asset25Round=10 then closeT3=close07;
if Asset25Round=11 then closeT3=close08;

*Commit;
if Asset25Round=10 then commitT1=commit05;
if Asset25Round=11 then commitT1=commit06;
if Asset25Round=10 then commitT3=commit07;
if Asset25Round=11 then commitT3=commit08;

*****
Income - Recode divide / $10k (T2)
*****;
income06=faminc06/10000;

```

```

income07=faminc07/10000;
income08=faminc08/10000;

if Asset25Round=10 then incT2=income06;
if Asset25Round=11 then incT2=income07;

/*natural log of income - Made skewness and kurtosis really bad - not using
*/
if faminc06 > 0 then loginc06=log(faminc06);
else if faminc06=0 then loginc06=log(1);

if faminc07 > 0 then loginc07=log(faminc07);
else if faminc07=0 then loginc07=log(1);

if Asset25Round=10 then logincT2=loginc06;
if Asset25Round=11 then logincT2=loginc07;          */

*****
ASSETS & DEBTS (T2)
*****;
debt=debt25/10000;
assets=finassets25/10000; *These keep the same scale as income for
explanatory purposes - No negatives so no need to do inverse hyperbolic sine
transformation;

*AssetDebt= assets/debt; *This doesn't work out... will measure assets and
debt separately to get mediating effects of them individually to tease out
varying degrees of strength;

/*natural log of assets & debts */
if finassets25 > 0 then logasset=log(finassets25);
else if finassets25=0 then logasset=log(1);

if debt25 > 0 then logdebt=log(debt25);
else if debt25=0 then logdebt=log(1);

RUN;

proc contents data=out.dissworking;
run;

proc freq data=out.dissworking;
where cohab=0;
table mstatt1 mstatt3 MSCHG MSCHG2
;
run;

proc MEANS data=out.dissworking n mean median range min max skew kurtosis;
var
LiveLengthT1;
run;

*****
KEEP Statement to only bring in what is needed for MPLUS Dissertation piece
*****;

```

```

DATA Out.diss_working2;
SET Out.dissworking;

RQ1= (caresT1 + closeT1 + commitT1)/3;
RQ3= (confT3 + caresT3 + closeT3)/3;

KEEP
id
mschg
mschg2
cohabT1
male
black
hispanic
white
ownhome
educ
kidsT1
kidsT2
kidsT3
LiveLengthT1
confT1
confT3
caresT1
caresT3
closeT1
closeT3
commitT1
commitT3
assets
debt
incT2
assets
logasset
logdebt
logincT2
RQ1
RQ3;
RUN;

*****
Convert Missing to -99 for MPLUS file
*****;

DATA out.diss_mplusmiss;
    SET out.diss_working2;
    ARRAY change _NUMERIC_;
        DO OVER change;
            IF change=. THEN change=-99;
        END;
RUN;

*****
*EXPORT TO EXCEL DOCUMENT TO GET RID OF VARIABLE NAMES LINE (OPEN, DELETE
FIRST LINE, SAVE AS CSV FILE)*
*****;

```



```

PROC EXPORT OUTFILE=
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\NLSY97\Dissertation\Mplus\Diss_SEM'
DATA=out.diss_mplusmiss DBMS=xlsx REPLACE;
RUN;

*****
Descriptives
*****;
PROC Freq DATA=out.diss_working2;
Where cohabT1=1;
TABLE male black hispanic othrace white ownhome educ mschg;
RUN;

PROC Freq DATA=out.diss_working2;
Where cohabT1=0;
TABLE male black hispanic othrace white ownhome educ mschg;
RUN;

PROC MEANS DATA=out.diss_working2 n mean std min max /*median range skew
kurtosis*/;
Where cohabT1=1;
VAR confT1 caresT1 closeT1 commitT1 confT3 caresT3 closeT3 commitT3 incT2
debt assets LiveLengthT1 kidsT1 kidsT2 kidsT3 ;
RUN;

PROC MEANS DATA=out.diss_working2 n mean std min max /*median range skew
kurtosis*/;
Where cohabT1=0;
VAR confT1 caresT1 closeT1 commitT1 confT3 caresT3 closeT3 commitT3 incT2
debt assets LiveLengthT1 kidsT1 kidsT2 kidsT3 ;
RUN;

*****
Bivariate Correlations
*****;
PROC Corr DATA=out.diss_working2;
Where cohabT1=1;
VAR RQ1 RQ3 incT2 debt assets mschg;
RUN;

*Latent Variable Pre-check;

PROC FACTOR DATA=out.diss_working2;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC Corr DATA=out.diss_working2 alpha;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC FACTOR DATA=out.diss_working2;
VAR caresT3 closeT3 commitT3 ;
RUN;

```

```

PROC CORR DATA=out.diss_working2 alpha;
VAR caresT3 closeT3 commitT3 ;
RUN;

PROC FACTOR DATA=out.diss_working2;
Where cohabT1=0;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC CORR DATA=out.diss_working2 alpha;
Where cohabT1=0;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC FACTOR DATA=out.diss_working2;
Where cohabT1=1;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC CORR DATA=out.diss_working2 alpha;
Where cohabT1=1;
VAR caresT1 closeT1 commitT1 ;
RUN;

PROC FACTOR DATA=out.diss_working2;
Where cohabT1=1;
VAR caresT3 closeT3 commitT3 ;
RUN;

PROC CORR DATA=out.diss_working2 alpha;
Where cohabT1=1;
VAR caresT3 closeT3 commitT3 ;
RUN;

PROC FACTOR DATA=out.diss_working2;
Where cohabT1=0;
VAR caresT3 closeT3 commitT3 ;
RUN;

PROC CORR DATA=out.diss_working2 alpha;
Where cohabT1=0;
VAR caresT3 closeT3 commitT3 ;
RUN;

/*****
Standardize Vars for Moderation Effects
*****/
Z = (IV - mean of IV) / STD of IV */

PROC STANDARD DATA=out.dissworking mean=0 std=1 out=out.zdissworking;
VAR caresT1 closeT1 commitT1 male assets incT2 debt;
RUN;

PROC MEANS DATA=out.zdissworking mean std;
var caresT1 closeT1 commitT1 male assets incT2 debt;
run;

```

```

DATA Out.zdiss_working2;
SET Out.zdissworking;

ZcareT1 = CaresT1*male;
ZcloseT1 = closeT1*male;
ZcommT1 = commitT1*male;
ZassetT2 = assets*male;
ZincT2 = incT2*male;
ZdebtT2 = debt*male;
RUN;

