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EFFECTS OF CHOICE ORIENTATION AND CONSENSUAL NON-MONOGAMY ON RELATIONSHIP QUALITY

by

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TABLE OF CONTENTS

ABSTRACT.. iv

CHAPTER

I. INTRODUCTION........……….…………........…………………………………………1

II. REVIEW OF THE LITERATURE………………………..……………………….…..……6

What is Consensual Non-Monogamy?……………………………..........…………6

Comparing Monogamy and Consensual Non-Monogamy……………………..…….13

Personality Differences of Those Who Engage in CNM Relationships...........................43

Defining Relationship Quality..46

The Paradox of Choice and The Maximization Paradox..51

Factors Influencing Choice Orientation...58

The Purpose of the Current Study...60

III. METHOD 63

Participants...63

Group Differences..64

Measures..66

Procedure...70

IV. RESULTS 73

Preliminary Analyses………………………………………………………………….73

Description of Statistical Analyses……………………..………………………………76

Measurement Model.……………………………………………………………………77

Structural Model.…………………………………………………..………………80

V. DISCUSSION..83

Measurement Model Discussion………………. ………………………………………83

Main Analysis Discussion………………. ……………………………………………...86

Limitations……………………………………………………………………………….91

Clinical Implications…….………………. ……………………………………………...97

Future Research…….………………. ………………………………………...…...98

Conclusion…….………………. ………………………………………...………101

REFERENCES………………………..102

APPENDICES……………….............……………………………………………….......125

LIST OF TABLES

Table

1. Participant Demographics and Group Differences..65
2. Means and Standard Deviations for All Measures by Whole Sample and Relationship Type...74
3. Correlations Among Key Study Variables for Whole Sample and by Relationship Type...75
4. Goodness of Fit Statistics for the Estimated Measurement Models……………………..78
5. Coefficient Paths in the Measurement Among Key Study Variables for all Whole Sample.. 79
6. Summary of Invariance Fit Statistics for the Relationship Type Multiple Group Analyses……………………………………………………………….79
7. Goodness of Fit Statistics for the Estimated Structural Models…………………………81
8. Coefficient and Regression Paths in the Structural Among Key Study Variables for the Whole Sample………………………………………………………………………….82

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ABSTRACT

Consensual non-monogamy (CNM) is a style of sexual or romantic relationship that consensually includes more than two people. Despite a notable prevalence of CNM relationships in the United States, there is relatively little research on this population. While previous research generally finds similar levels of relationship quality to that of monogamist relationships, those in CNM relationships experience notable stigma and are an understudied population. The current study used the Maximization Paradox (Dar-Nimrod, Rawn, Lehman, & Schwartz, 2009) to investigate whether individual differences in choice orientation might impact relationship quality differently in CNM and monogamist relationships. Specifically, it investigated whether maximizers, or those who understand the goal of decision-making as choosing the best option, through a strategy of alternative search, might not have reduced relationship quality when in engaged in CNM as opposed to monogamist relationships. Data was collected online through a survey format. Results did not find evidence to suggest that maximizing predicted lower relationship quality and did not suggest that relationship type would moderate this relationship. Findings suggest that both monogamous and CNM relationship show high levels of relationship quality and that the tendency to maximize does relate to relationship quality for either relationship type. Potential issues with maximization measurement may explain these results and recommendation for future research are discussed.

CHAPTER I

INTRODUCTION

The assumption that romantic relationships are meant to be only between two individuals is both ubiquitous and relatively unquestioned when studying romance, love, sex, and relationships. In fact, many scales and theories related to romantic relationships make the assumption that romance is between just two people [e.g., the Dyadic Adjustment Scale (Spanier, 1976); Emotion Focused Couples Therapy (Johnson & Greenberg, 1985)]. However, for many individuals, romance, love, sex, and relationships are not limited to one partner.

Consensual non-monogamy (CNM) is a style of romantic or sexual relationship that consensually includes more than two people in a sexual or romantic relationship and tends to be further segmented into three main relationship types: swinging, open, and polyamorous relationships (Brewster et al., 2017; Conley, Moors, Ziegler, Matsick, & Rubin, 2013). While the lay perception of these types of relationships is generally poor (Burris, 2013; Conley, Ziegler, Moors, & Rubin, 2013; Grunt-Mejer & Campbell, 2015; Matsick, Hutzler, Giuliano, Herselman, & Johnson, 2015) research has shown that CNM relationships are no less viable than monogamous relationships (Conley, Matsick, Moors, & Ziegler, 2017; Cox II, Fleckenstein, & Bergstrand, 2012; Fleckenstein & Cox, 2014; Morrison, Beaulieu, Brockman, & Beaglaoich, 2013; Rubel & Bogaert, 2015; Séguin et al., 2016). Nevertheless, those in CNM style relationships experience significant stigma (Conley, Moors, Matsick, & Ziegler, 2013; Cox II, Fleckenstein, & Bergstrand, 2012; Nearing, 2000). Further, this stigmatized view is often held by not just the general population, but also among mental health professionals (Finn, Tunariu, & Lee, 2012; Knapp, 1975).

Despite this stigma, CNM relationships are more common than one often thinks, with an estimated of 4-5% of people in CNM relationships at the current time (Conley, Ziegler, Moors, Matsick, & Valentine, 2012), and as many as 21% of people endorsing being in a CNM relationship at some point in their lives (Haupert, Gesselman, Moors, Fisher, & Garcia, 2016). Further, it is likely that this style of relationship will become more prevalent or more people will disclose their relationship status, as recent research has shown an increased interest in CNM type relationships (Moore, 2016; Moors, 2016). Unfortunately, despite the rate of CNM relationships being as high or higher than other frequently sexually marginalized groups, such as the LGBT populations (Gates, 2017), comparatively there is significantly less research and understanding about this relationship minority population and their relationship health. Therefore, the current study hopes to offer a new perspective and direction to help better understand this unique population.

One theoretical framework that may be applicable to the CNM population and relationship quality is a theory of choice first proposed by Simon (1955) and then expanded upon by Schwartz (2000). This theory, termed the Maximization Paradox (Dar-Nimrod, Rawn, Lehman, & Schwartz, 2009), highlights the paradox of choice in that while individuals often perceive more choice as beneficial, in reality greater choice tends to lead toward dissatisfaction and decrease wellbeing. Schwartz et al. (2002) proposed that there are individual differences in the way that people go about making choices that lead them to be more or less prone to experiencing dissatisfaction and decreased wellbeing with associated choices. On one side, there are those who seek out the "best" option and tend to experience increased dissatisfaction from decisions. These individuals and their choice orientation are termed "maximizers." On the other side, there are those who tend to select options that are "good enough" or satisfy some given threshold, termed “satisficers.” As expected, Schwartz and colleagues (2002) found that maximizers reported significantly less life satisfaction, optimism, and self-esteem, and significantly more regret, and negative social comparison than did satisficers. Moreover, other researchers have found similar negative associations with maximizing individuals (Parker, Bruine de Bruin, & Fischhoff, 2007; Roets, Schwartz, & Guan, 2012), including on relationship satisfaction (Mikkelson & Pauley, 2013). However, other researchers have found benefits of a maximizing choice orientation. For example, maximizers have been shown to achieve objectively better standards in terms of starting salaries for job placements, yet still feel more dissatisfied with their jobs than satisficers (Iyengar, Wells, & Schwartz, 2006).

Further, founders of this maximization theory believe the relationship between maximizing and satisficing may be context dependent (Cheek & Schwartz, 2016). For instance, one study found that maximizers were more satisfied than satisficers after making a reversible decision, as opposed to an irreversible decision (Shiner, 2015). This study showcases that the relationship between maximization and satisfaction might not be completely understood and could differ in contexts that allow multiple choices to be made. For the current study, this finding calls into question whether maximizers might find more satisfaction in a type of relationship that allows multiple romantic partner choices to be made, a CNM style of relationship. In other words, while monogamous relationships assume a norm of choosing one life partner, which is presented as an irreversible choice, a CNM relationship allows for multiple romantic or sexual partners, which is arguably closer in nature to being a reversible choice. Therefore, it could be argued that maximizers who desire greater freedom of choice, may find greater satisfaction in a relationship type that allows continual, consensual, relationship choices to be made. For a maximizer, being in a relationship that allows additional romantic partner choices could allow a maximizer to commit more readily and may allow them to feel more comfortable in their relationship because they no longer have to worry about choosing “the best” partner as an initial choice.

Grounded in the research that CNM relationships are no less healthy and viable than monogamous relationships (Conley et al., 2017; Rubel & Bogaert, 2015; Séguin et al., 2016), the current study investigates how choice orientation (or the tendency to maximize) may interact with different forms of relationships (CNM and monogamous) to affect level of relationship quality. To do so, the current study first aimed to replicate the finding of another study that showed maximizers to have lower levels of relationship quality than satisficers in general (Mikkelson & Pauley, 2013). Then, the relationship between choice orientation and relationship quality was tested by relationship type. Specifically, the current study investigated whether maximizing might predict different (higher or similar) levels of relationship quality for those in CNM relationships compared to those in monogamous relationships.

A better understanding of this linking between relationship style and choice orientation could be beneficial to both the lay community and mental health professionals. For instance, those who find themselves struggling with trying to maximize the process of finding a mate, may find solace in trying a style of relationship that allows them to have the benefits of being in a relationship without having to give up their propensity to continue searching. Further, this investigation would be helpful for mental health professionals working with individuals and couples considering or actively involved in CNM relationships. While CNM style relationships are unlikely to be a solution for all couples, it may be that some individuals would benefit from this option, yet there is little empirical evidence to guide this decision-making process. The purpose of this study is to further develop the empirical evidence to help guide the decision-making process for considering this healthy, but stigmatized relationship type.

CHAPTER II

REVIEW OF THE LITERATURE

The current study aims to shed light on the understudied CNM population and investigate whether maximization, that is typically believed to result in negative wellbeing, may benefit from a CNM-style of relationship. This empirical investigation could provide insight and offer some guidance for those considering a CNM-style relationship. The following review provides an overview of the research that has been conducted on CNM relationships in order to develop a better understanding of this population and the issues that they face. The review begins by providing demographics about the CNM population, and then moves into a discussion of the challenges this population faces including the perceived benefits of monogamy, as well as CNM stigma and marginalization. This review then highlights noted differences, or the lack thereof, between CNM and monogamous relationships. Following this, the review discusses constructs of interest including relationship quality, the theoretical framework of the choice orientation, and additional relevant variables.

What is Consensual Non-Monogamy?

Consensual non-monogamy (CNM) is a relationship formation in which partners have a consensual agreement that it is acceptable to have more than one sexual and/or romantic relationship at the same time (Brewster et al., 2017; Conley et al., 2017; Conley et al., 2013; Hutzler et al., 2015). Many different formations of CNM exist, however, research on CNM tends to focus on three main group distinctions: polyamorous (poly), open, and swinging relationships (Brewster et al., 2017; Conley et al., 2017; Conley et al., 2013; Hutzler et al., 2015).

Although definitions for these three CNM groups can vary, there are some consistencies in the literature. Polyamorous relationships are relationships in which people may sustain multiple loving or committed relationships, whereas open relationships consist of a primary couple in which one or both partners may pursue outside relationships based on implicitly or explicitly negotiated arrangements. Distinctly, swinging relationships consist of a primary couple that engages sexually with others, most typically at designated social events (Brewster et al., 2017; Conley et al., 2017; Hutzler et al., 2015). Nevertheless, studies range in how these relationships are defined. For instance, Brewster et al. (2017) highlights that the polyamorous formation is meant as a more stable form of relationship (as opposed to open and swinging) that emphasizes honest communication between all partners involved, whereas Conley et al. (2017) simply defines polyamorous by having multiple loving and committed relationships. Moreover, Brewster et al. includes that partners in an open relationship may engage in sexual or *romantic* relationships with others, yet Conley and colleagues (2017) emphasize that open relationships are generally expected to only be sexual. Finally, Brewster et al. (2017) emphasizes that participants of swinging relationships are typically married and heterosexual, whereas Conley and colleagues (2017) do not make such a distinction. Such discrepancies between definitions highlights a difficult problem that researchers face when trying to understand the differences between these relationships, especially because research has found significant differences in how these formations relate to relationships satisfaction and commitment (Conley et al., 2017; Klesse, 2006).

One reason for the discrepancy between these two sources is because Brewster et al. (2017) article is a content analysis of all the CNM articles published from 1926 through 2016, and thus seemingly uses the overlap between papers to define such terms. On the other hand, Conley et al. (2017) does not specifically cite other sources, but instead seems to separate the groups so as to make clearer distinctions for research purposes. For instance, based on

Brewster el al.'s (2017) definition it is unclear whether a primary couple in which both partners are romantically engaged with others would fall into polyamorous or open relationship category. Moreover, it would be unclear where to place a committed bisexual couple that only engages in consensual extradyadic sex at specified parties. Therefore, although Brewster el al.'s definitions may be more solidly based in the literature, they may not be more accurate or useful. This is likely because Brewster and colleagues carried forward the definitions that were used by early researchers who had very limited knowledge of CNM group differences.

Nevertheless, Hutzler et al. (2015) seems to offer a balance between these studies by integrating definitions within the existing literature to highlight the distinctions that tend to appear. For instance, open and swinging relationships tend to put more emphasis on emotional intimacy within the primary couple, while polyamory tends to emphasize emotional connections with multiple partners and may not include a sexual component (Hutzler et al., 2015).

Given these equivocal divisions, the current study chose to divide CNM relationships differently. Instead of dividing relationships by swinging, open, and polyamorous, which differ greatly in how they have been defined in the literature, the current study chose to divide CNM relationships into two distinct groups. That is, if a participant has just one *primary* partner, but also engages in other sexual and/or romantic relationships then they would be defined for the purposes of the current study as being in the primary group. This group would include open, swinging, and could possibly include hierarchal polyamorous relationships depending on how the participants chooses to identify their relationship. If a participant has multiple primary partners or understands their partners as equal in their relationship, then they would be defined for the purposes of the study as polyamorous. Nevertheless, Conley and colleague's (2017) definitions of CNM relationships were still utilized as well as some additional options to allow for further inclusiveness for participants trying to identify their relationship (see Appendix A for full description of all relationship description options). The primary and polyamorous designations would then be given on the backend to help with research clarity.

It is also important to note what CNM is not. For instance, polygamy is a related from of non-monogamy that at times is conflated with CNM, yet is distinct from CNM relationships (Barnett, 2013; Brewster et al., 2017; Conley et al., 2017). Polygamy is defined as the practice of marrying multiple spouses and is often a part of a cultural or religious practice (Brooks, 2009). Today, polygamy almost exclusively references polygyny, which includes either one husband and multiple wives, but can also include, polyandry, which is a relationship formation composed of one wife and multiple husbands (Brook, 2009). Polygamy is distinct from CNM relationships, as it is not always clear whether partners in these relationships are able to freely opt in or out (Brooks, 2009). Further, wives may be unable to exercise any control over the addition of new wives by their husbands (Brook, 2009). Therefore, polygamous relationships lack the key defining construct of CNM relationships, consent. Likewise, unlike CNM relationships, polygamous relationships have been linked to a number of problematic outcomes including, but not limited to, increased risk of mental health issues, increased STI risk, increased family violence, and decreased marital satisfaction (Al-Krenawi et al., 2002; Brooks, 2009; Elbedour, Onwuegbuzie, Caridine, & Abu-Saad, 2002).

Prevalence of CNM

Although the most common portrayals of romantic relationships do not often include CNM relationships, CNM relationships may be more common than are immediately obvious. One of the earliest investigations into the prevalence of CNM relationships found that between 15%-26% of a sample of 3,574 couples had “an understanding that allows nonmonogamy under some circumstances” (Blumstein & Schwartz, 1985, p. 585). Further, in another study, 29% of lesbian and 65% of gay couples also indicated this type of agreement (Blumstein & Schwartz, 1985). Rubin, Moors, Matsick, Ziegler, and Conley (2014) conducted two online studies with participants who were romantically engaged and used behavior-related and identity-related CNM items to identify whether participants were in CNM relationships. Of the 2,395 participants from across all 50 states of the U.S., 5.3% indicated being currently engaged in a CNM relationship at the time of the study. This rate is similar to the 4% to 5% rate found by Conley and colleagues (2012) in a number of studies with samples from the U.S. Moreover, T. Conley stated that she has seen a great deal of consistency in the 4% figure even when evaluating relationship style demographics that are not specifically related to relationship research (personal communication, January 30, 2018).

Restricting the sample to only U.S. adults who identified as heterosexual, Thompson, Hart, Stefaniak, and Harvey (2017), found that 1.9% of their 800 participants identified as being in a CNM relationship at the time of the study. Interestingly, a much greater percentage of participants from this study responded that their ideal relationship would be something other than monogamy. For instance, 5.6% of participants reported a “consensually sexually open relationship” as ideal, 1.5% indicated that a “consensually emotionally open relationship” would be ideal, and 7.2% reported that a “consensually sexual and emotional open relationship” would be ideal. Most notably, 15.9% of this heterosexual sample endorsed being in some kind of CNM relationship at some point in their lives.

Further, lifetime rates for CNM relationships may be even higher. In a recent study, Haupert, Gesselman, Fisher, Moors, and Garcia (2017) used a large, national sample of single individuals from the U.S. from 2013 and 2014 to identify how many currently single adults had ever participated in a CNM relationship. For this study, CNM was defined broadly by asking participants “if they had ever had an open sexual relationship” and then defining “open sexual relationship” as “an agreed-upon, sexually non-exclusive relationship” (Haupert et al., 2017, p. 431). They found that around 21 to 22% of their sample, or approximately 1 in 5 single Americans, had engaged in some form of consensual non-monogamy. However, it is important to note that while the researchers defined 21% as a lifetime prevalence rate, the average age of participants was 41 and their sample included participants as young as 18, which means that a more accurate lifetime rate that includes older adults across the lifespan may be even higher.

Moreover, interest in open and polyamorous relationships appears that it could be growing. A non-empirical poll from YouGov, a site dedicated to social surveying, found that 17% of Americans under age 45 reported having had sexual contact with other people with the consent of their partner compared to only 3% of those over age 65 (Moore, 2016). However, these statistics should be viewed critically, given they come from a non-empirical source and may have significant limitations. For instance, no demographics are given for the sample, which means samples of younger and older adults may not be equitable. Still, given the dearth of research evaluating prevalence of CNM relationships it is important to consider this finding.

Moreover, these findings appear to be in-line with other empirical research. For instance, Moors (2017) used Google Trends to assess the rate at which Americans’ sought out information related to CNM relationships across a 10-year period from 2006– 2015. This form of analysis allowed Moors to determine how many searches for a given set of keywords were searched for on any Google search engine (including searches in incognito or privacy mode, in which browsing history and Web cache are disabled) over a set period of time. Moors found that key words related to polyamory and open relationships increased over this 10 year time period compared to other key words from popular searches (i.e. gmail, Facebook, quotes, AOL, YouTube, etc), which suggests that the pattern of increase is unique rather than by chance. Interestingly, key words related to swinging saw a decrease compared to the other popular searches, but no explanation was offered for this finding. This data is especially interesting, as unlike most other study designs, this form of data collection allows for analysis of data that is relatively untainted by laboratory settings since it comes from the participant's natural setting. Previous research has shown that people tend to answer and respond to questions asking about sexual desire, or stigmatized topics in a manner that society would view favorably (Fisher, 1993; Grimm, 2010). However, since this data comes from a source in which participants are arguably unaware of being studied, it is likely that participants are searching for what they are truly interested in, rather than what they deem socially acceptable.

Further, demographic factors are also important to consider when discussing prevalence rates of CNM. Recent studies have found few differences in prevalence rates based on various demographic factors *between* CNM and monogamous groups. (Haupert et al., 2017; Rubel & Bogart, 2015). Specifically, Haupert and colleagues (2017), in their nationally representative sample of singles, found no difference between the groups prevalence rates on such demographic factors as age, education level, income, religion, region, political affiliation, and race.

However, these researchers did find differences for gender and sexual orientation between CNM and monogamous groups. More specifically, men and participants identifying as gay, lesbian, or bisexual endorsed having had a CNM relationship at a higher rate than women or heterosexuals. This finding that men and sexual minorities engaged in CNM at a higher rate is also consistent with other research (Blumstein & Schwartz, 1985; Page, 2004; Parsons, Starks, Gamarel, & Grov, 2012; Séguin et al., 2016). Nevertheless, this data does not suggest that CNM is uncommon among heterosexuals, as about 85% of those of who endorsed CNM in the Haupert et al. (2017) study identified as heterosexual. Further, Séguin et al. (2016) found that in a heterosexual Canadian sample of those who indicated being in an open relationship, 39.2% identified as heterosexual and of those in a polyamorous relationship 35.2% identified as heterosexual. Thus, these findings show that a heterosexual orientation is not uncommon in CNM relationships, but that compared to monogamy, there is a greater prevalence of participation among gay and bisexual populations.

Altogether, this data suggests that CNM is a somewhat common phenomenon in the U.S. and based on increased interest, may become more common in the future. Further, the demographic makeup of these those who participant in CNM appears relatively similar to those who practice monogamy, except that men and sexual minorities appear to engage in CNM relationships at a somewhat higher rate. The following section further compares possible differences between these two populations.

Comparing Monogamy and Consensual Non-monogamy

It is first important to discuss the research related to CNM as compared to monogamy to better understand the context and general perceptions of CNM relationships. Common myths and misperceptions about CNM relationships are described, complemented by a review of empirical literature that largely shows both CNM and monogamy are healthy and viable relationship types (Conley et al., 2017; Rubel & Bogaert, 2015; Séguin et al., 2016).

Perceptions

Although, the prevalence of CNM relationships may be greater than imagined, monogamous relationships still dominate the common perspective of romance. This ubiquitous view of monogamy may not only have led to the stigmatization of CNM relationships, but also to an overly positive understanding of monogamy. However, it is important to first evaluate what monogamy is and is not. Conley and colleagues (2012) discussed the lack of consistency when talking about monogamy. For instance, Conley et al. (2012) pointed out that monogamy in biological terms is the idea that a pair is bonded for life, with no other extradyadic sexual encounters. By this definition, humans would be expected to have only one sexual partner for their entire lives to be considered monogamous. However, among humans in Western cultures, monogamy more likely refers to the agreement of being with only one partner at a time or "serial monogamy" in which an individual has a series of relationships over time in which they are with only one partner (Bolton, McKay, & Schneider, 2010; Conley et al., 2012). This cultural understanding of monogamy is what will be used for the remainder of the text unless otherwise stated.

Conley et al. (2013) conducted a study that thoroughly investigated perceptions of both monogamy and CNM. In their multipart study, Conley et al. (2013) hypothesized that a halo effect, (or a heuristic that leads people to make globally positive assumptions based on a single attribute) surrounds monogamy facilitating a reciprocal stigma to be attributed to CNM relationships. In other words, Conley and colleagues (2013 hypothesized that since monogamy is seen as the standard to which all other relationships are compared, monogamy is not only unlikely to generate stigma, but also promote a halo effect wherein a couple that is portrayed as monogamous would be more likely to be viewed in a favorable light even on measures arbitrary to relationship maintenance.

In the first study, Conley et al. (2013) began by asking participants the open-ended question "what are the benefits of monogamy" and then thematically coding 189 responses from participants recruited online. They found that participant responses clustered into eight major perceived benefits, which they coded as commitment, health, trust, meaningfulness, passion, sex benefits, morality, and family benefits. However, as will be shown later, these perceived benefits of monogamy can be inaccurate and are not limited to just monogamous relationships.

In their second study, Conley and colleagues used the themes from their first study to generate relationship relevant traits (e.g. “promotes trust,” “provides stability to those involved in the relationship”) and relationship arbitrary traits (e.g. “promotes paying taxes on time” “promotes flossing teeth daily”), and then asked participants to rate partners who were depicted as being in either a monogamous or a CNM relationship. Using data from an online sample of 1,101 participants, they found that participants who were asked to rate the CNM couple gave significantly worse evaluations on both relationship and arbitrary traits. Further, additional analysis found that this effect was maintained even among CNM participants, demonstrating internalized stigma is present for those CNM relationships.

In Study three, participants read a vignette depicting either a monogamous or CNM relationship and were then asked to rate, on a 6-point Likert scale, the same relationship relevant and relationship arbitrary traits, plus new sexual satisfaction items (e.g. “less exciting sex – more exciting sex,” “more intimate sex – less intimate sex”). Again, results based on a sample of 132 participants from online sources indicated that the monogamous couple was rated as superior to the CNM couple on almost all relationship relevant traits and by a large effect, $\eta_2 =.78$. Further, participants in Study three also viewed the monogamous couple more positively on arbitrary qualities compared to the CNM relationship. The only item that the CNM couple was rated more highly on was likelihood to use condoms. Conley and colleagues hypothesized that while this finding may at first appear to be a more favorable perception of CNM relationships, it may reflect a finding by Conley and Rabinowitz (2009), who found that couples who use condoms are perceived to have lower-quality relationships than couples who do not.

Finally, in their last study, Conley and colleagues chose to use the same study design as Study 3 to address any lingering concerns. Specifically, they examined traits associated with relationships in general, rather than traits associated with monogamy, and a used a greater breadth of arbitrary traits to more fully evaluate the perceived positive and negative associations of monogamy and CNM. Similar to the past studies, this data from 269 participants who were recruited online showed that the monogamous couple was perceived more favorably on almost all relationship-relevant traits with an effect size of $\eta_2 = .39$. The one exception was that participants rated the CNM relationship as less jealous than the monogamous couple, thus showing CNM relationship may still be perceived positively on some relational aspects despite being perceived more negatively as a whole. Study 4 also provided stronger evidence for the halo effect being applied to monogamy, as the greater breadth of arbitrary traits in Study 4 showed a much larger effect, $\eta_2 = .46$ for participants rating the monogamous couple more favorably, than Study 2 ($\eta_2 = .09$), or study 3 ($\eta_2 = 0.10$).

Three other studies used similar methodologies to assess perceptions of those in CNM relationships. Grunt-Mejer and Campbell (2015) asked participants to rate depictions of monogamy, polyamory, open relationship, swinging, and cheating relationships on items related to relationship satisfaction, cognitive ability, and morality. Unsurprisingly, they found that the monogamous couple was perceived most favorably on all measures. However, unlike Conley et al.’s (2013) study, Grunt-Mejer and Campbell also showed differences between CNM group types and a cheating monogamous couple. They found that the polyamorous couple was rated second most favorably, the open and swinging couples were rated equally, and the cheating couple was rated least favorably on all of the measures. Further, the pattern of results was similar across groups, in that for each relationship type, relationship satisfaction was rated highest, then morality, and then cognitive ability. The only exception to this pattern was the cheating couple, who was rated lowest in morality and highest in cognitive ability (but still rated below all other groups).

