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Yabin Tang, Student Dr. Jason D. Hans, Major Professor Dr. Hyungsoo Kim, Director of Graduate Studies

# DEFINING INFIDELITY AND IDENTIFYING OFFENDING SPOUSES

# THESIS

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Family Sciences in the College of Agriculture, Food and Environment at the University of Kentucky

By

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Lexington, Kentucky

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2019

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## ABSTRACT OF THESIS

### DEFINING INFIDELITY AND IDENTIFYING OFFENDING SPOUSES

Research on infidelity has suffered from inconsistency in how infidelity has been operationalized across studies. This study was designed to advance methodological considerations for defining infidelity and identifying offending spouses. A subjective definition of infidelity was obtained from each respondent via both closed- and open-ended items. The open-ended responses were applied to explore the definition of infidelity. Additionally, an indirect questioning method was adopted to identify offending spouses according to their own subjective definitions of cheating and test the effectiveness of this approach relative to direct questioning for identifying offending spouses. Furthermore, gender differences in acknowledging infidelity through both direct and indirect approaches in general as well as across the four self-defined categorical infidelity were examined. A community sample of 465 married or divorced individuals anonymously completed the survey via MTurk. Results showed two defining characteristics of infidelity that cut across modes of infidelity (sexual, emotional, computer-mediated, and solitary) were that infidelity occurs outside the relationship and without consent. The definition of infidelity of infidelity provided in response to an open-ended inquiry tended to be shorter among offending spouses-especially male offending spouses-than among non-offending spouses. More offending spouses were found via the indirect (42.9%) approach than the direct approach (12.7%), and more men than women acknowledged engaging in infidelity behaviors according to both the direct (16.6% vs. 9.1%) and indirect (48.2% vs. 38.0%) approaches. That said, gender-based statistical differences in propensity to commit selfdefined infidelity were only found in sexual and computer-mediated forms of infidelity; propensity to commit self-defined emotional and solitary infidelity did not statistically differ between men and women; in all cases, however, gender differences were small. Results suggested that the indirect approach is better than direct questioning for identifying infidelity behaviors; the indirect approach elicited less social desirability bias. Implications for research and clinical practice are provided.

KEYWORDS: offending spouses, infidelity, unfaithful, cheating

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05/13/2019

# DEFINING INFIDELITY AND IDENTIFYING OFFENDING SPOUSES

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#### CHAPTER 1. LITERATURE REVIEW

## Introduction

Infidelity is the most commonly reported cause of divorce in the United Sates (Amato & Previti, 2003) and exists across at least 160 cultures (Betzig, 1989). Moreover, infidelity is considered the third most difficult therapeutic problem to work with and the second only to abuse for having the most damaging impact on relationships (Whisman, Dixon, & Johnson, 1997). Meanwhile, many professionals feel ill-equipped to work with unfaithful couples; a national survey of clinical members of the American Association of Marriage and Family Therapists (AAMFT) revealed that 74% of respondents believed that they gained insufficient knowledge regarding infidelity in their training program (Softas-Nall, Beadle, Newell, & Helm, 2008), and 72% of them felt the topic had not been adequately addressed in professional literature (Seedall, Houghtaling, & Wilkins, 2013). Thus, the incidence of infidelity is high, and the consequences are severe, yet professional readiness to address the issue is low.

Although research on infidelity has provided valuable insights for researchers and clinicians, many published studies have "suffered serious methodological problems" (Atkins, Baucom, & Jacobson, 2001, p. 736). One methodological critique is inconsistency in the definition of infidelity across this body of literature; infidelity has been operationalized in numerous different ways across studies of infidelity according to definitions determined by the investigators conducting each study. In addition, many studies on infidelity have inadequately addressed concerns about social desirability bias that may lead research participants—especially offending partners—to provide distorted information to avoid the discomfort associated with being labeled an offending spouse

(Blow & Hartnett, 2005b). Another critique is the frequency with which convenience samples of college students are used for infidelity research, given that college couples and married couples tend to have different standards regarding what constitutes infidelity (Blow & Hartnett, 2005b). Third, most research has focused on sexual infidelity (see Blow, 2005a); emotional, computer-mediated, and other possible types of infidelity have seldom been examined. The present study is designed to overcome these shortcomings in the extant empirical literature on infidelity. Specifically, a subjective definition of infidelity is obtained from each respondent via closed-ended questions which were used to identify offending spouses as well as via open-ended questions to further assess whether the full scope of infidelity is captured by existing instruments. Moreover, an indirect questioning method will be employed to assess the extent to which doing so reduces social desirability bias and a sample of married adults will be recruited from the general population to assess infidelity in married relationships.

#### **Definition and Measurements of Infidelity**

Despite general disapproval of infidelity—a Gallup Poll found that 91% of Americans reported that married men and women having an affair is morally wrong (Newport & Himelfarb, 2013)—the lifetime prevalence for infidelity ranges from 1.2% to 85.5% depending on the definition used, the timeframe assessed, and the representativeness of the sample (Luo, Cartun, & Snider, 2010). Infidelity can be defined in a myriad of ways, including behaviors such as having an affair, cheating, sexual intercourse, kissing, and pornography use (Blow & Hartnett, 2005b). Thus, what is considered infidelity in one study could be very different from what is considered infidelity in another study (Blow & Hartnett, 2005a; 2005b). Even participants within one study may hold distinct personal definitions of infidelity. Research regarding the definition of infidelity suggests that it might be better understood as a social construct defined by individuals based on their perceptions of social norms, personal values, and experiences (Carpenter, 2001; Edwards, 1995; Moller, & Vossler, 2015). Therefore, each participant's beliefs concerning which behaviors constitute infidelity will dictate how infidelity is defined for that participant in the present study.