/*****
Interaction Effects Testing
*****/

***NO COHAB Group***;
*Assets as DV;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL assets = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL assets = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL assets = commitT1 male ZcommT1;
RUN;

*Income as DV;
PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL incT2 = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL incT2 = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL incT2 = commitT1 male ZcommT1;
RUN;

*Debt as DV;
PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL debt = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;

```

```

where cohab=0;
MODEL debt = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL debt = commitT1 male ZcommT1;
RUN;

*Assets as IV;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL caresT3 = assets male ZassetT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL closeT3 = assets male ZassetT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL commitT3 = assets male ZassetT2;
RUN;

*Income as IV;
PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL caresT3 = inct2 male zinct2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL closeT3 = inct2 male zinct2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL commitT3 = inct2 male zinct2;
RUN;

*Debt as IV;
PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL caresT3 = debt male ZdebtT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL closeT3 = debt male ZdebtT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=0;
MODEL commitT3 = debt male ZdebtT2;
RUN;

```

```

***COHAB Group***;
*Assets as DV;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL assets = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL assets = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL assets = commitT1 male ZcommT1;
RUN;

*Income as DV;
PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL incT2 = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL incT2 = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL incT2 = commitT1 male ZcommT1;
RUN;

*Debt as DV;
PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL debt = caresT1 male ZcareT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL debt = closeT1 male ZcloseT1;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL debt = commitT1 male ZcommT1;
RUN;

*Assets as IV;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL caresT3 = assets male ZassetT2;

```

```

RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL closeT3 = assets male ZassetT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL commitT3 = assets male ZassetT2;
RUN;

*Income as IV;
PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL caresT3 = inct2 male zinct2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL closeT3 = inct2 male zinct2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL commitT3 = inct2 male zinct2;
RUN;

*Debt as IV;
PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL caresT3 = debt male ZdebtT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL closeT3 = debt male ZdebtT2;
RUN;

PROC REG Data=Out.zdiss_working2;
where cohab=1;
MODEL commitT3 = debt male ZdebtT2;
RUN;

```

Appendix B - Marriage Matters SAS Code

```
*Laptop (SAS University) Location;
LIBNAME OUT '/folders/myfolders/Dataset Files/Marriage
Matters/Data/Dissertation';
LIBNAME IN '/folders/myfolders/Dataset Files/Marriage Matters/Data/Original
Data';

*Home PC Location;
LIBNAME OUT 'E:\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Dissertation';
LIBNAME IN 'E:\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Original Data';
Libname fmt 'E:\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Original Data';
options fmtsearch=(fmt.formats);

*Office PC Location;
LIBNAME OUT
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Dissertation';
LIBNAME IN
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Dissertation';
Libname fmt
'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Original Data';
options fmtsearch=(fmt.formats);

*Create working dataset from the imported dataset (2,581 org vars);
*Run the OUT/IN/FMT Libnames when resetting SAS;

DATA Out.mm_diss_working;
SET In.MM_Original_miss;

/*p. 5 = start of wife v vars; p. 37 = Husband v variables */

*ID;
CoupleID=v1;
RespIDw=V2;
RespIDh=v1287;

*****
COHABIT OR NOT (GROUP EFFECTS)
*****;
*A8. COHABIT (V15=W, V1303=H);
If v15=0 then nocohabw=1; else nocohabw=0;
If v15=1 then cohabw=1; else cohabw=0;
if v15=999 or v15="." then nocohabw=".";
if v15=999 or v15="." then cohabw=".";

If v1303=0 then nocohabh=1; else nocohabh=0;
If v1303=1 then cohabh=1; else cohabh=0;
```

```

if v1303=999 or v1303="." then nocohabh=".";
if v1303=999 or v1303="." then cohabh=".";

*****
Covenant Marriage?
*****
V127 (wife) V1415 (husband) (p. 204 of codebook) - "First, just to be sure we
have it right, is your current marriage a covenant marriage?" 1 = yes, 2 =
no;

if v127 = 1 then covmar_w=1; else covmar_w=0;
if v127 = 999 or v127 = "." then covmar_w=".";

if v1415 = 1 then covmar_h=1; else covmar_h=0;
if v1415 = 999 or v1415 = "." then covmar_h=".";

if v127 = "." then do;
    if v1415 = 1 then covmar_a=1; else covmar_a=0;
end;

if covmar_w=1 or covmar_a = 1 then covmar=1; else covmar=0;

*****
CONTROLS
*****;
*Duration, Children (Y/N or #), Age, Education, Race (all via Dew 2007). He
also did # of marriage currently in, so coded that, too:

*B1 a/b. *****DURATION*****: time together before marriage (dating, living
together, engagement, being together) (v22/23=W, V1310/1311=H);
Dur_LT1W = v22/12;
if v22=998 or v22=999 or v22="." then Dur_LT1W=".";
DurateW= v23;
If DurateW = "." then DurateW=dur_lt1W;

Dur_LT1H = v1310/12;
if v1310=998 or v1310=999 or v1310="." then Dur_LT1H=".";
DurateH= v1311;
If DurateH = "." then DurateH=dur_lt1H;

*****CHILDREN (v141. #Children fathered/given birth to) (f23a-e_1... v165-
169/v1453-1457);

if v165=1 or v166=1 or v167=1 or v168=1 or v169=1 then kids_w=1; else
kids_w=0;
if v165="." or v166="." or v167="." or v168="." or v169="." then kids_w=".";

if v1453=1 or v1454=1 or v1455=1 or v1456=1 or v1457=1 then kids_h=1; else
kids_h=0;
if v1453="." or v1454="." or v1455="." or v1456="." or v1457="." then
kids_h=".";

/*
***EDUCATION*** - USE V700/1989 as the W1 data is numerical and too many
issues w/ length and actual degree received (when comparing via Proc Freq and
by statements);
/*edu_w=v338;

```



```

    if v338<12 then lthsed_w=1; else lthsed_w=0;
    if v338=12 then hsed_w=1; else hsed_w=0;
    if v338 in (13,14,15) then sced_w=1; else sced_w=0;
    if 15 < v338 < 21 then colled_w=1; else colled_w=0;
    IF v338=999 or v338="." then edu_w=".";
    IF v338=999 or v338="." then lthsed_w=".";
    IF v338=999 or v338="." then hsed_w=".";
    IF v338=999 or v338="." then sced_w=".";
    IF v338=999 or v338="." then colled_w=".";          */