Furthering this line of research, Matsick et al. (2013) found mostly consistent results when comparing perceptions of polyamorous, swinging, and open relationships when using a similar methodology to Grunt-Mejier and Campbell (2015). Specifically, they found all of the CNM relationships were perceived in slightly negative terms, although this finding should be tempered as no monogamous group was used as a control. Slightly in contrast to Grunt-Mejier and Campbell (2015), Matsick et al. found that swingers were overwhelmingly perceived in a more negative light than individuals in polyamorous relationships and that people in open relationships were perceived as somewhat more favorable than people in swinging relationships. However, it should be noted that the characteristics being rated were not the same in both studies. For instance, Matsick et al. found that participants viewed individuals in polyamorous relationships most favorably with higher ratings on items that related to maturity, responsibility and comfort, while swingers were associated significantly more often with the most negative descriptors, such as being unconventional, radical, and creepy. Matsick and colleagues suggest that the rating of polyamory over that of swinging and open relationships suggests that sexual relations in the absence of emotions is a greater violation of social norms than the understanding of only having one love, and those who engage in sex without love are likely to be judged most harshly.

Such a view may be corroborated by a qualitative study by Kleese (2006), who conducted in-depth interviews with those who identified as polyamorous. Kleese found a theme that some participants expressed a negative attitude toward swingers by specifically denouncing swingers as “promiscuous” rather than seeking meaningful, emotional relationships. These views point to a possible further stigma for swingers, even within the CNM community. However, this negative view was not unanimous and other polyamorous individuals indicated a more open, accepting and inclusive attitude toward swinging.

Other researchers have also found that polyamorous relationships were viewed more positively than relationships that focus solely on extradyadic sex (i.e., open relationships). For example, Cohen (2016) asked participants to read a short vignette about one of three types of relationships (polyamorous, open, or monogamous) and then rate the couple depicted in the vignette on how satisfied the couple is with their relationship. Participants who had read about the polyamorous couple gave higher satisfaction ratings compared to those that had read about the open couple. Nevertheless, those who read about the monogamous couple still gave the monogamous couple higher satisfaction ratings than either of the CNM (polyamorous and open) depictions. This research further highlights bias against, and between CNM relationships, as all the vignette couples were described as having the same level of relationship satisfaction, yet the CNM couples were perceived as experiencing less relationship satisfaction. It is also important to note that recent studies have shown no significant differences in relationship satisfaction between CNM and monogamous couples, and polyamorous couples have even been show to exhibit greater relationship satisfaction than monogamous couples (Conley et al., 2017).

However, Thompson, Hart, Stefaniak, and Harvey (2017) discovered somewhat contradictory perceptions of CNM relationships when investigating perceptions of a monogamous partner suggesting a transition to various types of CNM relationships. In this study, participants read a vignette and were asked to judge someone in a monogamous relationship who suggested either a polyamorous relationship, open relationship, swinging relationship, group sex, or role-playing to their partner. Role playing, defined as taking on specific roles during sexual activity, acted as the control variable to represent monogamy. Again, participants were asked to rate the initiator on cognitive abilities, morality, and relationship satisfaction. Consistent with the previous studies (Conley et al., 2013; Grunt-Mejer & Campbell, 2015), those in the vignettes who suggested the monogamous behavior, role-playing, were judged most favorably of all relationship types across all measures. However, unlike previous studies, researchers found that initiators of swinging and group sex [which some may define as swinging (Conley et al., 2017)] were judged more favorably than initiators of open and polyamorous relationships. Thompson et al. (2017) suggested that this difference may be due to the fact that an initiation of polyamory violates both emotional and sexual exclusivity of monogamy, while initiation of swinging only violates sexual exclusivity.

Together, these studies provide initial evidence that those in CNM relationships and initiators of CNM relationships are likely to be perceived in a negative light. Further, studies suggest that perceptions vary by the type of CNM relationship. Nevertheless, if a general negative perception does exist it may offer some context to the stigmatization that individuals in CNM relationships face, which will be explored in the next section.

Stigma and Marginalization

Given that monogamy appears to experience a halo effect while CNM tends to be viewed in a negative light (Conley et al., 2013), it is unsurprising that stigma and marginalization are common experiences for those in CNM relationships. Unfortunately, few empirical quantitative studies exist providing prevalence rates and a clear description of the stigma and marginalization. Nevertheless, those within the CNM community have recognized this absence and have tried give a clearer picture of the experiences of this population. One such case is a survey commissioned by Loving More, a polyamorous magazine and support network, and the National Coalition for Sexual Freedom (NCSF) in 2012 (Cox II, Fleckenstein, & Bergstrand, 2012). This internet-based survey sampled over 4,000 participants who self-identified as polyamorous (poly) and was the largest survey of self-identified poly individuals to date. This data was then compared to the National Opinion Research Center (NORC) at the University of Chicago biennial General Social Survey (GSS), which is a survey that monitors societal change in the U.S. since 1972. When poly participants were asked specifically about whether they had experienced discrimination in the past 10 years for being polyamorous, 28.5% endorsed experiencing discrimination. However, there are significant limitations to this data that should be acknowledged. First, the GSS sample contained data from participants over the course of many years, while the poly participant data was only collected over the course of one year. Thus, the time period in which the data was collected could have an impact on what participants are likely to report. Further, the poly group was self-selected, and could be more or less motivated to report discrimination than a participant in a general survey.

The owner of the Loving More magazine also commissioned a survey of 1000 polyamorists in 2000 as an attempt to learn more about the demographic factors of this under researched community (Nearing, 2000). This survey found that 43% of polyamorous individuals reported experiences with discrimination related to their relationship and the majority (93%) felt that there was at least some prejudice against their lifestyle. However, these findings have significant limitations, as it is unclear how these poly individuals were selected, and whether they are representative of the population as a whole. Nevertheless, these surveys do suggest that at least some portion of those in CNM relationships do experience stigma and marginalization.

Further, it is likely that those in CNM relationships hide their relationships or at least do not openly disclose their relationships in an effort to avoid discrimination and stigmatization. This speculation is tentatively corroborated by initial qualitative data. For instance, Henrich and Trawinski (2016) found that of the twelve polyamorous couples they interviewed, eleven discussed the challenge of disclosing their identity to family, friends, and community.

Further, nine of the 12 participants in Henrich and Trawinski (2016) study reported struggling with experiences of marginalization that were directly related to their polyamorous relationships, which suggests that revealing a poly or CNM relationship may not be beneficial. Moreover, this marginalization can be significant, as multiple participants shared stories of outright rejection by friends and family members when their poly-lifestyles were revealed. Further, participants described significant real-life consequences of the poly identity, such as discrimination and a lack of legal protections related to shared property, inheritance, child custody, and hospital visitations.

One reason for the stigmatization of CNM relationships is that they may still be perceived as a form of infidelity. For instance, Burris (2014) conducted an experimental investigation of people’s perceptions of vignette characters who desired to commit a form of infidelity or start a polyamorous relationship. The infidelity vignettes described either a character that wanted a love affair (defined as one no longer loving current partner) or a sexual fling (defined as causal sex while in a committed relationship). It is important to note that across all vignettes descriptions, no action was taken, only a desire to act was depicted. Participants were asked to rate the main vignette character on dimensions of ‘good–bad’, ‘like–dislike’ and ‘approve–disapprove.’ Burris found that the main vignette character, regardless of condition (desire for polyamory, a sexual fling, or a love affair), was evaluated negatively (as assessed by averaged scores for all three conditions falling past the average scale midpoint). Further, they found that participant perceptions did not differ significantly across the three conditions. Thus, participants did not rate the main character in the polyamorous relationship scenario higher or lower than the main character in the infidelity scenarios.

This study also asked a portion of participants to take the perspective of the main character. In other words, roughly half the participants received an additional instruction to try to put him or herself in the place of the main vignette character, after reading the vignette. When data from only these participants was analyzed, the main character who desired a sexual fling was rated significantly less harshly than either of the other conditions. Burris (2014) suggested that participants were more able to relate to the sexual fling condition and thus be more lenient in their judgment. This may suggest that if polyamory were to become more visible, relatable or better understood, stigma may decrease. Consistent with this suggestion, other research has shown that having familiarity with polyamory, either by knowing someone who is polyamorous or simply by having previous knowledge about the term polyamory, is linked to having more positive attitudes toward polyamory (Hutzler et al., 2015).

It is also important to bring forward contrary findings of a previously discussed article that reported that a depiction of a cheating couple was perceived less favorably than depictions of polyamorous, open, and swinging couples (Grunt-Mejer & Campbell, 2015). While participants in the Burris (2014) study on the whole did not rate desiring polyamory as different than desiring infidelity, Grunt-Mejer and Campbell's (2015) findings suggest that participants do differentiate the nuance between CNM and infidelity in some ways, as participants rated vignette characters who committed infidelity significantly lower on measures of relationship satisfaction, morality, and cognitive abilities. However, Grunt-Mejer and Campbell (2015) described vignette characters as *engaging* in infidelity, while Burris's (2014) vignettes only describe a character's desire to *engage*.

Nevertheless, even Burris (2014) found some differences between perceptions of the main character when participants were asked to rate personality factors and the character's state of mind, rather than just overall evaluative judgements. For instance, Burris also asked participants to rate the main vignette character who was depicted as wanting either a polyamorous relationship, love affair, or sexual fling, on 12 bipolar items depicting personality and character judgements. From this analysis, they found the character in the polyamorous condition was rated as significantly more needy, confused and more likely 'fooling themselves', compared to both of the other infidelity conditions, and more loving, warm and sensitive compared to the character desiring a love affair. However, other personality and character ratings did not differ between the conditions (kindness, selfishness, weakness, maturity, abnormality, mental health, impulsiveness and integrity). Therefore, Burris suggested that participants were able to see some nuance in how polyamory is viewed compared to infidelity. However, without further replication and empirical analysis of these findings, it is not possible to draw any conclusions about what these potential differences in perception may mean for stigma related to those in CNM relationships.

Effects of Stigma. This discussion provides initial evidence that the CNM population is a stigmatized group. However, what might not be clear is how this stigma may affect those in these types of relationships. Specific to relational stigma, Lehmiller (2012) found that those who experienced more disapproval of their romantic relationships (not limited to CNM), also reported greater symptoms of poor physical health, lower self-esteem, and engagement in riskier health behaviors such as increased cigarette smoking and less frequent condom use. Moreover, Lehmiller and Agnew (2006) compared levels of investment and compensation between marginalized relationships (which included a small number of CNM participants) and those in non-marginalized romantic relationships. The researchers found that marginalization was a significant negative predictor of commitment and that those in marginalized relationships invested significantly less than individuals in non-marginalized relationships.

Additional studies of stigma and mental health have found striking negative effects for stigma. For instance, a systematic review and meta-analysis of internalized mental health stigma found a prominent and robust negative relationship between internalized mental illness stigma and positive variables such as hope, self-esteem, and empowerment, as well as a positive relationship with psychiatric symptom severity and poor treatment adherence (Livingston & Boyd, 2010). Further, another meta-analysis of mental health-related stigma has found that stigma deters help-seeking (Clement et al., 2014). Further, it could be argued that if stigma decreases help-seeking, then it may be likely to result in decreased social support. This is problematic as perceived social support specific to other romantic relationship types (heterosexual, gay and lesbian romantic relationships), predicts more positive mental and physical health outcomes for relationship partners (Blair & Holmberg, 2008).

In conclusion, it appears likely that CNM groups experience stigma, which has been shown to be detrimental to both individual and relationship health. Recent investigations of the nuances in the perception of CNM relationships are beginning to illuminate the reasons for such bias, which may aid in combatting these misconceptions. However, it is important to recognize that health professionals are still a part of the mononormative community and as such are not immune to this bias.

Bias and Stigma in the Mental Health Field

Based on the stigma and marginalization discussed, those in CNM relationships who choose not to disclose their relationships have a clear rationale, as the bias against this group is widespread. Unfortunately, getting competent professional help comes at a further risk and difficulty for this population due in part to this stigma.

To illustrate this point, some of the earliest studies, although now dated, on CNM relationships found a significant bias against CNM relationships by mental health professionals. For instance, in 1975, Knapp analyzed survey data from 190 clinical members of the American Association of Marriage and Family Counselors. Results showed that therapists were most personally approving and professionally supportive of sexually open marriage clients and most disapproving and unsupportive of recreational swinging clients. Thirty-eight percent expressed disapproval for recreational swinging, while a full 14% expressed that they could not feel positively about *any* kind of extra-marital sex. Interestingly, a greater percent (33%) of the counselors expressed a professionally supportive stance for secret marital affairs than for recreational swinging (23%). Moreover, even though counselors were most approving of sexually open marriages, over a third of the respondents believed that a typical person (a non-clinical population) who chose to be involved in a sexually open marriage was likely to be neurotic and have personality disorders. Further, almost one-fifth of the counselors stated this population would be likely to have anti-social personalities. Further, many of the therapists surveyed responded negatively to even being asked about their views on CNM type relationships and some even made abusive statements about the research, the questionnaire, or both.

Additionally, it is noteworthy that Knapp (1975) also reported that nine percent of the counselors stated that they would try to use their professional skills to influence clients to cease their sexually open marriage, and that 17 percent of counselors would do so for clients engaged in recreational swinging.

However, current research does not support that those who engage in CNM relationship are any less mentally fit that those who practice monogamy (Rubel & Bogaert, 2015). Rather, the vast majority of research has found that those in CNM relationships do not significantly differ or show improved ratings compared to monogamous couples on measures of health (Cox, Fleckenstein, & Bergstrand, 2013; Rubel & Bogaert, 2015).

Further, other studies of therapists' perceptions of those in CNM type relationships found similarly negative perceptions. For instance, Hymer and Rubin (1982) asked 57 therapists to describe a typical person who engages in an extramarital sex, a sexually open marriage, and swinging. The majority (n = 51) described negative depictions of those who engage in any of these types of extramarital sex and greatest number of negative depictions were attributed to persons who engaged in swinging (n = 36). Of these 51 therapists, 24% imagined the sexually open marriage client as fearing commitment or intimacy; 15% imagined that these clients were in marriages that were not adequately fulfilling; and 7% imagined that they were having identity problems or being "pseudo-intellectuals." Of the 36 therapists that gave negative depictions of swingers, 25% described them fearing commitment and intimacy; 19.5% described them as having identity problems; 14% described them as narcissistic, borderline, and emotionally dead having regressive wishes, fearing aging, and being impulse-ridden; and 8% described them as being dissatisfied with their primary relationships. Together these finding suggest that some therapists may show active nonsupport for a CNM client's chosen lifestyle.

Although some of this research is dated, therapist bias may not have improved significantly over time. In a recent qualitative study by Henrich and Trawinski (2016), they found that half of their 12 polyamorous participants reported dissatisfactory or negative experiences while working with conventional therapists (therapists who did not identify as having a polyamorous specialty or awareness) while three did not seek out therapy for polyamorous issues. The two most common reasons for the negative experiences were therapists' positive biases toward monogamy and unfamiliarity with polyamorous relationships, which tended to result in either condescension or a lack of therapeutic competence due to lack of CNM knowledge.

More to this point, Finn, Tunariu, and Lee (2012) interviewed 17 United Kingdom counselors identifying as being non-directive and non-pathologizing toward CNM couples. Despite all therapists identifying as CNM-affirmative, the researchers found that many of the therapists' statements did not reflect this sentiment. For instance, one therapist discussed polyamory as misdirected due to excessive sexual desire, and another mentioned that underlying intimacy issues should first be explored before engaging in CNM. These statements demonstrate that even therapists who identify as affirming may still use monogamy as a normative baseline rather than setting up CNM relationship types as equal options to pursue. Nevertheless, it does appear that some improvements have been made, as three participants from the Henrich and Trawinski (2016) study who worked with "polyamory-aware" therapists, reported positive therapeutic experiences, especially when working on polyamorous relationship issues.

In recent years, multiple articles have been published competencies for mental health professionals working with people in CNM relationships (Finn et al., 2012; Girard & Brownlee, 2015; Henrich & Trawinski, 2016; McCoy, Stinson, Ross, & Hjelmstad, 2013). Across these articles, the consistent recommendation is that professionals become educated on the nuances of CNM relationships. One reason is that gaining knowledge and thinking critically about the concept of monogamy has been shown to reduce negative attitudes toward polyamory (Hutzler et al., 2015). Nevertheless, many significant gaps still exist in the literature that could help therapists become more knowledgeable about how to work with CNM relationships, such as personality factors that coincide with greater relationship wellbeing or quality for those in CNM relationships. Furthermore, without information on factors that contribute to relationship success or failure, it is difficult to guide clients and treatment through empirically supported clinical decision making. The current study helps to provide research in this area, by examining one factor that may relate to relationship quality in CNM relationships.

Relational Benefits and Drawbacks

Thus far, research related to perceptions and stigma of CNM have been discussed, but what does the research say about the accuracy of these perceptions? This section gives a thorough overview of what research has found when comparing between samples of CNM and monogamous relationships on various indices of relationship quality.

To the researcher's knowledge, no study has found a significant difference between CNM relationships and monogamous relationships on measures of relationship satisfaction and commitment, but some find differences in intimacy, trust, and passion (Conley et al. 2017; Rubel & Bogaert, 2015; Séguin et al., 2016). For instance, one of the most recent investigations (Conley et al., 2017) examined measures of satisfaction, commitment, passionate love, attitudinal jealousy, behavioral jealousy, and trust, among 1,507 individuals in monogamous relationships and 617 individuals in CNM relationships. They found no significant differences emerged between the two groups on satisfaction, commitment, or passionate love. However, researchers found that jealousy was lower and trust was higher among CNM participants. Further they found significant effect sizes for attitudinal and behavioral jealousy, as well as trust (Cohen's *d* 2.56, .34, and .28, respectively). The researchers explained that attitudinal jealousy was likely skewed because the measure asked participants about jealousy if their partners were to engage in other romances, which is allowed in CNM relationships. However, behavioral jealousy, which only asked about behaviors related to jealousy, was still higher among monogamous participants than CNM participants.

Similarly, Seguin et al. (2016) compared monogamous and CNM (open and polyamorous) participants on measures of relationship quality and equity. They found that all groups reported high levels of quality and equity. Further, relationship quality and equity did not differ significantly across groups.

Further, Rubel and Bogaert (2015) conducted an overview of the research on the CNM population and specifically looked at research related to the psychological well-being and the quality of relationships. When comparing across studies, the overall trend of data suggested that those who engage in CNM relationships generally have similar relationship quality to those who practice monogamy. However, as Rubel and Bogaert (2015) highlight, some studies have found differences between the different CNM group types and monogamy. For instance, one study of gay men found that gay men in open relationships showed lower commitment and trust compared to gay men in monogamous relationships, although they had similar levels of relationship satisfaction (Hoff, Beougher, Chakravarty, Darbes, & Neilands, 2010). However, other researchers found no difference in relationship quality between gay men in open relationships and gay men in monogamous relationships (Blasband & Peplau, 1985; Bricker & Horne, 2007; Kurdek & Schmitt, 1986; LaSala, 2004).

In another study of gay men, researchers found that those in open relationships were less passionate, but not less intimate or committed, than monogamous or “threesome-only” relationships, and further found that participants who broke relationship rules, regardless of relationship type, reported lower overall relationship quality (Hosking, 2013). Hoskings (2013) suggests that, at least for gay men, it is likely not the extradyadic relationships that affect relationship quality, but whether the partners abide by their decided relationship agreement. Findings by LaSala (2004) also support this point, as only relationships from this study in which one or more partners engaged in sex outside of their relationship agreement (regardless of the relationship being CNM or monogamous) were rated as less adjusted and satisfied.

Further, other differences have been found between CNM group types in samples not limited to gay men. For instance, when Conley et al. (2017) conducted separate analyses with a sample of heterosexual individuals and compared the individual groups of CNM (polyamory, open, and swinging) and monogamy, some significant differences emerged on measures of relationship quality. Specifically, when comparing open and monogamous relationships, those in open relationships reported significantly less satisfaction, commitment, and passionate love. However, when comparing between polyamorous and monogamous relationships, those in polyamorous relationships reported significantly higher satisfaction, commitment, trust, and passionate love. Conley et al. also noted that those in open relationships at times reported that their partners were not able to be physically present or were unable to have the type of sex that they would prefer to have. This may offer some insight into other factors that could be lowering relationship quality ratings among those in open relationships.

Nevertheless, other researchers found no significant difference in commitment between sexually open and non-open relationships (Rubin & Adams, 1986). However, one caveat to these findings is that the definition of open relationships varies between researchers, especially for earlier research. Further, Rubin and Adams define sexually open marriages as, “as a marriage in which there is an explicit agreement that sexual relationships outside the primary pair-bond are acceptable,” which could align with either a polyamorous or open relationship based more current researchers' descriptions (Brewster et al., 2017; Conley et al., 2017).

Taken together, this research suggests that that there is limited evidence to suggest that differences exist between the different CNM group types and monogamous relationships in terms of relationship quality. Further, given the conflicting evidence, the likelihood of rival hypotheses and variables explaining what differences have been found, there is no evidence to suggest that CNM relationships, as a group, have any poorer outcomes than monogamous ones. While it appears that open relationships may have lower relationship quality than both monogamy and other CNM groups (Conley et al., 2017; Hoff et al., 2010), this difference should be further researched to determine whether these deficits are a result of the nature of the relationship versus a result of factors that lead couples to become open (e.g. a partner being deployed, a partner being unable to engage in certain sexual activities) that might affect relationship quality. There is also some evidence to suggest that polyamory may be related to higher measures of relationship quality than monogamy (Conley et al., 2017). Further, it appears that there is some conflicting findings particularly among gay men in different types of relationships. However, some researchers suggest that following relationship rules is more important to relationship quality than relationship formation. In sum, research on CNM relationship quality is still lacking, limiting resources for individuals navigating these types of relationships and prescribing little empirical support for mental health professionals aiming to influence social policy and stigma intervention.

Health of the Individual

Many may assume that CNM relationships would put individuals at a higher risk of contracting STIs. However, current research suggests that individuals practicing CNM are at no greater risk for STI contraction than those practicing monogamy (Conley et al., 2012b; Lehmiller, 2015). When investigating prevalence rates of STIs between those practicing CNM versus sexually unfaithful individuals in monogamous relationships, Conley et al. (2012b) found that sexually unfaithful individuals as compared to those in CNM relationships were less likely to use barriers during their extradyadic encounter, less likely to properly sanitize sex toys prior to sexual encounters, less likely to tell their partner about the encounter, and less likely to be tested for STIs. Therefore, such findings suggest that those in CNM relationships tend to engage in safer sex practices than monogamous relationships with infidelity, which may help to explain why rates STI rates are not increased among those practicing CNM.

Further, Lehmiller (2015) conducted a similar study that investigated sexual health differences between monogamous and CNM populations, rather than the unfaithful monogamous. Again, results showed that CNM partners reported significantly greater condom use during sexual intercourse and a significantly higher likelihood of STI testing than monogamous partners. Rates of barrier use did not differ significantly between groups for oral sex, but rates were quite low across both groups. Most notably, this study found that despite CNM participants having more sexual partners, CNM participants did not report any more STIs than monogamous participants. Moreover, it is also important to note that the monogamous population may have underreported STI diagnoses compared to CNM individuals, as the monogamous participants were significantly less likely to report getting tested for STIs.

Therefore, it may be possible that the STI rate among monogamous individuals may actually be higher than the CNM individuals.

Nevertheless, some may wonder if the effectiveness of condoms is really as effective at stemming STI transmission rates as much as practicing monogamy, as these studies suggest. However, other research has found that condoms are indeed very effective at stemming STI contraction. For instance, Pinkerton and Abramson (1993) studied the effectiveness of condoms at preventing HIV transmission compared to the number of short-term sexual partners. Using a Bernoulli process model of HIV transmission they found that monogamy, as generally practiced (not lifelong monogamy), does not offer protection over that of condom use (so long as condoms are used at least somewhat effectively). Further, they found that consistent use of condoms was so effective at preventing transmission of HIV that using condoms consistently would reduce the risk of HIV transmission more than eliminating 1,000 potential sexual partner encounters.

This study highlights the risk of monogamy as practiced in society. In other words, while monogamy between two and only two people over an entire lifetime is the safest practice to avoid STI contraction, it is not how monogamy is practiced. As Conley et al. (2012) argues, many individuals do not follow practices that would severely limit STI contraction, such as first agreeing to be monogamous before engaging in any form of genital contact; waiting months for any STIs to emerge before having sexual contact with a new partner; conducting a full battery of STI tests; and waiting until all STI results are determined and treated before engaging in any sexual activity.

Moreover, while the rules of monogamy stipulate that an individual should only be sexually active with their partner, in practice many couples engage in additional sexual relationships, or infidelity. In fact, studies have found infidelity to be quite common among monogamous couples. For example, one study found that 40% of undergraduates currently in a romantic relationship knew that a romantic partner had cheated on them (Emmers-Sommer, Warber, & Halford, 2010). Further, rates of infidelity over the course of marriage, which is arguably perceived as a more committed form of monogamy than dating, are estimated at 30% to 50% for men and 20% to 40% for women (Buss, 2000). Further still, it is hard to know whether such rates are accurate, as infidelity is socially undesirable and participants may be consciously or unconsciously reluctant to admit such actions (Drigotas & Barta, 2001). More to that point, an investigation by Whisman and Snyder (2007) found that only about 1% of married women admitted to sexual infidelity in the past year when asked in a face-to-face interview, while the rate jumped to over 6% when the same participants were asked via a computer-assisted self-interview. All together, these findings demonstrate that even in monogamous relationships extradyadic sex is common and therefore it cannot be argued that practiced monogamy is in itself a way to prevent STI transmission.

Alternatively, it could be argued that applying the label of monogamy to a relationship increases the risk of contracting an STI. For instance, once a casually dating couple agrees to a monogamous relationship, they are likely to stop condom use before getting tested for STIs (Bolton, McKay, & Schneider, 2010; Conley et al. 2012;). Further, Conley et al. (2013) demonstrated that it is a common belief that monogamy protects against STI transmission, yet research shows that extradyadic sex, a risk factor in STI contraction, is common even in monogamous relationships. Moreover, both Lehmiller (2015) and Conley (2012) both found that CNM participants were more likely to indicate that their primary partner knew about their extradyadic sexual involvements compared with persons in monogamous relationships. Thus, these studies suggest that monogamous couples are more likely to be unaware that they are at risk than those practicing CNM.

On a final note related to health of the individual, a study of those aged 55 and older who were sexually non-exclusive reported other signs of good health. Specifically, Fleckenstein and Cox (2015) compared answers of 502 individuals who identified as sexually non-exclusive to 723 participants from the 2012 GSS, which is “a full-probability survey conducted face-to-face with a representative sample of participants living in the United States” (Fleckenstein & Cox, 2015, p.99). GSS participants were not asked about relationship formations, thus it is possible limitation that not all of those in the GSS were monogamous. By modeling questions from those in the GSS Fleckenstein and Cox (2015) were able to compare demographic responses among an older sample of individuals who practice CNM compared to a more general US sample of aging individuals. They found that the CNM group reported significantly greater sexual frequency and more sexual partners than the GSS respondents, but, similar to the other studies discussed, also reported greater likelihood to be tested for HIV. Further, Fleckenstein and Cox largely found that the CNM group also reported greater levels of happiness and general health. The only exception was that married male participants did not differ between groups on happiness, and never married individuals did not differ on reported health. Finally, they found no significant difference between the groups in happiness with their marriages. Using a regression analysis, they found that health for those practicing CNM was predicted by personal happiness and sexual frequency, while only income showed a strong positive contribution to health for the GSS group. Further, one of the more interesting findings of this study was that those in the in the CNM group who also identified as unmarried members reported significantly higher levels of sexual frequency, health, and happiness in comparison with the general population sample. The authors point out that this is contrary to much of the existing literature that finds poorer health outcomes for older unmarried adults, thus the authors tentatively suggest that CNM may be helpful to curb the loneliness and lack of connection experienced by some older adults.