Historically, in the absence of a uniform operational definition of infidelity, different instruments and questionnaires were used to measure different aspects of infidelity (Blow & Hartnett, 2005b). Some studies have used a single question to measure infidelity in a general way such as, "Have you had any experiences in which someone you were romantically involved with 'cheated on' you?" (e.g., Hall & Fincham, 2006), or have focused on a specific aspect of infidelity, such as sexual infidelity: "Have you ever had sex with someone other than your spouse while you were married?" (e.g., Atkins & Kessel, 2008). Others have evaluated infidelity by utilizing scales, such as the Extradyadic Behaviors Inventory (Luo, Cartun, & Snider, 2010) or the Attitudes Toward Infidelity Scale (Whatley, 2012). In qualitative studies respondents have been asked to describe their infidelity experience openly or in the context of a semi-structured interview (e.g., Mileham, 2007). These open-ended approaches could be useful for identifying aspects of infidelity that have been overlooked in the literature, for example, but are labor-intensive relative to quantitative approaches.

Another alternative is a hybrid approach whereby an open-ended question is integrated into a survey comprised primarily of closed-ended items. This could serve to validate closed-ended items by ensuring that key aspects of one's definition of infidelity are captured in closed-ended items, or could broaden the scope of infidelity by identifying aspects of infidelity that people intuit but that researchers have overlooked in their deductive approached to measuring infidelity.

Therefore, the open-ended questions will be used to explore the lay persons' definitions of infidelity (RQ1).

#### **Cognitive Dissonance, Social Desirability Bias, and Indirect Measurement**

Cognitive dissonance occurs when a cognition of a behavior is inconsistent with one's cognition of self (Aronson & Carlsmith, 1962; Festinger, 1957). For most people, infidelity is considered immoral or wrong (Newport & Himelfarb, 2013). Therefore, individuals who have a positive self-concept, considering themselves loval and honest partners, may experience cognitive dissonance when they engage in infidelity (Foster & Misra, 2013). Furthermore, cognitive dissonance is associated with psychological discomfort and negative affect such as uneasy, irritable, nervous, and jittery feelings (Elliot & Devine, 1994; Harmon-Jones, 2001). The aversive psychological states observed in individuals who engage in infidelity are similar to those described in the cognitive dissonance literature. For example, Hall and Fincham (2009) found that offending partners showed more symptoms of lower general well-being, depression, and distress related to self, such as regret, guilt, shame, and lower levels of self-forgiveness. Intrapersonally, those who have engaged in one-night stands (i.e., one-time sexual encounters that do not result from or in an ongoing intimate relationship, and in this context that are extrarelational without the consent of one's ongoing partner), especially offending females, tend to feel that they disappoint themselves and to worry about gaining a negative reputation among those who know them (Campbell, 2008).

To reduce dissonance and return to equilibrium, offending partners tend to describe the behavior as unintentional and inconsequential (e.g., Sedikides, Gaertner, & Toguchi, 2003); blame a lack of control or an unsatisfactory relationship before committing infidelity (Feldman & Cauffman, 1999; Mongeau, Hale, & Alles, 1994); or add new information to justify their behaviors (e.g., a romantic candlelight dinner might be justified by emphasizing that no sex occurred and simply having dinner with someone is not cheating; Henline, Lamke, & Howard, 2007). Further, research suggests that offending individuals—particularly those holding positive regard for themselves (e.g., those who consider themselves to be a good person)—may feel cognitive dissonance for engaging in socially unacceptable unfaithful behaviors (Foster & Misra, 2013), and consequently may tend to trivialize their behavior or frame it as unintentional and inconsequential (Sedikides, Gaertner, & Toguchi, 2003; Simon, Greenberg & Brehm, 1995). Although there are several ways to reduce cognitive dissonance caused by infidelity, trivialization is one of the most frequent strategies used to return equilibrium (Cooper & Mackie, 1983; Sherman & Gorkin, 1980). Therefore, it is possible that offending spouses may conceal, minimize, or distort their infidelity to reduce cognitive dissonance and maintain their positive selfconcept.

Social desirability bias is the tendency of people to respond in an inaccurate (underor over-reporting) but socially favorable way based on current social norms and standards, especially concerning sensitive topics (Fisher, 1993; Krumpal, 2013; Zerbe & Paulhus, 1987). A survey of 2,075 respondents were asked to evaluate sensitivity on several petty and immoral behaviors in Germany. The results showed that infidelity was perceived to be the second most sensitive topic (viewed as wrong or uncomfortable to admit doing by 73% of respondents) after shoplifting (79%); more wrong or uncomfortable than drunk driving (53%) and marijuana use (43%; Coutts & Jann, 2011). Secrecy, pain, and shame are associated with infidelity, so research respondents may perceive the stigma of infidelity and present themselves in a positive light, independent of their actual attitudes and behaviors, to maintain a socially favorable self-presentation (Blow, 2005b; Krumpal, 2013; Zapien, 2017). For example, Whisman and Snyder (2007) found that offending partners are likely to deny engaging in infidelity in an attempt to avoid shame or embarrassment.

Methodological techniques used to reduce social desirability bias include selfadministered questionnaires and indirect questioning (Blow, 2005b; Fisher, 1993; Krumpal, 2013). For example, a study found a higher percentage of extramarital sex using a self-administered questionnaire mailed by sealed envelope (13.1%) than a face-to-face interview (10.5%; Treas & Giese, 2000). Another widely used technique is indirect questioning, which is a projective technique employed to ask participants to answer questions from another person's perspectives or about another person's behaviors (Fisher, 1993; Robertson & Joselyn, 1974) instead of asking participants questions directly related to themselves or their partners. The indirect questioning method allows participants to describe (or project) their own attitudes and beliefs behind a "facade of impersonality" (Simon, 1974, p. 586). For example, Fisher (1993) found that participants projected their own perspectives on others when asked to indicate what they thought someone else's perspective might be. Thus, it is possible that indirect questioning elicits less social desirability bias than direct questioning when asking about sensitive topics such as infidelity, and indirect questioning with an online self-administered vignette will therefore

be employed for the present study to identify beliefs about offending behaviors. Further, the utility of the indirect approach will be tested by comparing those responses with responses to direct questioning.

