#### **ORIGINAL PAPER**



# No Remorse: Sexual Infidelity Is Not Clearly Linked with Relationship Satisfaction or Well-Being in *Ashley Madison* Users

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#### Abstract

Past research on extradyadic relationship experiences (including infidelity) often suffers from restricted sampling and retrospective accounts, which may have given researchers a distorted image of what it is like for people to have affairs. In this research, we shed light on the experiences people have during their affairs with a sample of registered users on *Ashley Madison*, a website geared toward facilitating infidelity. Our participants completed questionnaires about their primary (e.g., spousal) relationships, as well as personality traits, motivations to seek affairs, and outcomes. Findings from this study challenge widely held notions about infidelity experiences. Analyses revealed that participants were highly satisfied with their affairs and expressed little moral regret. A small subset of participants reported having consensually open relationships with their partners, who knew about their activity on *Ashley Madison*. In contrast to previous findings, we did not observe low relationship quality (i.e., satisfaction, love, commitment) to be a major driver of affairs and the affairs did not predict decreases in these relationship quality variables over time. That is, among a sample of individuals who proactively sought affairs, their affairs were not primarily motivated by poor dyadic/marital relationships, their affairs did not seem to have a strong negative impact on their relationships, and personal ethics did not play a strong role in people's feelings about their affairs.

Keywords Romantic relationships · Affairs · Infidelity · Sexual dissatisfaction · Ashley Madison

#### Introduction

Research on extradyadic romantic relationship experiences (including infidelity) has found links with personality factors such as sensation-seeking and attachment style (Lalasz & Weigel, 2011; Russell et al., 2013), dyadic factors such as commitment (Drigotas et al., 1999), demographic factors such as gender and sexual orientation (Lehmiller & Selterman, 2021), and environmental/cultural factors such as perceived acceptance/permissiveness (Blumstein & Schwartz, 1983). Our current research extends this literature in several important ways to give us a more detailed picture of people's experiences as they seek and have affairs. Here, we present cross-sectional and longitudinal data from a population of

experienced and aspiring cheaters, recruited through *Ashley Madison*, a website geared toward facilitating extradyadic experiences. As we will show, findings from our sample of *Ashley Madison* users are inconsistent with some of the conventional wisdom surrounding what it means for a person to cheat on their romantic partners. Based on our results, we suggest that for many who engage in infidelity, their experiences are emotionally nuanced and sometimes self-contradictory.

#### Disentangling Monogamy and Infidelity

Information about the psychological nature of monogamy and infidelity is paradoxical and conflicting. Representative polling shows that nearly all respondents view infidelity as a moral transgression (Gallup Organization, 2019), and many would be especially distressed at the thought of their own partners committing infidelity. Infidelity remains a leading predictor of divorce (Amato & Previti, 2003) and intimate partner violence (Tsapelas et al., 2011). Yet despite the moral condemnation and dire consequences of infidelity, a sizeable number of people choose to cheat on



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their romantic partners, with estimates around 20-25% of married people and 33-50% of young adults in dating relationships (Luo et al., 2010). This suggests that even if sexual exclusivity is desirable, it is also quite challenging and many people who strive for it fall short.

Why does this happen? Most research examining infidelity from a dyadic perspective has centered around the relationship deficit model, which suggests that suboptimal relationship variables, such as low satisfaction or high conflict, predict affairs (Thompson, 1983). Indeed, prospective studies of infidelity suggest that low levels of commitment to a partner predict the incidence of infidelity in forthcoming months (Drigotas et al., 1999), and retrospective accounts highlight variables such as anger and neglect as psychological motivations for infidelity (Barta & Kiene, 2005). Some researchers directly claim that while underlying factors exist, all incidents of infidelity must occur within a negative dyadic context (Barta & Kiene, 2005). Conventional wisdom is that affairs are harrowing and leave lasting emotional scars on those involved in part because infidelity degrades and destroys very important relational bonds.

Other findings, however, challenge these core assumptions. Survey data show that a significant proportion of adulterers (in the range of 35–55% for some samples) rated their marriages as "happy" or "very happy" (Glass & Wright, 1985). More recent studies also suggest that non-dyadic factors, such as situational changes (e.g., intoxication), seeking autonomy or self-esteem, and sexual variety may also play a role as distinct reasons for people to seek affairs (Selterman et al., 2019). The initial motivations for affairs are linked with the experiences that people report having during and after affairs. For instance, in a sample of (mostly) young adults in dating relationships, those who reported being motivated by dyadic factors such as anger or dissatisfaction also felt more intimacy/love and sexual excitement with their affair partners, had longer affairs, were more likely to disclose their affairs and breakup with their primary partners. By contrast, those motivated by non-dyadic factors such as esteem-seeking or situational shifts were less satisfied during their affairs, had briefer affairs, were more likely to keep their affairs secret and maintain their primary relationships (Selterman et al., 2021). Taken together, these findings suggest that affairs and the consequences of affairs are not monolithic. In addition, most of the studies in this area of relationship functioning have focused on unmarried young adult college students, who tend to skew politically liberal and who are surrounded by available alternative partners, thus having greater opportunities to have affairs (Atkins et al., 2001). It would be useful to investigate infidelity motivations and outcomes in non-college samples, with greater variation on demographic factors such as age and marital status.