All together these studies suggest that CNM tends to be practiced with increased sexual safely so as to offset any additional risk that is introduced from extradyadic sexual partners. Further, findings suggest that both CNM and monogamy are healthy for individuals, but that both should practice safe sexual practices in order to curb STI transmission.

Family Benefits and Drawbacks

One caveat that may be brought as an argument against CNM relationships, is that even if the individuals express equitable levels of relationship quality to monogamy, how would CNM partnerships effect the family? While there is not a great deal of literature in this area, as studying CNM families is a difficult venture, one researcher has conducted research with this population.

Sheff (2010, 2011) conducted 40 in-depth interviews with adults who identified as polyamorous (poly) and used grounded theory to analyze the data in order to better understand poly families and the unique circumstances they face. From this analysis Sheff (2010) found two themes that emerged as drawbacks to the poly family formation. One was that poly parents highlighted that the whole family, including the children, often had to deal with the stigma of CNM relationships. This theme may also be echoed by a previously discussed, but non-empirical survey of around 1000 polyamorous self-identified, which found that only around 28% of participants responded “yes” to telling their children about their polyamorous status (Nearing, 2000). However, since there is limited demographic data for this survey it is unclear whether this figure includes participants who do not have children. Nevertheless, of those who responded affirmatively, 15% indicated that the children had a negative response to hearing about their parents CNM relationship. Moreover, empirical qualitative data from Henrich and Trawinski (2016) illustrates exactly how detrimental stigma around CNM relationships can be on families.

For instance, one participant talked about growing up in a polyamorous family and her family's unspoken rule to not discuss the family formation with those outside of the family. However, at age 13 she shared this information with a classmate, which resulted in the information being spread throughout the school and her parents verbally chastising her. Such a story highlights the possible lack of support children could face in a polyamorous family if they are expected to keep their family a secret. Further it highlights that once a family has been revealed to be of a CNM nature there are real life implications that result from others' lack of understanding, but not the nature of the family formation. Henrich and Trawinski (2016) went on to discuss how many participants found disclosing their status difficult and at times resulted in the complete loss of contact between family members.

As the dominate relationship type, monogamous families would have an advantage of not having to cope with stigma related the parent's relationship formation. While it is unfortunate that any family or child must deal with stigma that is outside of their control, it is a reality that many families face. For instance, Sheff articulated that poly families appeared to face many of the same issues faced by families headed by same-sex partners related to stigma, such as custody of children, coming out to family members, and managing the impacts of parents' relationships on their children. Moreover, stigma against CNM has been found to decrease with familiarity and knowledge (Hutzler et al., 2015), which suggests that visible CNM families may decrease stigma. Regardless, stigma in itself should not a be a reason to dismiss CNM as an appropriate, healthy family formation.

The other most common drawback that Sheff (2010) noted was when children became emotionally attached to partners that later exited their lives. While losing an emotional attachment is a painful process, there is no evidence to suggest that the amount of times this would happen to children in poly families is any different from those whose parents are actively dating in a monogamous fashion. For instance, divorce is common in the US with about 40 to 50 percent of marriages ending in divorce (Kazdin, 2000). Further, of those who reported being married at least once on the US census bureau, about 17% of men and 18% of women had been married at least two times (U.S. Census Bureau, 2015). Moreover, step-families are also common with 42 percent of adults surveyed by the Pew Research Center indicating that they have at least one step relative (Pew Research Center, 2011). Moreover, single parents are also common in the current society, with 25% of children being raised by a single parent (Pew Research Center, 2010). Thus, many children from a monogamous family would also experience parental figures that may leave their lives. Sheff (2010) also asserts from her findings, that like many monogamous relationships, many polyamorous partners stayed in the children's lives even after the romantic relationships dissolved.

On the other hand, Sheff (2010) also isolated themes related to the unique benefits of poly families. One of these positive themes was that children in poly families were able to benefit from more one-on-one child to adult time. Parents in the study discussed how their children were able to develop a greater breadth of hobbies and skills based on the different interests and abilities of the multiple caregivers. Poly-parents also discussed the advantage of having caregivers available for child care, which they believed decreased the general family stress of having to manage child rearing responsibilities (e.g. packing lunches, arranging rides, etc.). Others highlighted how having multiple caregivers helped them decrease the time their children would need to spend in daycare. This an arrangement of having multiple caregivers, could be seen as similar to other cultures who involve multiple family members, such as aunts, uncles, and grandparents, in the child rearing process (Sweet & Bumpass, 1990).

The final theme mentioned by Sheff (2010) was that poly parents believed that they shared greater emotional intimacy with their children because of the nature of their polyamorous relationships. While it should be acknowledged that this theme is only the belief of these participants, the parents shared that they emphasize greater honesty with their children because they assert that honesty is emphasized as a foundational rule of polyamory. Poly parents mentioned that they share openly with their children on a range of subjects from their own shortcomings to age appropriate discussions about sexuality.

As a final note, Sheff also stated in her 2011 paper, which used the same sample as the 2010 study that children in poly families "appear to be mainly self-confident, articulate, and satisfied with family life" (p.514). While she acknowledged that her small sample size and method of recruitment may bias these findings, such a statement does give some initial evidence that a CNM family does work for some. It is also acknowledged that the discussion focused mainly on poly families rather than including other types of CNM relationships. Unfortunately, to the researcher's knowledge no studies examining swinging or open relationship families exist. However, one small finding that can be added is that when swingers were asked to rank values according to scale developed by Rokeach (1968) that lists personal and social values, swingers most commonly ranked family security as second to the top out of a list of 18 (Jenks, 1988). This finding tentatively suggests that swingers still valued their family life highly, despite engaging in sexual activity that is outside the norm.

To conclude, although greater distress may occur in CNM family system due to stigmatization, there is little empirical evidence to suggest that CNM family formations are any more detrimental than monogamous formations, and may even offer some unique benefits. Moreover, the lack of research available highlights the importance of research that investigates CNM relationships, such as the present study, to better understand CNM relationships and help decrease stigma related to CNM. Nevertheless, some may not be comfortable with the idea of decreasing stigma for CNM because it goes against their moral beliefs.

Morality, Mononormativity, and Monogamy as the Natural State of Being

A point that has been brought up when discussing monogamy and CNM is the idea of whether such a relationship formation is "right" or moral (Conley et al., 2013; Moors et al., 2013). Research has found evidence that commonness of a practice shapes what humans perceive as moral (Lindström, Jangard, Selbing, & Olsson, 2018). Therefore, it is likely that CNM would not be perceived as less moral if it were more ubiquitous in the current society.

It is also important to discuss a closely related belief that monogamy is a natural state for human relationships. For instance, the term mononormativity first coined by Pieper and Bauer (2005) is the dominant assumption that monogamous relationships are the normal and natural state for human relationships, and is related to other assumptions about sexuality such as heteronormativity (Barker & Langdridge, 2010; Hutzler et al., 2015).

However, while this assumption of monogamy is pervasive in the Western culture (one must only think of nearly any popular book or movie as proof), there is no evidence that monogamy is tied to any biological state or drive. For instance, under the assumption that monogamy is the natural state, or a biological drive for humans, it would be likely that our common ancestors would be more likely to form monogamous pair bonds. Lukas and Clutton-

Brock (2013) looked at 2545 mammalian species whose social systems could be classified and found that only 9% could be classified as socially monogamous, which they defined as “a single breeding female and a single breeding male share a common range or territory and associate with each other for more than one breeding season, with or without nonbreeding offspring” (p. 526). Moreover, 23% were coded as social living groups, which they stated typically have polygynous or polygynandrous mating systems. These researchers further argue that monogamy tends to evolve in these species due to specific states, such as when feeding competition between females was intense, breeding females were intolerant toward each other, and population density was low, resulting in mate-guarding becoming beneficial to ensuring paternal offspring. This suggests that monogamy, or other relationship formations, may arise due to social conditioning, but does not indicate that monogamy is a predetermined biological state.

Nevertheless, one could argue that humans are very distant from most of our mammalian relatives. However, perhaps more convincing is that even our closest animal relatives (or the species in current existence that share the most overlap in DNA with humans), orangutans, chimpanzees, bonobos, and gorillas, do not appear to form monogamous bonds (van Schaik & Dunbar, 1990). Further, our closest relatives the bonobo and chimpanzee who share 99.6 % of their DNA with humans, show behavior similar to that of a polyamorous (polygynandrous for bonobos and polygynous for chimpanzees) society (De Waal, 2006; Gibbons, 2012; Van Schaik & Dunbar, 1990). This is not to suggest that CNM is a natural state either, but simply that neither relationship formation seems to be a biological drive.

It is also interesting to consider the research that has been done on prairie voles, a species that is classified as monogamous and engages in biparental care (Young & Wang, 2004). These rodents show a marked difference in behavior following mating such as males forming an enduring selective preference for their mate, increased aggression toward other males, and increased paternal care (Insel, 2010). Researchers believe that this difference in behavioral expression is due to hormonal changes in the release of oxytocin and vasopressin (Insel, 2010). However, even in this rodent that is often studied as a monogamous animal, the prairie vole often mates with voles other than their primary partner and at times even deserts their primary mate (Wolff, Mech, Dunlap, & Hodges, 2002). In other words, at least some prairie voles' behavior could be better described as at least non-monogamous (as consent is hard to argue either way for a vole). Interestingly, Young and Wang (2004) state that while there is no hard evidence of a common physiological mechanisms for pair-bond formation in prairie voles and humans, they do write on possible implications of what their research conducted on prairie voles could mean for humans. For instance, they highlight that other research has shown that levels of oxytocin and arginine vasopressin change during orgasm and sexual arousal for humans. They extrapolate that similar to the prairie vole, these hormones may aid in pair bonding or general bonding. More specifically, they cite previous research that has shown areas in the brain that are rich in oxytocin and arginine vasopressin light up that when participants view a picture of their romantic partner, and that a similar pattern of brain activation occurs when mothers view pictures of their children. Together, this research suggests that while oxytocin and arginine vasopressin may be involved in bonding among humans and prairie voles, it does not suggest that these hormones dictate monogamy, as both species engage in extradyadic sex. Therefore, there is extremely limited evidence to suggest that monogamy is the more "natural" state for humans.

Instead, it seems likely that monogamy or CNM advances due to societal pressures and cultural norms. For instance, Aguilar (2012) conducted in depth interviews with those who lived in communal living groups who also happened to practice polyamory as the norm rather than monogamy. Some participants described coming to the community and identifying as monogamous, but due to the societal norms of the community, transitioned to practicing polyamory. Further, if monogamy were a “natural” state for humans it would be extremely unexpected to see any other relationship formation, regardless of the culture one lives in. However, this does not appear to be the case as Schmitt (2005) examined sociosexuality within 48 different nations and found great variability in the way that different people engaged in sexual relationships, such as people that regularly engage in infidelity or cultures that endorse polygamous relationships.

As a final note, it is important to emphasize that CNM is not being proposed as a “natural state” either. The purpose of this section is to simply illustrate that human relationship functioning does not appear to have a set pattern of interaction, be it monogamous, polyamorous or any other formation.

Personality Differences of Those Who Engage in CNM Relationships

While there has been limited current research into differences between CNM and monogamous populations, it was seemingly a point of interest for earlier studies. In a review of the literature, Rubel and Bogaert (2015) summarized that individuals in these groups do not appear to differ on a number of important psychological traits:

> work satisfaction, authoritarianism, Machiavellianism, philosophy of nature, internal–external control of reinforcement, alienation, life satisfaction, depression, personal fulfillment, stability of mood, ability to refuse unwanted drinks, somatization, obsession–compulsion, interpersonal sensitivity, hostility, anxiety, phobic anxiety, paranoid ideation, psychoticism, hopelessness, and the perception that one is well-liked, warm, and affectionate.

Therefore, on the whole it does not seem these groups are significantly different. Some of the more recent investigations of differences between the two groups have focused on biological differences, but do not discriminate between the CNM population and the non-consensual nonmonogamous population. For instance, in a study investigating differences in neural activation in responses to sexual and romantic stimuli, Hamilton and Meston (2017) only chose to differentiate between monogamous and non-monogamous men, rather than consensual and non-consensually non-monogamous men. Hamilton and Meston (2017) found that monogamous men showed more reward-related neural activity when viewing romantic pictures compared to nonmonogamous men, and found no significant differences between groups for activation for sexual stimuli. However, since the paper did not differentiate, or even specify how many of the participants endorsed non consensual versus consensual nonmonogamy it is hard to extrapolate these findings to the CNM population. Moreover, since CNM relationships differ in terms of endorsement for romantic love (i.e. polyamory versus open relationships) these authors may not have accounted for covariates among their sexually nonmonogamous group. While this study could suggest a link between those who engage in extradyadic sex and those who do not in terms of either a biological or learned trait, the failure to examine covariates of the CNM population significantly limit the applicability to the CNM population.

Other research has examined attachment style differences between CNM and monogamous populations. Moors, Conley, Edelstein, and Chopik (2015) explored attachment orientations and CNM relationships in two studies. In the first study, heterosexuals who had never engaged in a CNM relationship were asked about their attitudes toward CNM and their willingness to engage in a CNM relationship compared with their attachment styles. Those who endorsed anxious attachments were linked with negative attitudes toward CNM, but did not different from other attachment styles in willingness to engage in CNM. On the other hand, avoidant styles endorsed more positive attitudes toward alternatives to monogamy and were more willing to hypothetically engage in a CNM relationship. However, interestingly, these findings did not align with actual engagement in CNM. In the second study, Moors et al. used a hierarchical multiple logistic regression to investigate which attachment styles would predict engagement in either a CNM or monogamous relationship in a heterosexual sample of currently romantically engaged participants. Results showed that those in CNM relationships reported lower levels of avoidance compared to people in monogamous relationships, but that rates of engagement did not differ significantly for anxiously attached individuals. Therefore, this research suggests that while avoidant individuals, may be more likely to like the idea of CNM relationships, those who actually engage in CNM relationships tend to be less avoidant, but do not differ from monogamous groups in terms of anxious or secure attachment styles.

On the other hand, while rates of engagement for anxiously attached individuals may not vary significantly between CNM and monogamous groups, satisfaction might. Mohr et al (2013) investigated links between romantic attachment styles and relationship functioning in a sample of people in same-sex CNM and monogamous relationships. Mohr found that sexual exclusivity was only related to lower relationship satisfaction and commitment when one or both partners endorse an anxious attachment. In other words, although anxiously attached individuals are just as likely to engage in CNM relationships as securely attached individuals (Moors et al, 2015), anxious individuals may be more likely than either secure or avoidant individuals to experience reduced satisfaction in a CNM over monogamous relationships. However, it should be noted that Moors sample consisted only of heterosexual individuals, while Mohr’s et al (2013) sample was comprised of only those in same-sex partnerships, therefore it cannot be ruled out that this finding could be a result of population differences.

New social science research has also found another individual trait that may affect relationship health outcomes differently between CNM and monogamous relationships. Rodrigues et al (2016a) investigated differences in relationship satisfaction between participants who did and did not endorse unrestricted sociosexuality, or the predisposition to engage in casual extradyadic sex. Previous research had found that those who endorse unrestricted sociosexuality tend to have poorer relationship outcomes. Using a sample of 329 Portuguese heterosexuals registered on an online dating site for finding extradyadic sexual partners, Rodrigues found the expected negative association between sociosexuality and relationship satisfaction. However, when examining just those with unrestricted sociosexuality in CNM relationships, the association switched to a positive association between unrestricted sociosexuality and relationship satisfaction. This suggests that for those who have an unrestricted sociosexuality, a CNM relationship may offer a solution to reduced relationship satisfaction.

The current study furthers this line of research by investigating whether an individual difference in choice orientation (to be discussed below) may make some individuals more suited, in terms of relationship outcomes, to CNM over monogamy. The next section reviews the construct of relationships quality, which is used as a measure of relationship outcomes.

Defining Relationship Quality

The current study aims to measure relationship quality differences between those in CNM and monogamous relationships, as well as the influence of choice orientation (to be discussed below). However, there is no one definitive definition of relationship quality, and moreover, the distinctions of common relationship outcome measures such as adjustment, satisfaction, and quality are often blurred in the literature (Fincham & Bradbury, 1987; Sabatelli, 1988). Nevertheless, relationship quality and related concepts, such as marital adjustment, happiness, and satisfaction, are some of the most widely studied constructs in the romantic relationship research field (Sabatelli, 1988; Spanier & Lewis, 1980). Further, aspects of relationship quality and related constructs have been tied to general welfare, psychological well-being, and physical health (Baumeister & Leary, 1995; Berry & Worthington, 2001; Whiffen & Aube, 1999). Therefore, it is important to define what relationship quality entails for the current study, by grounding the definition in theories and research on relationship quality and its related components.

To begin, while there are multiple definitions of relationship quality, theories and research tend to converge around the broad idea that relationship quality entails the ratio of positive, beneficial romantic experiences, to the ratio of potentially harmful, negative experiences in a relationship (Collins, Welsh, & Furman, 2009). For instance, Spanier and Lewis (1980) in a review of “marital quality” research studies from the 1970s, defined martial quality as “the subjective evaluation of a married couple's relationship on a number of dimensions and evaluations” (Spanier & Lewis, 1980, p. 826). They further delineated that quality was weighted on a continuum with high marital quality associated with good adjustment, communication, marital happiness, and satisfaction with the relationship. However, Fincham and Bradbury (1987) proposed that marital quality should be understood as “an individual’s global evaluation of his or her marriage” (Fincham & Bradbury, 1987, p. 800). They specifically opposed Spainer and Lewis’s (1980) operationalization and argued instead that marital quality should be based in an overall, global judgement rather than individual aspects. For instance, they specifically argued that that behaviors should not be included in relationship quality, as behaviors do not always coincide to one’s overall evaluation of quality in a relationship, given that people can act in ways counter to how they feel.

In a review of measures related to marital research, Sabatelli (1988) highlighted that marital quality has been mainly understood from these two different perspectives. Sabatelli highlighted that when quality is understood as a blend of adjustment and satisfaction measures, as Lewis and Spanier (1979; 1980) proposed, a measure of quality would then need to include both objective and subjective aspects of the relationship. Sabatelli argued that this would result in a definition of marital quality that would differ little from what has been historically understood as marital adjustment. Sabatelli further argued for a definition more in line with Fincham and Bradbury (1987), and suggested that marital quality should be understood as a global evaluation, allowing for inferences about how respondents view their relationship as a whole, while still allowing for each factor (such as satisfaction and commitment) to be evaluated separately.

These differences of opinions underscore the previous and ongoing debate as to how relationship quality should be defined. Nevertheless, it is also important to recognize new ways of understanding relationship quality. For instance, Fowler et al. (2016) highlighted how the vast majority of relationship quality measures focus on the hedonic (pleasure or happiness) dimension of the relationship. However, they argued that hedonic measures alone may not be able to capture the full depth of relationship quality. Instead, they proposed that eudaimonic or human flourishing may be an important aspect of relationship quality for which past scales may not account. For instance, eudaimonic measures of relationship quality may be able to account for not just whether an individual is satisfied in their relationship, but whether they feel that relationship helps them to flourish in life.

Therefore, in the current study, relationship quality is understood as both the hedonic and eudaimonic measure of one's relationship. In other words, relationship quality should include global dimensions of satisfaction and commitment, as well, as eudaimonic assessments such as relationship flourishing. As such, it is important to understand how each of these sub-constructs is defined and contribute to the overarching construct of relationship quality. The following sections further define these three components of satisfaction, commitment, and flourishing.

Relationship Satisfaction

Relationship satisfaction is one of the most widely studied and influential constructs in romantic research (Graham, Diebels, & Barnow, 2011). Similar to relationship quality, no single definition exists, and it is often conflated with other measures of relationship quality, such as adjustment and happiness (Vaughn & Baier, 1999). Nevertheless, relationship satisfaction tends to be differentiated in that it is based on one's *subjective* understanding of the relationship. For instance, Graham et al. (2011) in a meta-analysis of relationship satisfaction measures defined it as, "one's subjective global evaluation of one's relationship" (p. 39). Further, Vaughn and Baier (1999) defined it as one's "subjective evaluation of a close relationship" (p. 137). Grounded in Rusbult's Investment Model (Rusbult, 1980), a popular model in relationship research, Le and Agnew (2003) defined satisfaction as "the subjective evaluation of the relative positivity or negativity that one experiences in a relationship" (Le & Agnew, 2003, p. 39). Therefore, for the current study, satisfaction is defined as an individuals' subjective valuing of their relationship.

Relationship Commitment

Relationship commitment is another well studied and utilized construct in outcome research. Commitment generally refers to the stability of a relationship (Sabatell, 1988). Again, definitions of the exact nature of commitment are variable. For instance, Arriaga and Agnew

(2001), in a systemic review of relationship commitment literature from the lens of the Investment model (Rubult, 1980), suggested that commitment has three distinct components: psychological attachment, long-term orientation, and intention to persist. Further, they found that each commitment component predicted couple functioning and eventual breakup status, showing that commitment is related to relationship length and positive functioning.

Similarly, Adams and Jones (1997) also compared conceptualizations of marital commitment and found three primary dimensions, which consisted of: “wanting to stay married, feeling morally bound to stay married, and feeling trapped in a marriage” (Adams & Jones, 1997, p 1180). Their findings map onto the commitment framework proposed by Johnson (1973) who suggested marriages persist because of a couple’s desire to (Personal Commitment), because they ought to (Moral Commitment), or because they have to (Structural Commitment). Clearly, using the conceptualization above, which is based on *marital* commitment, would be problematic for the current study. For instance, a great deal of the conceptualization is based on a “moral” or structural understanding that would not extend to casual or short-term relationships.

It is also important to consider that commitment has been conceptualized, at least in part, by an individual’s likelihood to pursue another relationship (Lund 1985). Such a conceptualization would not be appropriate for the current study, as pursuing another relationship is an expectation of CNM relationships, rather than a violation. Therefore, based on past conceptualizations (Lund, 1985), the current study conceptualizes relationship commitment as one’s intention to continue being in a relationship.

Relationship Flourishing

Compared to satisfaction and commitment, flourishing in relationships is lesser studied aspect of relational functioning. Nevertheless, it is an important aspect of relationship quality because it is likely able to capture more than just feelings toward one's relationship, but rather may be able to capture how that relationship is able to contribute meaning to one's life (Fowler et al., 2016). For instance, relationship flourishing is meant to capture eudaimonic dimensions of a relationship such as life meaning, personal growth, relational giving, and goal sharing (Fowler et al., 2016). Flourishing has been found to correlate strongly with measures of hedonic relationship satisfaction (Fowler et al., 2016) demonstrating good convergent validity for overall relationship satisfaction. Yet, has also been shown to be distinct from the hedonic measures in that a better fit was found as a two-factor CFA model (Fowler et al., 2016). Thus, flourishing may be able to further capture the deeper and richer aspects of relationship quality, that in turn contribute to one's feelings of satisfaction and commitment toward their relationship

Relationship quality is therefore based on the rating of each conceptualization of these constructs. Specifically, satisfaction and commitment are used as measures of hedonic relationship quality, or the pleasure happiness dimension of how one's relationship causes one to feel. Historically, satisfaction and commitment have been the two most common measures of this type of relationship quality and have been used previously with the CNM population (Seguin et al., 2017). Relationship flourishing is then be used to measure the eudaimonic aspect of relationship quality, or how one's relationship contributes to meaning, growth, and fulfillment in one's life. While each construct or domain may vary independently of the other, the combined ratings of each is understood as relationship quality. The next section discusses the conceptualization and origin of the choice orientation factor for which relationship quality was measured.

The Paradox of Choice and the Maximization Paradox

As evidenced by countless relationship matching services, from a professional matchmaker to apps like Tinder, making decisions about who to form romantic or sexual relationships with are important life tasks for people. However, how does one make these kinds of choices? Further, how does this decision-making process differ when the assumption of monogamy is no longer present? In other words, understanding decision-making is central when thinking about romantic relationships, but there may be some nuance in how decision-making functions when one is expected to choose only one partner versus multiple. To better understand how decisions might affect the individual, it is important to first understand how humans make decisions. For instance, Simon (1955) was the first to suggest that there are restrictions in both the environment and within the human mind that limit one's ability to fully consider all possible alternatives when making decisions.

To better understand Simon's (1955) proposition, it can be helpful to use a real-world example, such as the process of buying a car. While one likely tries to get the best car at the best price there is simply no way to ever know whether this task was accomplished due to the impossibility of first finding all the cars available for purchase (in-person shopping, traveling to another state, looking online) and then considering all of the car options (models, features, price). Moreover, even if people could somehow have access to all possible options available and features to consider, they would still be limited in their predictive ability to know what the features would be like (are heated seats something one truly likes, or just images they would enjoy on a cold morning?). Further still, even if by some leap of imagination one could experience all the cars' features, the human mind would still be limited in the computational processing of this unconceivably large amount of data.

Stated more succinctly, humans have limited knowledge and ability to make choices. Instead, Simon (1955, 1956, 1957) proposed that humans engage in a form of bounded or "limited" rationality, or the process by which one makes a decision when an option presents as "reasonable" rather than optimal.

Using Simon's (1955) work as a starting point, Schwartz (2000) proposed that, in the current age of nearly limitless choice, there is a paradox surrounding choice. Schwartz postulated that in American culture, self-determination is highly regarded, and equated with greater autonomy and choice. Further, creating one's self-definition through one's choices is a sign of healthy psychological well-being. In other words, he highlighted the American value of achieving success in part through one's own ability to make good choices. However, although Americans tend to value choice, limitless choice may create a "tyranny" of choice. Put another way, if Americans believe that a successful person should always be able to make the "best" choice, more choices may create more dissatisfaction as an individual is unlikely to ever be able to unequivocally know whether they made the "best" choice.

Iyengar and Lepper (2000) empirically tested this maximization paradox. Over the course of three studies they found that people were better able to make and commit to decisions; people showed more motivation; and people were more satisfied with the choices they made when less options were presented. In summary, Iyenar and Lepper's (2000) research supported Schwartz's (2000) proposition that despite a desire for more choice, humans may actually find more satisfaction in their choices when they have more limited options.

However, Schwartz (2002) proposed that there are likely differences in how people experience this maximization paradox. Specifically, Schwartz et al. (2002) suggested that individuals differ in their decision tendencies, such that some are "maximizers," who strive to make the best choice, while others are “satisficers”, or those who strive to make choices that meet their standards, rather than seeking the best choice.