H1: More offending spouses will be identified through indirect questioning than through direct closed questioning.

Furthermore, in order to explore whether there is difference between offending and non-offending's responses in an open definition of infidelity, the length of responses from these two groups will be examined (RQ2).

#### Typology, Gender and Infidelity

A typology of infidelity has developed in the literature over time. Weis and Slosnerick (1981) drew a distinction between sexual and non-sexual infidelity. Their data indicated that most individuals who were against extramarital sexual involvement reported acceptance toward several nonsexual but date-like extramarital behaviors with individuals of the other sex (e.g., going to a movie theater, dinning out, dancing). A common typology for infidelity subsequently emerged with three classifications: emotional-only, sexualonly, and a combination of the two (Glass & Wright, 1985; Thompson, 1984). With emergence of mobile phones and the internet as a mediums for connection, computermediated behaviors related to infidelity (e.g., sending sexual text messages and photos to another person via telephone) have become commonplace (e.g., Albright, 2008). Accordingly, Thompson and O'Sullivan (2015) categorized infidelity into four sets of behaviors: sexual/explicit behavior with physical contact (e.g., sexual intercourse), computer-mediated behaviors (e.g., masturbating over webcam), romantic/affectionate behaviors that potentially convey romantic interest (e.g., watching movies in a dark living room with someone), and solitary sexual behaviors such as masturbation.

Gender, intertwined with the typology of infidelity, is a frequently-studied factor in the infidelity literature. From an evolutionary perspective, men are in competition for a women's reproductive fidelity whereas women are in competition for the resources men possess that can help their offspring survive (e.g., Buss, Larsen, Westen, & Semmelroth, 1992; Carpenter, 2012). Aligned with this perspective, researchers found that male sexual infidelity tends to be more accepted than female sexual infidelity (e.g., Tagler & Jeffers, 2013; Thompson & O'Sullivan, 2015; Wiederman, 1997), men are more likely than women to report having extramarital sex (e.g., Labrecque & Whisman, 2017; Petersen & Hyde, 2010), and men are more distressed by their partner's sexual than emotional infidelity (e.g., Brase, Adair, & Monk, 2014; Sagarin et al., 2012; Tagler & Jeffers, 2013). Conversely, women are more likely than men to engage in emotional infidelity (e.g., Glass & Wright, 1985), and get more upset by a partner's emotional infidelity (e.g., Kruger et al., 2015; Sagarin et al., 2012). However, a social-cognitive perspective indicates that "jealousy can be induced when any important aspect of an interpersonal relationship is threatened" (Harris, 2003, p. 119), and there is no notable gender difference in the jealousy experienced by women and men when their partner's behaviors are perceived to be a threat to the relationship. For example, a partner's sexually explicit (physical) behaviors are most likely to be classified as cheating behavior among both men and women alike because such behavior is perceived to pose the most threat to the existing relationship (e.g., Carpenter, 2012; Kruger et al., 2015; Wilson, Mattingly, Clark, Weidler, & Bequette, 2011).

Therefore, aligned with evolutionary perspective, I expect that men engage in more infidelity than women, and that this will be revealed using both direct and indirect approaches. Furthermore, I expect men are more likely than women to commit self-defined sexual infidelity, and that women are more likely than men to commit self-defined emotional infidelity. The hypotheses to be tested are as follows:

H2: More male than female offending spouses will be found in both direct and indirect approaches.

H3: Men are more likely than women to engage in self-defined sexual infidelity, and women are more likely than men to commit self-defined emotional infidelity.

Compared to men, women are more likely to rate computer-mediated behaviors as infidelity (Whitty, 2003), are more distressed by computer-mediated infidelity, and perceive that computer-mediated behaviors are as more destructive to the primary relationship (Hackathorn, 2009). Computer-mediated infidelity often overlaps with other forms of infidelity literature. For example, computer-mediated chatting can be flirtatious or outright sexual, and can occur among people who have never met in person who either have or do not have an emotional connection (Hackathorn, 2009). Solitary infidelity is also computer-mediated, but only a few studies on infidelity have examined solitary computer-mediated infidelity (e.g., Thompson & O'Sullivan, 2015); gender differences in self-defined computer-mediated and solitary infidelity will therefore be examined (RQ3)

#### **The Present Study**

The extant literature on infidelity is limited in several ways that will be addressed in the present study. First, research on those who have engaged in infidelity has often used direct questioning, which likely identifies only a unique subset of offending partners. Second, researchers typically impose their own definition of infidelity on research participants' experiences instead of allowing participants themselves to subjectively define infidelity according to their own beliefs and relationship experiences. Third, most research has focused on sexual infidelity; emotional, computer-mediated, and solitary infidelity have seldom been examined. Fourth, a large number of studies have used vignettes with college samples to assess reactions to hypothetical infidelity, which might not align closely with actual infidelity experiences (Harris, 2002). Further, what constitutes infidelity can vary from one relationship to another due to varying degrees of commitment and openness within relationships (e.g., Hsueh, Morrison, & Doss, 2009).

Given these limitations in the extant literature, the present study was designed to advance methodological considerations within the empirical literature on infidelity in four distinct ways. First, a subjective definition of infidelity is obtained from each respondent via closed-ended items that were adopted to identify offending spouses and via open-ended question to further understand perceptions of infidelity. Second, an indirect approach using participants' own subjective definitions of infidelity paired with self-reported behaviors is adopted to identify offending individuals. Third, whether men and women differ in their propensity to commit infidelity will be tested using data from both direct versus indirect approaches as well as within each of the four types of infidelity. Fourth, the sample is composed of married or divorced individuals self-reporting their infidelity experience within marriage instead of never-married individuals providing responses to hypothetical situations.