# **Consensual Extradyadic Behavior**

Separately, many couples choose to engage in enthusiastic, consensual forms of non-monogamy, such as open relationships, polyamory, and swinging (Conley et al., 2017). These types of relationship dynamics are growing in popularity/interest in the general population (Moors, 2017), and while they involve extradyadic behavior and sometimes multiple simultaneous partnerships, these arrangements do not stem from relational deficits with primary partners (Mitchell et al., 2014). Research on consensually nonmonogamous (CNM) dynamics is growing, with much of it focused on relational variables such as relationship and sexual satisfaction (Muise et al., 2019; Murphy et al., 2021; Wood et al. 2021) and personality traits such as attachment security (Moors et al., 2019). A latent profile analysis of data from people in relationships found that people in CNM relationships were similar to those in monogamous relationships in terms of healthy relationship functioning, and both relationship types appeared healthier compared to those engaging in infidelity, which showed lower levels of relationship quality and individual functioning (Hangen et al., 2020).

The focus of the current study was on experiences of infidelity, and the survey questions were written with infidelity—not CNM—in mind. However, some research suggests that a small but non-negligible percentage of people who utilize apps/websites such as *Ashley Madison* are doing so with consensual and honest agreement from their partners (see Rodrigues et al., 2019; Thompson et al., 2021). In the present work, we distinguish between infidelity and CNM based on whether the extradyadic behaviors occurred within the bounds of open agreement between partners/spouses, which we assessed from participants in our questionnaires in several ways.

### Individual Differences, Gender, and Well-Being

Sociosexuality, or the degree to which people link sex with love (Simpson & Gangestad, 1991), predicts incidence of infidelity (Mattingly et al., 2011; Simpson et al., 2004), and predicts happiness when people have multiple sexual partners (Vrangalova & Ong, 2014). It may be the case that personality traits relevant to sexual variety are powerful enough to overcome moral concerns in the pursuit of infidelity. Sociosexuality is also a relevant predictor for life satisfaction and self-esteem (Vrangalova & Ong, 2014), but this link has not yet been examined in the context of infidelity. Some evidence suggests that people are motivated to seek affairs in part to boost their feelings of self-esteem (Selterman et al., 2019). Given the strong and

consistent evidence linking relationship satisfaction with life satisfaction (Diener & Seligman, 2002; Diener et al., 2000), it is surprising that little research has examined links between infidelity and well-being. Logically, if changes in relationship quality are linked with changes in well-being (Dyrdal et al., 2011; Gustavson et al., 2016), and if infidelity negatively impacts relationship quality, then well-being ought to be negatively impacted as well. Threading these ideas together, if a sexual personality trait motivates pursuit of multiple sex partners, this could lead to greater happiness. On the other hand, if people engage in a behavior that is both immoral and damaging to their relationships, they may feel worse about their lives and about themselves compared to those who refrained from cheating. Thus, the link between infidelity and well-being may depend on traits such as Sociosexuality.

# **Online Infidelity**

Ashley Madison is a dating website/mobile application geared toward facilitating affairs, for whom most users are in committed partnerships and marriages. An emerging area of research on internet-mediated infidelity shows that these affairs have similar psychological and behavioral patterns as offline-initiated affairs. For instance, men on sites like Ashley Madison report having more sexual motivations for affairs, while women report more dyadic motivations such as feeling neglected, and trait Sociosexuality is also associated with sexual motivations for affairs and with greater sexual satisfaction during those affairs (Hackathorn & Ashdown, 2021). These findings have been reported in samples with participants who did not initiate their affairs online (Barta & Kiene, 2005; Selterman et al, 2019, 2021), and similar results also emerged from samples from other websites geared toward facilitating infidelity, such as Second Love. Such studies additionally support links between higher Sociosexuality, lower commitment, and increased likelihood of having affairs (Rodrigues et al., 2017). Other studies find that people engage in a variety of extradyadic behaviors through Ashley Madison, including sex with affair partners, social support, emotional intimacy and affection, etc. (Thompson et al., 2021).

Aside from companies that explicitly cater to those seeking affairs, people also look for extradyadic partners on other mainstream dating apps such as *Tinder*. In a sample of undergraduate students, many indicated that they sent messages to others on *Tinder* even while they were in an exclusive romantic relationship, or that they saw someone else on Tinder whom they knew was in a relationship (Weiser et al., 2018). This analysis also revealed that Sociosexuality was linked with greater likelihood of Tinder-facilitated extradyadic sex (Weiser et al., 2018). Other studies find evidence that who use Tinder while in an exclusive

relationship score higher on sub-clinical psychopathy, and lower on agreeableness and conscientiousness, compared to Tinder users who are single (Timmermans et al., 2018). Those using general dating apps such as Tinder to have affairs may avoid some of the popular demonization toward Ashley Madison users, who are especially likely to be viewed negatively by those high in trait jealousy or sex-oriented guilt (Hackathorn et al., 2017). Overall, findings from these studies show evidence that online infidelities are psychologically similar to offline infidelities.

Some distinctions, however, also emerge. First, based on representative survey data through the mid-2010s, most people who engage in infidelity meet their affair partners offline and know them beforehand, rather than meeting online first (Labrecque & Whisman, 2017). These may reflect older trends, as people are growing increasingly comfortable with meeting others online, especially in the wake of the COVID-19 pandemic that has seen dating apps/sites rise in usage (Dietzel et al., 2021; Wiederhold, 2021). But as far as our current knowledge is concerned, internet-initiated infidelity occurs in a substantial minority of cases. Some who encounter affair partners online may engage in onlineonly infidelities (e.g., cybersex) and never interact in-person. However, this also appears to be a minority of cases, as most internet-mediated affairs begin online but transition to in-person (Alexopoulos, 2021), just as they do with mainstream online dating apps such as Tinder or eHarmony. There may be other ways in which Ashley Madison users differ from other subpopulations of affair-seekers, which we treat as an open question.