Relating back to the question of relational decision-making, if some people are more drawn to try and make the best possible choice, rather than choosing the option that satisfies a given standard, the assumption of monogamy might be problematic. For instance, one could argue that an assumption that only one romantic partner can be chosen, may be more detrimental for those who spend a great deal of time and effort searching for the best decision, as they may continue to search rather than focusing on forming an initial lasting commitment. Further, if these individuals do begin a relationship, they may find it harder to stop wondering about whether they would find greater satisfaction in a different relationship. However, if instead these individuals were allowed to continue dating or having sexual experiences, it may allow them to feel more comfortable making and committing to romantic decisions. The current study poses this question to explore whether having such a choice orientation could affect differences in relationship quality between CNM and monogamous relationships. The next section provides further evidence for this rationale and further defines these two types of choice orientations.

Satisficers and Maximizers

In the years since Schwartz initially proposed the maximizer and satisficer personality differences, here referred to as choice orientations, many different conceptualizations and measures have emerged (e.g. Diab, Gillespie, & Highhouse, 2008; Lai, 2010; Ma & Roese, 2014; Nenkov, Morrin, Ward, Schwartz, & Hulland, 2008), which resulted in conflicting and confusing findings. To help future research in this area progress, Cheek and Schwartz (2016) reviewed the different conceptualizations to form one consistent model that encapsulates clear definitions and differences between maximizers and satisficers. Specifically, they proposed a two-component model of maximization based on differences in decision-making goals and strategies. They put forth that maximization is best understood as the pursuit of the maximization *goal* of choosing the best option, through the maximization *strategy* of alternative search. They further articulated that, other constructs, that had been used in previous conceptualizations, such as decision difficulty and regret, are better understood as outcomes or causes, rather than components of maximization.

In differentiating between maximizers and satisficers, Cheek and Schwarz (2016) cite the *desire* for "the best" as key to understanding the goal component of maximization. To clarify, they state the following distinction "satisficers will stop searching once their standards—however high they may be—are met, whereas maximizers may continue searching for a better option even after they have found one that would potentially meet their standards" (Cheek & Schwartz, 2016, p. 136).

The maximization strategy includes both act of seeking out information about alternatives, and the process of comparing alternatives. To illustrate the difference between a maximizer's and a satisficer's strategy they offer the following example, "a maximizer may identify all possible options quickly, but then spends a large amount of time trying to evaluate the tradeoffs of the choice alternatives. A satisficer, other hand, would stop considering tradeoffs once a suitable option has been identified" (Cheek & Schwartz, 2016, p. 136).

Conley et al. (2017) was the first to propose that the maximization theory might help offer some insight into better understanding differences between those in monogamous and CNM relationships. Previous research has found that maximizers tend to experience less satisfaction and well-being than satisficers. For instance, this decrease in satisfaction has been observed in satisfaction with chosen academic major (Dahling & Thompson, 2012), first job placements (Iyengar, Wells, and Schwartz (2006), and general life satisfaction (Chang et al., 2011; Nenkov et al., 2008; Schwartz et al., 2002). Most notable for the current study, maximizers have also shown lower relationship satisfaction, investment, and commitment than satisficers (Mikkleson & Pauley, 2013).

However, Conley et al., 2017, when considering the applicability of this theory to CNM relationships questioned whether this association between satisfaction and maximization would hold if an individual could choose more than one option. Further, Cheek and Schwartz (2016), suggest there may be some contextual factors that could lead the relationship between satisfaction and maximization to change. For instance, Shiner (2015) found one interesting exception; while maximizers were found to be less satisfied than satisficers after making irreversible decisions, maximizers were more satisfied than satisficers after making a reversible decision.

This finding is interesting to note when considering how decision-making functions in CNM and monogamous relationship. In a monogamous relationship, it is expected that one’s decision is largely irreversible; an individual can only be with one person and there are typically significant consequences for breaking this expectation. However, while decisions in a CNM relationship may not be completely reversible, a relationship in which more than one choice is possible follows theoretically closely to the idea of reversibility. In other words, in CNM relationships one would still be able to choose more than one romantic or sexual partner without having to face potential consequences such as a divorce.

Other researchers have also tried to better understand this connection between maximizing and satisfaction. Schwartz et al. (2002) hypothesized that these deficits in satisfaction and wellbeing for maximizers are the result of perceiving their inability to obtain the "best" result as failure, and then attributing that failure to their self-image. Cross-cultural research, including participants from the U.S., Western Europe, and China, supports this assertion. Specifically, Roets et al. (2012) showed that maximizing was associated with greater regret, but while regret was related to a strong detrimental impact on well-being for U.S. and Western European participants, regret did not have a substantial effect for Chinese participants. Roets and colleagues hypothesized that maximization did not cause reduced well-being for those in China because, unlike Western cultures that proclaim individual choice as a way to self-actualization and happiness, Chinese culture does not centralize choice as a way to achieve happiness.

Hence, research has provided evidence that, at least in some Western cultures, maximizing is generally associated with negative wellbeing outcomes. Therefore, relating this theory back to the current study, if monogamy were the only option for making romantic and sexual choices, then surely satisficers would be at a natural advantage for finding satisfaction in their relationships. However, this is not the case. Rather, CNM relationships fit well theoretically with the tendencies of a maximizer, in that a maximizer would be able to make a relational decision, without having to give up their of goal of seeking the "best." Further, a CNM relationship, may allow maximizers to feel more satisfied and committed in their primary relationships, as they would still be able to enjoy the company of their primary partner while they consider alternative partners, and moreover they would likely gain reassurance of their choice by being able to compare other partners to their primary partner.

This type of research is needed as there is little research that offers any realistic, practical pathways or solutions to increase relationship outcomes for maximizers. For instance, Roets et al. (2012) wrote that maximizers "seem better off living in a society that provides and values more limited individual choice” (p. 700). However, a societal shift away from greater individual choice is not within the control of the individual and is unlikely to occur in the foreseeable future. Sparks, Ehrlinger, and Eibach (2012) suggested that maximizers could rely on the advice of trusted others to feel more confident in their choices, however such a suggestion has great limitations, especially for making important, individual choices, such as who to marry. Further, other researchers simply argue that maximizers should adopt the decision-making style of satisficers (Parker et al., 2007). However, if the tendency to maximize is a trait, that suggestion is akin to asking an introvert to simply adopt the working style of an extrovert. Unfortunately, these suggestions offer little hope for maximizers to find greater satisfaction and wellbeing, and highlights the need for other solutions.

In sum, maximizers, or those who aim for the best by seeking out and comparing options, tend to experience less relationship satisfaction than satisficers, who aim to find an option that they deem satisfactory. However, other researcher suggests that there may be contextual factors that could change the relationship between maximizing and satisfaction (Shiner, 2015). The current study investigates whether CNM relationships might be one pathway to help maximizers find greater relationship satisfaction. Put another way, maximizers have a propensity to continuously desire and seek the “perfect” choice in relationships (that likely does not exist and if it does would be unable to know they have it). Therefore, the current study asks could a relationship formation that allows a maximizer to have a stable partner, yet continue to evaluate other options with additional partners, lead to greater relationship quality? However, there are some factors related to maximization and relationship quality that may confound potential relationships between the variables if these factors are not properly assessed and controlled.

Factors Influencing Choice Orientation

Given that maximization has only recently been synthesized into its current conceptualization, it hard to determine what variables may impact its relationship with relationship quality. Nevertheless, the current section reviews possible confounding factors.

One possible variable to control for attachment style as Moors et al. (2015) found that anxiously attached individuals were more likely than either secure or avoidant individuals to experience reduced relationship satisfaction in a CNM over monogamous relationships. By including anxious attachment in the model as a predictor the present study was better able to determine whether anxious attachment might affect the relationship between maximization and relationship quality based on relationship type.

Further, personality types may also be important to consider. For instance, Purvis, Howell, and Iyer (2011) investigated the impact of the Big Five personality traits in explaining the negative association between maximization and general well-being. They discovered that neuroticism was positively correlated with maximization, which was also associated with lower general well-being.

Therefore, a pilot study was conducted to determine if neuroticism is directly related to maximizing and might need to be controlled for in the main study. Results of the pilot study showed that neither maximizing measure (MTS-7 or SMI-AS) significantly correlated with neuroticism. Therefore, neuroticism was not measured in the main study due to failing to find a correlation between maximization measures and neuroticism in the pilot study (see Appendix J).

This pilot study also helped to determine which maximizing measures were psychometrically adequate and how maximization should be psychometrically conceptualized. Results demonstrated that the SMI-AS and the MTS-7 both showed at least adequate reliability, but a third maximization measure, DMTI, did not. Therefore, only the SMI-AS and the MTS-7 were used to measure maximization.

Results of the pilot study also suggested that maximizing should be measured as two separated, but related constructs. For instance, the MTS-7 and the SMI-AS showed a good fit when modelled as separate and correlated constructs, however, combining items into a single maximizing construct resulted in a poor fitting model (see Appendix J).

The Purpose of the Current Study

From the review of the literature, researchers have established that CNM relationships are viable relationships, but individuals in CNM relationships are frequently perceived poorly and experience a stigma and marginalization from both the general community and mental health professionals. Many researchers have highlighted the dearth of research on CNM relationships and the many gaps in the literature. One such gap is understanding how individual factors (i.e. maximization) might contribute to a person benefitting more from a CNM relationship versus a monogamous relationship. The current study aims to address this gap by investigating how maximization predicts relationship quality and how relationship types [CNM (primary and polyamorous) and monogamous] might moderate this relationship (see Figure 1). Findings from this study not only add understanding to this under researched population, but could also help provide empirical guidance to mental health professionals and individuals exploring diverse relationship styles. As such, the following hypotheses and research questions are proposed:

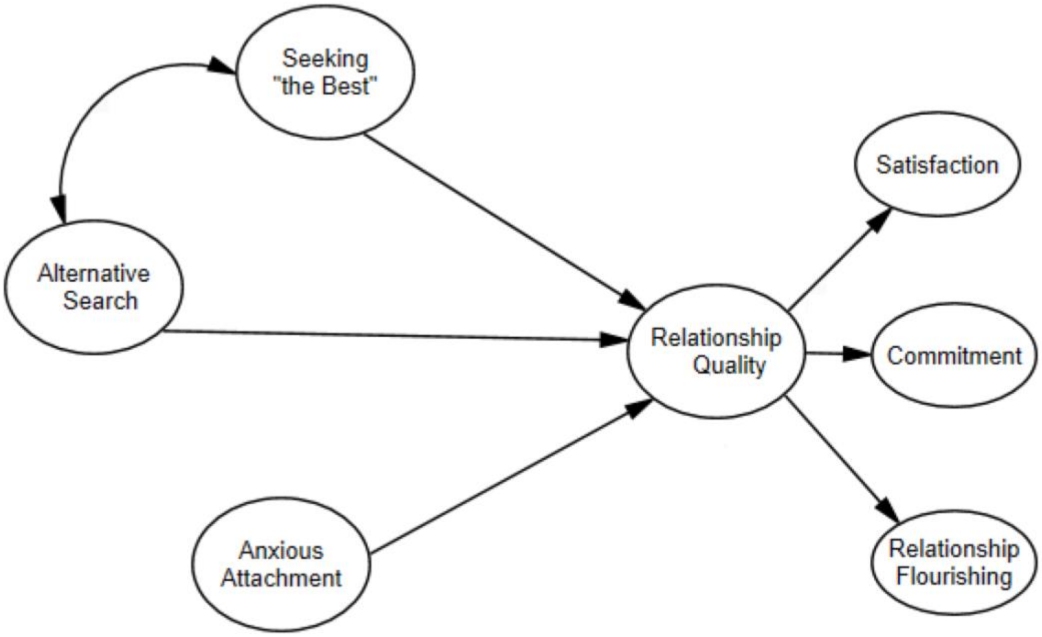
Seeking
"the Best"
Alternative
Search
Anxious
Attachment
Relationship
Quality
Satisfaction
Commitment
Relationship
Flourishing

Figure 1. Structural model with latent constructs of maximizing, (Seeking the Best; MTS-7 and Alternative search Strategy; SMI subscale Alternative search subscale), Anxious attachment (AAS), and Relationship quality (Satisfaction; PRQC subscale, Commitment; PRQC subscale, and Relationship Flourishing).

R1: When controlling for anxious attachment style, will maximization predict levels of relationship quality regardless of relationship type?

> H1: When controlling for anxious attachment style, maximization will negatively predict relationship quality regardless of relationship type.

R2: When controlling for anxious attachment style, will maximizing in the consensual non-monogamous (considering both primary and polyamorous subgroupings) sample predict relationship quality differently than maximizing in the monogamous sample?

> H2a: When controlling for anxious attachment style, maximizing will not predict lower levels of relationship quality for those in CNM relationships (considering both primary

and polyamorous subgroupings), but maximizing will have a negative predictive relationship with relationship quality for those in the monogamous sample.

H2b: When controlling for anxious attachment style, maximizing will have a positive predictive relationship with relationship quality for those in the CNM (considering both primary and polyamorous subgroupings) sample and will have a negative predictive relationship with relationship quality for those in the monogamous sample.

CHAPTER III

METHOD

The current study investigated differences in relationship quality based on relationship and choice orientations. Specifically, the study investigated differences between CNM and monogamous relationship types when differentiated by a tendency to maximize when making decisions. The following section describes the study's design, participants, measures, procedure, and proposed analyses.

Participants

A total 331 participants were used in the analysis. While no exact rule exists as the number of participants required to analyze data using structural equation modeling, most tend to agree that 10 participants per estimated parameter is sufficient (Schreiber, Nora, Stage, Barlow, & King, 2006). When grouped there were 138 participants for the monogamous group, 115 participants in the primary group, and 78 participants in the polyamorous group. There are few recommendations for how many participants need be included per group, but an expert on structural equation modeling, Dr. Robert Stupinsky, recommended that around 100 per group is adequate (personal communication, January 30, 2019).

However, 509 participants were initially counted, but 170 participants were excluded. Reasons for exclusion included having more than a single item missing from one or more of the main measures or being from a country other than the USA, Canada, or the UK. Given Roets's et al. (2012) findings on cultural (nation of origin) differences in the relationship between choice orientations and well-being outcomes the current sample may be limited to those in Western cultures. After careful examination of the relationship categorization of those who selected "other" when defining their relationship, eight participants were excluded due to falling outside of the set relationship parameters (e.g. being a “relationship anarchist” or identifying as “polyamorous” but being in a monogamous relationship with no plans to start other relationships).

Of the 331 participants included in the analysis, 201 identified as women, 118 men, 12 self-identified their gender. Ages of participants ranged from 18 to 70 with a mean age of 30. The majority of participants identified as White (N =297, 90%), with 4% (N= 13) identifying as multiracial, 2.4% (N = 8) as Asian, 2.1% (N = 7) as Latinx, .6% (N = 2) as Black, and .6% (N = 2) as Native American. Most participants identified as being in the middle class (N = 137, 41.4%), with 2.1% (N = 7) identifying as upper class, 25.4% (N = 84) as upper-middle class, 17.5% (N = 58) as lower-middle class, and 13.0% (N = 43) as working class. The majority of the participants identified as heterosexual (N = 162, 48.9%), with a second majority identifying as bisexual (N = 97, 29.3%). The rest of the sample identified as gay or lesbian (N = 13, 3.9%), pansexual (N = 36, 10.9%), Asexual (N = 4, 1.2%), questioning (N = 13, 3.9%), and self-identify (N = 6, 1.8%). The majority of participants were at least slightly liberal (N = 234, 70.9%). Most were from the USA (N = 240, 72.5%), with 16.9% (N = 56) from Canada, 10.6% (N = 35) from the UK.

Group Differences

The data was tested for group differences based on demographic factors including gender, age, race, sexual orientation, political orientation, and nationality using crosstabs and testing significance of percentages with chi squared. Significant group differences were found at the $p < .05$ level for gender, sexual orientation, and political orientation and $p < .001$ for age (See Table 1).

Table 1

Participant Demographics and Group Differences

	Monogamous n (%)	Primary n (%)	Polyamorous n (%)	Total n (%)
*Gender				
Women	94 (68%)	56 (49%)	51 (65%)	201 (61%)
Men	42 (30%)	56 (49%)	20 (26%)	118 (36%)
Self-Identify	2 (1%)	3 (3%)	7 (9%)	12 (4%)
Race				
White	125 (91%)	104 (90%)	68 (87%)	297 (90%)
Black	1 (1%)	1 (1%)	0	2 (1%)
Asian	3 (2%)	5 (4%)	0	8 (2%)
Latinx	4 (3%)	1 (1%)	2 (3%)	7 (2%)
Native American	0	1 (1%)	1 (1%)	2 (1%)
Multiracial	3 (2%)	3 (3%)	7 (9%)	13 (4%)
Self-identify	2 (1%)	0	0	2 (1%)
**Age				
18-25	81 (59%)	27 (23%)	20 (26%)	128 (39%)
26-35	43 (31%)	42 (37%)	38 (49%)	123 (37%)
36-45	3 (2%)	3 (3%)	2 (3%)	8 (2%)
46-55	6 (4%)	25 (22%)	10 (13%)	41 (12%)
56-65	3 (2%)	11 (10%)	6 (8%)	20 (6%)
66-70	0	6 (5%)	0	6 (2%)
Unknown	2 (1%)	1 (1%)	2 (3%)	5 (2%)
*Sexual Orientation				
Heterosexual	79 (57%)	59 (51%)	24 (31%)	162 (49%)
Gay or Lesbian	8 (6%)	1 (1%)	4 (5%)	13 (4%)
Bisexual	36 (26%)	38 (33%)	23 (29%)	97 (29%)
Pansexual	8 (6%)	10 (7%)	18 (23%)	36 (11%)

Asexual	2 (1%)	0	2 (3%)	4 (1%)
Questioning	3 (2%)	5 (4%)	5 (6%)	13 (4%)
Self-identify	2 (1%)	2 (1%)	2 (3%)	6 (2%)
*Political Orientation				
Very liberal	45 (33%)	28 (24%)	41 (53%)	114 (34%)
Somewhat liberal	33 (24%)	31 (27%)	29 (37%)	93 (28%)
Slightly liberal	13 (9%)	14 (12%)	0	27 (8%)
Neither	21 (15%)	26 (23%)	6 (8%)	53 (16%)
Slightly conservative	12 (9%)	3 (3%)	0	15 (5%)
Somewhat conservative	7 (5%)	10 (9%)	1 (1%)	18 (5%)
Very conservative	6 (4%)	3 (3%)	1 (1%)	10 (3%)
Nationality				
USA	91 (66%)	90 (78%)	59 (76%)	240 (73%)
Canada	25 (18%)	17 (15%)	14 (18%)	56 (17%)
UK	22 (16%)	8 (7%)	5 (6%)	35 (11%)

Note. Total percentages may not add up due to being rounded to nearest whole percent.
* indicate chi-square differences between Groups at $p < .05$.
***indicate chi-square differences between Groups at $p < .001$.

Measures

Participants were asked to complete the following measures to assess their choice orientation in relationships and perceived relationship quality. Anxious attachment style was also measured as a possible confounding variable. Finally, participants also responded to a demographics questionnaire that classified their relationship type, as well as other important demographic variables.

7-Item Maximizing Tendency Scale (MTS-7; Dalal et al., 2015). The MTS-7 is a 7-item measure of whether an individual has the goal of choosing the best when making decisions, which is one facet of maximizing (Cheek & Schwartz, 2016). It was based on the Maximizing Tendency Scale (Diab, Gillespie, and Highhouse, 2008), but had two items removed to increase psychometric validity. It is rated on a 1 (completely disagree) to 7 (completely agree) scale with high scores indicating greater agreement with having a goal of choosing the best. Sample items include, "I don't like having to settle for good enough,'" "I will wait for the best option, no matter how long it takes," and "No matter what I do, I have the highest standards for myself." The MTS-7 shows adequate psychometric properties. Specifically, with a sample of U.S. undergraduates, the MTS-7 had a Cronbach alpha of .82 and a test–retest reliability of .61 (Dalal et al., 2015) (see Appendix C for full measure). For the current sample, MTS-7 also showed adequate reliability with Cronbach alpha of .85.

Short Maximization Inventory (SMI; Ďuriník, Procházka, & Cígler, 2018). The SMI is a 15-item measure for assessing maximization as an individual trait. It was derived from the Maximization Inventory (Turner, Rim, Betz & Nygren, 2012). However, for the current study only one subscale, Alternative Search (the tendency to exert effort and spend time exploring alternative choices), will be used since only this subscale was recommended by Cheek and Schwartz (2016) to measure the maximization strategy. The alternative search subscale is composed of five items and is rated on a 1 (completely disagree) to 7 (completely agree) scale with high scores indicating greater time spent on exploring alternative choices. Sample items include, "I take time to read the whole menu when dining out," "I usually continue to search for an item until it reaches my expectations," and "When shopping, I plan on spending a lot of time looking for something." The Alternative Search subscale showed adequate reliability with a Cronbach's alpha of 0.77 in prior studies (Ďuriník, Procházka, & Cígler, 2018) (see Appendix D for full measure). However, for the current sample including all 5 items resulted in a poor reliability with a Cronbach alpha of .68. Therefore, only items 2-4 were used in the model as they retained an adequate reliability with a Cronbach alpha of .71.

Perceived Relationship Quality Component (PRQC; Fletcher, Simpson, & Thomas, 2000). The PRQC is an 18-item measure of perceived relationship quality and includes subscales of relationship satisfaction, commitment, intimacy, trust, passion, and love. However, only the satisfaction and commitment subscales were used for the current study. The scale is measured on a 7-point Likert-type scale from 1 (not at all) to 7 (extremely) with higher scores indicating greater relationship quality. Sample items include, **"**How satisfied are you with your relationship?" "How committed are you to your relationship?" The PRQC showed acceptable to strong reliability across each subscale for two studies with participants who were involved in both long term and short term relationships (Fletcher et al., 2000). Cronbach's alpha scores consisted of .91 to.93 for satisfaction, and .94 to .96 for commitment, Reliability in these studies was also strong for the overall scale with Cronbach's alpha scores of .85 and .88. Moreover, both the relationship satisfaction, and commitment subscales of the PRQC have been used in other research investigating possible differences between CNM and monogamous populations (Seguin et al., 2017). Cronbach's alpha scores for this sample of both monogamous and CNM participants was .96 for relationship satisfaction, and .93 for commitment. For the current sample, both satisfaction and commitment subscales also showed adequate reliability with Cronbach alphas of .95 for each.

Relationship Flourishing Scale (RFS; Fowers et al., 2016) The RFS is a 12-item measure of self-reported eudaimonic relationship quality that assesses meaning, personal growth, relational giving, and goal sharing in one's romantic relationship. The scale is measured on two 5-point agreement response set from 1 strongly disagree to 5 strongly agree, and a 5-point frequency response set from 1 never to 5 always with high scores indicating greater eudaimonic relationship quality. Sample items include, "I have more success in my important goals because of my partner's help,'" "Talking with my partner helps me to see things in new ways," and "I make time when my partner needs to talk." The RFS has shown adequate psychometric properties with a Cronbach alpha of .93 among a sample of married individuals and showed expected correlations with measures hedonic relationship quality (Fowers et al., 2016). For the current sample, RFS also showed adequate reliability with Cronbach alpha of .87.

Adult Attachment Scale (AAS; Collins & Read, 1990). The AAS is an 18-item measure of self-reported global attachment anxiety and avoidance. The AAS consists of three subscales that measure comfort with closeness (Close), comfort depending on others (Depend), and attachment anxiety, or the extent to which an individual is worried about being rejected and abandoned in relationships (Anxiety). However, only the Anxiety subscale was used for the current study. The scale is measured on a Likert-type scale from 1 (not at all characteristic of me) to 5 (very characteristic of me), with higher scores indicating greater inclination toward anxious attachment. Sample items include, "In relationships, I often worry that my partner does not really love me," "I find that others are reluctant to get as close as I would like," and "In relationships, I often worry that my partner will not want to stay with me." Reliability was adequate for the .85 for the anxiety subscale (Collins, 1996) (see Appendix H for full measure). For the current sample, the anxiety subscale also showed adequate reliability with Cronbach alpha of .74. However, items 11 and 12 were removed from analysis due to poor model fit. Reliability without items 11 and 12 was also adequate with Cronbach alpha of .77.

Demographics. Participants will be asked to indicate the type of relationship they are involved in (monogamous, swinging, open, polyamorous, or other) using Conley et al.'s (2017) definitions and methodology of differentiating between monogamous and CNM type relationships (see Appendix A for full demographic questionnaire). Participants will also be asked to indicate relationship duration, which will be used as a covariate, as relationship length has been show to affect relationship satisfaction (Lund, 1985). Participants will also be asked about how often they see their primary partner, infidelity, and other various demographic factors (e.g., gender, age, race, SES, education-level, etc.). See Appendix A for complete demographics.

Validity checks. To assess for careless responding, three validity checks were incorporated into the survey based on the recommendations by Meade and Craig (2012). These validity checks were placed at the end of the survey, and were introduced from scripts adapted from Meade and Craig (2012) (see appendix B for scripts and questions). Specifically, participants were asked "Please tell us how much effort you put forth towards this study," which will be rated on a 1 (little to no effort) to 5 (full effort). Next, they were asked "I gave this study ____ attention" which will be rated from 1 (almost no) to 5 (my full). Finally, they were asked, "In your honest opinion, should we use your data in our analyses of this study?" Participants who respond "no" were also asked for a reasoning to ensure that the question was properly understood. If a participant marks less than a 3 on the effort, a 1 on the attention question, or "no" their data was to be excluded from analysis (Meade & Craig, 2012), unless their written response indicates their data is valid.

Procedure

Institutional review board approval was first obtained through the submission of an expedited research request (see appendix K for copy of IRB information). Next, the proposed sample was recruited from an online source, Reddit (r/samplesize, r/polyamory, /r/swingers). This type of targeted data collection was necessary due to low levels of CNM relationships in the general U.S. population.

After finding the link on the Reddit website, participants were then directed to an online Qualtrics survey. They were first asked to review and agree to an informed consent by clicking either "I am at least 18 years old and I agree to participate" to begin the survey or "I do not agree to participate" in which case they would be redirected to the end of the survey. Participants were then asked whether or not they were currently engaged in a romantic or sexual relationship to which they had to respond affirmatively to continue the rest of the survey. Respondents were then given a demographics questionnaire and the two choice orientation measures, which were randomized to eliminate survey bias. Next, participants were asked if they were in a monogamous relationship. If they answered affirmatively, they were asked whether they engaged in non-monogamous behaviors. If participants responded negatively to being in a monogamous relationship, they were asked to select from a number of options that best described their relationships. Based on their selections they were directed to relationship quality measures that matched their relationship type. Monogamous participants (i.e. those who responded affirmatively to being in a monogamous relationship and negatively to the non-monogamous behavioral question) were given the standard measures. Non-monogamous participants were separated into two groups: primary, those who have just one *primary* partner, but also engages in other sexual and/or romantic relationships; and polyamorous, those with multiple primary partners who understands their partners as equal in their relationship. Primary and polyamourous participants were given differently modified measures to ask about relationship quality for either their primary partner or partners, thus creating three separate blocks to ask about relationship quality for each relationship type. All relationship quality measures were randomized with their blocks to help eliminate survey bias. Finally, all participants took the anxious attachment measure and three validity question checks. Participants were then thanked for their participation and informed that they could contact the primary investigator if they have any questions or concerns about the survey or their data. Median time to complete the survey was about 7 minutes and 15 seconds.