#### CHAPTER 2. METHOD

# Sampling

A convenience sample was recruited through Amazon Mechanical Turk (MTurk), which is a crowdsourcing website enabling recruitment of research participants. MTurk participants tend to be more diverse (and recruited more rapidly and inexpensively) than standard internet-based samples and traditional face-to-face samples (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013). To avoid unduly biasing the sample particularly due to the stigmatized nature of infidelity, which involves deep relational pain and personal shame (Blow & Hartnett, 2005b)—recruitment material described the study as one about relationship beliefs and marital experiences. Inclusion criteria required that respondents be (a) 18 years of age or older, (b) currently or previously in a heterosexual marriage, and (c) geographically located in the United States.

A community sample of 242 women and 223 men (N = 465) completed the survey. A majority of the participants self-identified as non-Hispanic White (73.1%); others identified as Hispanic (9.5%), non-Hispanic Black (5.4%), Asian (2.6%), Native American (0.2%), or had multiple racial identities (9.2%). Participants ranged in age from 21 to 54 years (M = 35.9, SD = 7.7). Currently married individuals comprised 91.4% of the sample, and 7.1% reported being currently divorced. Over 80% had a college degree, and 5.8% had not completed any formal education beyond earning a high school diploma. Additional details of the sample's characteristics are reported in Table 1.

Characteristic	п	%
Gender		
Female	242	52.0
Male	223	48.0
Racial or ethnicity identity		
Asian	12	2.6
Hispanic	44	9.5
Native American	1	0.2
Non-Hispanic Black	25	5.4
Non-Hispanic White	340	73.1
Multiple racial identities	43	9.2
Marital Status		
Currently married	427	91.4
Currently separated	7	1.7
Divorced	33	7.1
Education Level		
Graduate degree	93	20.0
Bachelor's degree	234	50.3
Associate degree	56	12.0
Some college	51	11.0
High school diploma	27	5.8
Less than high school	4	0.9
Income		
Less than \$20,000	25	5.4
\$20,001 to \$40,000	74	15.9
\$40,001 to \$70,000	164	35.3
\$70,001 to \$100,000	122	26.2
Above \$100,000	80	17.2
	M	SD
Age (years)	35.9	7.7

Table 1 Demographic Characteristics of Participants (N = 465)

## Procedure

The survey was designed to be completed anonymously via the internet to reduce social desirability bias (Whisman & Synder, 2007), as well as to minimize other practical and logistical hindrances to participation. Although the survey was administered via Qualtrics, participants accessed it via the MTurk shell. Those who passed the screening assessment were asked to provide informed consent to continue, and those who did so were then taken to the survey. Participants were compensated \$0.90 for their time; the duration of time taken to complete the survey was around 11 minutes (M = 11.6, SD = 7.8).

#### Measures

Indirect assessment of infidelity. The 32-item Definitions of Infidelity Questionnaire (DIQ; Thompson & O'Sullivan, 2015; see Appendix A), which includes four subscales, was utilized to investigate beliefs about and experiences with marital infidelity. The Sexual/Explicit Behavior subscale (7 items;  $\alpha = .95/.94$  for females and males, respectively, in the present study) refers to explicit physical contact such as sexual intercourse. The Technology/Online Behavior subscale (7 items;  $\alpha = .88/.89$ ) refers to computer-mediated communication, such as masturbating with someone other than with one's spouse via webcam. The Romantic/Affectionate Behavior subscale (13 items;  $\alpha$ =..94/.96) refers to behaviors associated with displays of romantic interest, such as dressing to attract one's sexual attention. Finally, the Solitary Behavior subscale (5 items;  $\alpha = .88/.92$ ) refers to activities that individuals engage in alone, such as masturbation or watching pornography. Six-week test–retest reliability is high, r(156) = .96, p < .001, and the DIQ has adequate convergent, discriminant, and predictive validity as well (Thompson & O'Sullivan, 2015).

With distractor items (respondent demographic items) in between, the DIQ was administered twice, with the instructions, items, and response options adapted as needed to (1) assess beliefs concerning the degree to which each behavior constitutes being unfaithful in a generic married couple (response options ranged from *not at all unfaithful* [scored as 1] to *very unfaithful* [7]); and (2) to indicate the number of times the respondent engaged in each behavior him- or herself while married (response options were 0 times, 1 time, and 2+ times). The order in which the items were presented was randomized within versions and across respondents to avoid ordering effects. The degree

of perceived unfaithfulness was subsequently dichotomized for some analyses by distinguishing between respondents who indicated that a behavior was perceived to be more unfaithful than faithful (i.e., responses of *largely unfaithful* [5], *mostly unfaithful* [6], or *very unfaithful* [7]) versus behaviors perceived as less unfaithful (i.e., responses of *not at all unfaithful* [1], *slightly unfaithful* [2], *somewhat unfaithful* [3], or *moderately unfaithful* [4]).

**Direct assessment of infidelity.** The second-to-last item of the survey directly asked married respondents, "Did you ever cheat on your spouse during your current marriage?" (response options were *yes* and *no*). Divorced respondents were asked the same question, adapted to reference the past marriage.

**Open-ended definition of infidelity.** The final item of the survey was openended: "In your own words, briefly describe how you would define cheating" (see Appendix B). Open-ended items have often been used to expand or explore the breadth of a given topic (Sproull, 1988), and were used in a similar manner in the present study.

# **Analytical Procedures**

Indirect questioning was employed to identify offending spouses (those who have committed self-defined infidelity) as a means to overcome social desirability bias. Specifically, those who indicated that a particular behavior was unfaithful in a generic context and later reported having engaged in the same behavior during marriage were classified as offending spouses (or more bluntly, cheaters).