#### The Present Study

In this study, we aimed to better understand the psychological experiences of those who seek and engage in extradyadic behaviors. We designed a 2-wave survey study with the goal to investigate how initial factors would predict subsequent behaviors and psychological outcomes. We utilized participants who were active users on Ashley Madison. Surveys were distributed throughout 2019 with assistance from the website staff. Our hypotheses are detailed below. As anticipated in our preregistration, there were issues that arose during data collection which required modifications to the analysis plan. The original protocol called for participants to be contacted for surveys at two time points, 3 months apart. Due to human error, both surveys were sent out to a larger pool of Ashley Madison users and only a subset of them were matched across time. This resulted in two cross-sectional samples and one longitudinal sample with data matched from

<sup>&</sup>lt;sup>1</sup> We pre-registered our hypotheses here: https://osf.io/fv6zc/



a subset of participants who completed both waves. Although the two cross-sectional samples were large in size (1680 at T1 and 600 participants at T2), a smaller sample of 260 participants were matched across both waves of data. This smaller sample was statistically underpowered to test some of our original hypotheses, so they were modified to focus on the cross-sectional data. In addition, with the rich data provided through the cross-sectional samples, we focused our attention on the descriptive data from each of these samples and used the second sample (Sample B) to test the replicability of our findings from the first sample (Sample A).

In addition, two other complications after data collection resulted in changes to our analysis plan. Our preregistered hypotheses included testing predictions about trait moral concerns (based on Moral Foundations Theory) and gender differences in infidelity experiences. However, internal consistencies for our moral concern measures were inadequate, with alphas ranging from 0.55 to 0.60, and the gender ratio in our samples was skewed too heavily male, thus limiting our statistical power to detect gender effects. Therefore, we did not include analyses for moral concerns and gender, given our low confidence in those results.<sup>2</sup>

# **Hypotheses**

# **Relationship Quality and Infidelity**

H #1a: Higher scores on relationship well-being variables (including satisfaction, intimacy, love) will predict lower likelihood of infidelity and less enthusiasm for finding an affair partner. Conversely, higher scores on deficit variables (including conflict, neglect) will predict higher likelihood and higher enthusiasm for infidelity. H #1b: Relationship quality and status will change across time for those who have an affair, relative to those who do not, such that wellbeing variables (satisfaction, intimacy, love) will decrease, deficit variables (conflict, neglect) will increase. In addition to these directional hypotheses, we also proposed non-directional research questions. RQ #1: Would relationship quality predict relationship fallout (i.e., separation/divorce)? RQ #2: Does relationship quality predict dissatisfaction with (i.e., derogating) potential affair partners?.

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# **Motivations for Infidelity**

H #2a: Those motivated to have affairs based on anger, lack of love, low commitment, sexual dissatisfaction, and neglect to commit infidelity will score lower in relationship well-being variables (love, intimacy, satisfaction) and higher in deficit variables (conflict, neglect). H #2b: Infidelity motivations anger, lack of love, low commitment, sexual dissatisfaction, and neglect will be linked with decreases in relationship wellbeing (satisfaction, intimacy, love) over time, increases in deficits (conflict, neglect), and greater likelihood of divorce/dissolution from partners.

#### Well-Being and Infidelity

H #3a: Among those who report affairs, higher scores on *sociosexuality*, *variety* motivation, and *autonomy* motivation will predict higher life satisfaction and self-esteem. H #3b: Sociosexuality, variety, and autonomy motivations will predict higher sexual satisfaction with affair partners. RQ #3: Do people who report affairs score higher on life satisfaction or self-esteem compared to those who do not report affairs?

#### Method

# **Participants**

A total of 2290 participants began the Time 1 questionnaire. Of those, we excluded participants because they failed an attention check item (182), exited the survey partway through (1002), indicated across multiple survey items that they were not in a romantic relationship (36), or were part of the matched sample described below (260). The final Sample A (Time 1 questionnaire only) contained 810 respondents, with 684 men and 118 women (8 unknown). The mean age in this sample was 51.48 years old (SD = 11.54). The sample was mostly straight (738) with 61 identifying as bisexual, one as gay, four as pansexual, one as asexual, and 5 other/unknown. When asked about relationship status, 117 reported being single,<sup>3</sup> 130 dating and/or cohabitating, 424 engaged/married/domestic partnership, and 51 with some other relationship arrangement. Approximately 10% of the sample (85) reported being consensually non-monogamous (while either dating or married). However, many of these

<sup>&</sup>lt;sup>2</sup> Curious readers may wish to see our supplemental document, which contains analyses that stem from our original preregistration plan, which we removed from our final published manuscript. We invite researchers to peruse these findings in the hopes that they may generate future studies, but we strongly recommend interpreting these findings with caution.

<sup>&</sup>lt;sup>3</sup> We retained data from participants who answered in-depth relationship questions (e.g., satisfaction, love, conflict, sex) even if they indicated on this demographic question that they were single. Some participants may have interpreted this option to mean "unmarried" or "uncommitted." Running our analyses with "single" participants excluded did not change the overall pattern of results.

participants' CNM statuses are contradicted by their responses to later questions; see descriptive results below.