Missing Data and Normality

In total, 5 items or .9% of the working data set was missing. Little's Test of Missing Completely at Random (MCAR) was conducted and was found to be significant. However, given that only 5 items were missing, one each for five different participants, we believed the data was appropriate to use. This process then left a total of 5 participants with one item response missing from their response set. An expectation-maximization imputation process, using SPSS 24, was then was used to calculate values for these 5 items. The results of the analysis of this data set are considered in the next chapter.

Univariate and multivariate normality were assessed for all variables in AMOS version 25 using procedures outlined in Byrne (2016). Variables showed good univariate normality, but data also showed significant multivariate non-normality. As a result, data was estimated in Mplus version 1.1.0 using the Satorra–Bentler scaled chi-square (SBS$_{X2}$), which is robust to non-normality and considered the most straightforward strategy to handle non-normal data (Bryne, 2016; Finney, & DiStefano, 2006).

CHAPTER IV
RESULTS

This chapter provides an overview of the statistical analyses relevant to whether maximization has an interactional effect with relationship type on relationship quality. Specifically, this chapter details the results of the analyses related to both the preliminary analyses and to the test of the hypotheses. There is a particular focus on the results of the multigroup structural equation modeling (SEM) that is used to determine whether invariance held for different models. Detailed analysis of both the measurement model as well as the hypothesized structural model are provided.

Preliminary Analyses

First, it is important to determine pre-existing differences in the established relationship type groups besides those that are being assessed. Descriptive statistics were analyzed using Statistical Package for Social Sciences (SPSS).25 (see Tables 2 and 3). Preliminary group differences based on demographic factors including gender, age, race, religion, sexual orientation, political orientation, education, and nationality were also estimated in SPSS using crosstabs and testing significance of percentages with chi-squared. Significant group differences were found at the $p < .05$ level for gender, age, sexual orientation, and political orientation.

Table 2

Means and Standard Deviations for All Measures by Whole Sample and Relationship Type

	Overall *n* = 331		Monogamous *n* = 182		Primary *n* = 72		Polyamorous *n* = 78	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
MTS-7	4.3	1.1	4.4	1.1	4.4	1.2	4.1	1.2
SMI-Alternative search	4.8	1.1	5.0	1.1	4.7	1.2	4.5	1.0
PRQC-Satisfaction	5.9	1.2	5.9	1.3	6.1	1.1	5.9	1.2
PRQC-Commitment	6.5	.96	6.4	1.1	6.7	.69	6.4	.90
Relationship Flourishing	4.3	.52	4.2	.54	4.3	.53	4.3	.48
AAS	2.5	.86	2.7	.85	2.3	.74	2.3	.87

Note. Relationship Flourishing and AAS are on a 1-5 point scale all others are on a 1-7 point scale. Means and standard deviations have been rounded to two decimal points.

Table 3

Correlations Among Key Study Variables for Whole Sample and by Relationship Type

	SMI-Alternative search	PRQC-Satisfaction	PRQC-Commitment	Relationship Flourishing	AAS-Anxious Attachment
Whole sample					
MTS-7	.255**	.048	.015	.125*	.026
SMI-AS		.016	-.001	.002	.114*
Satisfaction			.676**	.682**	-.078
Commitment				.647**	.095
Flourishing					.003
Monogamous					
MTS-7	.296**	.088	.049	.203*	-.039
SMI-AS		.013	-.024	.108	.119
Satisfaction			.769**	.626**	.010
Commitment				.638**	.175*
Flourishing					.152
Primary					
MTS-7	.206*	.066	.021	.120	.013
SMI-AS		-.064	-.020	-.082	.069
Satisfaction			.701**	.791**	-.244**
Commitment				.678**	-.062
Flourishing					-.174
Polyamorous					
MTS-7	.210	-.056	-.067	.025	.074
SMI-AS		.111	.086	-.023	.117
Satisfaction			.462**	.597**	-.050
Commitment				.618**	.160
Flourishing					.021

Note. * $p < .05$. ** $p < .001$.

Description of Statistical Analyses

A significant SBS$_{\chi 2}$ typically indicates poor model fit (Kline, 2011), however, model fit was also evaluated based on the following fit statistics for an adequate model: comparative fix index (CFI) > .90, standardized root mean square residual (SRMR) < .08, and root mean square error of approximation (RMSEA) < .08 (Bentler, 1990) with better fitting models closer to CFI > .95, SRMR < .08, and RMSEA < .06 (Kline, 2011).

Prior to testing the structural model, a multigroup confirmatory factor analysis (CFA), was first conducted to test the full measurement model using Mplus version 1.1.0. In this model all parameters were freely estimated for all three relationship types. During this stage of analysis, individual items, modification indices, factor loadings, and model fit statistics were evaluated to create the best-fitting model.

Next, this measurement model was also tested for significant differences among the three relationship types at the metric (factor loadings constrained), scalar (factor loading and intercepts constrained), and strict (factor loadings, intercepts, and error terms constrained) levels to ensure that all three relationship groupings did not differ significantly at any measurement level. The SBS$_{\chi 2}$ test of difference (SBS$\Delta_{\chi 2}$; Satorra & Bentler, 2001) was used to determine whether any of the models differed significantly from the last.

Once the best fitting measurement model was verified and shown to be invariant among all relationship types, the structural model was then tested using the constrained measurement model. The structural model included directional relationships that were specified with latent regression paths based on the proposed hypotheses, as well as applicable coefficient paths to create the structural model (see figure 1). To determine whether the hypothesized model's relationship differed by relationship type the model was compared between when coefficients paths were and were not constrained. The SBS$x2$ test of difference (SBS$\Delta x2$; Satorra & Bentler, 2001) was used to determine whether the fully constrained model differed significantly from the freely estimated model.

Measurement Model

In conducting a SEM, the first step is to test the measurement model to ensure that the latent variables are being measured adequately. For the current study, four latent constructs were present (Maximizing measures: Alternative search and Seeking “the best,” Anxious Attachment, and Relationship Quality). The full model resulted initially in a poor fit (Chi-Squared = 408.883; CFI = .874; RMSEA = .074; SRMR = .071). Nevertheless, after examining the factor loadings items 11 and 12 of the AAS (“I want to merge completely with another person” and “My desire to merge sometimes scares people away”) were deleted due to a low factor loading (.19 and .26 respectively). Further, excluding these item makes sense theoretically given the sample includes those that see love as being between more than two people. Dropping these items resulted in an acceptable measurement model-data fit. See Table 4 for fit statistics and Table 5 for coefficient paths.

Table 4

Goodness of Fit Statistics for the Estimated Measurement Models

	χ^2	df	CFI	SRMR	RMSEA	SBS$_{X2}$
Whole Sample/ Measurement Model	188.511***	113	0.959	0.054	0.045	1.0802
Configural Model	506.828***	378	0.933	0.080	0.056	1.0558
Metric Model	525.706***	391	0.930	0.084	0.056	1.0564
Scalar Model	534.466***	399	0.930	0.092	0.055	1.0572
Strict Model	563.976***	433	0.932	0.092	0.052	1.0633

Note. χ^2 = model chi-square; df = degrees of freedom; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; SBS$_{X2}$ = Satorra–Bentler scaled chi-square.
*p < .05; **p < .01; ***p < .001.

Table 5

Coefficient Paths in the Measurement Among Key Study Variables for all Whole Sample

	MTS-7	SMI-Alternative search	Relationship Quality	AAS
MTS-7		.270**	.074	.004
SMI-AS			.008	.172*
Relationship Quality				-.073
AAS				

Note. * *p* < .05. ** *p* < .001.

Next the measurement model was tested for invariance between all three relationship types using the Satorra–Bentler scaled chi-square test of difference (Satorra & Bentler, 2001). No sources of non-invariance were found for factor loadings, intercepts, or error terms. Model comparison statistics for the multigroup measurement model are presented in Table 6.

Table 6

Summary of Invariance Fit Statistics for the Relationship Type Multiple Group Analyses

	Δ*df*	SBS$\Delta x2$
Configural Model vs. Metric model	13	22.36
Metric model vs. Scalar model	8	15.51
Scalar model vs. Strict model	34	48.60

Note. None of the above differences were statistically significant at the $p < .05$ level. Δdf = delta degrees of freedom; SBS$\Delta x2$ = Satorra–Bentler scaled chi-square test of difference.

Structural Model

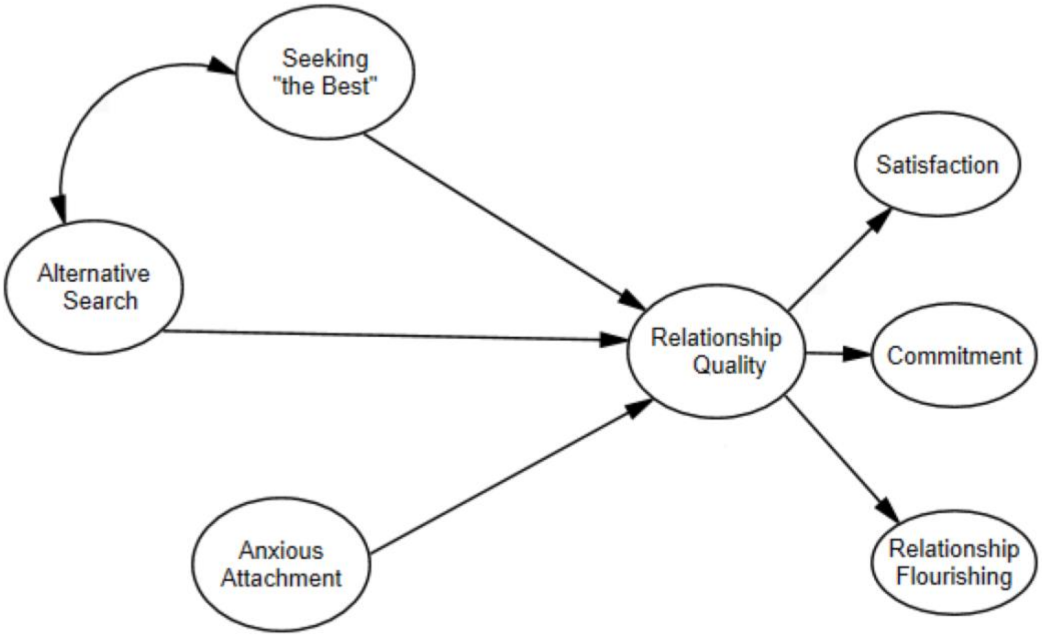
Seeking "the Best"
Alternative Search
Anxious Attachment
Relationship Quality
Satisfaction
Commitment
Relationship Flourishing

Figure 1. Structural model with latent constructs of maximizing (Seeking the Best; MTS-7 and Alternative search Strategy; SMI subscale Alternative search subscale), Anxious attachment (AAS), and Relationship quality (Satisfaction; PRQC subscale, Commitment; PRQC subscale, and Relationship Flourishing).

The first aim of the study is to determine whether maximization would negatively predict relationship quality. To do so, the structural model was then estimated to assess for differences in predictive relationships between the latent variables for the whole sample (see Table 7). Contrary to the first hypothesis, maximization was not predictive of relationship quality (see Table 8).

The second aim of the study what to determine whether maximization would interact with relationship type to change the relationship between maximizing and relationship quality. For instance, it was hypothesized that maximization would either no longer negatively predict relationship quality for those in CNM relationships or would positively predict relationship quality for those in CNM as opposed to monogamous relationships. To investigate this aim of the study a multigroup structural model was tested.

Given that multigroup measurement model already showed invarience for factor loadings, intercepts, and error terms, the structural model was first tested with these items constrained across relationship types, known as the unconstrained model. This unconstrained model was then compared to a model that additionally constrained the path coefficients, known as the constrained model. Contrary to what had been hypothesized, this resulted in a non-significant Satorra–Bentler scaled chi-square test of difference of 15.51, *df* = 8. Thus, indicating that no significant regression path differences existed between the different relationship types.

Table 7

Goodness of Fit Statistics for the Estimated Structural Models

	χ^2	df	CFI	SRMR	RMSEA	SBSχ_2
Whole sample; Structural model	195.001***	115	0.957	0.058	0.046	1.0803
Multigroup structural model; unconstrained	568.138***	439	0.933	0.093	0.052	1.0628
Multigroup structural model; fully constrained	575.507***	447	0.933	0.098	0.051	1.0630

Note. χ^2 = model chi-square; df = degrees of freedom; CFI = comparative fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; SBSχ_2 = Satorra–Bentler scaled chi-square.
*p < .05; **p < .01; ***p < .001.

Table 8

Coefficient and Regression Paths in the Structural Among Key Study Variables for the Whole Sample

	MTS-7	SMI-Alternative search	Relationship Quality	AAS
MTS-7		.269**	.075	.004
SMI-AS			-.003	--
Relationship Quality				-.074
AAS				

Note. * *p* < .05. ** *p* < .001.

CHAPTER IV

DISCUSSION

The aim of the current study was to investigate how relationship quality might be impacted by an interaction between levels of choice orientation (e.g., the tendency to maximize) and relationship types [consensual non-monogamy(primary and polyamorous) and monogamous]. It was hypothesized that relationship between relationship quality and maximizing would be negative, but that this relationship would either switch or be neutralized when looking only at those in consensual non-monogamy and monogamous (CNM) relationships. However, while the fit for the hypothesized model was adequate, the predictive power of the maximizing measures on relationship quality were not significant. Therefore, none of proposed hypotheses were supported because the maximizing measures did not significantly predict relationship quality regardless of whether the data was analyzed as a whole or by relationship type. While these findings are discussed in more detail below, the following measurement model section discusses noteworthy concerns as to why the expected relationships were not found.

Measurement Model Discussion

To this point, one of the most significant issues in the current study involves the theoretical basis and the measurability of the maximizing tendency. For instance, the current study's hypotheses are largely based on maximizing literature that used the Maximizing Scale (MS; Schwartz et al., 2002) or scales adapted from the Maximizing Scale (e.g., Mikkelson & Pauley, 2013). Such articles reliably found that maximizers had lower satisfaction than satisficers (Chang et al., 2011; Mikkelson & Pauley, 2013; Nenkov et al., 2008; Schwartz et al., 2002). However, other researchers began to question psychometric and theoretical properties of the MS (Dalal, Diab, Zhu, & Hwang, 2015), which lead to the development of over 11 different maximizing measures (Cheek & Schwartz, 2016). Unfortunately, while other scales did appear to have better psychometric properties than the original MS scale (Dalal, Diab, Zhu, & Hwang, 2015), it was unclear whether these scales were capturing the same underlying concept of maximizing (Cheek & Schwartz, 2016). Due to these measurement issues, there is not a clear choice when choosing a maximizing measure.

The rationale to use the Maximizing Tendency Scale (MTS-7) and the Alternative Search subscale from the SMI came as a result of the recommendations by Cheek and Schwartz (2016). To help the field move forward given the confusion in the field of maximization, Cheek and Schwartz (2016) clarified the theoretical basis of maximization. They then recommended psychometrically adequate scales that aligned with their two-part conceptualization of maximizing, which was is comprised of a maximizer's goal and strategy tendencies in decision-making. While they noted that none of the scales perfectly captured their theoretical understanding of the maximizing tendency, they recommended the MTS-7 as the most psychometrically accurate overall measure of a maximizers' *goal* to obtain "the best" option when making a decision. They further recommended the Alternative Search subscale from the Maximizing Inventory (MI; Turner, Rim, Betz & Nygren, 2012) as the best available measure of maximizers' *strategy* to seek out options to compare. Nevertheless, they only "tentatively" recommended this alternative search scale due to it not being entirely reflective of solely the alternative search process and recommend that future authors try to refine it. Thus, the current study used the Alternative search scale from the SMI (Ďuriník, Procházka, & Cígler, 2018), which is a refinement of the MI.

While there is a clear rationale for using these two recommended maximizing measures, both still create significant limitations. For instance, past research that used the MTS-7 did not find that maximization correlated with life (dis)satisfaction (Diab, Gillespie, & Highhouse, 2008), which is contrary to the greater findings of the maximization field (Chang et al., 2011; Mikkelson & Pauley, 2013; Nenkov et al., 2008; Schwartz et al., 2002), as well as the base hypothesis of the current study. Further, the refined Alternative Search subscale may not be the refinement that was in-line with the theoretical recommendation of Cheek and Schwartz (2016). In other words, it is unclear whether Cheek and Schwartz would agree that the refined Alternative Search subscale items theoretically match what they envisioned as a maximizer' "strategy." Moreover, it does not appear this scale was tested for a correlation with satisfaction (Ďuriník, Procházka, & Cígler, 2018). Further it was found to have only weak negative correlations with happiness and optimism, and a weak positive correlation to regret (Ďuriník, Procházka, & Cígler, 2018). Moreover, in the current study the Alternative Search subscale had to drop two of the five items in order to retain borderline adequate reliability, suggesting that this subscale may not have the best psychometric properties. Given that, to the researcher's knowledge, no prior studies have found that these measures negatively correlate with measures of satisfaction, it is unclear whether these recommended measures are truly measuring the same maximizing concept from which the hypotheses of this study are based.

Moreover, the current study based its hypothesis on the work of Mikkelson and Pauley (2013), who found that maximizers endorsed lower levels of *relationship satisfaction* compared to satisficers. This study is important to discuss because Mikkelson and Pauley adapted the original MS scale to be about making relationships decisions rather than economic decisions, and to the researcher's knowledge, Mikkelson and Pauley (2013) are the only researchers to evaluate relationship satisfaction and maximizing. Therefore, it may be possible that maximizing needs to be measured as a specific trait (such as maximizing in relationships) versus and an overall global decision-making trait. Thus, the current study may not have found a significant relationship between maximizing and relationship quality because the type of maximization being measured was global rather than trait specific to how people tend to make decisions in their romantic relationships.

Main Analysis Discussion

Despite the substantial measurement limitations, the main findings will now be discussed in detail. First, results of the primary hypothesis, that maximizing would be associated with lower relationship quality, was not supported. The vast majority of past research on maximizing had found that maximizing was associated with lower levels of satisfaction (Chang et al., 2011; Mikkelson & Pauley, 2013; Nenkov et al., 2008; Schwartz et al., 2002), including relationship satisfaction (Mikkelson & Pauley, 2013). As a reminder, the current study's measure of relationship quality includes a measure of relationship satisfaction, as well as measures of relationship commitment and flourishing that are highly correlated with satisfaction (Fowler et al., 2016). However, not all studies indicated that maximizing was associated with lower levels of satisfaction. For instance, Diab, Gillespie, and Highhouse (2008) did not find that maximization correlated with life (dis)satisfaction. This finding may indicate that the relationship between maximizing and satisfaction is not as clear cut as had been previously assumed.

To this point, others have suggested that contextual factors may influence the relationship between maximizing and satisfaction (Cheek & Schwartz, 2016). For instance, Shiner (2015) also found that while maximizers were found to be less satisfied than satisficers after making irreversible decisions, maximizers were more satisfied than satisficers after making a reversible decision. While the current study had originally hypothesized that relationship type (CNM or monogamous) might be such a factor, the current results indicate that other, unknown factors might have caused the hypothesized relationship to be unfound. As previously discussed, one such possible factor may have the measurement and conceptualization issues related to maximization.

Given this primary null finding, it is difficult to fully evaluate the second aim of the study. For instance, the second hypothesis was that the decrease in relationship quality for maximizers would improve for those in CNM as opposed to monogamous relationships. However, as previously discussed maximizing did not predict a decrease in relationship quality in the overall sample. Nevertheless, invariance testing between the three groups (monogamous, primary, and polyamorous) did not show any significant differences in coefficient paths. In other words, the predictive power of maximizing on relationship quality did not differ significantly between the different relationship types. Thus, indicating that no difference would exist between the maximizing measures and relationship quality for those in primary, polyamorous or monogamous relationships.

To the researcher’s knowledge, no previous research had investigated the relationship between maximization, relationship type, and relationship quality. However, Conley and colleagues (2017) were the first to suggest that maximizers in CNM relationships might not experience the expected decrease in relationship satisfaction if an individual were able to choose more than one partner. However, results did not find evidence to support that the interaction between one’s maximization tendency and one’s relationship quality would differ by relationship types.

Nevertheless, given that support was not first found for the assertion, that maximizers would have lower relationship quality, it is difficult to determine whether the relationship type may or may not have an interactional effect. For instance, maximizing did not show any predictive relationship toward relationship quality. Therefore, it is not possible to determine whether relationship type might have affected the relationship between maximizing and relationship quality, if a relationship had been present.

Nonetheless, in agreement with past literature, other findings were more in line with past research. For instance, no significant difference was found between those in monogamous, primary, or polyamorous relationships in terms of relationship quality. In other words, participants in all three relationship types had average mean scores for relationship satisfaction, commitment and flourishing that did not differ significantly different at the $p < .05$ level (see Table 2 for relationship type mean scale scores). As previously discussed, some research has found significant differences in measures of relationship quality (Conley et al., 2017; Hoff et al., 2010), but the majority of literature has found similar ratings of relationship quality between CNM and monogamous relationships (Conley et al., 2017; Rubel & Bogaert, 2015; Seguin et al., 2016).

Nevertheless, it is interesting to note that for relationship commitment only, those in primary relationships (6.653) were nearly significantly higher ($p = .05$) than those in monogamous relationships (6.390). This is noteworthy as this difference somewhat conflicts with prior findings. For instance, the primary classification used in this study is the classification that would encompass open relationships. However, unlike polyamorous relationships, some past research has found that those in open relationships expressed lower levels of relationship commitment (Conley et al., 2017; Hoff et al., 2010). Thus, it appears that this study found higher relationship quality for those in open relationships than past research.

However, a notable caveat is that the primary relationship type for this study encompassed *all* relationships who have one primary partner. Thus, it did not solely include those in open relationships, but also included other types of CNM relationships, like swinging and hierarchal polyamorous relationships. Thus, the results may not be surprising given that past research has found that those in swinging relationships did not differ significantly from those in monogamous relationships, and those in polyamorous relationships expressed greater levels of commitment than those in monogamous relationships (Conley et al., 2017).

Further it should be noted that all relationship types indicated high relationship quality. For instance, all group averages were well above the mean scale score for all relationship measures (See Table 2). Past research on CNM, despite possible difference between groups, have found that measures of relationship quality for all relationship types to be above the scale midpoint for measures of relationship quality (Conley et al., 2017; Hoff et al., 2010; Seguin et al., 2016). Thus, this result also reaffirms that both CNM and monogamous style relationships and viable and healthy options.

Finally, the current study did not find that anxious attachment was a significant predictor of relationship quality. This result was found regardless as to whether the data was analyzed for the whole sample or by relationship type. This suggests that those who endorsed higher levels of anxious attachment did not endorse lower or higher levels of relationship quality.

This finding conflicts with past research that has found those with anxious attachment tend to have lower levels of relationship quality (Brennan & Shaver, 1995; Butzer & Campbell, 2008; Simpson, 1990). For example, Li and Chan (2012) conducted a meta-analysis on attachment styles and their relationship to different types of relationship quality. Using 82 different samples or 15,422 participants from past studies they found that anxious attachment was moderately negatively correlated to general relationship satisfaction, which they defined as the overall subjective evaluation of the romantic relationship.

Nevertheless, it should be noted that in this meta-analysis anxious attachment did not correlate significantly with measures of connectedness (Li & Chan, 2012). Connectedness was defined as the degree to which romantic partners are bonded or involved with each other, which sounds more similar to measures of relationship commitment and flourishing. Thus, it should be noted that the current study used measures of commitment flourish and satisfaction together to define relationship quality. Therefore, this study's measure of relationship quality might not equate to the relationship satisfaction that was used in the aforementioned meta-analysis.

Further, it should be noted that the current study only evaluated anxious attachment, as opposed to also comparing other forms, such as secure and avoidant (Mikulincer & Shaver, 2005). Therefore, it is not possible for the current study to speak to whether an anxiously attached individual would have higher or lower relationship quality than an individual with another form of attachment style. This may speak to why no predictive relationship was found for anxious attachment on relationship quality, as studies on attachment styles tend to compare styles rather than look at a single style in isolation.

Nevertheless, finding a lack of significant differences in anxious attachment between relationship types also conflicts with Mohr, Selterman, and Fassinger (2013) who found that relationship quality was only lower for those in CNM relationships compared to those in monogamous relationships when the participant or their partner had an anxious attachment.

Instead, the current findings suggest that those with anxious attachment may still be able to find similar relationship quality in monogamous and CNM relationships.

Limitations

Several limitations regarding study implementation and procedures are worth mentioning. First, because Reddit allows for public comments to be made on the survey link, several public comments were made about this particular study that users could read prior to taking the survey. More specifically, the public comments feature allowed for a participant in the polyamory Subreddit to guess the purpose of the study and describe how they felt this idea fit their own experience. This may have biased some of the polyamory users who took the survey after reading the comment. Second, researchers mistakenly used the original AAS measure to assess attachment anxiety, rather than the revised measure. However, the two measures are very similar in nature, and the original AAS is still a psychometrically valid and reliable scale.

Another area the study could have improved is the relatively low power associated with the small sample, especially given the model's high complexity. For instance, because the model included so many different relationships, some stronger relationships may have been able to drive the adequate overall fit of the model but may have subsequently masked the significance of weaker differences between groups. Therefore, if the model complexity was decreased or a larger sample was used, these weaker relationships may have become significant.

Further, the model may have lacked adequate power to find non-invariance. The choice was made to evaluate the CNM population as two separate groups given that past research has been criticized for grouping together all CNM relationships despite being of very different natures (Sizemore & Olmstead, 2017). The current study tried to alleviate this past limitation by separating the CNM group into those participants who have one primary partner and those who have multiple. Nevertheless, this limited the power of each group, such that the polyamorous group had less than 100 participants. Therefore, a significant difference between groups may have been found if more polyamorous participants had been included.

Another difficulty that exists when conducting research with the CNM population is that at the current time few, if any, scales have been explicitly normed for this population. For the current study, careful consideration was given to choosing scales that could measure relationship quality given the unique population qualities. Despite this consideration, the scales used still carried some limitations.

First, the satisfaction and commitment scales of the PRQC were selected because they were one of the few scales that did not explicitly reference any type of love between just two people and had been used with the CNM population previously (Séguin et al., 2016). However, these subscales have very redundant wording, which makes them appear very psychometrically strong, but may not be fully capturing nuanced aspects of satisfaction and commitment.

Second, all of the relationship quality scales required some adaptation to be used with the CNM population. While these altercations were minimized as much as possible, and held up well within the measurement model, there is no way to know whether these changes were adequate in allowing for the same underlying concepts to be measured given the lack of prior testing for the CNM population. Further, because each of the groups saw a differed altercation of the scale it is unknowable whether any possible differences may have evolved from seeing a different measure versus a true difference in relationship quality.