Content analysis of the open-ended responses began with a primary coder inductively developing and assigning codes to each thought phrase contained with the response. That is, each open-ended definition could be coded multiple times if there were multiple distinguishable components of the definition embedded within the response. Ultimately, the primary coder developed an initial codebook with a definition and a few examples for each inductively-derived code (Bazeley, 2013; Bernard & Ryan, 2009). Then a secondary coder independently coded the open-ended data using the primary coder's codebook but without any discussion of the codebook. Upon completion, discrepancies in coding between the primary and secondary coders were discussed until conceptual clarity was achieved, then the codebook was adjusted accordingly and both coders independently revised their codes as needed according to the revised codebook. At this point, the kappa interrater reliability between the coders was .68, which is sufficient to conclude that there was sufficient reliability between the two coders (Miles & Huberman, 1994). Only the primary coder's codes were used in subsequent analyses, which examined whether any otherwise unexplored behaviors are present in common lay conceptualizations of infidelity. Additionally, the open-ended responses were examined for consistency when paired with the closed-ended responses as an additional means to evaluate the methodological utility of indirect questioning.

#### CHAPTER 3. RESULTS

Table 2 summarizes the correlations of study variables: infidelity according to the direct question; the indirect items overall; and the sexual, computer-mediated, emotional, and solitary behavior subscale items; as well as according to gender. Infidelity according to the indirect items overall was statistically and positively correlated with infidelity according to the direct question as well as the sexual, computer-mediated, emotional, and solitary subscales (.39 < r < .76, ps < .01). The direct question was also statistically positively correlated with each of the four infidelity subscales (.16 < r < .48, ps < .01). Gender was statistically correlated with the direct question as well as the indirect items overall and the sexual and computer-mediated subscales (.10 < r < .16, ps < .05). However, gender was not statistically correlated with emotional or solitary infidelity, indicating that perceptions of unfaithfulness associated with emotional and solitary infidelity may not differ between men and women.

The definition of infidelity was explored through open-ended response (RQ<sub>1</sub>). Coding of the open-ended definitions led to the identification 15 themes overall (see Table 3), including four that were particularly salient: *outside the relationship* (found in 57.7% of respondents' definitions), *sexual* (55.7%), *emotional* (35.5%) and *nonconsensual or secrecy* (15.6%). The sexual and emotional themes are consistent with the closed-items, but behaviors occurring "outside the relationship" and the "nonconsensual or secrecy" aspect of behaviors added contextual characteristics that likely informed many participants' assessments of whether any particular behavior constituted infidelity across the four broad categories of infidelity. Interestingly too, and to the point of the subjective definition of infidelity employed in this study, 7.2% of

respondents explicitly stated that the definition of infidelity is subjective and is defined differently by different couples.

Chi-square tests were employed to assess whether offending spouses were more frequently identified via the indirect than the direct approach (Hypothesis1). Substantially fewer respondents (12.7%) acknowledged upon direct inquiry that they had cheated during their marriage than did so indirectly according to their own definition of cheating (42.9%),  $\chi^2$  (1) = 69.91, p = <.01,  $\varphi = .39$ . Thus, Hypothesis 1 was supported (see Table 4).

Independent samples *t* tests were conducted to explore whether there was a difference between offending and non-offending spouses with regard to the length (measured in characters) of their open-ended definitions of infidelity (RQ<sub>2</sub>; see Table 5. The results showed that offending individuals (M = 71.7, SD = 58.9) tended to provide shorter definitions than non-offending individuals (M = 96.2, SD = 69.4), *t* (462) = 4.01, p < .01, d = 0.38. The same *t* tests within gender showed that male offending individuals (M = 92.8, SD = 51.8) provided shorter definitions than male non-offending individuals (M = 92.8, SD = 66.8), *t* (222) = 3.75, p < .01, d = 0.51. For females, the difference was about half as large as it was for males and was not statistically different between offending (M = 82.3, SD = 67.8) and non-offending (M = 98.8, SD = 71.5) females, *t* (240) = 1.80, p = .07, d = 0.24. Thus, offending men tend to offer shorter definitions of cheating than do non-offending men, but the same cannot be concluded about women based on these data.

Chi-square tests (see Table 4) were employed to assess whether males were more likely than females to be offenders according to both the direct and indirect approaches

(Hypothesis 2), as well as whether men are more likely to have engaged in self-defined sexual infidelity whereas women are more likely to have engaged in self-defied emotional infidelity (Hypothesis 3). As expected, men were more prevalent self-defined cheaters regardless of whether assessed directly (16.6% vs. 9.1%;  $\chi^2$  (1) = 5.89, p = .02,  $\varphi$  = .11) or indirectly (48.2% vs. 38.0%;  $\chi^2$  (1) = 4.90, p = .03,  $\varphi$  = .10). Thus, Hypothesis 2 was supported.

For Hypothesis 3 (see Table 4), men were more likely than women to have engaged in self-defined sexual infidelity (32.4% vs. 18.6%;  $\chi^2$  (1) = 11.76, p < .01,  $\varphi =$ .16). Although the proportion of male offenders were also higher than the proportion of female offenders in self-defined emotional infidelity (31.5% vs. 28.5%), this difference was small and not statistically significant,  $\chi^2$  (1) = 0.50, p = .48,  $\varphi = .03$ . Therefore, hypothesis 3 was partially supported. For computer-mediated and solitary infidelity (RQ<sub>3</sub>), the results suggested that men were more likely than women to engage in computer-mediated infidelity (32.4% vs. 23.6%),  $\chi^2$  (1) = 4.55, p = .03,  $\varphi = .10$ , but there was no statistical difference with regard to solitary infidelity,  $\chi^2$  (1) = 1.63, p = .20,  $\varphi =$ .06.