*V700 = W2 REV RESP EDUCATION - WIFE;
if v700 in (1,3,4) then hsed_w=1; else hsed_w=0;
if v700 in (2,5,9) then sced_w=1; else sced_w=0;
if v700 in (6,7,8) then colled_w=1; else colled_w=0;
    IF v700=999 or v700="." then hsed_w=".";
    IF v700=999 or v700="." then sced_w=".";
    IF v700=999 or v700="." then colled_w=".";

*V1989 = W2 REV RESP EDUCATION - Husband;
if v1989 in (1,3,4) then hsed_h=1; else hsed_h=0;
if v1989 in (2,5,9) then sced_h=1; else sced_h=0;
if v1989 in (6,7,8) then colled_h=1; else colled_h=0;
    IF v1989=999 or v1989="." then hsed_h=".";
    IF v1989=999 or v1989="." then sced_h=".";
    IF v1989=999 or v1989="." then colled_h=".";

*W1 Education via b20 c & d;
If hs_w = 0 then do;
    if collg_w = 0 then ed_nhs_w = 1; else ed_nhs_w=0;
end;*( < hs n = 43);

If hs_w = 1 then do;
    if collg_w = 0 then ed_hs_w = 1; else ed_hs_w=0;
end; *(hs diploma n = 344);

If hs_w in ( 0,1) then do;
    if collg_w = 1 then ed_col_w = 1; else ed_col_w=0;
end; *(college n = 280);

***RACE***;
race_w=v394;
    IF race_w=2 then White_w=1; else White_w=0;
    If race_w=999 or race_w="." then White_w=".";

race_h=v1682;
    IF race_h=2 then White_h=1; else White_h=0;
    If race_h="." then White_h=".";

***NUMBER TIMES MARRIED (INCLUDING THIS ONE) P. 419/1086***;
nomar_w=v137;
    if v137="." then nomar_w=".";

nomar_h=v1425;
    if v1425="." then nomar_h=".";

*****
Before Marriage (questions start on p. 194)

```

```

*B4 - Did resp become involved w/ someone else while dating? (V27=W, V1315=H)
(wnocheat = wife did not cheat, hnocheat = husband didn't cheat, w/hcheat =
cheated) ;
if v27=0 then wnocheat=1; else wnocheat=0;
if v27=999 or v27="." then wnocheat=".";
if wnocheat=1 then wcheat=0; else wcheat=1;
if wnocheat="." then wcheat=".";

if v1315=0 then hnocheat=1; else hnocheat=0;
if v1315=999 or v1315="." then hnocheat=".";
if hnocheat=1 then hcheat=0; else hcheat=1;
if hnocheat="." then hcheat=".";

*B5 - Does resp think partner become involved w/ someone else while dating?
(V28=W, V1316=H) (w/h_pnocht = doesn't think partner cheated, w/h_pcheat =
believes spouse cheated);
if v28=1 then w_pnocht=1; else w_pnocht=0;
if v28=0 or v28=999 or v28="." then w_pnocht=".";
if w_pnocht=1 then w_pcheat=0; else w_pcheat=1;
if w_pnocht="." then w_pcheat=".";

if v1316=1 then h_pnocht=1; else h_pnocht=0;
if v1316=0 or v1316=999 or v1316="." then h_pnocht=".";
if h_pnocht=1 then h_pcheat=0; else h_pcheat=1;
if h_pnocht="." then h_pcheat=".";

*B6. Cyclical Relationships (V29=w, v1317=h);
If v29 in (1,2) then cycle_w=1; else cycle_w=0;
if v29 = "." then cycle_w=".";

If v1317 in (1,2) then cycle_h=1; else cycle_h=0;
if v1317 = "." or v1317=0 then cycle_h=".";

/* B7. CONFLICT while dating (V30=w, v1318=h);
0 Practically no conflict at all      306 43.3 %
1 A little conflict                    300 42.4 %
2 A lot of conflict                    80 11.3 % */

conf_w=v30;
conf_h=v1318;

*****;

confid_w=v61;
confid_h=v1349;

*****
APIM & LGCA VARIABLE CODE
*****;

/*B20a-m (p. 87) Things brought into the relationship Code B20a-m (v78-103;
V1366-1391)*/

****POSITIVE ATTRIBUTES - T0****;
*B20a = had JOB prior to marriage (Respondent: w=v78 h=v1366. Resp on
partner: w= v91 h=v1379);

```

```

if v78=1 then job_w=1; else job_w=0;
if v78=999 or v78="." then job_w=".";

if v1366=1 then job_h=1; else job_h=0;
if v1366=999 or v1366="." then job_h=".";

if v91=1 then h_job_w=1; else h_job_w=0;
if v91=999 or v91="." then h_job_w=".";

if v1379=1 then w_job_h=1; else w_job_h=0;
if v1379=999 or v1379="." then w_job_h=".";

*B20b = had CAR prior to marriage (Respondent: w=v79 h=v1367. Resp on
partner: w= v92 h=v1380);
if v79=1 then car_w=1; else car_w=0;
if v79=999 or v79="." then car_w=".";

if v1367=1 then car_h=1; else car_h=0;
if v1367=999 or v1367="." then car_h=".";

if v92=1 then h_car_w=1; else h_car_w=0;
if v92=999 or v92="." then h_car_w=".";

if v1380=1 then w_car_h=1; else w_car_h=0;
if v1380=999 or v1380="." then w_car_h=".";

*B20C = had HS DIPLOMA prior to marriage (w=v80 h=v1368. Resp on partner: w=
v93 h=v1381);
if v80=1 then hs_w=1; else hs_w=0;
if v80=999 or v80="." then hs_w=".";

if v1368=1 then hs_h=1; else hs_h=0;
if v1368=999 or v1368="." then hs_h=".";

if v93=1 then h_hs_w=1; else h_hs_w=0;
if v93=999 or v93="." then h_hs_w=".";

if v1381=1 then w_hs_h=1; else w_hs_h=0;
if v1381=999 or v1381="." then w_hs_h=".";

*B20D = had COLLEGE DEGREE prior to marriage (w=v81 h=v1369. Resp on partner:
w= v94 h=v1382);
if v81=1 then collg_w=1; else collg_w=0;
if v81=999 or v81="." then collg_w=".";

if v1369=1 then collg_h=1; else collg_h=0;
if v1369=999 or v1369="." then collg_h=".";

if v94=1 then hcollg_w=1; else hcollg_w=0;
if v94=999 or v94="." then hcollg_w=".";

if v1382=1 then wcollg_h=1; else wcollg_h=0;
if v1382=999 or v1382="." then wcollg_h=".";