A total of 1426 participants began the Time 2 questionnaire. Of those, 260 were excluded because they were part of the matched sample (described below), and 298 were excluded because they exited the survey partway through. Being in a relationship was not a requirement for completing the Time 2 survey. The final Sample B (Time 2 questionnaire only) contained 868 participants, including 780 men and 72 women (16 unknown) who had a mean age of 52.77 years old (SD = 11.56). The sample was mostly straight (779) with 63 identifying as bisexual, one as gay, five as pansexual, one as asexual, and 19 other/unknown. When asked about relationship status, 169 reported being single, 136 dating and/or cohabitating, 412 engaged/married/domestic partnership, and 64 unknown/other. Further, 6% (87) reported being consensually non-monogamous.

A total of 260 participants could be matched across both timepoints. Of those, 26 indicated across multiple survey items that they were not in a romantic relationship at Time 1 and were excluded. The final Sample C (the longitudinal sample with both questionnaires completed) consisted of 234 participants, including 204 men and 29 women (1 unknown) with a mean age of 53.66 years old (SD = 10.73). When asked about relationship status, 32 were dating and/or cohabitating, 138 were engaged/married/domestic partnership, and 9 reported some other relationship arrangement. Again, 11% (22) reported being consensually non-monogamous. Some participants reported being single (31) or did not report a relationship status (2) but were nevertheless retained in the final sample because they indicated elsewhere in the survey that they did have a romantic partner. As with the crosssectional sample, the longitudinal sample was mostly straight (207), with 26 identifying as bisexual and one as pansexual.

Power analyses were conducted with the WebPower package in R (Zhang & Yuan, 2018). In the context of a multiple linear regression model with five predictors, Samples A (89%) and B (91%) had a sufficient sample size to detect a small effect (Cohen's  $f^2 = 0.02$ ). The matched sample had too few participants to detect a small effect (33%) but had sufficient power (97%) to enough to detect a medium effect (Cohen's  $f^2 = 0.1$ ). In the context of logistic regression, effect sizes are not standardized in the same way. However, let us assume a model with a single continuous predictor, and a binary outcome with a 30% of occurrence at mean levels of the predictor and a 40% chance of occurrence at + 1SDabove the mean (a modestly sized odds ratio of 1.5). Samples A (84%) and B (86%) have sufficiently large sample sizes to detect this effect, but Sample C does not (36%). Overall, the cross-sectional samples are well-powered to detect the hypothesized effects, but the longitudinal sample is underpowered, particularly for models with binary outcomes (e.g., predicting affairs or breakups).

#### **Materials and Procedure**

We report the measures used in our analyses below, with the full materials available here: https://osf.io/nmjha/.

We aimed to keep the focus as broad as possible in terms of extradyadic experiences. We informed participants that the study solicits information about any type of emotional, romantic, physical, or sexual interactions, which would all count as an affair, and which are not limited to a specific time duration (1 night or 1 month, etc.), and which are not limited to any specific act or behavior (kissing, dating, sex, etc.)." This allowed for the most inclusive account of extradyadic experiences that participants may report having. We assessed participants' history of affairs ("Have you ever had an affair or engaged in infidelity?"), the degree to which they felt enthusiastic about finding affair partners ("I am interested and enthusiastic about finding an affair partner on Ashley Madison"). We assessed monogamy status by asking participants "Do you and your spouse/partner have an agreement to be sexually exclusive (monogamous)? and "Have you and your spouse/partner ever had an "open" relationship? (meaning, you and your partner have an agreement that it is ok to date or have sex with other people)."

We assessed relationship quality in both Time 1 and Time 2 questionnaires, with five items capturing love ("I love my spouse/partner deeply"), satisfaction ("I feel satisfied in my relationship with my spouse/partner"), conflict ("I have many conflicts with my spouse/partner."), sexual satisfaction ("How satisfied are you with your present sex life with your spouse/partner?"), and intimacy (the Inclusion of Other in Self scale; Aron et al., 1992), respectively. The first four items used 5-point agree-disagree scales, and intimacy was captured with seven overlapping circles. Exploratory factor analyses indicated that these five items loaded well onto a single factor (factor loadings range from 0.58 to 0.89 in Sample A). Therefore, we standardized and averaged them to create an overall relationship quality measure (\alphas from 0.78 to 80). Separately, we asked whether participants currently have a consensual agreement to be exclusive (monogamous) with their partners/spouses, and whether they have ever had such a relationship.

We also measured well-being in both questionnaires, with two items capturing self-esteem (e.g., "Overall, I feel good about myself",  $\alpha$ s from 0.73 to 0.83), and one item capturing life satisfaction ("I feel that my life is close to ideal") on 5-point scales.

Sociosexuality (Penke & Asendorpf, 2008) was measured at Time 1 with 6 items; three capturing the sociosexual attitudes on a 5-point scale (e.g., "Sex without love is ok",  $\alpha$ s from 0.73 to 0.74), and three capturing desire on a 9-point scale (e.g., "How often do you have sexual fantasies about someone with whom you do not have a committed romantic relationship?",  $\alpha$ s from 0.81 to 0.85).



Motivations to have affairs were assessed with 8 items from Selterman et al. (2019), each capturing a separate motivation (anger, sexual dissatisfaction, lack of love, low commitment, neglect, situational change, independence/ autonomy, and desire for sexual variety) on a 5-point scale from 1 = Strongly disagree to 5 = Strongly agree.