Table 2 Intercorrelations for Study Variables (N = 465)

		2	(			
Variable	1	2	3	4	5	6
1. Direct question	_					
2. Indirect question	.39**	_				
3. Sexual	.48**	.67**	_			
4. Computer-mediated	.37**	.72**	.68**	_		
5. Emotional	.22**	.76**	.59**	.59**	_	
6. Solitary	.16**	.60**	.59**	.57**	.64**	-
7. Gender	.11*	.10*	.16**	.10*	.03	.06
* <i>p</i> < .05. ** <i>p</i> < .01.						

Table 3 Frequency of Themes in Open-ended Response (N=442)

			Non-cheaters ( $n=251$ )						Ch	eaters	s ( <i>n</i> =19	1)		
					Μ	lale	Fei	male			М	ale	Fe	male
	Tot	tal	Т	otal	( <i>n</i> =	109)	( <i>n</i> =	=142)	Тс	otal	( <i>n</i> =	103)	(n	=88)
-	п	%	п	%	п	%	п	%	 п	%	п	%	п	%
Outside the relationship	255	57.7	165	65.7	79	72.5	86	60.6	90	47.1	39	37.9	51	58.0
Sexual	246	55.7	166	66.1	76	69.7	90	63.4	80	41.9	41	39.8	39	44.3
Emotional	157	35.5	104	41.4	44	40.4	60	42.3	53	27.7	18	17.5	35	39.8
Non-specific	86	19.5	47	18.7	14	12.8	33	23.2	39	20.4	21	20.4	18	20.5
Nonconsensual/secrecy	69	15.6	34	13.5	16	14.7	18	12.7	35	18.3	18	17.5	17	19.3
Desire	46	10.4	31	12.4	13	11.9	18	12.7	15	7.9	5	4.9	10	11.4
Subjective	32	7.2	23	9.2	8	7.3	15	10.6	9	4.7	5	4.9	4	4.5
Harmful	29	6.6	17	6.8	6	5.5	11	7.7	12	6.3	7	6.8	5	5.7
Relationship behaviors	26	5.9	22	8.8	9	8.3	13	9.2	4	2.1	0	0.0	4	4.5
Garbage	26	5.9	2	0.8	0	0.0	2	1.4	24	12.6	15	14.6	9	10.2
Wrong	24	5.4	11	4.4	5	4.6	6	4.2	13	6.8	9	8.7	4	4.5
Trust violation	22	5.0	18	7.2	9	8.3	9	6.3	4	2.1	2	1.9	2	2.3
Non-relationship	17	3.8	2	0.8	1	0.9	1	0.7	15	7.9	9	8.7	6	6.8
Online	15	3.4	11	4.4	4	3.7	7	4.9	4	2.1	2	1.9	2	2.3
Solitary sexual behavior	1	0.2	1	0.4	0	0.0	1	0.7	0	0.0	0	0.0	0	0.0

			Cheaters									
			To	Total		Male		Female				
			(N =	465)		( <i>n</i> =	222)	( <i>n</i> =	= 242)			
	M	SD	п	%		п	%	n	%	$\chi^2$	р	φ
Direct <sup>a</sup>	.13	.33	59	12.7		37	16.6	22	9.1	5.89	.02	.11
Indirect <sup>a</sup>	.43	.50	199	42.9		107	48.2	92	38.0	4.90	.03	.10
DIQ												
Sexual	6.08	1.37	117	25.2		72	32.4	45	18.6	11.76	<.01	.16
Computer-mediated	4.89	1.46	129	27.8		72	32.4	57	23.6	4.55	.03	.10
Emotional	2.66	1.50	139	30.0		70	31.5	69	28.5	0.50	.48	.03
Solitary	2.33	1.56	99	21.3		53	23.9	46	19.0	1.63	.20	.06

Table 4 Descriptive Statistics and Chi-square Tests for Observed Frequencies and Percentage Differences Between Men and Women

*Note*. DIQ = Definitions of Infidelity Questionnaire.

 $a_0 =$ non-cheater, 1 =cheater.

Table 5 Descriptive Statistics and t Tests for Length of Open-ended Definition Provided by Gender

	Ν	lon-cheate	ers		Cheater	s	95% CI of M				
	п	М	SD	n	М	SD	Difference	t	df	р	d
Overall	265	96.2	69.4	199	71.7	58.9	[12.5, 36.5]	4.0	462	<.01	0.38
Men	115	92.8	66.8	107	62.6	51.8	[14.3, 46.1]	3.8	220	<.01	0.51
Women	150	98.8	71.5	92	82.3	64.8	[-1.5, 34.5]	1.8	240	.07	0.24

#### CHAPTER 4. DISCUSSION

## Interpretations

The purpose of this study was to advance methodological considerations with regard to the study of infidelity using a sample of married and divorced individuals who had not been in a consensually non-monogamous relationship. Specifically, a subjective definition of infidelity was obtained from each respondent via both closed- and openended items. The open-ended responses were applied to explore the definition of infidelity. Moreover, an indirect approach using each participant's own subjective definition of infidelity paired with self-reported behaviors was used to identify offending individuals. Finally, gender differences were assessed concerning the definition of infidelity, both with direct and indirect approaches and across four categorical infidelity behaviors.

#### **Definition of Infidelity**

Infidelity can be defined in various ways such as having an affair, cheating, kissing, viewing pornography, etcetera (Blow & Hartnett, 2005a; 2005b). Thus, the definition of infidelity adopted by researchers in one study can be quite different from another one. Participants may even hold different perceptions of infidelity within the same study. The hybrid approach taken in the present study was intended to serve as a validity check—that is, to ensure key aspects of infidelity were captured in the closed-ended items—and to explore the scope of what lay people generally consider to be infidelity. Several interesting findings emerged.