*B20E = had Savings of > $1,000 prior to marriage (w=v82 h=v1370. Resp on
partner: w= v95 h=v1383);
if v82=1 then svg1k_w=1; else svg1k_w=0;

```

```

if v82=999 or v82="." then svg1k_w=".";

if v1370=1 then svg1k_h=1; else svg1k_h=0;
if v1370=999 or v1370="." then svg1k_h=".";

if v95=1 then hsvg1k_w=1; else hsvg1k_w=0;
if v95=999 or v95="." then hsvg1k_w=".";

if v1383=1 then wsvg1k_h=1; else wsvg1k_h=0;
if v1383=999 or v1383="." then wsvg1k_h=".";

*B20f = had Savings of > $10,000 prior to marriage (w=v83 h=v1371. Resp on
partner: w= v96 h=v1384);
if v83=1 then svg10k_w=1; else svg10k_w=0;
if v83=999 or v83="." then svg10k_w=".";

if v1371=1 then svg10k_h=1; else svg10k_h=0;
if v1371=999 or v1371="." then svg10k_h=".";

if v96=1 then hsvg10kw=1; else hsvg10kw=0;
if v96=999 or v96="." then hsvg10kw=".";

if v1384=1 then wsvg10kh=1; else wsvg10kh=0;
if v1384=999 or v1384="." then wsvg10kh=".";

*B20g = Owned HOME prior to marriage (w=v84 h=v1372. Resp on partner: w= v97
h=v1385);
if v84=1 then home_w=1; else home_w=0;
if v84=999 or v84="." then home_w=".";

if v1372=1 then home_h=1; else home_h=0;
if v1372=999 or v1372="." then home_h=".";

if v97=1 then h_home_w=1; else h_home_w=0;
if v97=999 or v97="." then h_home_w=".";

if v1385=1 then w_home_h=1; else w_home_h=0;
if v1385=999 or v1385="." then w_home_h=".";

****NEGATIVE ATTRIBUTES - T0****;

*B20j = Had CC Debt of > $500 prior to marriage (w=v87 h=v1375. Resp on
partner: w= v100 h=v1388);
if v87=1 then ccdebt_w=1; else ccdebt_w=0;
if v87=999 or v87="." then ccdebt_w=".";

if v1375=1 then ccdebt_h=1; else ccdebt_h=0;
if v1375=999 or v1375="." then ccdebt_h=".";

if v100=1 then hccdebtw=1; else hccdebtw=0;
if v100=999 or v100="." then hccdebtw=".";

if v1388=1 then wccdebth=1; else wccdebth=0;
if v1388=999 or v1388="." then wccdebth=".";

*B20k = Had OTHER SIGNIFICANT DEBT prior to marriage (w=v88 h=v1376. Resp on
partner: w= v101 h=v1389);

```

```

if v88=1 then odebt_w=1; else odebt_w=0;
if v88=999 or v88="." then odebt_w=".";

if v1376=1 then odebt_h=1; else odebt_h=0;
if v1376=999 or v1376="." then odebt_h=".";

if v101=1 then hodebt_w=1; else hodebt_w=0;
if v101=999 or v101="." then hodebt_w=".";

if v1389=1 then wodebt_h=1; else wodebt_h=0;
if v1389=999 or v1389="." then wodebt_h=".";

if ccdebt_w=1 or odebt_w=1 then debt_w=1; else debt_w=0;
if ccdebt_h=1 or odebt_h=1 then debt_h=1; else debt_h=0;
if hccdebtw=1 or hodebt_w=1 then h_debt_w=1; else h_debt_w=0;
if wccdebt_h=1 or wodebt_h=1 then w_debt_h=1; else w_debt_h=0;

*B20L = Had BANKRUPTCY prior to marriage (w=v89 h=v1377. Resp on partner: w=
v102 h=v1390);
if v89=1 then bnkrup_w=1; else bnkrup_w=0;
if v89=999 or v89="." then bnkrup_w=".";

if v1377=1 then bnkrup_h=1; else bnkrup_h=0;
if v1377=999 or v1377="." then bnkrup_h=".";

if v102=1 then hbnkrupw=1; else hbnkrupw=0;
if v102=999 or v102="." then hbnkrupw=".";

if v1390=1 then wbnkruph=1; else wbnkruph=0;
if v1390=999 or v1390="." then wbnkruph=".";

*B20M = Had MEDICAL problem prior to marriage (w=v90 h=v1378. Resp on
partner: w= v103 h=v1391);
if v90=1 then medic_w=1; else medic_w=0;
if v90=999 or v90="." then medic_w=".";

if v1378=1 then medic_h=1; else medic_h=0;
if v1378=999 or v1378="." then medic_h=".";

if v103=1 then hmedic_w=1; else hmedic_w=0;
if v103=999 or v103="." then hmedic_w=".";

if v1391=1 then wmedic_h=1; else wmedic_h=0;
if v1391=999 or v1391="." then wmedic_h=".";

***INCOME @ T0***
L33a/b (V400 & 401 = w, V1688 & 1689 = h);
Inc_w = v400;
if v400=999 or v400="." then inc_w=".";
h_inc_w = v401;
if v401=999 or v401="." then h_inc_w=".";
HHInc_w = inc_w + h_inc_w;
    *2 = No income
    3 or 4 or 5 = < $20k
    6 = 20-30k
    7 = 30-40k
    8 = 40-50k

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```

    9 = 50-60k
    10 = $60k or more;
If 0 < HHinc_w < 6 then HHinc_w=1; *<20k;
IF HHinc_w = 6 then HHinc_w=2; *20-30k;
IF HHinc_w = 7 then HHinc_w=3; *30-40k;
IF HHinc_w = 8 then HHinc_w=4; *40-50k;
IF HHinc_w = 9 then HHinc_w=5; *50-60k;
IF HHinc_w > 9 then HHinc_w=6; *60k+;

if inc_w=1 then inc_w=1;
if inc_w in (2,3) then inc_w=2;
if inc_w=4 then inc_w=3;
if inc_w=5 then inc_w=4;
if inc_w=6 then inc_w=5;
if inc_w=7 then inc_w=6;
if inc_w=8 then inc_w=7;
if inc_w=9 then inc_w=8;