At Time 2 only, we asked participants who had had an affair how satisfying their affair was emotionally ("How emotionally satisfying was the affair?") and sexually ("How sexually satisfying was the affair?") on a 5-point scale from 1 = Extremely dissatisfying to 5 = Extremely satisfying.We also asked whether they regretted their affair ("I regret having this affair") on a 5-point scale from 1 = Strongly disagree to 5 =Strongly agree. We further assessed what sexual behaviors participants engaged in with their affair partners (e.g., oral sex, vaginal sex). For those who reported not having an affair by Time 2, we also probed participants' attributions for this outcome based on 12 items. This included reasons specific to the pool of potential affair partners ("I did not find anyone that I felt romantically/sexually attracted to;" "I tried to find an affair partner, but didn't click with anyone"), reasons pertaining to participants' relationships ("I was reminded of my love for and loyalty to my spouse"), social stigma ("I didn't want others to judge me negatively for having an affair"), and moral objections ("I realized that having an affair would be immoral"; "I didn't want God to punish me for having an affair").

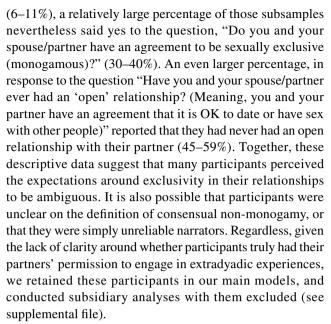
### Results

#### **Descriptive Statistics**

Due to the uniqueness of the current sample, we present descriptive statistics in some detail. Our data, along with code, can be found here: https://osf.io/yh4d6/.

Did the Ashley Madison users consider themselves to be unfaithful? Participants reported conflicting information about whether they had their partners' permission to engage in extradyadic experiences. Approximately half of participants reported having an agreement to be exclusive with their primary partner/spouse (43–60% across samples), with the rest reporting no such agreement. Yet, few participants said that they currently had an open relationship with their partner (9–12% across samples). Most participants reported that they had cheated on their partners at some point in their relationship (65–70%). In contrast, relatively few participants reported that their partners had previously cheated on them (14–24%); most reported that their partners had never cheated (32–43%) or they were unsure whether their partners had cheated (34–43%).

Looking specifically at the participants who identified as being in a consensually non-monogamous relationship



Did the Ashley Madison users have affairs? Across samples and timepoints, participants were enthusiastic about finding an affair partner on Ashley Madison (Ms range from 4.08 to 4.28 on a 5-point scale; SDs from 0.80 to 0.97). However, most participants were not looking to engage in infidelity for the first time. At Time 1, most participants had already had an affair prior to using Ashley Madison (64% of Sample A, 65% of Sample C). Participants varied in terms of how actively they were currently pursuing an affair partner and how successful they had been thus far; see Fig. 1.

Most participants had not yet found an affair partner either at Time 1 (61% of Sample A, 58% of Sample C), or at Time 2 (53% for Sample B, 38% for Sample C). The remainder reported having had an affair either via *Ashley Madison* (18–28%), or through some other means (28–30%). A sizable minority of participants were currently communicating with affair partners (15–21%), had met an affair partner in person (13–21%), and had sex with an affair partner (20–30%). Relatively fewer participants had gone on dates (8–14%) or fallen in love with an affair partner (3–7%). Of those who had had an affair by Time 2, most reported that the affair partner was not an escort (sex worker; 88–90%), whereas the rest said that they were an escort (3–5%), or that they were unsure (3–5%).

What were their primary relationships like? Mean ratings on each relationship quality item for each sample are presented in Fig. 2. Participants generally reported high levels of love for their partners, yet low levels of sexual satisfaction. Approximately half of the participants said that they were not currently sexually active with their partners (47–52% across samples). Some participants had sought professional counseling to improve their relationship (18–27%), but most had not. Together, these descriptive data paint a picture of ambivalent long-term relationships with a mixture of both



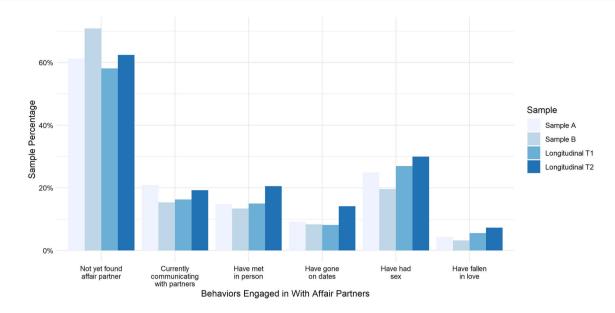
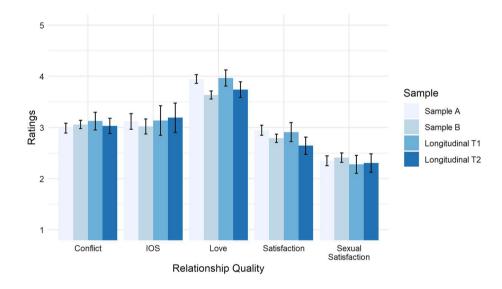
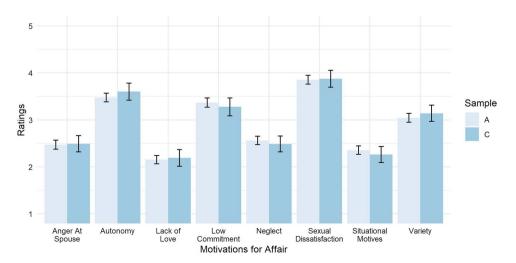


Fig. 1 Behaviors engaged in with potential affair partners for each sample. Note Participants were able to select multiple behaviors

Fig. 2 Relationship quality ratings for each sample. *Note* Here and in all figures, error bars represent 95% confidence intervals around the mean



**Fig. 3** Endorsement of affair motives in Samples A and C





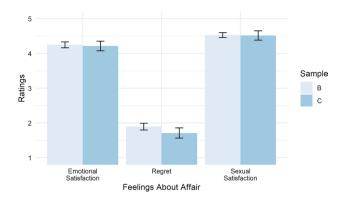


Fig. 4 Feelings about affair experiences for each sample

positive and negative qualities, and with notably unsatisfying sex lives.