Findings based on the open-ended responses advanced the understanding of

infidelity in three ways. First, among the four themes with highest frequency, the "sexual" and "emotional" themes are prominently assessed via the closed-ended responses within the sexual and emotional categories. Second, another two frequently mentioned themes "outside the relationship" and "nonconsensual or secrecy" may suggest that infidelity can be defined in a general behavioral way across the four categorical infidelity behaviors in closed-ended questions (sexual, emotional, computermediated, and solitary). Third, infidelity can also be defined as a violation of moral standards (i.e., the themes: "wrong" and "trust violation") or behaviors that cause hurtful feelings for the partner (i.e., the theme "harmful"). One interesting finding in the openended response data was that some participants believed that cheating was very subjective and should be defined based on one's own relationship contract with his/partner (i.e., the theme "subjective"). For example, "Cheating is not a definite notion. I believe that cheating in a relationship must be defined by the people involved in those relationship. What is considered cheating in one marriage, may not be the same in another marriage." Thus, infidelity is a socially constructed concept (Carpenter, 2001).

# **Indirect Approach**

Considering the secrecy, pain, and shame associated with infidelity, the survey may have aroused cognitive dissonance in offending individuals, thereby prompting them to provide socially favorable responses to maintain a positive self-image (Blow, 2005b; Foster & Misra, 2013; Krumpal, 2013). To reduce the socially desirable bias attached to infidelity, an indirect approach to identifying offending spouses was employed.

One of the outstanding findings was that far more participants self-identified as offenders via the indirect than the direct approach, indicating that social desirability bias

was reduced using the indirect approach. Compared to direct questioning, the indirect approach may reduce socially desirability bias in two ways. First, offending individuals were identified through pairing participants' own classification of behaviors as unfaithful or not with their own self-reported behaviors, with distractors in between. Thus, participants might not have known the purpose of those items were to identify offending individuals, so they might be more willing to give unbiased responses than when directly asked whether they have cheated on their spouse. Also, when asking participants about their own behaviors, rather than asking whether they had engaged in each behavior they were asked how many times they had engaged in each behavior (with zero being a valid response option) as a means to destignatize acknowledgement of having engaged in the given behavior. This aligns with previous research that neutral question wording such as using unthreatening, forgiving, and familiar words or phrases on sensitive topics, and framing the context in an appropriate way may reduce socially desirable answers (e.g., Barton, 1958; Krumpal, 2013). Second, precise wording of behaviors may have left less latitude for a self-serving interpretation than the more general direct question, In addition, the direct question contained the word *cheat* (i.e., "Did you ever cheat on . . . ?") as a broad term intended to capture the full breadth and context of all the behaviors at once. Participants may have been uncomfortable answering this rather blunt question in the affirmative because infidelity is social unacceptable (Newport & Himelfarb, 2013), and admitting one's infidelity may threaten one's positive self-concept (Schaeffer, 2000, p. 118) and lead to more cognitive dissonance, guilt, and shame than occurred with indirect questioning (e.g., Foster & Misra, 2013; Harmon-Jones, 2001; Schaeffer, 2000). Thus, the utility of the indirect approach was supported in present study, but replication and

further specification of which component of this approach was most effective at eliciting unbiased responses is needed.

Further evidence of the discomfort individuals experience with cognitive dissonance was exhibited in the shorter open-ended definitions of infidelity that offending spouses tended to provide relative to non-offending spouses. Whether intentional or not, this might be a strategy offending individuals used to protect their positive self-cognition and reduce the psychological discomfort by leaving more latitude for interpretation (Elliot & Devine, 1994; Harmon-Jones, 2001; Simon, Greenberg & Brehm, 1995). However, difference between offending and non-offending groups might be exaggerated by gender differences. The *t*-test results showed that offending men tend to offer shorter definitions of infidelity than non-offending men. This raises the possibility of an alternative explanation focused on gender differences rather than cognitive dissonance. For example, studies on both men and women's reasons for divorce show that former wives give longer, more complex, and more concrete reasons of their divorce than their former husbands do (e.g., Amato & Previti, 2003; Cleek & Pearson, 1985; Kitson, 1992). This seems consistent with data from the present study, wherein women tended to give longer and more complex definitions of infidelity than did men, and men were disproportionately represented in the offending spouses category relative to women. Indeed, there seems to have been an additive effect whereby both gender and behavior were associated with definition length; women tended to provide longer definitions than men, and non-offending spouses tended to provide longer definitions than offending spouses.

## Gender difference

Men were more likely than women to both directly and indirectly acknowledge that they had ever engaged in unfaithful behaviors while they were married. Those results are consistent with a series of previous research that has found men are more likely to report and engage in infidelity (e.g., Sheppard, Nelson, & Andreoli-Mathie, 1995; Smith, 2012). Although the direction of influence cannot be speculated upon based on the present data, the fact that men engage in unfaithful behaviors at a higher rate than women may reflect cultural and social norms that view women's unfaithful behavior as less forgivable than men's unfaithful behavior (e.g., Haavio-Mannila & Kontula, 2003, using a Scandinavian and Baltic sample that may not generalize to Americans), and men who engage in such behaviors may therefore experience less risk or consequence (e.g., guilt, relationship instability) than women who do the same (Meyerling & Epling-McWherter, 1985).

The findings that men are more likely than women to engage in sexual infidelity is consistent with previous studies (e.g., Allen et al., 2005; Labrecque & Whisman, 2017; Petersen & Hyde, 2010). As for men being somewhat more likely than women to engage in computer-mediated infidelity, this might be because many of the computer-mediated items overlap with sexual behaviors (e.g., "masturbating with someone over webcam"), in conjunction with research indicating that many sexually-oriented encounters initiated via computer-mediated communication are intended to eventually result in a face-to-face meeting and continue offline (e.g., Whitty, 2003). Perhaps not surprisingly then, compared to men, women tend to consider computer-mediated behaviors to be more unfaithful, get more upsetting by them, and perceive them to be more threatening to the primary relationship (Hackathorn, 2009; Whitty, 2003).