Third, all relationship measures likely had a ceiling effect. For instance, a great deal of the participants marked their relationship as the highest possible option. Therefore, it is possible that greater variation in relationship quality existed between different participants, but the scales were not able to capture this variance. Likewise, there may have been a restriction of range issue for the attachment measure as standard deviations for the AAS show very little variance.

It is possible that that stigma may have influenced these results. For instance, past research has demonstrated the CNM relationships are stigmatized (Conley et al., 2013; Henrich & Trawinski, 2016),Therefore, those in CNM relationships may have been more likely rate themselves with a social desirability bias, especially since those in CNM relationships were likely to realize that the survey was evaluating their relationship type given the targeted survey collection on specific subreddits. Nevertheless, those in monogamous relationships also showed ceiling effects and restriction of range issues.

It is also important to note that there are a number of limitations that should be considered in regard to the measurement and conceptualization of maximization. However, most of these limitations have already been discussed in detail above, and therefore those previously mentioned are not be further discussed here. Nevertheless, there are some further issues related to maximization that should be considered.

For instance, the maximization measures appeared to have some difficulties with the CNM population. For instance, the Alternative Search scale did not appear extremely reliable, especially for the CNM population. While this measure showed adequate reliability in past studies (Ďuriník, Procházka, & Cígler, 2018) and in pilot testing with a general population sample (Cronbach alpha at .76), for the main analysis this scale originally showed a Crohnbach alpha below .7. Items 1 and 5 had to be excluded from analysis in order to get an adequate reliability of .7 for the whole sample. This suggests that this scale may not be the most reliable, at least when being used with the current sample that included a high degree of CNM participants.

It may be possible that those in CNM relationships do not share the same conceptual view of Alternative Search and other maximization measures as monogamous people. For instance, those who chose CNM might also tend to be less materialistic. Since these scales are based on economic principles, rather than relationships, those in CNM relationships may not relatet to these maximization questions in the same way as they might related to maximization questions about relationships.

As previously discussed the lack of power in the model may have masked these types of potential differences that would have otherwise been detectable during the measurement model analysis. To this point, it is curious that other differences between the CNM and monogamous groups appeared, but none were significant. For instance, the two maximization measures, MTS-7 and Alternative Search, showed a significant correlation when all participants were evaluated together, and when just the monogamous group was looked at individually, as theoretically predicted. However, the two measures did not correlate significantly as theoretically predicted when evaluating just those in polyamorous relationships. Further, they were again less significantly correlate ($p < .001$ vs $p < .05$) for the primary group. This again appears to suggest that if the model had more power, a significant difference might have been found for how CNM and monogamous participants relate to the maximizing concept. Alternatively, it may again suggest that that those in CNM relationships might relate differently to these scales as both ask questions that are more related to economic than about relationships. In other words, were the two scales asking about decision-making in relationships, these measures may be more likely to correlate for both monogamous and CNM populations.

Relatedly, it is important to note that items also had to be dropped from the anxious attachment measure in order to find a good fitting model. These two items (“In relationships, I often worry that my partner does not really love me," and "I find that others are reluctant to get as close as I would like") are likely to be understood differently between monogamous and CNM people given's monogamy's assumption that one partner is meant to be able to fulfil all of an individual's needs. By dropping these items the measurement of anxious attachment is compromised given that only four items are being used to determine anxious attachment, rather than six. However, dropping items with low factor loadings is a common practice in structural equation modeling (Henseler, Ringle, & Sinkovics, 2009; Rahman, Memon, Azis, & Abdullah, 2013).

Yet another, difficulty in researching the CNM population is that it can be challenging to find a large number of CNM participants in the general population. Therefore, most research with the CNM population comes from samples recruited online by targeting specific sites where those in CNM relationship are more likely to frequent (Sizemore & Olmstead, 2017). However, a digital divide may limit generalizability as some populations such as those from rural areas, lower socio-economic status, and individuals with disabilities may not have been recruited at a rate that would accurately reflect the overall population given these populations typically have less access to the internet. Thus, this internet-based recruitment strategy obtains a convivence sample that is typically from White, middle-class participants that likely does not reflect the CNM population, or general population, as a whole. Nevertheless, internet-based recruitment may allow for greater diversity compared to community-based recruitment strategies for the CNM population, at least in terms of race, socioeconomic status, and age given that many may not openly share their CNM status in person, possibly due to stigma or bias (Sizemore & Olmstead, 2017).

Moreover, CNM participants were mainly recruited from two "subreddits" that targeted interests such as swinging and polyamory from the larger social media site called Reddit. This type of recruitment may cause a threat to the internal validity of the study. For instance, the participants recruited from the CNM subreddits may be more aware than those in monogamous relationships that the nature of the study deals in some way with judging CNM relationships. Having this knowledge may cause these participants to answer questions with a positive bias, in an effort to consciously or unconsciously defend their life choices. Moreover, since all measures were self-report, there was no check to validate whether participants reported quality coincides with their experienced relationship quality.

Further, this type of online sampling may also limit the external validity of the study. For instance, CNM participants on these sites may not represent those in CNM relationships generally. In other words, they may hold a stronger CNM identity to CNM; may be wanting relationship advice; or any number of other differences in terms of demographic criteria.

To this point, when conducting preliminarily analysis there were significant group differences for demographic variables including gender, age, sexual orientation, and political orientation between the three relationship types. Therefore, because the groups differed in other ways than in just relationship type, it is not possible to know whether any findings reflect a difference in relationship type or other demographic differences.

Finally, it should be recognized that the findings of this study are limited by design. For instance, this study is correlational as opposed to causal and it is therefore not possible to determine whether a third, unknown factor may be driving these relationships. Moreover, this study is not longitudinal, which means that it is still unknowable as to whether maximizing and relationship type might have an effect on future relationship quality and how it changes over time, rather than just this singular measure of present-day relationship quality.

Clinical Implications

The CNM population is a large minority group within the U.S. (Haupert et al., 2016), yet many may still struggle to find practitioners that are even aware, let alone knowledgeable, in working with this unique populations' concerns. For instance, Henrich and Trawinski (2016) reference their experience of polyamorous client consistently reporting difficulty finding therapists who are knowledgeable, unbiased and accepting of polyamory. Moreover, Finn, Tunariu, and Lee (2012) documented bias and insidious views about CNM from therapists who identifying themselves as being non-directive and non-pathologizing toward CNM. However, true empirical study of those in the CNM lifestyle experience in seeking medical help are few are far between. The lack of empirical literature demonstrates the need for greater understanding of this population. Clearly, more research is needed so that stigma and bias do not dictate how the clinical community works with this population. To that effect, while the current study did not find the expected results, it does still help to inform clinical practice and future research.

First, based on the study's findings, clinicians may assume that neither type of relationship (CNM, Monogamous), nor type of decision making style predict relationship quality. In other words, this study suggests that there is no reason to caution clients to move away from a CNM relationship based on how they tend to make decisions. For instance, Finn, Tunariu, a Lee (2012) identified a bias among clinicians in that those who are familiar with CNM often set monogamy as the normative baseline rather recognizing CNM relationships as equally valid.

Further, the current study did not find that having an anxious attachment was significantly predictive of relationship quality. More specifically, unlike Moors et al. (2015), this study did not find evidence to suggest that those with more anxious attachments would experience decreased relationship quality in a CNM relationship. Given these conflicting results, more research is needed to understand the interactional impact of attachment and relationship styles on relationship quality. However, in the meantime, this study suggests that practitioners need not actively discourage those with anxious attachments away from CNM style relationships.

The current study also reconfirmed that those in CNM and monogamous relationships share similar levels of relationship quality. This finding is important because it adds to the growing body of literature that suggests CNM relationships are just as viable as monogamous relationships. This replication of past findings again suggests that clinicians should not favor monogamy over CNM when working with clients. For instance, others who have discussed guidelines for working with the CNM population and highlight the importance of avoiding the use of assumptions about sexual practices by challenging one's own personal biases about monogamy and further understanding and finding comfort with one's own sexuality (Girard & Brownlee, 2015; Zimmerman, 2012). Moreover, others have recommended tools such as bracketing, or the setting aside of one's preconceived notions or values, (Berry & Barker, 2014). Further, others recommend the importance of knowing when a therapist should refer to another therapist if such biases are unable to be set aside (Girard & Brownlee, 2015; Weitzman, 2006). Such guidelines highlight the importance of clinicians working to be knowledgeable and well-informed about different styles of relationships. In doing so, clinicians should be better able assist their clients in finding what works best for each unique individual, rather than unknowingly promoting stigma and prematurely foreclosing viable solutions for their clients.

Future Research

Nevertheless, this need for clinicians to be well-informed is also a call for greater research into CNM given the current dearth of empirical literature. More research on the CNM population can help elucidate the barriers the CNM population faces, as well as unearth the possible solutions. Specifically, more research on what factors lead to greater relationship quality in CNM versus monogamous relationships may be helpful in guiding clinical practice.

However, one of the current barriers in conducting this type of research is a lack of normed scales for the CNM population, especially when evaluating relationship quality. Without testing adapted measures, it is unknowable whether relationship quality measures designed for the monogamous population function in the same way for those in the CNM population. Future research is needed to evaluate how different relationship quality measures can be used accurately for both populations. Moreover, it is important that research evaluates the different subcategories of the CNM population given that many different types of relationships fall under this umbrella term but have stark differences.

Relatedly, another barrier in conducting CNM research remains how to classify different relationship styles. Past research has most often divided CNM relationships into 3 main groups: open, swinging, and polyamorous. However, researchers have differed in how these relationships are defined, as relationships do not always fall neatly into these distinctions (Brewster et al., 2017; Conley et al., 2017; Conley et al., 2013; Hutzler et al., 2015). This study was, to the researcher's knowledge, the first to separate CNM relationships into two distinctions: primary, if an individual has just one primary partner or polyamory, if the individual has multiple primary partners. While this division line is still not a perfect solution, it has the benefit of creating clearer boundaries than the past distinctions. This distinction would enable researchers to clearly compare and contrast the different CNM groups from multiple studies, which may help elucidate past confusion resulting from comparing dissimilar classifications as the same groups. Therefore, future research may be able to better classify the differences between different CNM grouping by using this distinction.

Nevertheless, if this distinction is used, future studies may want to consider one further split to the primary group. That is, they may want to inquire whether the primary partner has active knowledge about their partner's other partners. This distinction may be able to differentiate open relationships from other forms of CNM like swinging and polyamory.

Moreover, future research may also benefit from asking about non-monogamous behaviors to ascertain whether an individual is in a monogamous relationship, rather than solely asking about a monogamous agreement. For instance, the current study implemented a second question, "In your current relationship, have you and your partner ever mutually engaged in or seriously discussed and plan to engage in sexual relations with another person(s), such as a threesome or group sex?" after a participants had indicated agreement to being in a monogamous relationship. In doing so, nearly 24% of the participants responded affirmatively. This may suggest that because of the mono-normative bias in society more people may be engaging in CNM, but may not recognize this as CNM behavior or classify their relationship as non-monogamous. Nevertheless, it may be more accurate to include these participants in the primary category given that they are behaviorally engaging in CNM.

Additionally, given the significant limitations of measuring maximization that was discussed, researchers should use caution in selecting maximization scales. More research should be conducted in validating newer scales to determine fit for the underlying maximization theory. Until such research is conducted it may be advisable to include both newer measures that retain good psychometric properties, as well as the original maximization scale (Schwartz et al.,

2002) to ensure theoretical fit. However, caution may be warranted in further investigating maximization as a construct until the field better establishes measures for both psychometric and theoretical validity.

Finally, in future investigations of maximization and relationship quality it may also be important evaluate other potential confounding variables such as dominance, low-agreeableness, and social extraversion. Such traits may be confounding measures of maximization given the wording of maximization measures that are evaluating the goal of seeking “the best” decisions.

Conclusion

The current study hypothesized that relationship quality would be lower for those who tend to maximize rather than satisfice, but that this relationship would either switch or be neutralized when looking only at those in consensual non-monogamy and monogamous (CNM) relationships. However, the tendency to maximize did not significantly predict relationship quality regardless of whether the data was analyzed as a whole or by relationship type. Yet, once again relationship quality did not significantly differ by relationship type as previous research has found. Nevertheless, the CNM population remains understudied and vulnerable to bias in both commonplace and professional environments. While one’s decision-making tendencies may not matter much for finding relationship quality, having the ability to choose who to love does matter. Whether that choice is to love one or many, fighting for love without prejudice remains a worthy goal.

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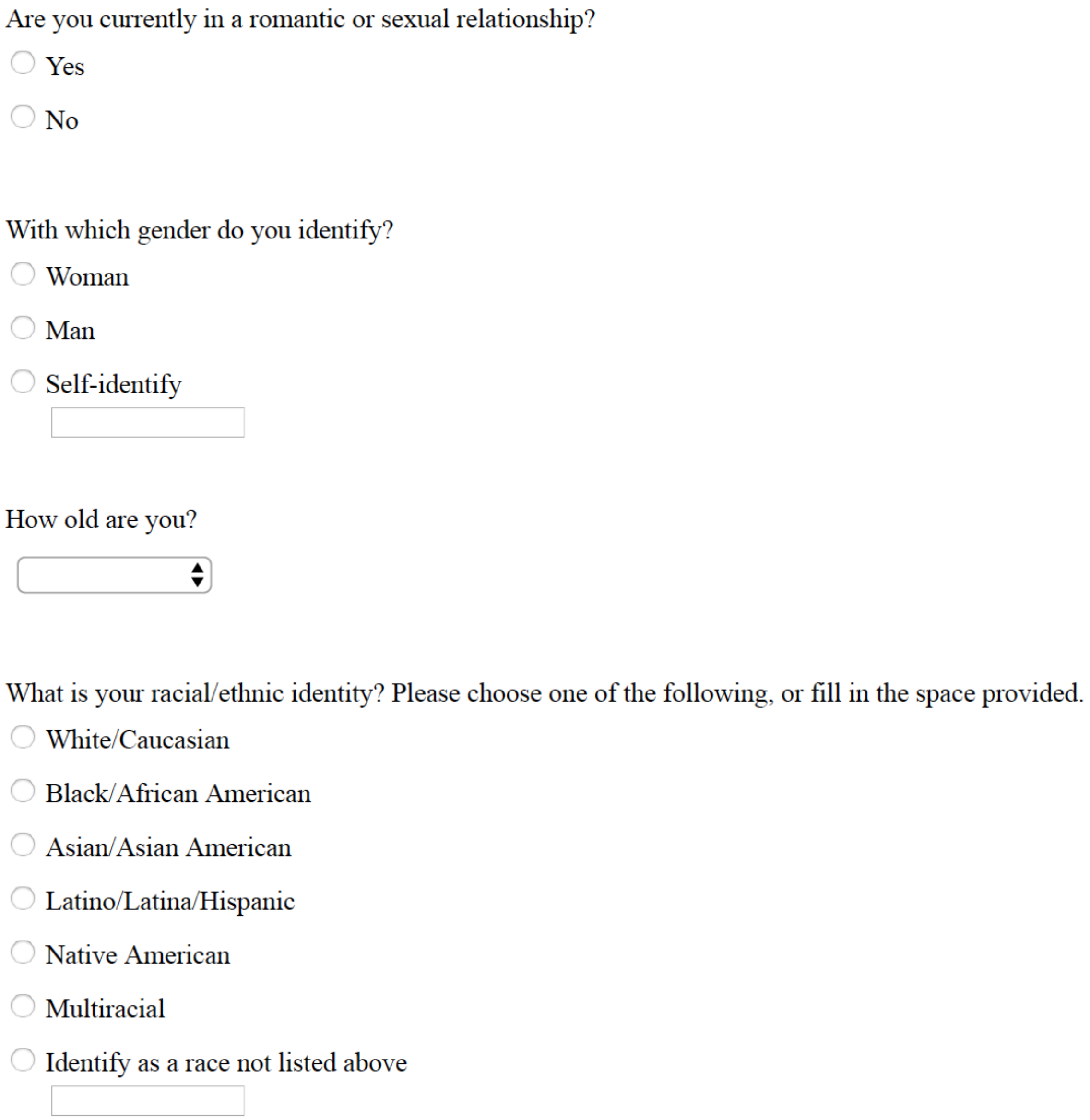
APPENDIX A

DEMOGRAPHICS QUESTIONAIRE AND RELATIONSHIP SORTING QUESTIONS



Are you currently in a romantic or sexual relationship?

○ Yes

○ No

With which gender do you identify?

○ Woman

○ Man

○ Self-identify

How old are you?

What is your racial/ethnic identity? Please choose one of the following, or fill in the space provided.

○ White/Caucasian

○ Black/African American

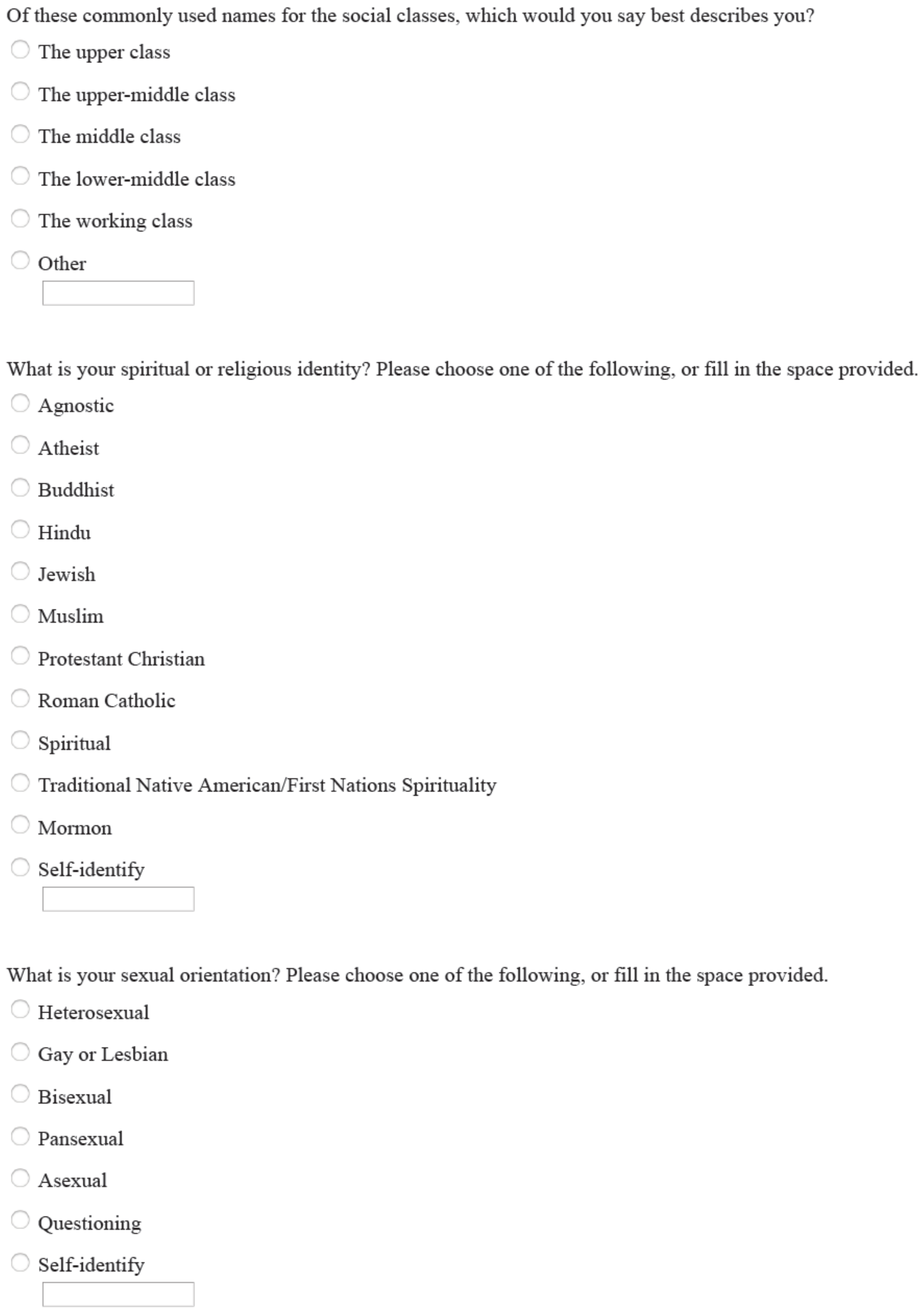
○ Asian/Asian American

○ Latino/Latina/Hispanic

○ Native American

○ Multiracial

○ Identify as a race not listed above



Of these commonly used names for the social classes, which would you say best describes you?

○ The upper class

○ The upper-middle class

○ The middle class

○ The lower-middle class

○ The working class

○ Other

What is your spiritual or religious identity? Please choose one of the following, or fill in the space provided.

○ Agnostic

○ Atheist

○ Buddhist

○ Hindu

○ Jewish

○ Muslim

○ Protestant Christian

○ Roman Catholic

○ Spiritual

○ Traditional Native American/First Nations Spirituality

○ Mormon

○ Self-identify

What is your sexual orientation? Please choose one of the following, or fill in the space provided.

○ Heterosexual

○ Gay or Lesbian

○ Bisexual

○ Pansexual

○ Asexual

○ Questioning

○ Self-identify

○ Prefer not to disclose

Which of the following best describes your political orientation?

○ Very liberal

○ Somewhat liberal

○ Slightly liberal

○ Neither liberal nor conservative

○ Slightly conservative

○ Somewhat conservative

○ Very conservative

Are you from?

○ USA

○ Canada

○ UK

○ Other

What is your highest completed level of education?

○ Some high school

○ High School

○ Associate

○ Some college

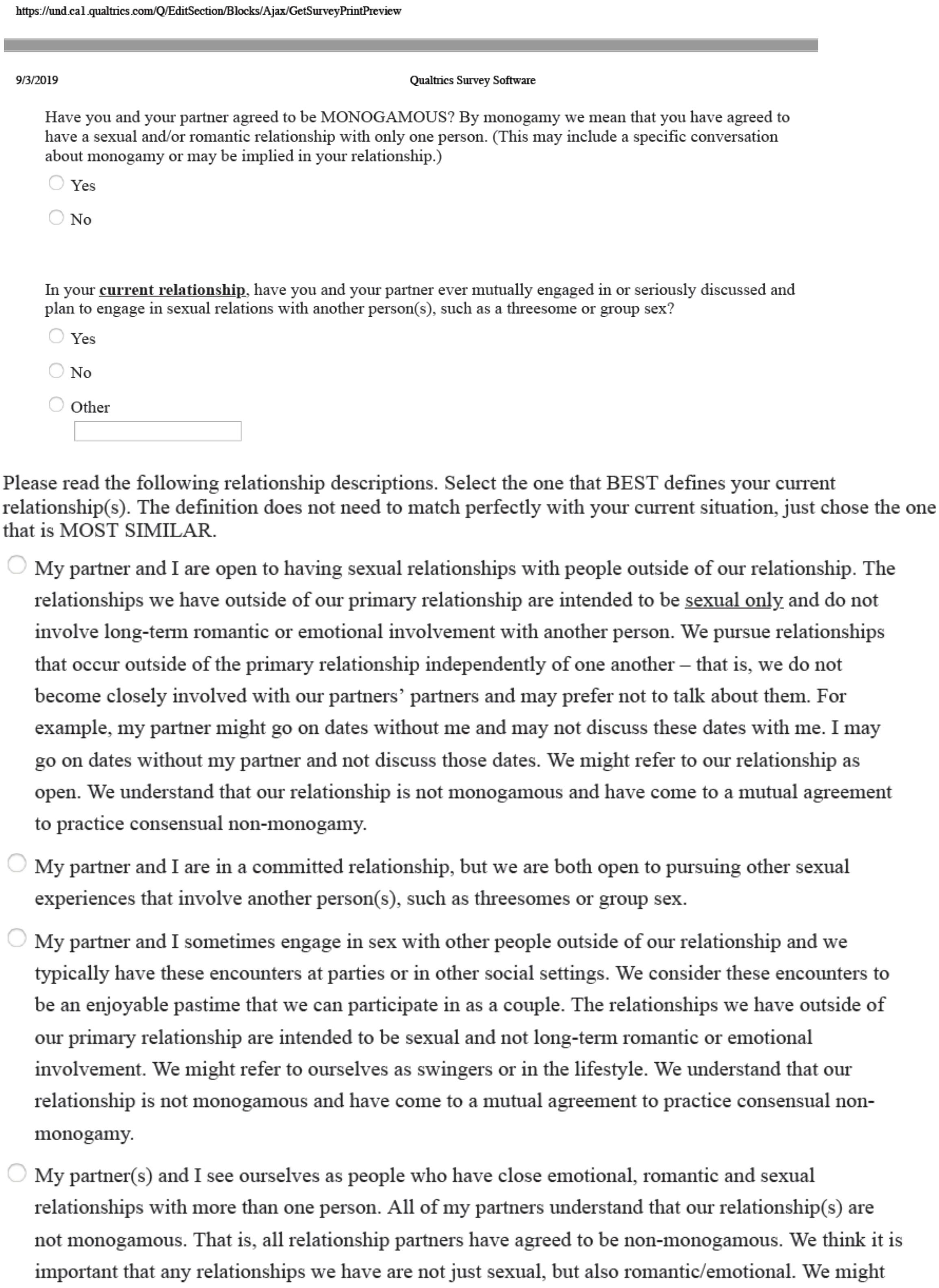
○ Bachelors

○ Masters

○ PhD or equivalent

○ Professional degree (MD, JD, DDS, etc)

Relationship Sorting Questions



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Have you and your partner agreed to be MONOGAMOUS? By monogamy we mean that you have agreed to have a sexual and/or romantic relationship with only one person. (This may include a specific conversation about monogamy or may be implied in your relationship.)

○ Yes

○ No

In your **current relationship**, have you and your partner ever mutually engaged in or seriously discussed and plan to engage in sexual relations with another person(s), such as a threesome or group sex?