Motives for and against having an affair. Participants' endorsement of eight potential reasons for wanting to have an affair are presented in Fig. 3. Consistent with participants' reports about their relationships, sexual dissatisfaction was the most strongly endorsed motive for wanting an affair. Other commonly endorsed reasons included low commitment, autonomy (i.e., wanting freedom and independence) and a desire for a variety of sexual partners. In contrast, other problems with one's relationship (e.g., lack of love, anger toward the spouse, feeling neglected) were some of the leastendorsed reasons for wanting an affair. These results suggest that participants were seeking affairs because they wanted novel, exciting sexual experiences, or because they didn't feel a strong commitment to their partners, rather than because of a need for emotional fulfillment.

How did participants feel about their affairs? Participants who indicated on the Time 2 questionnaire that they had had an affair were asked how they felt about it (n=399 in Sample B) and n=137 in Sample C). Results can be seen in Fig. 4. Participants generally reported that their affair was highly satisfying both sexually and emotionally, and that they did not regret having their affair.

Did the partners know about the affairs? Of the participants who indicated on the Time 2 questionnaire that they had had an affair, most reported that their partners did not know about the affair (79% in Sample B and 83% in Sample C).

# **Confirmatory Analyses**

We organized the rest of our results based on the hypotheses and research questions listed above. Models comparing means were conducted with Student's *t*-tests, models predicting continuous outcomes were conducted with linear regression, and models predicting binary outcomes were conducted using logistic regression (the t.test, lm, and glm

functions from base R, respectively). Standardized beta coefficients and confidence intervals were obtained using the effectsize package (Ben-Shachar et al., 2020).

*Dyadic/relationship variables*. This set of analyses concerned both positive (e.g., satisfaction) and negative (e.g., conflict) dyadic relationship variables, which we combined into a single relationship quality factor (see measures section).

We first tested (H#1a) whether relationship quality would predict having affairs or enthusiasm for finding an affair partner. This prediction was not supported. Relationship quality at Time 1 did not significantly predict enthusiasm for finding an affair partner at Time 1  $\beta = -0.06$ , p = .091, and did not predict likelihood of having an affair at Time 1  $\beta = -0.14$ , p = .069 or Time 2  $\beta = 0.22$ , p = .122. We then tested (H#1b) whether relationship quality or relationship status would change from Time 1 to Time 2 as a function of having an affair. This prediction was also not supported. Relationship quality did not decrease at T2 relative to T1 as a function of having an affair,  $\beta = 0.05$ , p = .254, nor did having an affair increase the likelihood of relationship dissolution/ divorce,  $\beta = -0.18$ , p = .296.

Separately, to address RQ#1, we found that Time 1 relationship quality predicted lower likelihood of divorce/dissolution at Time  $2\beta = -0.64$ , p = .002 [-1.06, -0.26]. We also addressed RQ#2 to test whether relationship quality was associated with any of the items reflecting dissatisfaction with (i.e., derogating) potential affair partners (e.g., "Others on the site didn't seem like my type"). These variables were not associated (all ps > 0.08).

Motivations for infidelity. We tested the hypothesis (H#2a) that dyadic infidelity motivations (i.e., affairs based on anger, sexual dissatisfaction, lack of love, low commitment, and neglect), would be linked with lower scores on Time 1 relationship quality (e.g., satisfaction). Consistent with this prediction, a multiple regression model with all 8 motivation variables entered simultaneously revealed that anger  $\beta = -0.09, p < .001, [-0.15, -0.04],$  sexual dissatisfaction  $\beta = -0.32, p < .001, [-0.38, -0.27], lack of love \beta = -0.21,$ p < .001, [-0.27, -0.15], low commitment  $\beta = -0.17$ , p < .001, [-0.24, -0.11], and situational factors  $\beta = -0.20,$ p < .001, [-0.26, -0.14] were all negatively associated with relationship quality, whereas autonomy was positively associated with relationship quality  $\beta = 0.13$ , p < .001, [0.08, 0.18]. Separately, neglect  $\beta = -0.15$ , p < .001, [-0.22, -0.07] and situational factors  $\beta = -0.19, p < .001$ [-0.27, -0.10] were also negatively associated with Time 1 life satisfaction, while autonomy was positively associated with life satisfaction  $\beta = 0.09$ , p = .010, [0.02, 0.16].

We also tested the hypothesis (H#2b) that dyadic infidelity motivations (e.g., anger, sexual dissatisfaction) would be linked with decreases in relationship quality from T1 to T2 and breakup rates at T2. We ran a multiple regression model



**Table 1** Longitudinal associations between infidelity motivations (Time 1) and staying together (Time 2)

Motivations for infidelity (Time 1)	Stayed together (Time 2)	
	$\beta$	95% CI
Anger	12	[69, 44]
Sexual dissatisfaction	68**	[-1.20,20]
Lack of love	.64*	[.15, 1.16]
Low commitment	06	[71, .60]
Neglect	.25	[17, .68]
Autonomy	27	[69, .16]
Situational factors	.58*	[.10, 1.07]
Variety	.05	[48, .58]

p < .05; \*\*p < .01; \*\*\*p < .001

with motivation factors as predictors while controlling for T1 relationship quality. All those associations were non-significant (all ps > 0.10), except for situational factors which was associated with lower T2 relationship quality  $\beta = -0.12$ , p = .035, [-0.24, -0.01]. None of the dyadic infidelity motivations was linked with changes in life satisfaction from T1 to T2 (all ps > 0.10). Sexual dissatisfaction motivation was linked with lower likelihood of remaining together with significant others at T2  $\beta = -0.68$ , p = .007, [-1.20, -0.20], whereas lack of love  $\beta = 0.64$ , p = .012, [0.15, 1.16] and situational factors  $\beta = 0.58$ , p = .018, [0.10, 1.07], were positively linked with this outcome. Put another way, participants were more likely to report remaining together with their spouse/ significant other if their affairs were more strongly motivated by situational factors or by lack of love rather than less. Further, they were less likely to report remaining together if their affairs were more strongly motivated by sexual dissatisfaction, see Table 1.