Inc_h = v1688;
if v1688=999 or v1688="." then inc_h=".";
w_inc_h = v401;
if v1689=999 or v1689="." then inc_h=".";
HHInc_h = inc_h + w_inc_h;
    *2 = No income
    3 or 4 or 5 = < $20k
    6 = 20-30k
    7 = 30-40k
    8 = 40-50k
    9 = 50-60k
    10 = $60k or more;
If 0 < HHinc_h < 6 then HHinc_h=1;
IF HHinc_h = 6 then HHinc_h=2;
IF HHinc_h = 7 then HHinc_h=3;
IF HHinc_h = 8 then HHinc_h=4;
IF HHinc_h = 9 then HHinc_h=5;
IF HHinc_h > 9 then HHinc_h=6;

if inc_h=1 then inc_h=1;
if inc_h in (2,3) then inc_h=2;
if inc_h=4 then inc_h=3;
if inc_h=5 then inc_h=4;
if inc_h=6 then inc_h=5;
if inc_h=7 then inc_h=6;
if inc_h=8 then inc_h=7;
if inc_h=9 then inc_h=8;

*****
HH Size & Age
*****;

*HH Size_Wife Resp;
if v411<100 then hhno2_w=1; else hhno2_w=0;
if v411="." or v411=999 then hhno2_w=".";

if v412<100 then hhno3_w=1; else hhno3_w=0;
if v412="." or v412=999 then hhno3_w=".";

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```

if v413<100 then hhno4_w=1; else hhno4_w=0;
if v413="." or v413=999 then hhno4_w=".";

if v414<100 then hhno5_w=1; else hhno5_w=0;
if v414="." or v414=999 then hhno5_w=".";

if v415<100 then hhno6_w=1; else hhno6_w=0;
if v415="." or v415=999 then hhno6_w=".";

if v416<100 then hhno7_w=1; else hhno7_w=0;
if v416="." or v416=999 then hhno7_w=".";

if v417<100 then hhno8_w=1; else hhno8_w=0;
if v417="." or v417=999 then hhno8_w=".";

if hhno2_w=1 then hhno_w=1;
if hhno3_w=1 then hhno_w=2;
if hhno4_w=1 then hhno_w=3;
if hhno5_w=1 then hhno_w=4;
if hhno6_w=1 then hhno_w=5;
if hhno7_w=1 then hhno_w=6;
if hhno8_w=1 then hhno_w=7;

*HH Size Husb Resp;
if v1699<100 then hhno2_h=1; else hhno2_h=0;
if v1699="." or v1699=999 then hhno2_h=".";

if v1700<100 then hhno3_h=1; else hhno3_h=0;
if v1700="." or v1700=999 then hhno3_h=".";

if v1701<100 then hhno4_h=1; else hhno4_h=0;
if v1701="." or v1701=999 then hhno4_h=".";

if v1702<100 then hhno5_h=1; else hhno5_h=0;
if v1702="." or v1702=999 then hhno5_h=".";

if v1703<100 then hhno6_h=1; else hhno6_h=0;
if v1703="." or v1703=999 then hhno6_h=".";

if v1704<100 then hhno7_h=1; else hhno7_h=0;
if v1704="." or v1704=999 then hhno7_h=".";

if v1705<100 then hhno8_h=1; else hhno8_h=0;
if v1705="." or v1705=999 then hhno8_h=".";

if hhno2_h=1 then hhno_h=1;
if hhno3_h=1 then hhno_h=2;
if hhno4_h=1 then hhno_h=3;
if hhno5_h=1 then hhno_h=4;
if hhno6_h=1 then hhno_h=5;
if hhno7_h=1 then hhno_h=6;
if hhno8_h=1 then hhno_h=7;

*Respondent's Age***;
Age_w=v410;
if v410=999 or v410="." then age_w=".";

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Age_h=v1698;
if v1698=999 or v1698="." then age_h=".";

*****
Economic Well-Being @T1:
J1f_1_w/h = V234 (p. 470) / V1522 (p. 1136);

EconWB_w = v234;
If econwb_w = 999 or econwb_w = "." then econwb_w=".";

EconWB_h = v1522;
If econwb_h = 999 or econwb_h = "." then econwb_h=".";

*****
Warmth @T2:
  - J1a Physical intimacy (V493/1782);
physic_w = v493;
  if physic_w=999 or physic_w="." then physic_w=".";
physic_h = v1782;
  if v1782=999 or v1782="." then physic_h=".";

  *- J1b Love (v494/1783);
love_w = v494;
  if love_w=999 or love_w="." then love_w=".";
love_h = v1783;
  if v1783=999 or v1783="." then love_h=".";

  *- J1g Emotional intimacy (v499/1788);
emote_w = v499;
  if v499=999 or v499="." then emote_w=".";
emote_h = v1788;
  if v1788=999 or v1788="." then emote_h=".";

  *- J2a kiss (v501/1790);
kiss_w = v501;
  if v501=999 or v501="." then kiss_w=".";
kiss_h = v1790;
  if v1790=999 or v1790="." then kiss_h=".";

  *- J2b engage in outside interests (v502/1791);
outint_w = v502;
  if v502=999 or v502="." then outint_w=".";
outint_h = v1791;
  if v1791=999 or v1791="." then outint_h=".";

  *- J2e laugh together (v505/1794);
laugh_w = v505;
  if v505=999 or v505="." then laugh_w=".";
laugh_h = v1794;
  if v1794=999 or v1794="." then laugh_h=".";

  *- J2i work together on projects (v509/v1798);
workto_w = v509;
  if v509=999 or v509="." then workto_w=".";
workto_h = v1798;
  if v1798=999 or v1798="." then workto_h=".";

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    *- J2j sexual relations (v510/1799);
sex_w = v510;
    if v510=999 or v510="." then sex_w=".";
sex_h = v1799;
    if v1799=999 or v1799="." then sex_h=".";

*****
Hostility/Conflict @T2:
    - J2h have an argument about something (v508/v1797);
argue_w = v508;
    if v508=999 or v508="." then argue_w=".";
argue_h = v1797;
    if v1797=999 or v1797="." then argue_h=".";

    *- J1d degree of fairness (reverse coded for unfairness) (v496/v1785);
fair_w = v496;
    if v496=999 or v496="." then fair_w=".";
fair_w2 = 6-fair_w;

fair_h = v1785;
    if v1785=999 or v1785="." then fair_h=".";
fair_h2 = 6-fair_h;

    *- (J3a) I withdraw (v520/v1809);
wdraw_w = v520;
    if v520=999 or v520="." then wdraw_w=".";
wdraw_h = v1809;
    if v1809=999 or v1809="." then wdraw_h=".";

    *- (J3b) I get tense & anxious (v521/v1810);
tense_w = v521;
    if v521=999 or v521="." then tense_w=".";
tense_h = v1810;
    if v1810=999 or v1810="." then tense_h=".";