○ Yes

○ No

○ Other

☐

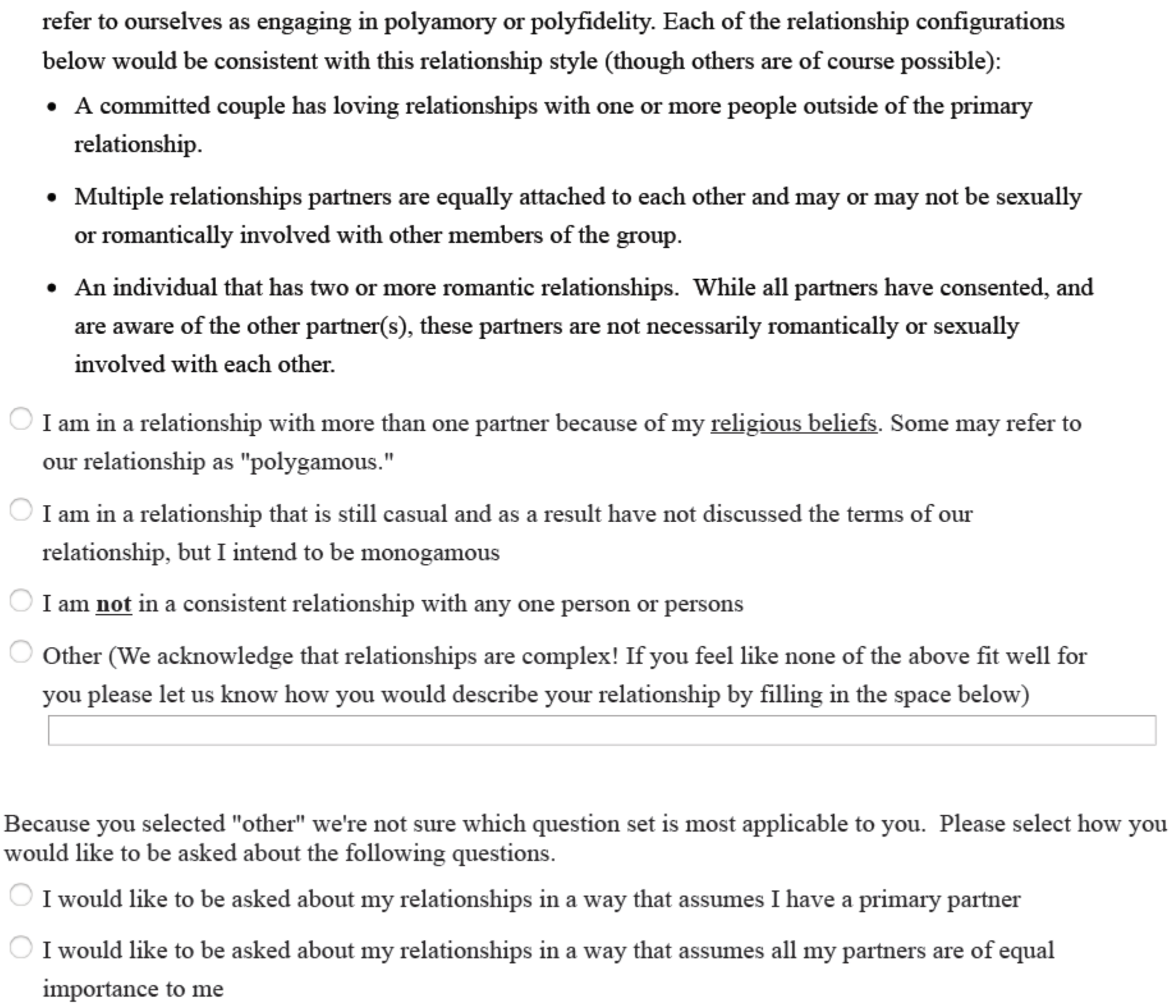
Please read the following relationship descriptions. Select the one that BEST defines your current relationship(s). The definition does not need to match perfectly with your current situation, just chose the one that is MOST SIMILAR.

○ My partner and I are open to having sexual relationships with people outside of our relationship. The relationships we have outside of our primary relationship are intended to be sexual only and do not involve long-term romantic or emotional involvement with another person. We pursue relationships that occur outside of the primary relationship independently of one another – that is, we do not become closely involved with our partners' partners and may prefer not to talk about them. For example, my partner might go on dates without me and may not discuss these dates with me. I may go on dates without my partner and not discuss those dates. We might refer to our relationship as open. We understand that our relationship is not monogamous and have come to a mutual agreement to practice consensual non-monogamy.

○ My partner and I are in a committed relationship, but we are both open to pursuing other sexual experiences that involve another person(s), such as threesomes or group sex.

○ My partner and I sometimes engage in sex with other people outside of our relationship and we typically have these encounters at parties or in other social settings. We consider these encounters to be an enjoyable pastime that we can participate in as a couple. The relationships we have outside of our primary relationship are intended to be sexual and not long-term romantic or emotional involvement. We might refer to ourselves as swingers or in the lifestyle. We understand that our relationship is not monogamous and have come to a mutual agreement to practice consensual non-monogamy.

○ My partner(s) and I see ourselves as people who have close emotional, romantic and sexual relationships with more than one person. All of my partners understand that our relationship(s) are not monogamous. That is, all relationship partners have agreed to be non-monogamous. We think it is important that any relationships we have are not just sexual, but also romantic/emotional. We might



refer to ourselves as engaging in polyamory or polyfidelity. Each of the relationship configurations below would be consistent with this relationship style (though others are of course possible):

- **A committed couple has loving relationships with one or more people outside of the primary relationship.**
- **Multiple relationships partners are equally attached to each other and may or may not be sexually or romantically involved with other members of the group.**
- **An individual that has two or more romantic relationships. While all partners have consented, and are aware of the other partner(s), these partners are not necessarily romantically or sexually involved with each other.**

○ I am in a relationship with more than one partner because of my religious beliefs. Some may refer to our relationship as "polygamous."

○ I am in a relationship that is still casual and as a result have not discussed the terms of our relationship, but I intend to be monogamous

○ I am **not** in a consistent relationship with any one person or persons

○ Other (We acknowledge that relationships are complex! If you feel like none of the above fit well for you please let us know how you would describe your relationship by filling in the space below)

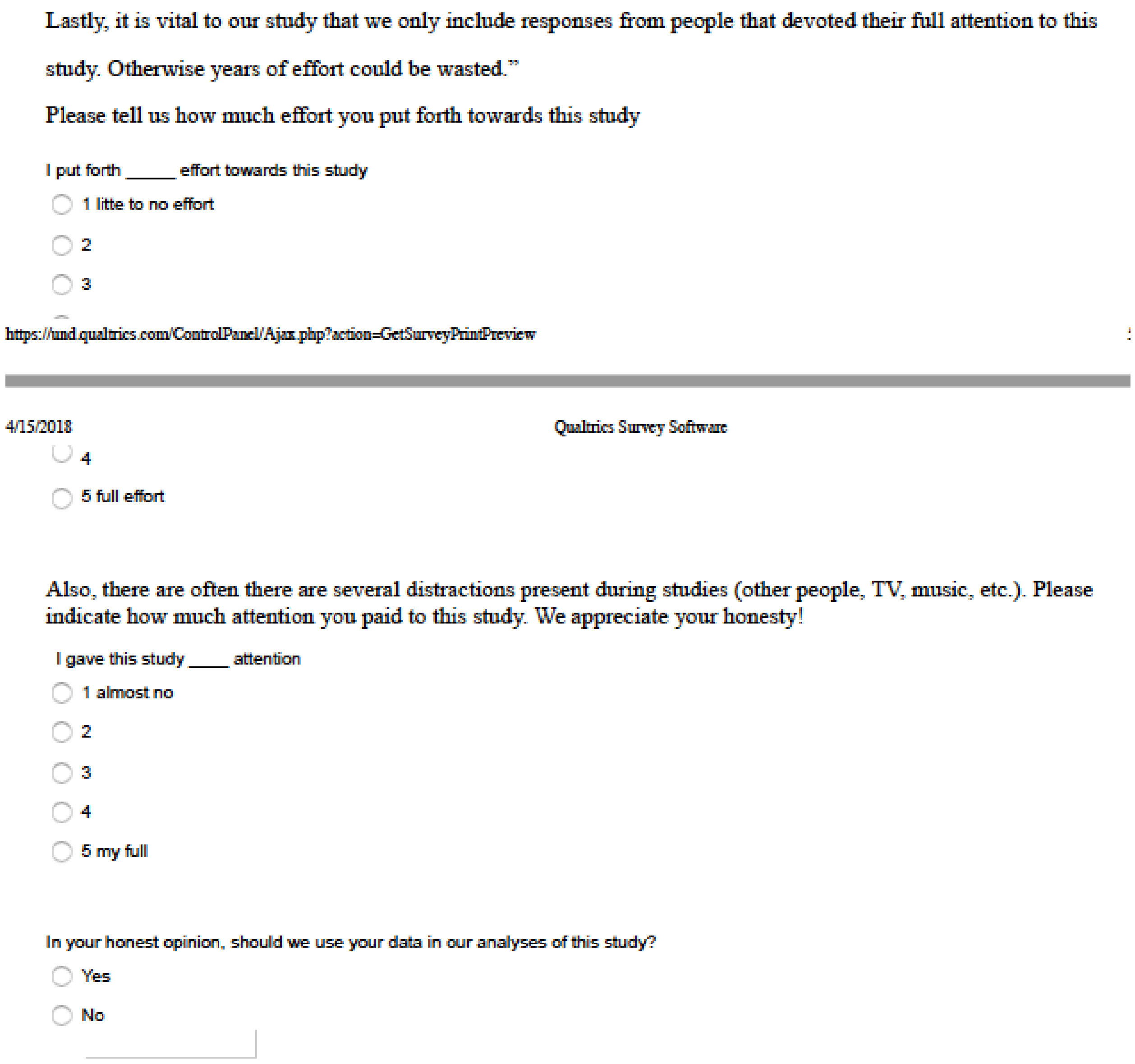
Because you selected "other" we're not sure which question set is most applicable to you. Please select how you would like to be asked about the following questions.

○ I would like to be asked about my relationships in a way that assumes I have a primary partner

○ I would like to be asked about my relationships in a way that assumes all my partners are of equal importance to me

APPENDIX B

ADAPTED SCRIPTS AND VALIDITY MEASURES FROM MEADE AND CRAIG (2012)



Lastly, it is vital to our study that we only include responses from people that devoted their full attention to this study. Otherwise years of effort could be wasted.”

Please tell us how much effort you put forth towards this study

I put forth _____ effort towards this study

○ 1 litte to no effort

○ 2

○ 3

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4/15/2018 Qualtrics Survey Software

○ 4

○ 5 full effort

Also, there are often there are several distractions present during studies (other people, TV, music, etc.). Please indicate how much attention you paid to this study. We appreciate your honesty!

I gave this study ____ attention

○ 1 almost no

○ 2

○ 3

○ 4

○ 5 my full

In your honest opinion, should we use your data in our analyses of this study?

○ Yes

○ No

APPENDIX C

7-ITEM MAXIMIZING TENDENCY SCALE (MTS-7; DALAL ET AL., 2015)

1	2	3	4	5	6	7
Completely Disagree						Completely Agree

1. I don’t like having to settle for good enough.

2. I am a maximizer.

3. No matter what I do, I have the highest standards for myself.

4. I will wait for the best option, no matter how long it takes.

5. I never settle for second best.

6. I never settle.

7. No matter what it takes, I always try to choose the best thing.

APPENDIX D

SHORT MAXIMIZATION INVENTORY (SMI; ĎURINÍK, PROCHÁZKA, CÍGLER, 2018) ALTERNATIVE SEARCH SUBSCALE

1	2	3	4	5	6	7
Completely Disagree						Completely Agree

1. *I take time to read the whole menu when dining out.
2. I usually continue to search for an item until it reaches my expectations.
3. When shopping, I plan on spending a lot of time looking for something.
4. I find myself going to many different stores before finding the thing I want.
5. *When I see something that I want, I always try to find the best deal before purchasing it.

*items 1 and 5 were excluded from main analysis due to low internal reliability

APPENDIX E

DECISION MAKING TENDENCY INVENTORY (DMTI; MISURACA ET AL., 2015) LESS AMBITIOUS SATISFICING SUBSCALE

1	2	3	4	5	6	7
Completely Disagree						Completely Agree

1. If I am happy with my work, I do not seek better opportunities.
2. In choosing between alternatives, I stop at the first that works for me.
3. I do not ask for more than what satisfies me.
4. When I watch TV or listen to the radio, I tend to follow the first program that I find interesting.

APPENDIX F

PERCEIVED RELATIONSHIP QUALITY COMPONENT (PRQC; FLETCHER, SIMPSON & THOMAS, 2000) SATISFATION AND COMMITMENT SUBSCALES WITH ADAPTED INSTRUCTIONS BY RELATIONSHIP TYPE

Each statement is answered on a 7-point Likert-type scale (ranging from 1 = not at all to 7 = extremely).

Monogamous:

Thinking about the past 4 weeks, please rate your current partner and relationship on each of the following items:

Primary:

Thinking about the past 4 weeks, please rate your current primary partner and relationship on each of the following items:

Polyamorous:

Thinking about the past 4 weeks, please rate your current primary partners and overall relationship on each of the following items:
("s" added to "relationship" for this option only)

Relationship Satisfaction

1. How satisfied are you with your relationship?
2. How content are you with your relationship?
3. How happy are you with your relationship?

Commitment

4. How committed are you to your relationship?

5. How dedicated are you to your relationship?

6. How devoted are you to your relationship?

APPENDIX G

RELATIONSHIP FLOURISHING SCALE (RFS; FOWERS ET AL., 2016) WITH ADAPTATIONS FOR RELATIONSHIP TYPES

Each statement is answered on a 5-point Likert-type scale (ranging from 1 = Strongly Disagree/Never to 5= Strongly Agree/Always).

Monogamous:

Please choose the response that best captures your agreement with the following statements about your relationship with your partner.

1. I have more success in my important goals because of my partner’s help
2. We look for activities that help us to grow as a couple
3. My partner has helped me to grow in ways that I could not have done on my own
4. It is worth it to share my most personal thoughts with my partner
5. When making important decisions, I think about whether it will be good for our relationship
6. It is natural and easy for me to do things that keep our relationship strong
7. Talking with my partner helps me to see things in new ways
8. I make it a point to celebrate my partner’s successes
9. I really work to improve our relationship
10. My partner shows interest in things that are important to me
11. We do things that are deeply meaningful to us as a couple
12. I make time when my partner needs to talk

Primary:

Please choose the response that best captures your agreement with the following statements about your relationship with your primary partner.

1. I have more success in my important goals because of my primary partner's help
2. We look for activities that help us to grow as a couple
3. My primary partner has helped me to grow in ways that I could not have done on my own
4. It is worth it to share my most personal thoughts with my primary partner
5. When making important decisions, I think about whether it will be good for our relationship
6. It is natural and easy for me to do things that keep our relationship strong
7. Talking with my primary partner helps me to see things in new ways
8. I make it a point to celebrate my primary partner's successes
9. I really work to improve our relationship
10. My primary partner shows interest in things that are important to me
11. We do things that are deeply meaningful to us as a couple
12. I make time when my primary partner needs to talk

Polyamorous:

Please choose the response that best captures your agreement with the following statements about your relationship with your primary partners.

1. I have more success in my important goals because of my primary partners' help
2. We look for activities that help us to grow as partners
3. My primary partners have helped me to grow in ways that I could not have done on my own
4. It is worth it to share my most personal thoughts with my primary partners
5. When making important decisions, I think about whether it will be good for our relationship
6. It is natural and easy for me to do things that keep our relationship strong
7. Talking with my primary partners helps me to see things in new ways
8. I make it a point to celebrate my primary partners' successes
9. I really work to improve our relationship
10. My primary partners show interest in things that are important to me
11. We do things that are deeply meaningful to us as partners
12. I make time when my primary partners need to talk

APPENDIX H

ADULT ATTACHMENT SCALE (AAS-R; COLLINS, 1990)

Only items 2r, 4, 5, 10, 11, and 12 were included in the study to make up the Anxious attachment measure. However, items 11 and 12 were dropped for the main analysis due to low factor loadings and poor model fit.

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about **all your relationships (past and present)** and respond in terms of how you **generally feel** in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

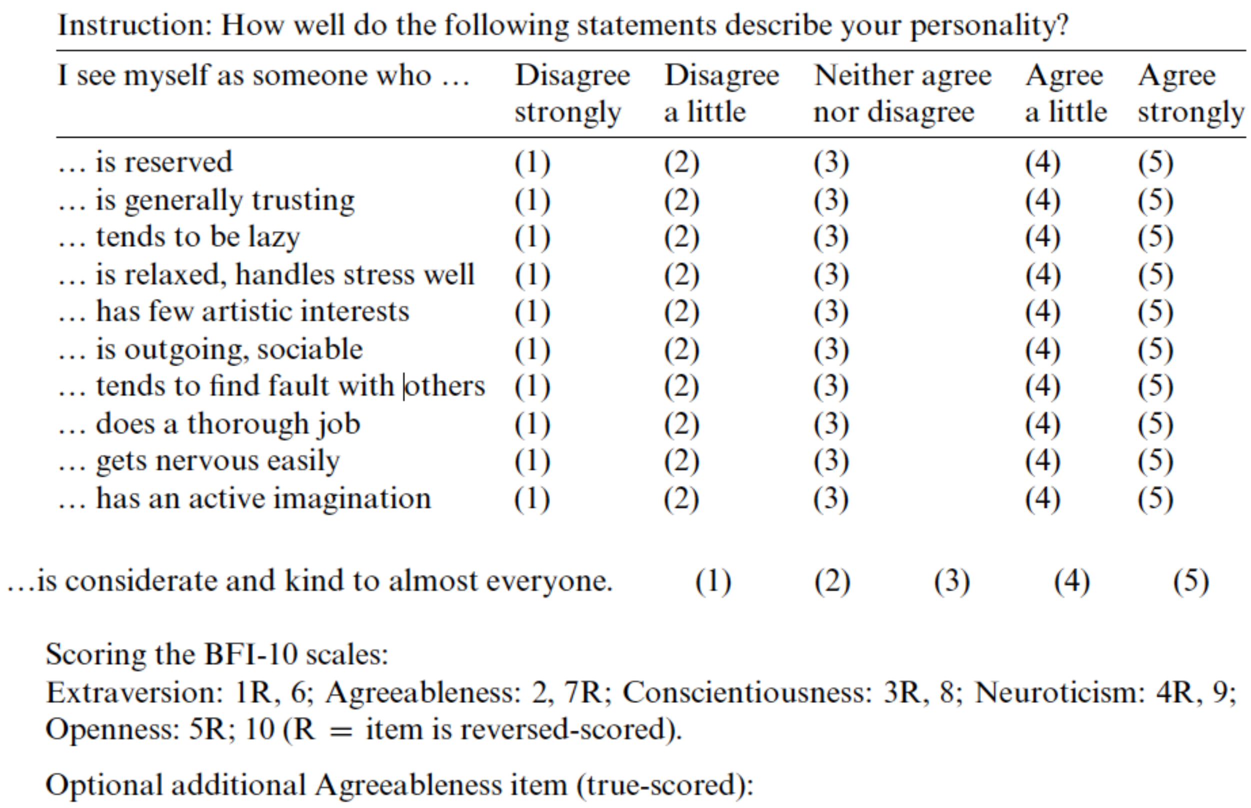
1--------------2--------------3--------------4--------------5

Not at all characteristic of me				**Very characteristic of me**

1. I find it relatively easy to get close to others.
2. I do not worry about being abandoned.
3. I find it difficult to allow myself to depend on others.
4. In relationships, I often worry that my partner does not really love me.
5. I find that others are reluctant to get as close as I would like.
6. I am comfortable depending on others.
7. I do not worry about someone getting too close to me.
8. I find that people are never there when you need them.
9. I am somewhat uncomfortable being close to others.
10. In relationships, I often worry that my partner will not want to stay with me.
11. I want to merge completely with another person.
12. My desire to merge sometimes scares people away.
13. I am comfortable having others depend on me.
14. I know that people will be there when I need them.
15. I am nervous when anyone gets too close.
16. I find it difficult to trust others completely.
17. Often, partners want me to be closer than I feel comfortable being.
18. I am not sure that I can always depend on others to be there when I need them.

APPENDIX I

BIG FIVE INVENTORY (BFI-10; RAMMSTEDT & JOHN, 2007)



Instruction: How well do the following statements describe your personality?

I see myself as someone who …	Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
… is reserved	(1)	(2)	(3)	(4)	(5)
… is generally trusting	(1)	(2)	(3)	(4)	(5)
… tends to be lazy	(1)	(2)	(3)	(4)	(5)
… is relaxed, handles stress well	(1)	(2)	(3)	(4)	(5)
… has few artistic interests	(1)	(2)	(3)	(4)	(5)
… is outgoing, sociable	(1)	(2)	(3)	(4)	(5)
… tends to find fault with others	(1)	(2)	(3)	(4)	(5)
… does a thorough job	(1)	(2)	(3)	(4)	(5)
… gets nervous easily	(1)	(2)	(3)	(4)	(5)
… has an active imagination	(1)	(2)	(3)	(4)	(5)

…is considerate and kind to almost everyone. (1) (2) (3) (4) (5)

Scoring the BFI-10 scales:
Extraversion: 1R, 6; Agreeableness: 2, 7R; Conscientiousness: 3R, 8; Neuroticism: 4R, 9; Openness: 5R; 10 (R = item is reversed-scored).

Optional additional Agreeableness item (true-scored):

APPENDIX J

PILOT STUDY

Method

Participants

In total 288 participants clicked on the survey link. However, many participants dropped out before taking the survey items, and were thus excluded from analyses. This left 190 participants with no missing data. Of these participants 50% female, 44% Male, and 4% self-identified. Participants ranged in age from 18 to 58 with a mean age of 27. Participants identified their race as White (79%), Multiracial or self-identify (10%), Asian/Asian American (6%), Latino(a) (2%) Black (1%), and less than 1 percent identified as Native American or Pacific Islander.

Measures

Participants were asked to complete the following measures.

7-Item Maximizing Tendency Scale (MTS-7; Dalal et al., 2015). The MTS-7 is a 7-item measure of whether an individual has the goal of choosing the best when making decisions, which is one facet of maximizing (Cheek & Schwartz, 2016). It was based on the Maximizing Tendency Scale (Diab, Gillespie, and Highhouse, 2008), but had two items removed to increase psychometric validity. It is rated on a 1 (completely disagree) to 7 (completely agree) scale with high scores indicating greater agreement with having a goal of choosing the best. Sample items include, “I don’t like having to settle for good enough,’” “I will wait for the best option, no matter how long it takes,” and “No matter what I do, I have the highest standards for myself.” The MTS-7 shows adequate psychometric properties. Specifically, with a sample of U.S.

undergraduates, the MTS-7 had an Cronbach alpha of .82 and a test–retest reliability of .61 (Dalal et al., 2015). For the current study, the an alpha of .85 was obtained.

Short Maximization Inventory (SMI; Ďuriník, Procházka, & Cígler, 2018). The SMI is a 15-item measure for assessing maximization as an individual trait. It was derived from the Maximization Inventory (Turner, Rim, Betz & Nygren, 2012). However, for the current study only one subscale, Alternative Search (the tendency to exert effort and spend time exploring alternative choices), will be used since only this subscale was recommended by Cheek and Schwartz (2016) to measure the maximization strategy. The alternative search subscale is composed of five items and is rated on a 1 (completely disagree) to 7 (completely agree) scale with high scores indicating greater time spent on exploring alternative choices. Sample items include, "I take time to read the whole menu when dining out," "I usually continue to search for an item until it reaches my expectations," and "When shopping, I plan on spending a lot of time looking for something." The Alternative Search subscale showed adequate reliability with a Cronbach's alpha of 0.77 in prior studies (Ďuriník, Procházka, & Cígler, 2018) (see Appendix D for full measure). For the current study, the an alpha of .76 was obtained.

Decision Making Tendency Inventory (DMTI; Misuraca et al., 2015). The DMTI is a measure of the decision-making tendencies to maximize, satisfice, and minimize. However, only one of its subscales, the Less Ambitious Satisficing Subscale will be used. This subscale is a measure of the tendency to engage in satisficing behavior, and was recommended by Cheek and Schwartz (2016) as it is the only measure with items that reflect satisficing as the tendency to choose the first option that meets one's criteria when making a choice. It is composed of four items and is rated on a 1 (completely disagree) to 7 (completely agree) scale with higher scores indicating greater tendency to satisfice. Sample items include, "If I am happy with my work, I do not seek better opportunities," "In choosing between alternatives, I stop at the first that works for me," and "When I watch TV or listen to the radio, I tend to follow the first program that I find interesting." This subscale showed a Cronbach's alpha of .60 with a sample of Italian undergraduates (Misuraca et al., 2015)(see Appendix E for full measure). Given this scale's marginal Cronbach's alpha, this measure's reliability reassessed prior to any additional analysis. For the current study it showed poor reliability with a Crohnbach alpha of .535, and thus it was eliminated from further consideration.

Big Five Inventory (BFI; John, Naumann, & Soto, 2008). The BFI is a 44-item measure for assessing five different personality traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. However, for the current study only the Neuroticism subscale was used. This subscale is composed of eight questions and is rated from a 1 (disagree strongly) to 5 (agree strongly) Likert-type scale with higher scores indicating higher endorsement of the subscale trait. Participants are asked to indicate their level of agreement with how much different statements represent their personality. Sample items include, "is generally trusting (R)," "Is relaxed, handles stress well," and "is outgoing, sociable (R)." The neuroticism subscale showed good reliability with a Cronbach's alpha of 0.87 in prior studies (John et al., 1991). For the current study, the an alpha of .84 was obtained.

Research Design

Participants were recruited via Reddit (r/samplesize). Participants were directed to an online Qualtrics survey where they were first asked to review and agree to an informed consent, and respond to the demographics questionnaire. Next, the three measures of interest were presented randomly to eliminate survey fatigue. Lastly, they were presented with the three validity question checks to ensure valid responding.

Results

Reliability Analysis

The Cronbach alpha were as follows: MTS-7= .85, SMI=.76, DMTI = .54, Neuroticism (Neuro) sub scale = .84. DMTI showed poor reliability and will not be further considered for analysis. MTS-7 and Neuro both show good reliability, but SMI shows only adequate reliability. However, removing items would decrease reliability based on “if deleted” results.

Exploratory Factor Analysis

MTS-7, SMI, and Neuro all appear that only one factor should be extracted based on scree plots. All items loaded at above .4 for having a single factor.

Conducting an EFA with SMI and MTS-7 together also indicate that two factors should be extracted and each items scales load appropriately onto their respected factors.

Measurement Models

In testing this model the fit was largely adequate indicating construct validity. Chi-squared was significant, but this can be ignored due to the large sample size. Hu and Bentler (1999) recommended good fitting models should have RMSEA < .06, TLI > .95, CFI > .95 RMSEA for this model was slightly over the recommend .06. CFI was indicated as .93, which is slightly below the recommendation of .95.

Convergent validity was good with AVE’s above .5 (.628 for SMI and .686 for MTS). However, both showed adequate to good alpha’s of .76 and .85, respectively.

The average AVE between SMI and MTS is .1999, which is less than the squared correlation between SMI and MTS of .1764, thus demonstrating discriminant validity.

Finally, the model does evidence nomological validity as SMI and MTS and theorized to both represent different aspects of Maximizing. Thus, the significant correlation between the two latent variables makes theoretical sense.

Nevertheless, the model could be improved. To do so, some of the lowest loading items one at a time. It was found that deleting any items from the SMI worsened the fit, but deleting item 2 of the MTS, greatly improved the model fit (RMSEA= .059, CFI= .962, TLI= .949). Standardized residuals were also evaluated, but none appeared problematic. Modification indices were also evaluated, but only one was elevated (above 10), and it did not make theoretical sense to alter. Both maintained adequate to good alpha's of .76 and .84, respectively.