Well-Being. We hypothesized that among those who reported affairs, trait sociosexuality, variety motivation, and autonomy motivation (all assessed at Time 1) would predict life satisfaction and self-esteem at both Time 1 and Time 2 (H#3a), and sexual satisfaction with affair partners at Time 2 (H#3b). H#3a was not well-supported. None of the predictor variables was associated with life satisfaction or self-esteem at Time 1, or self-esteem at Time 2, although sociosexuality predicted higher life satisfaction at Time  $2\beta = 0.26$ , p = .010, [0.06, 0.45], among those who reported affairs. H#3b was not supported. None of the variables emerged as significant predictors of Time 2 affair satisfaction. We then addressed RQ#3 to test whether those reporting affairs scored differently from those who did not report affairs in terms of satisfaction or self-esteem, and we did not find evidence that these groups scored differently on those variables ps > 0.10.

#### Discussion

Overall, the findings in this paper highlight the nuanced psychological nature of extradyadic behavior for Ashley *Madison* users. The descriptive results suggest that people's experiences with affairs are counterintuitive and, at times, self-contradictory. On one hand, participants reported strong feelings of love toward their primary partners/spouses that would ostensibly impede them from cheating. On the other hand, they also derived considerable physical and emotional pleasure from their affairs and expressed little regret. There were also inconsistent expressions about the monogamous/exclusive nature of their relationships. A small percentage (<15%) of our sample indicated that they were in consensually non-monogamous relationships, suggesting that they had their partners' permission to use Ashley Madison to find paramours. However, many of these same participants indicated elsewhere in the survey that their relationships were exclusive or that they did not have an open relationship with their partners. Some participants' inconsistencies may be because they have not had discussions with their partners about monogamy in their relationships, which is a common phenomenon that leads to misunderstandings and disagreements about infidelity (Warren et al., 2012). Regardless, similar patterns of results emerged whether the participants who reported being in CNM relationships were retained or excluded.

For a sample of people aspiring to have affairs, participants expressed high amounts of romantic love toward their partners, with moderate amounts of satisfaction and conflict, and many taking significant steps to improve their relationships (e.g., marital counseling). Moreover, participants also felt positively about themselves, scoring well on life satisfaction. These factors would ostensibly redirect people away from having affairs. Sexual satisfaction, or lack thereof, appeared to stand out as a variable of interest, with about half of participants saying they were not sexually active with their partners. Sexual dissatisfaction was the strongest motivator for those in our sample to pursue affairs. Our participants also reported high emotional and sexual satisfaction with their affairs, and little regret. In a sense, these results mirror the results from prior studies on attitudes and incidence of infidelity, which most people view disapprovingly, and yet, is commonly experienced.

Some, but not all our directional predictions, were supported by the data. Dyadic variables were not associated with infidelity. Relationship quality (satisfaction, intimacy, conflict) did not predict having affairs, nor did it predict affair regret, nor did it decrease as a function of whether participants had affairs. This challenges findings from some prior work which has shown relationship investment as a key predictor of infidelity in young adults (Drigotas et al., 1999),



and that affairs are linked with decreased relationship quality outcomes. However, independent of affairs, relationship quality did (negatively) predict the likelihood of relationship dissolution over time, which is consistent with prior work.

Participants' motivations for having affairs, which included dyadic factors like anger and sexual dissatisfaction, were linked with worse relationship quality at Time 1, while motivation for autonomy, a non-dyadic factor, was linked with better relationship quality. This is consistent with prior work showing that as people experience relationship deficits, their motivations for affairs reflect those deficits, and that infidelity motivations are not monolithic (Selterman et al., 2019). However, these motivation variables did not predict changes in relationship quality or life satisfaction over time for those who reported having affairs. This shows some preliminary evidence that relationship deficits precede infidelity motivations, but not the other way around. Separately, sexual dissatisfaction predicted an increased likelihood of relationship dissolution/divorce, while lack of love and situational factors were associated with remaining together. This shows how different motivations for infidelity are differentially associated with relationship stability in the long-term. Among those who reported affairs, sociosexuality and motivations for variety and autonomy were not associated with happiness or self-esteem. Sociosexuality did predict sexual satisfaction with affair partners, but autonomy predicted lower sexual satisfaction.

The findings from our sample of Ashley Madison users paint a picture of infidelity experiences that does not follow key assumptions long held in the literature on close relationships. These assumptions include the notion that because infidelity is widely considered immoral and is sometimes linked with conflict and intimate partner violence, therefore those who choose to have affairs must have suboptimal relationships (Barta & Kiene, 2005; Thompson, 1983) or behave in significantly different ways compared to those who maintain sexual exclusivity. We did not observe a robust pattern in our data which would support these ideas. Relationship quality (satisfaction, conflict) was not systematically linked with having affairs. One possible explanation is that there are non-dyadic motivations for infidelity that stem from things like self-esteem, desire for variety, and situational factors, rather than from deficits in people's marriages or partnerships (Selterman et al., 2019).