    *- (J3e) I get physically violent (v524/v1813);
abuse_w = v524;
    if v524=999 or v524="." then abuse_w=".";
abuse_h = v1813;
    if v1813=999 or v1813="." then abuse_h=".";

    *- (J3f) I feel unloved (v525/V1814);
unlove_w = v525;
    if v525=999 or v525="." then unlove_w=".";

unlove_h = v1814;
    if v1814=999 or v1814="." then unlove_h=".";

    *- (J3i) I get sarcastic (I say things intended to hurt my partner)
(v528/v1817);
sayhurtw = v528;
    if v528=999 or v528="." then sayhurtw=".";
sayhurth = v1817;
    if v1817=999 or v1817="." then sayhurth=".";

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```

      *- (J3k) I get hostile ( I act like we are enemies) (v530/v1819);
hostilew = v530;
      if v530=999 or v530="." then hostilew=".";
hostileh = v1819;
      if v1819=999 or v1819="." then hostileh=".";

/*****
Rel Sat @T3:
      - V883/2172 (less missing than 811/2100). Variable b21_3_w/h: "Which of
the following best describes your feelings about the marriage, taking all
things together?".
      Ranked from 1 = I am extremely unhappy to 4= as happy as most
people in their marriages to 7 = it is perfect... see p. 125 of the
codebook).;
RelSat1W = v883;
      If v883 = "." then relsat1w=".";
RelSat1H = v2172;
      If v2172=999 or v2172="." then relsat1h=".";

      *V811/2100. Variable = j1h_3_w/h: "In every marriage, there are some
things that are very good and other things that could use some improvement.
Right now,
      how satisfied would you say you are with your overall relationship with
your partner?" (1=Very dissatisfied and 5 = very satisfied);
RelSat2W = v811;
      If v811=999 or v811="." then relsat2w=".";
RelSat2H = v2100;
      If v2100=999 or v2100="." then relsat2h="."; */

      *V879/v2168 (same missing as v883/2172). Scale of 1-10.
j7a_3_w/j7a_3_h: "On the scale below, a 10 means the best your marriage could
possibly be
      and a 1 means the worst your marriage could possibly be. Taking all
things together, please indicate where your marriage stands at the present
moment.";
RelSat3W = v879;
      If v879=999 or v879="." then relsat3w=".";
RelSat3H = v2168;
      If v2168=999 or v2168="." then relsat3h=".";

*****
Rel Sat T1 & T2
*****;

RelSat1W = v304;
      If v304=999 or v304="." then relsat1w=".";
RelSat1H = v1592;
      If v1592=999 or v1592="." then relsat1h=".";

RelSat2W = v568;
      If v568=999 or v568="." then relsat2w=".";
RelSat2H = v1857;
      If v1857=999 or v1857="." then relsat2h=".";

      *- Or, V804-811/2093-2100 (review CFA);

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```

rs1_w=v804;
    If v804=999 or v804="." then rs1_w=".";
rs2_w=v805;
    If v805=999 or v805="." then rs2_w=".";
rs3_w=v806;
    If v806=999 or v806="." then rs3_w=".";
rs4_w=v807;
    If v807=999 or v807="." then rs4_w=".";
rs5_w=v808;
    If v808=999 or v808="." then rs5_w=".";
rs6_w=v809;
    If v809=999 or v809="." then rs6_w=".";
rs7_w=v810;
    If v810=999 or v810="." then rs7_w=".";
rs8_w=v811;
    If v811=999 or v811="." then rs8_w=".";

rs1_h=v2093;
    If v2093=999 or v2093="." then rs1_h=".";
rs2_h=v2094;
    If v2094=999 or v2094="." then rs2_h=".";
rs3_h=v2095;
    If v2095=999 or v2095="." then rs3_h=".";
rs4_h=v2096;
    If v2096=999 or v2096="." then rs4_h=".";
rs5_h=v2097;
    If v2097=999 or v2097="." then rs5_h=".";
rs6_h=v2098;
    If v2098=999 or v2098="." then rs6_h=".";
rs7_h=v2099;
    If v2099=999 or v2099="." then rs7_h=".";
rs8_h=v2100;
    If v2100=999 or v2100="." then rs8_h=".";

RUN;

****
Divorce info?
****;
Proc freq data=out.mm_diss_working;
table cohabw cohabh;
run;

Proc freq data=out.mm_diss_working;
table unlove_w unlove_h;
run;

Proc freq data=out.mm_diss_working;
table v127 covmar_w v1415 covmar_h covmar_a covmar;
run;

Proc means data=out.mm_diss_working;
var RelSat1W relsat2w relsat3w;
where cohabw=1;
run;

```

```

Proc freq data=out.mm_diss_working;
table collg_w;
by hs_w;
run;

*****
T-test to test group diff b/t cov & standard marriages
*****;

proc ttest data=out.mm_diss_working;
class covmar;
var RelSat1W RelSat2W RelSat3W
RelSat1H RelSat2H RelSat3H
econwb_w econwb_h
Age_w DurateW
Age_h DurateH
inc_w debt_w
inc_h debt_h
White_w hsed_w sced_w colled_w kids_w cohabw
White_h hsed_h sced_h colled_h kids_h cohabh;
run;

****
SORT BY hh size (wife) to be able to do the 150% poverty calc correctly
****;

Proc sort data=out.mm_diss_working;
by hhno_w;
run;

*Now create sorted wife dataset;

DATA Out.mm_diss_working_sort_w;
SET Out.mm_diss_working;

*****
150% Poverty - Wife
*****;

IF hhinc_w=1 then pov_w1=1; else pov_w1=0;
if hhinc_w="." then pov_w1=".";
IF hhinc_w=2 and hhno_w>2 then pov_w2=1; else pov_w2=0;
if hhinc_w="." then pov_w2=".";
if hhinc_w=3 and hhno_w>4 then pov_w3=1; else pov_w3=0;
if hhinc_w="." then pov_w3=".";

povert_w=pov_w1 + pov_w2 + pov_w3;
npov_w=1-povert_w;

run;

Proc Freq data=Out.mm_diss_working_sort_w;
table hhinc_w;
by hhno_w;
run;

```

```

Proc Freq data=Out.mm_diss_working_sort_w;
table pov_w1 pov_w2 pov_w3 povert_w npov_w;
run;

****
SORT BY hh size (husband) to be able to do the 150% poverty calc correctly
****;

Proc sort data=Out.mm_diss_working_sort_w;
by hhno_h;
run;

*Now create sorted husband dataset;