#### Limitations

Four key limitations of this study need to be taken into account when considering the results of this study. The first concerns generalizability. Findings regarding the definition of infidelity are based on a sample composed of married and divorced individuals who are heterosexual and have not engaged in consensual non-monogamy. Thus, the results presented here may not generalize to other relationship types, such as dating, cohabitating, same-sex couples, and consensually non- monogamous couples, given that rules regarding what constitutes infidelity can vary across relationship types and stages (Blow & Hartnett, 2005a). Furthermore, non-Hispanic Whites comprised a majority (73.1%) of the sample, so the results may not generalize to other racial and ethnic groups (e.g., Treas & Giesen, 2000; cf. Choi, Catania, & Dolcini, 1994). Second, both direct and indirect approaches found that men were more likely than women to commit infidelity, and that men were more likely to engage in computer-mediated infidelity than women, but the magnitude of these differences were small. Thus, caution should be taken to avoid overstating the statistically significant but small gender difference that emerged in these data. Importantly too, many studies have shown that the gender gap with regard to engagement in unfaithful behaviors is closing, especially in the lifetime prevalence of extramarital sex (e.g., Mark, Janssen, & Milhausen, 2011). Third, if there were ordering effects such that asking for one's definition of infidelity at the end of the survey was influenced by previously completing two iterations of the DIQ, then the results might have been different if a between-subjects design had been employed whereby participants were randomly assigned to either the DIQ (closed-ended items) or the open-ended question. Fourth, attitudes and behaviors toward infidelity could be

different between participants with an isolated instance of engaging in unfaithfully behaviors with another person versus a repeated pattern of such behavior with multiple persons (e.g., Knopp et al., 2017), but the number of persons with whom such behaviors were engaged was not measured in these data.

### **Implications for Research and Practice**

Several implications can be drawn from this study. The various definitions of infidelity beyond sexual and emotional infidelity suggested that clinicians should seek to understand their client's own subjective definition of infidelity. A challenge of infidelity research is minimizing the stigma and corresponding social desirability bias in responses. The indirect approach taken here may provides a viable means for overcoming the limitations of direct questioning for identifying offending individuals. The high percentage of self-identified offending individuals suggests that clinicians should routinely assess for infidelity in individuals, especially in the sexual and computermediated domains, suggest that clinicians need to pay attention to possible gender differences in perceiving and involving in different types of infidelity.

### APPENDICES

## Appendix A

# **DIQ-Another Couple Version**

**Instructions**: Indicate the extent to which you would consider it *unfaithful* if a married person were to engage in each of the following behaviors with someone of the other sex without his or her spouse's consent.

Not at all	Slightly	Somewhat	Moderately	Largely	Mostly	Very
unfaithful						
1	2	3	4	5	6	7

#### Sexual/explicit behaviors

Penile–vaginal intercourse with someone Penile-anal intercourse with someone Give someone oral sex Receive oral sex from someone Touch someone's genitals

Take a shower with someone Kiss someone intensely

#### Technology/online behaviors

Send someone sexually explicit messages by text or emails Masturbate over webcam Receive sexually explicit messages by text or emails from someone Create a profile on a dating website Send someone affectionate/flirtatious texts or emails Receive affectionate/flirtatious texts or emails from someone

Browse an online dating website alone

# **Emotional/affectionate behaviors**

Receive close emotional support from someone

Watch movies in a dark living room with someone

Be tagged in pictures with someone on a social networking site

Provide someone close emotional support

Share secrets with someone

Dress in a way to attract sexual attention

Attend an event for which tickets are required (e.g., theater, concert, sporting event)

Have a casual dinner with someone

Kiss someone on the cheek

Work late with someone

Do favors for someone

Like/follow an attractive person on social media

Give someone a gift

# Solitary behaviors

"Check out" (or admire the look of) someone

View pornographic videos online alone

View pornographic magazines alone

Engage in masturbation alone

Find a celebrity attractive

### **DIQ-Self version**

**Instructions**: How many times did you engage in the following behaviors (with someone of the other sex) during the marriage but without your spouse's (or the most recent spouse's) XXX consent?

0 times 1 time 2+ times

#### Sexual/explicit behaviors

Penile–vaginal intercourse with someone Penile-anal intercourse with someone Giving someone oral sex Receiving oral sex from someone Touching someone's genitals Taking a shower with someone Kissing someone intensely

#### **Technology/online behaviors**

Sending someone sexually explicit messages by text or emails Masturbating over webcam Receiving sexually explicit messages by text or emails from someone Creating a profile on a dating website Sending someone affectionate/flirtatious texts or emails Receiving affectionate/flirtatious texts or emails from someone

Browsing an online dating website alone

### **Emotional/affectionate behaviors**

Receiving close emotional support from someone

Watching movies in a dark living room with someone

Being tagged in pictures with someone on a social networking site

Providing someone with close emotional support

Sharing secrets with someone

Dressing in a way to attract sexual attention

Attending an event for which tickets are required (e.g., theater, concert, sporting event)

Having a casual dinner with someone

Kissing someone on the cheek

Working/studying late with someone

Doing favors for someone

Liking/following someone on social media

Giving someone a gift

## Solitary behaviors

'Checking out' (or admiring the look of) someone

Viewing pornographic videos online alone

Viewing pornographic magazines alone

Engaging in masturbation alone

Finding a celebrity attractive

# Appendix B

1. "Did you ever cheat on your spouse during your current marriage?"

1) Yes 2) No —OR—

"Did you ever cheat on XXX during your marriage with him or her?"

- 1) Yes 2) No
- 2. In your own words, briefly describe how you would define cheating:

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