This measurement model provides evidence that MTS-7 and SMI are measuring two different constructs, but that these concepts are significantly related, thus supporting Cheek and Schwartz (2016) proposition that MTS-7 and SMI may both represent different, but related aspects of maximization.

Competing measurement model

Next, to test whether maximization would better be represented as a single construct, rather than two related constructs, I tested just one overall factor of "maximizing." This resulted in a model with a RMSEA of .159, CFI of .717, and a TLI of .636. Thus, this demonstrates that maximizing is clearly better represented as two separate constructs.

Correlations Among Key Study Variables

	MTS-7	SMI-Alternative search	BFI-Neuroticism
MTS-7	1	.362**	-.012
SMI		1	.042
BFI-Neuroticism			1

** $p < .001$.

Discussion

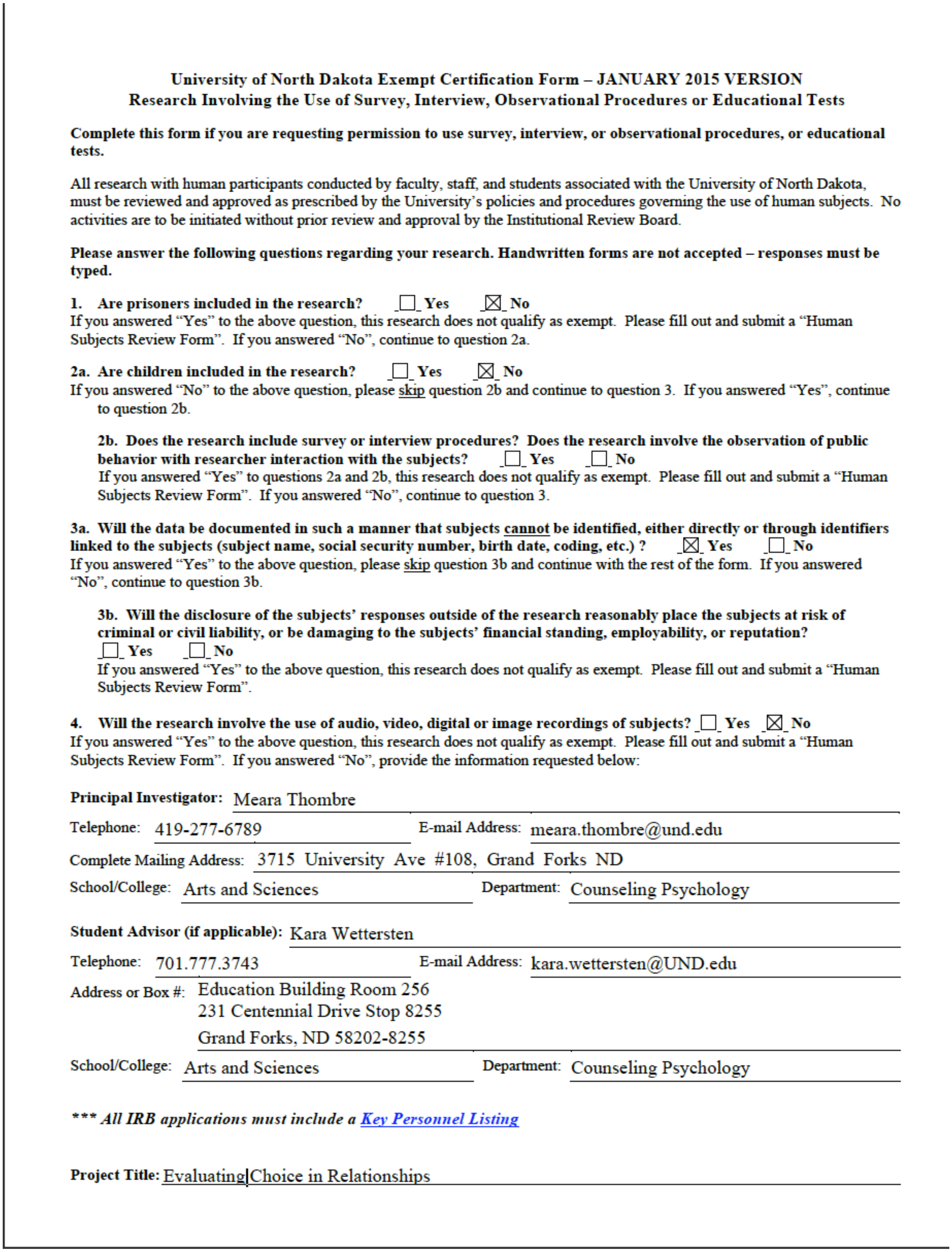
The aim of the current pilot study was threefold. The first aim was to determine whether all of the maximizing measures were psychometrically adequate. Results demonstrated that while the SMI-AS and the MTS-7 both showed at least adequate reliability, the DMTI did not. Therefore, DMTI will not be considered as a potential measure.

The second aim of the study was to test how maximization should be measured given its two-part conceptualization as a goal and a strategy (Cheek & Schwartz, 2016). Results demonstrated a good fit when the MTS-7 and the SMI-AS were separate but correlated constructs, however, combining items into a single maximizing construct resulted in a poor fitting model. Thus, maximizing should be measured as two separate, but related constructs.

The final aim of the study was to test whether neuroticism correlates with maximizing to determine if neuroticism should be controlled for in the main study. Results showed that for the current sample neither maximizing measure (MTS-7 or SMI-AS) significantly correlated with neuroticism. Therefore, results indicate that neuroticism does not need to be considered in the main study.

APPENDIX K

COPY OF IRB INFORMATION



University of North Dakota Exempt Certification Form – JANUARY 2015 VERSION
Research Involving the Use of Survey, Interview, Observational Procedures or Educational Tests

Complete this form if you are requesting permission to use survey, interview, or observational procedures, or educational tests.

All research with human participants conducted by faculty, staff, and students associated with the University of North Dakota, must be reviewed and approved as prescribed by the University's policies and procedures governing the use of human subjects. No activities are to be initiated without prior review and approval by the Institutional Review Board.

Please answer the following questions regarding your research. Handwritten forms are not accepted – responses must be typed.

1. Are prisoners included in the research? ☐ **Yes** ☒ **No**
If you answered "Yes" to the above question, this research does not qualify as exempt. Please fill out and submit a "Human Subjects Review Form". If you answered "No", continue to question 2a.

2a. Are children included in the research? ☐ **Yes** ☒ **No**
If you answered "No" to the above question, please skip question 2b and continue to question 3. If you answered "Yes", continue to question 2b.

2b. Does the research include survey or interview procedures? Does the research involve the observation of public behavior with researcher interaction with the subjects? ☐ **Yes** ☐ **No**
If you answered "Yes" to questions 2a and 2b, this research does not qualify as exempt. Please fill out and submit a "Human Subjects Review Form". If you answered "No", continue to question 3.

3a. Will the data be documented in such a manner that subjects cannot be identified, either directly or through identifiers linked to the subjects (subject name, social security number, birth date, coding, etc.) ? ☒ **Yes** ☐ **No**
If you answered "Yes" to the above question, please skip question 3b and continue with the rest of the form. If you answered "No", continue to question 3b.

3b. Will the disclosure of the subjects' responses outside of the research reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation?
☐ **Yes** ☐ **No**
If you answered "Yes" to the above question, this research does not qualify as exempt. Please fill out and submit a "Human Subjects Review Form".

4. Will the research involve the use of audio, video, digital or image recordings of subjects? ☐ **Yes** ☒ **No**
If you answered "Yes" to the above question, this research does not qualify as exempt. Please fill out and submit a "Human Subjects Review Form". If you answered "No", provide the information requested below:

Principal Investigator: Meara Thombre
Telephone: 419-277-6789 E-mail Address: meara.thombre@und.edu
Complete Mailing Address: 3715 University Ave #108, Grand Forks ND
School/College: Arts and Sciences Department: Counseling Psychology

Student Advisor (if applicable): Kara Wettersten
Telephone: 701.777.3743 E-mail Address: kara.wettersten@UND.edu
Address or Box #: Education Building Room 256
231 Centennial Drive Stop 8255
Grand Forks, ND 58202-8255
School/College: Arts and Sciences Department: Counseling Psychology

****** All IRB applications must include a Key Personnel Listing***

Project Title: Evaluating Choice in Relationships

Proposed Research Beginning Date: June 2018

Exempt research will be approved for 3 years from the original approval date.

Funding agencies supporting this research: n/a

(A copy of the funding proposal for each agency identified above MUST be attached to this proposal when submitted.)

☐ YES or ☒ NO Does any researcher associated with this project have a financial interest in the results of this project? If yes, submit on a separate piece of paper an additional explanation of the financial interest. The Principal Investigator and any researcher associated with this project should have a Financial Interests Disclosure Document on file with their department.

☐ YES or ☒ NO Will any research participants be obtained from another organization outside the University of North Dakota (e.g., hospitals, schools, public agencies, American Indian tribes/reservations)?

☐ YES or ☒ NO Will any data be collected at or obtained from another organization outside the University of North Dakota?

If yes to either of the previous two questions, list all institutions: ______________________________

Letters from each organization must accompany this proposal. Each letter must illustrate that the organization understands its involvement and agrees to participate in the study. Letters must include the name and title of the individual signing the letter and should be printed on organizational letterhead.

Does any external site where the research will be conducted have its own IRB? _____ YES or _____ NO

If yes, does the external site plan to rely on UND's IRB for approval of this study? _____ YES or _____ NO
(If yes, contact the UND IRB at 701 777-4279 for additional requirements)

If your project has been or will be submitted to other IRBs, list those Boards below, along with the status of each proposal.

______________________________ Date submitted: __________ Status: ___ Approved ___ Pending
______________________________ Date submitted: __________ Status: ___ Approved ___ Pending

(include the name and address of the IRB, a contact person at the IRB, and a phone number for that person)

Type of Project: Check "Yes" or "No" for each of the following.

☒ YES or ☐ NO New Project

☒ YES or ☐ NO Dissertation/Thesis/Independent Study

☐ YES or ☒ NO Continuation/Renewal

☒ YES or ☐ NO Student Research Project

☐ YES or ☒ NO Is this a Protocol Change for previously approved project? If yes, submit a signed Protocol Change Form, along with a signed copy of this form with the changes bolded or highlighted.

Please provide additional information regarding your research by responding to questions 5-11 on a separate sheet of paper.

5. **In non-technical language, describe the purpose of the study and state the rationale for this research.**

6. **In non-technical language, describe the study procedures.**
   How will subjects be informed of the research? If you will be having subjects sign a consent form, justify why. How will instrument(s) be distributed/collected? Will compensation be provided? What is the suspected duration of subject participation? Etc.

7. **Where will the research be conducted?**

8. **Describe what data will be recorded.**

9. **How will data be recorded and stored (that is will it be coded, anonymous, etc.)?**
   Note: Must state that data will be stored for a minimum of three years after data analysis is complete, or for a period of

time sufficient to meet federal, state, and local regulations, sponsor requirements, and organizational policies and procedures.

10. Describe procedures you will implement to protect confidentiality of data collected from participants and privacy of participants when participating in research activities.

11. Describe the nature of the subject population and the estimated number of subjects.

If participants who are likely to be vulnerable to coercion and undue influence are to be included in the research, define provisions to protect the privacy and interests of these participants and additional safeguards implemented to protect the rights and welfare of these participants.

12. Include a copy of the study information sheet to be given to participants (either in person or online, depending on the nature of the research) that discloses research information. A template is available under 'Exempt Certification Forms' on the IRB Forms page of the IRB website: http://und.edu/research/resources/human-subjects/forms.cfm

Necessary attachments:

☒ Signed Student Consent to Release of Educational Record Form (students and medical residents only);
☒ Investigator Letter of Assurance of Compliance;
☒ Key Personnel Listing;
☒ Surveys, interview questions, or educational tests;
☒ Printed web screens (if survey is over the Internet);
☒ Advertisements, including recruitment emails/letters and social network postings; and
☒ Informed consent statement.

NOTE: The UND IRB requires that all key personnel involved in the research complete human subject education before IRB approval to conduct research can be granted.

****

By signing this form, I certify that the above information is accurate and that this research will be conducted in accordance with the statements provided above; this research does not involve prisoners, but if a subject becomes a prisoner, I will notify the IRB.

(Principal Investigator)	Date:
(Student Adviser)	Date:

*****All students and medical residents must list a faculty member as a student advisor on the first page of the application and must have that person sign the application.*****

Submit the signed application form and any necessary attachments to the Institutional Review Board, 264 Centennial Drive Stop 7134, Grand Forks, ND 58202-7134; or bring it to Twamley Hall, Room 106.

INVESTIGATOR LETTER OF ASSURANCE OF COMPLIANCE WITH ALL APPLICABLE FEDERAL REGULATIONS FOR THE PROTECTION OF THE RIGHTS OF HUMAN SUBJECTS

I __Meara Thombre___________________________
(Name of Investigator)

agree that, in conducting research under the approval of the University of North Dakota Institutional Review Board, I will fully comply and assume responsibility for the enforcement of compliance with all applicable federal regulations and University policies for the protection of the rights of human subjects engaged in research. Specific regulations include the Federal Common Rule for Protection of the Rights of Human Subjects 45 CFR 46. I will also assure compliance to the ethical principles set forth in the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research document, The Belmont Report.

I understand the University's policies concerning research involving human subjects and agree to the following:

1. Should I wish to make changes in the approved protocol for this project, I will submit them for review PRIOR to initiating the changes. (A proposal may be changed without prior IRB approval where necessary to eliminate apparent immediate hazards to the subjects or others. However, the IRB must be notified in writing within 72 hours of any change, and IRB review is required at the next regularly scheduled meeting of the full IRB.)

2. If any problems involving human subjects occur, I will immediately notify the Chair of the IRB, or the IRB Coordinator.

3. I will cooperate with the UND IRB by submitting Research Project Review and Progress Reports in a timely manner.

I understand the failure to do so may result in the suspension or termination of proposed research and possible reporting to federal agencies.

_____________________________________ __ ________________
Investigator Signature Date

5. Purpose of study and rationale:

Consensual non-monogamy (CNM) is a style of romantic or sexual relationship that consensually includes more than two people in a sexual or romantic relationship (Brewster et al., 2017; Conley, Moors, Ziegler, Matsick, & Rubin, 2013). While the lay perception of these types of relationships is generally poor (Burris, 2013; Conley, Ziegler, Moors, & Rubin, 2013; Grunt-Mejer & Campbell, 2015; Matsick, Hutzler, Giuliano, Herselman, & Johnson, 2015) research has shown that CNM relationships are no less viable than monogamous relationships (Conley, Matsick, Moors, & Ziegler, 2017; Cox II, Fleckenstein, & Bergstrand, 2012; Fleckenstein & Cox, 2014; Morrison, Beaulieu, Brockman, & Beaglaoich, 2013; Rubel & Bogaert, 2015; Séguin et al., 2016). Further, CNM relationships are more common than one often thinks, with an estimated of 4-5% of people in CNM relationships at the current time (Conley, Ziegler, Moors, Matsick, & Valentine, 2012), and as many as 21% of people endorsing being in a CNM relationship at some point in their lives (Haupert, Gesselman, Moors, Fisher, & Garcia, 2016). However, despite this high prevalence, the CNM population remains understudied. Therefore, the current study hopes to offer a new perspective and direction to help better understand this unique population by using the Maximization Paradox (Dar-Nimrod, Rawn, Lehman, & Schwartz, 2009) to investigate whether individual differences in choice orientation might impact relationship quality differently in CNM and monogamous relationships.

Specifically, the Maximization Paradox stipulates that there are individual differences in the way that people go about making choices that lead them to be more or less prone to experiencing dissatisfaction and decreased wellbeing with associated choices (Schwartz et al., 2002). On one side, there are those who seek out the "best" option and tend to experience increased dissatisfaction from decisions. These individuals and their choice orientation are termed “maximizers.” On the other side, there are those who tend to select options that are “good enough” or satisfy some given threshold, termed “satisficers.” While research has generally found that maximizers have decreased satisfaction compared to satisficers, other research suggests that this relationship may be context dependent (Shiner, 2015). Thus, the relationship between maximization and satisfaction might not be completely understood and could differ in contexts that allow multiple choices to be made, such as the type of relationship.

A better understanding of this linking between relationship style and choice orientation could be beneficial to both the lay community and mental health professionals. The purpose of this study is to further develop the empirical evidence to help guide the decision-making process for those considering this healthy but stigmatized relationship type.

6. Describe the study procedures:

To start, a pilot study will be conducted to test the validity and reliability of different maximization measurements and potential covariate factors. In the pilot study, participants will be asked to anonymously rate the degree they agree with a number of statements based on 3 measures of choice orientation, regret, and neuroticism, and additionally a demographics form (see screen shots of survey for pilot measures). Based an exploratory factor analysis, the scales and/or items that are most psychometrically sound will be used in the main analysis to distinguish maximizers and satisficers. For the pilot, at least 200 participants will be recruited from Reddit, Amazon Mechanical Turk and snowball sampling on Facebook. All potential participants will first read an informed consent (see screen shots of pilot survey for informed consent) and indicate their willingness to participant. The informed consent will only allow participants to continue if they indicate that they are 18 or older. After completing the survey, participants will be thanked for their participation and will be given the email address of the primary investigator to contact if they have any questions or concerns about the survey or their data. No personally identify information will be collected for the pilot. The pilot survey should only take participants 5-10 minutes.

For the main study, any participant 18 years or older who is in a current romantic or sexual relationship will be eligible. However, participants from non-Western countries will be excluded from the main analysis, unless a substantial number of non-Western participants complete the survey. In order to compare individuals in CNM relationships to individuals in monogamous relationships, two samples will be collected. The first proposed sample (CNM) will be recruited from online sources such as Reddit (r/samplesize, r/polyamory, /r/NonMonogamy/r/PolyFamilies, etc.), Facebook groups (Polyamory Dating, Poly People, etc.), and online forums specific to the CNM population. This type of targeted data collection is necessary due to low levels of CNM relationships in the general U.S. population. The second proposed (monogamous) sample will be recruited primarily from Reddit and Facebook. If enough data cannot be obtained from the proposed sources, Amazon Turk will be used to gather additional data. Participants recruited through Amazon Mechanical Turk will be compensated 10 cents per minute, while other participants will not be compensated.

All potential participants will first read the informed consent and indicate their willingness to participant in this anonymous study (see screen shots of survey for the main study informed consent). The informed consent will only allow participants to continue if they indicate that they are 18 or older. Next, participants will respond to the demographics questionnaire. Following this, the choice orientation, regret, relationship quality, neuroticism, and attachment style measures will all be presented randomly to eliminate survey fatigue. Lastly, they will be presented with the three validity question checks and follow-up demographics questions (see screen shots of survey for all scales and demographics of the main study). Participants will then be thanked for their participation and given debriefing information. Participants will also be given the email address of the primary investigator to contact if they have any questions or concerns about the survey or their data.

7. Where will research be conducted?

The research will be conducted using Internet platforms, as described above.

8. Describe what data will be collected:

All responses listed in the survey attached to this IRB application will be recorded. No identifying information will be collected. The data range of the records include all data collected from the beginning (approximately June 2018, or pending IRB approval) of data collection to the end of data collection (approximately May 15, 2019).

9. Describe how data will be recorded and stored:

Data will be collected through Qualtrics and stored on a password-protected computer owned by the principle investigator. Following completion of the study, the data will be transferred and stored in electronically secure excel and SPSS files, with password protection and with no identifying information attached. The data will be kept for the minimum required time of seven years (American Psychological Association ethics code) post-analysis.

The PI (Meara Thombre) and faculty advisor (Kara Wettersten) will have full access to the data files.

10. Describe procedures you will implement to protect confidentiality of data from participants and privacy of participants when participating in research activities:

The original electronic data will be available for viewing by the PI (Meara Thombre) and faculty advisor. These files will be password protected. No identifying information, such as names and email addresses, will be collected in connection to the data from this project. As outlined in the informed consent document (see screen shots of surveys), any participant may withdraw at any time. In any eventual publication, all data will remain de-identified.

11. Describe the nature of the subject population and the estimated number of subjects

For the main study, we hope to recruit around 125 participants ages 18 and older who are in a current romantic or sexual relationship. Approximately four roughly equal groups between relationship and choice orientation will also be necessary for proper analysis, so data collection will continue until a minimum number of participants are obtained. Participants will be recruited through a number of Internet platforms, including, Reddit, Facebook and Amazon Mechanical Turk, as well as other sites listservs or forums specific to the CNM population based on willingness of the sites administrators. The compensation offered for participation is only relevant for Amazon Mechanical Turk, and is not substantial enough to offer undue coercion to potential participants. This survey will target those in CNM relationships, but all responses will be kept completely anonymous and participants are informed that they can withdraw at any time. No other vulnerable populations are targeted. We will not be asking individuals for a written (signature) informed consent as a way of further protect individual participant’s anonymity.

PROTOCOL CHANGE FORM
UNIVERSITY OF NORTH DAKOTA INSTITUTIONAL REVIEW BOARD

Please complete this form and attach revised research documents for any proposed change to your protocol, consent forms, or any supportive materials (such as advertisements, questionnaires, surveys, etc.). All changes must be highlighted. Any proposed change in protocol affecting human participants must be reviewed and approved by the IRB prior to implementation, except where an immediate change is necessary to eliminate a hazard to the participant.

Principal Investigator: Meara Thombre

Telephone: 419-277-6789 E-mail Address: Meara.thombre@und.edu

Complete Mailing Address: 3715 University Ave #108

School/College: Arts and Sciences Department: Counseling Psychology

Project Title: Evaluating Choice in Relationships

Proposal Number: IRB201806-325 **Approval Date:** 6/14/2018

THE CURRENT STATUS OF THE PROJECT IS (Check one)

____ Project currently in progress. Number of subjects enrolled is: ____

x Project not yet started. No subjects enrolled.

____ Project closed to subject entry.

1. Briefly describe and explain the reason for the revision or amendment and the justification for the change. Include a copy of affected protocol pages and consent form with specific changes highlighted.

We would like to add two questions about relationship type in the pilot study to better compare demographic factors in the main study.

2. Does the change affect the study or subject participation (procedures, risks, costs, etc.)? ____ Yes x No

Please explain: A similar question is already asked in the main study.

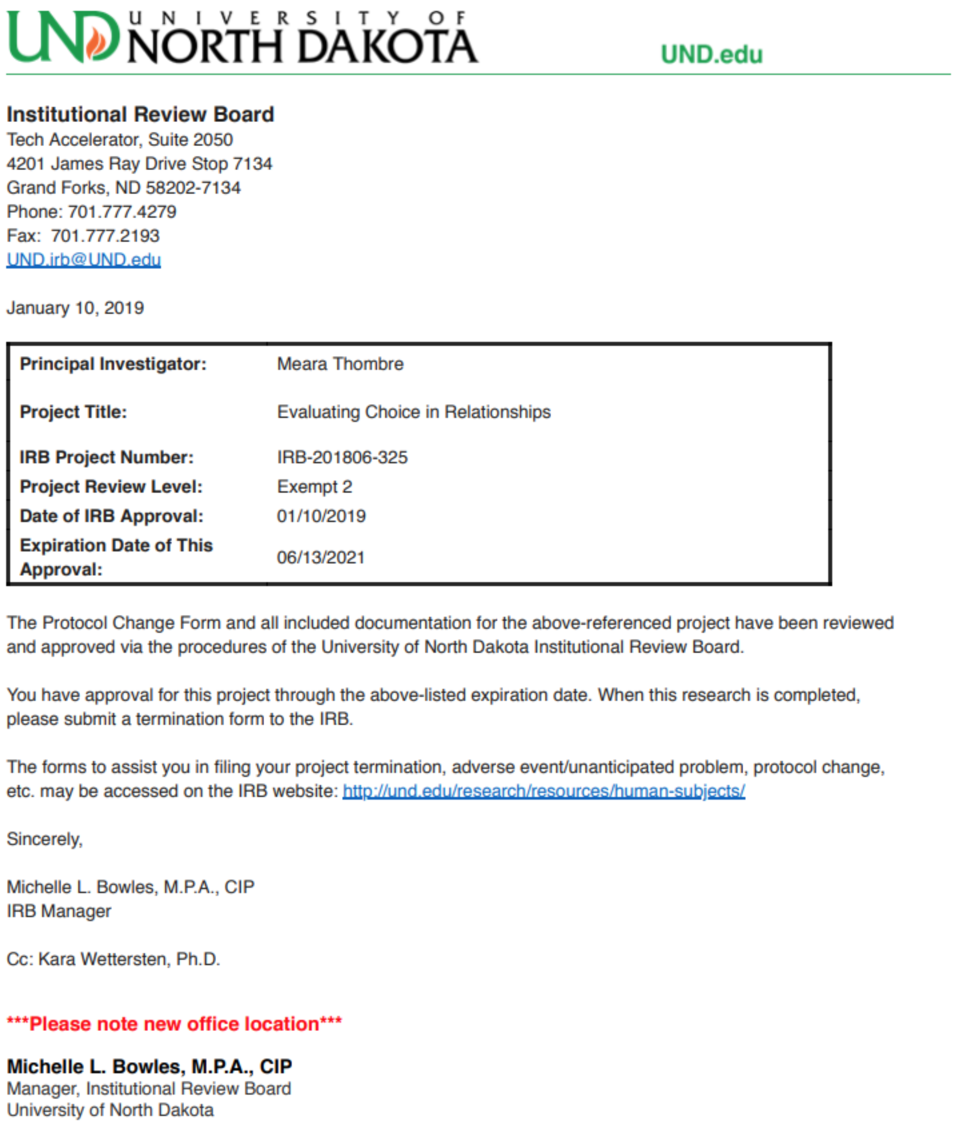
3. Does the change affect the consent document? ____ Yes x No

If yes, include the revised consent form(s) with the changes highlighted, and a clean copy of the revised consent form(s).

By signing below, you are verifying that the information provided in the Human Subjects Review Form and attached information is accurate and that the project will be completed as indicated.

Signatures:

Principal Investigator	Date:
	June 25, 2018
Student Adviser (if applicable)	Date:



UNIVERSITY OF NORTH DAKOTA
UND.edu

Institutional Review Board
Tech Accelerator, Suite 2050
4201 James Ray Drive Stop 7134
Grand Forks, ND 58202-7134
Phone: 701.777.4279
Fax: 701.777.2193
UND.irb@UND.edu

January 10, 2019

Principal Investigator:	Meara Thombre
Project Title:	Evaluating Choice in Relationships
IRB Project Number:	IRB-201806-325
Project Review Level:	Exempt 2
Date of IRB Approval:	01/10/2019
Expiration Date of This Approval:	06/13/2021

The Protocol Change Form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

You have approval for this project through the above-listed expiration date. When this research is completed, please submit a termination form to the IRB.

The forms to assist you in filing your project termination, adverse event/unanticipated problem, protocol change, etc. may be accessed on the IRB website: http://und.edu/research/resources/human-subjects/

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Manager

Cc: Kara Wettersten, Ph.D.

*****Please note new office location*****

Michelle L. Bowles, M.P.A., CIP
Manager, Institutional Review Board
University of North Dakota