DATA Out.mm_diss_working_sort_h;
SET Out.mm_diss_working_sort_w;

*****
150% Poverty - husband
*****;

IF hhinc_h=1 then pov_h1=1; else pov_h1=0;
if hhinc_h="." then pov_h1=".";
IF hhinc_h=2 and hhno_h>2 then pov_h2=1; else pov_h2=0;
if hhinc_h="." then pov_h2=".";
if hhinc_h=3 and hhno_h>4 then pov_h3=1; else pov_h3=0;
if hhinc_h="." then pov_h3=".";

povert_h=pov_h1 + pov_h2 + pov_h3;
npov_h=1-povert_h;

run;

Proc Freq data=Out.mm_diss_working_sort_h;
table hhinc_H hhno_h;
run;

Proc Freq data=Out.mm_diss_working_sort_h;
table hhinc_h;
by hhno_h;
run;

Proc Freq data=Out.mm_diss_working_sort_h;
table pov_h1 pov_h2 pov_h3 povert_h npov_h povert_w npov_w;
run;

*****All is good w/ poverty. Now limit sample size to those in the study &
then create dataset for MPLUS*****;

*SEE "Summary" Excel tab to show highlighting... V410/1698=Resp Age,
V411/1699=Person 2 age and so on. Should yield n=650... *517* now (only those
where both partners responded included);
DATA Out.mm_diss_working_2;
SET Out.mm_diss_working_sort_h;

```

```

if v410>40 then do; *This do loop limits to couples where at least one person
is under age 41 (40 or younger). Remove those where Resp age = 41+ AND
person2=41+;
    if v411 >40 then delete;
    if v411="." then delete; *Removes those where resp is female and only
respondent;
end;

if v2 = 10491 then delete; *Removed b/c person 2 was a child (young age) and
person 3 was the same age (42) as person 1, therefore assumed P1 & P3 were
the couple-don't qualify;
if RespIDh in (12651, 10580, 12372, 12178) then delete; *these remove where
husband only was resp and reported them & wife >40 yrs;
if RespIDw = '.' then delete; *Removes those without wife responses;
IF RespIDh = '.' then delete; *Removes those without husband responses;

Keep
v4 v1290
CoupleID RespIDw RespIDh
cohabw cohabh
covmar_w covmar_h covmar
DurateW DurateH
kids_w kids_h
hsed_w sced_w colled_w hsed_h sced_h colled_h
White_w White_h
nomar_w nomar_h wcheat hcheat w_pcheat h_pcheat
cycle_w cycle_h conf_w conf_h confid_w confid_h
job_w job_h car_w car_h hs_w hs_h collg_w collg_h
svglk_w svglk_h svgl0k_w svgl0k_h home_w home_h
ccdebt_w ccdebt_h debt_w debt_h
bnkrup_w bnkrup_h medic_w medic_h
HHInc_w HHInc_h hhno_w hhno_h
Inc_w Inc_h h_inc_w w_inc_h
Age_w Age_h
EconWB_w EconWB_h
physic_w physic_h
love_w love_h
emote_w emote_h
kiss_w kiss_h
outint_w outint_h
laugh_w laugh_h
workto_w workto_h
sex_w sex_h
argue_w argue_h
fair_w fair_h fair_w2 fair_h2
abuse_w abuse_h
wdraw_w wdraw_h
tense_w tense_h
unlove_w unlove_h
sayhurtw sayhurth
hostilew hostileh
RelSat1W RelSat1H
RelSat2W RelSat2H
RelSat3W RelSat3H
rs1_w rs2_w rs3_w rs4_w rs5_w rs6_w rs7_w rs8_w
rs1_h rs2_h rs3_h rs4_h rs5_h rs6_h rs7_h rs8_h
povert_w povert_h npov_w npov_h;

```

```

run;

*****
EXPORT TO EXCEL DOCUMENT TO CHANGE V4 AND V1290 TO 1/0 & Couple ID to 1-517
*****;
PROC EXPORT OUTFILE=
'E:\Dropbox\Research\SASUniversityEdition\myfolders\Dataset Files\Marriage
Matters\Data\Dissertation\Diss_Data2'
/* 'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Dissertation\Diss_Data2' */
data=Out.mm_diss_working_2 DBMS=xlsx REPLACE ;
run;

*****
IMPORT Back from Excel
*****;
PROC IMPORT DATAFILE =
'E:\Dropbox\Research\SASUniversityEdition\myfolders\Dataset Files\Marriage
Matters\Data\Dissertation\Diss_Data2'
/* 'C:\Users\drlawson\Dropbox\Research\SASUniversityEdition\myfolders\Dataset
Files\Marriage Matters\Data\Dissertation\Diss_Data2' */
DBMS=xlsx REPLACE OUT = out.mm_diss_working_3;
RUN;

Proc Contents Data = out.mm_diss_working_3; *check to see if v4 & v1290 are
numeric...if so, no need to do the step below;
run;

*New dataset to convert divorced variable to numeric;
Data out.mm_diss_working_4;
Set out.mm_diss_working_3;
    div_w = input(v4, best5.);
    div_h = input(v1290, best5.);
run;

Proc Contents Data = out.mm_diss_working_4; *run if step above is necessary;
run;

DATA Out.mm_diss_working_5;
SET Out.mm_diss_working_4;
div_w=v4;
div_h=v1290;
run;

Proc Freq data=out.mm_diss_working_5;
table div_w div_h;
run; *checks out! 38 divorced to be dropped;

*****
DROP Divorced from study
*****;

DATA Out.mm_diss_working_6;
SET Out.mm_diss_working_5;

```

```

if div_w = 1 then delete;
if div_h = 1 then delete; *Removes those divorced before end of T3;
DROP V4;
DROP V1290;

cohab_bad = cohabw-cohabh;

if cohab_bad=-1 then cohab_bad_h=1; else cohab_bad_h=0;
if cohab_bad=1 then cohab_bad_w=1; else cohab_bad_w=0;

***Create since t-tests came back similar for cohab for the mismatched***;
if cohabw=1 or cohabh=1 then cohab=1; else cohab=0;

run;

*****
Convert Missing to -99 for MPLUS file
*****;

DATA out.mm_diss_mplusmiss;
    SET out.mm_diss_working_6;
    ARRAY change _NUMERIC_;
    DO OVER change;
        IF change=. THEN change=-99;
    END;
RUN;