Furthermore, relationship quality did not predict feelings of regret after affairs in our sample, nor positive perceptions of alternative partners. Prior studies have pointed to factors such as commitment and interdependence are linked with motivations to derogate or devaluate potential alternatives (Johnson & Rusbult, 1989; Lydon et al., 2003; Miller, 1997). But our participants' responses to items assessing their perceptions of alternatives (e.g., "Others on the site didn't seem like my type") were not associated with

measures of their marital/relationship quality. Put another way, we found weak evidence that relationship quality was linked with derogation of alternative partners. In addition, affair motivation variables stemming from dyadic elements (such as anger, lack of love, or sexual dissatisfaction) were paradoxically associated with greater concurrent relationship quality, and they did not predict changes in relationship quality or life satisfaction over time.

Circling back to one of the central questions we posed in our introduction, it may seem paradoxical that infidelity would be so widely frowned upon, and yet so common. Our results provide clues as to why extradyadic behavior is normative, in large part because the relationships of cheaters appear similar to the relationships of non-cheaters, at least in the eyes of the individuals who are committing infidelity (their partners may feel differently). Some people may pursue affairs even if their satisfaction is high or perceived conflict is low (Glass & Wright, 1985). Although this may be surprising to those who have long assumed key benefits to monogamous relationships, including higher satisfaction, those who study consensual non-monogamy recognize this alleged benefit is a myth (Conley et al., 2013, 2017). Monogamy comes with trade-offs, and relational or emotional outcomes are not universally positive.

In terms of strengths and limitations, we note several. We planned several analyses with our longitudinal data, anticipating that Sample C, which consisted of matched participants across T1 and T2, would be much larger. However, the matched Sample C was much smaller than the two cross-sectional samples A and B. Thus, we have more confidence in the conclusions from the cross-sectional data, and conversely, we urge caution against overextrapolation from our longitudinal findings (particularly with binary outcomes such as breakups at T2, which were quite underpowered) before they can be independently replicated. We suggest future studies extend on our work by further probing developmental antecedents and outcomes of infidelity.

Our sample reflects a population of middle-aged adults, most of whom are married, in contrast to young adult college students in dating relationships whose infidelities are more frequently studied in the literature. Our findings may generalize to populations of similar age and relationship status, but it may also be possible that *Ashley Madison* users are somehow different from those who have affairs through other means. *Ashley Madison* users are investing time, energy, and money into the pursuit of infidelity, whereas others may have affairs that originate more passively. Our sample was also skewed in terms of gender representation as most participants were men (84–90% across samples), which limited our ability to conduct analyses gender as a predictor of infidelity experiences. It may be the case that our findings generalize



more to men who have affairs than to women or non-binary individuals.

Existing data suggest that most people who commit infidelity report having affairs with others that they already knew rather than through matchmaking apps (Labrecque & Whisman, 2017), although such services are growing in popularity especially in recent years (Dietzel et al., 2021; Wiederhold, 2021). The existing data do not yet support the idea that Ashley Madison users represent a distinct group relative to others who cheat, although we suggest treating this as an open question for which future research will bear evidence on. At this point, we recommend caution before overgeneralizing findings from Ashley Madison users to the wider population of affair-seekers. It may also be the case that Ashley Madison users are also meaningfully different from affair-seekers who use other internet platforms such as Second Love, although again, presently, we have no data to support this notion. Furthermore, whereas websites/apps such as Ashley Madison offer users additional opportunities to engage in affairs, we do not have data on relationship outcomes for these affairs compared to affairs that originate offline.

Separately, some of our participants indicated having a non-exclusive or consensually open relationship with their primary partners. This group of consensually non-monogamous folks who use websites like *Ashley Madison* (which facilitate affairs) may be different in some ways compared to others in open relationships who prefer other means of finding extradyadic partners. Some who practice ethical non-monogamy insist that their paramours either be single or in consensually open relationships themselves.

Infidelity remains highly socially stigmatized and there can even be legal consequences for marital adultery, which would theoretically serve as barriers to infidelity. In contexts where infidelity or non-monogamy more broadly are frowned upon, attitudes and experiences are likely to be more restricted, and our current study does not allow for such sociocultural comparisons. Finally, our data do not pertain to lifetime infidelity behaviors, so we did not address questions about developmental aspects of infidelity, either within persons or within relationships.

# **Conclusion**

With data from three relatively large samples, we found that participants generally reported eagerness for extradyadic experiences, most of which were in the context of monogamous/exclusive relationships. Participants sought affairs despite strong feelings of love for their primary partners/spouses. Yet, participants also reported a high degree of physical and emotional pleasure with their affairs and low levels of regret. Going forward, we recommend that researchers consider nuanced approaches to understanding

infidelity. This study is among the latest to suggest that infidelity is psychologically subtle and, in some cases, paradoxical. We suggest that many common assertions and assumptions about links between infidelity and poor relationship quality are not consistently supported by available evidence. We observe that people tend to struggle with moral consistency in intimate contexts in the sense that they endorse values that would ostensibly prohibit infidelity, while also engaging in infidelity themselves. Future research might also profit from integrating the literature on moral inconsistencies with the literature on intimate relationships.

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Code Availability Code is available in the same OSF folder as the data file.

#### **Declarations**

Conflict of interest The authors have not disclosed any conflict of interests.

**Ethical approval** This study was approved by the University of Maryland Institutional Review Board [382480-9].

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