*****
*EXPORT TO EXCEL DOCUMENT TO GET RID OF VARIABLE NAMES LINE (OPEN, DELETE
FIRST LINE, SAVE AS CSV FILE)*
*****;
PROC EXPORT OUTFILE= 'E:\Dropbox\Research\1. Dissertation\Proposal\3. MM -
APIM\Data\Diss_SEM'
/* 'C:\Users\drlawson\Dropbox\Research\1. Dissertation\Proposal\3. MM -
APIM\Data\Diss_APIM_SEM' */

data=out.mm_diss_mplusmiss DBMS=xlsx REPLACE ;
run;

*****
IMPORT Back from Excel (if necessary...code is here just in case)
*****;
PROC IMPORT DATAFILE = 'C:\Users\delawson\Dropbox\Research\1. Dissertation\3.
MM - APIM\Data\Diss_APIM_SEM'
DBMS=xlsx REPLACE OUT = out.mm_diss_working_3;
RUN;

*****
END OF DATASTEP
*****;

*****
Export for MPLUS - NOT USING...DID IT VIA EXCEL ABOVE
*****;

```



```

PROC EXPORT DATA=out.mm_diss_mplusmiss OUTFILE=
'C:\Users\delawson\Dropbox\Research\1. Dissertation\3. MM -
APIM\Data\Diss_APIM_SEM.dat'
DBMS=DLM REPLACE ; putnames=no;
RUN;
    *use REPLACE only when replacing data file;

Proc freq DATA=out.mm_diss_working_6;
table cohab_bad cohab_bad_h cohab_bad_w;
run;

proc ttest DATA=out.mm_diss_working_6;
where cohabw=1;
class cohab_bad_w;
var inc_w job_w debt_w econwb_w physic_w love_w emote_w abuse_w sayhurtw
hostilew RelSat3w ;
run;

proc ttest DATA=out.mm_diss_working_6;
where cohabh=1;
class cohab_bad_h;
var inc_w job_h debt_h econwb_h physic_h love_h emote_h abuse_h sayhurth
hostileh RelSat3h ;
run;

*****
DESCRIPTIVES
*****;

*APIM PAPER;
Proc Freq data=out.mm_diss_working_6;
table inc_w job_w debt_w
inc_h job_h debt_h
White_w hsed_w sced_w colled_w kids_w
White_h hsed_h sced_h colled_h kids_h covmar;
run;

Proc Means data=out.mm_diss_working_6;
Var
econwb_w econwb_h
physic_w love_w emote_w
physic_h love_h emote_h
unlove_w sayhurtw hostilew
unlove_h sayhurth hostileh
RelSat3W
RelSat3H
Age_w DurateW
Age_h DurateH ;
run;

Proc Means data=out.mm_diss_working_6;
Var
econwb_w econwb_h
physic_w love_w emote_w;

```

```

run;

Proc Freq data=out.mm_diss_working_6;
Table
econwb_w econwb_h
physic_w love_w emote_w;
run;

*LGCA PAPER;
Proc Freq data=out.mm_diss_working_6;
table covmar inc_w debt_w
inc_h debt_h
White_w hsed_w sced_w colled_w kids_w cohabw
White_h hsed_h sced_h colled_h kids_h cohabh;
run;

Proc Means data=out.mm_diss_working_6;
Var
RelSat1W RelSat2W RelSat3W
RelSat1H RelSat2H RelSat3H
econwb_w econwb_h
Age_w DurateW
Age_h DurateH ;
run;

Proc sort DATA=out.mm_diss_working_6;
by cohab;
run;

PROC CORR DATA=out.mm_diss_working_6;
by cohab;
VAR RelSat1W Relsat1H Relsat2W Relsat2H RelSat3W RelSat3h inc_w inc_h debt_w
debt_h econwb_w econwb_h;
RUN;

*****
Partial Correlations for APIM paper - partial for econ_Wb
*****;
PROC CORR DATA=out.mm_diss_working_6;
VAR abuse_w;
PARTIAL econwb_w econwb_h;
RUN;

PROC CORR DATA=out.mm_diss_working_6;
VAR econwb_w econwb_h;
RUN;

DATA Out.mm_diss_working_7;
SET Out.mm_diss_working_6;

W_Warm= (physic_w + love_w + emote_w)/3;
H_Warm= (physic_h + love_h + emote_h)/3;

W_Conflict= (unlove_w + sayhurtw + hostilew)/3;
H_Conflict= (unlove_h + sayhurth + hostileh)/3;

```

```

run;

proc means data=Out.mm_diss_working_7;
var w_warm H_warm W_Conflict h_Conflict;
run;

****APIM Table 2 (correlations)*****;

proc corr data=Out.mm_diss_working_7;
where cohab=0;
var RelSat3W RelSat3H w_warm H_warm W_Conflict h_Conflict econwb_w econwb_h
inc_w inc_h job_w job_h debt_w debt_h
White_w White_h hsed_w hsed_h sced_w sced_h colled_w colled_h kids_w kids_h
covmar
Age_w Age_h DurateW DurateH ;
run;

****APIM Table 3 (partial correlations)*****;

*T0 to T1*;
PROC CORR DATA=out.mm_diss_working_7;
where cohab=0;
VAR econwb_w econwb_h;
PARTIAL inc_w inc_h job_w job_h debt_w debt_h;
RUN;

PROC CORR DATA=out.mm_diss_working_7;
where cohab=1;
VAR econwb_w econwb_h;
PARTIAL inc_w inc_h job_w job_h debt_w debt_h;
RUN;

*T1 to T2a*;
PROC CORR DATA=out.mm_diss_working_7;
where cohab=0;
VAR W_Warm H_Warm;
PARTIAL econwb_w econwb_h;
RUN;

PROC CORR DATA=out.mm_diss_working_7;
where cohab=1;
VAR W_Warm H_Warm;
PARTIAL econwb_w econwb_h;
RUN;

*T1 to T2b*;
PROC CORR DATA=out.mm_diss_working_7;
where cohab=0;
VAR W_Conflict H_Conflict;
PARTIAL econwb_w econwb_h;
RUN;

PROC CORR DATA=out.mm_diss_working_7;
where cohab=1;
VAR W_Conflict H_Conflict;
PARTIAL econwb_w econwb_h;
RUN;

```

```

*T2 to T3*;
PROC CORR DATA=out.mm_diss_working_7;
where cohab=0;
VAR RelSat3W RelSat3H;
PARTIAL W_Warm H_Warm W_Conflict H_Conflict;
RUN;

PROC CORR DATA=out.mm_diss_working_7;
where cohab=1;
VAR RelSat3W RelSat3H;
PARTIAL W_Warm H_Warm W_Conflict H_Conflict;
RUN;

```