

Title

Can earlier relationship experiences act as a stable moderator of the sex difference in forced-choice sexual jealousy responses?

Abstract

The sex difference in forced-choice sexual jealousy responses has over the past 20 years gradually been established as a stable sex difference by the empirical literature (e.g. Sagarin et al., 2012). The search of possible moderators of the sex-difference has therefore been intensified. In this thesis I aim to investigate to what extent, if any at all, does earlier relationship experiences act as a stable moderator of the sex-difference. For that purpose, I administered four infidelity scenarios and questions regarding earlier relationship to 473 undergraduate students, 281 women and 192 men. The results from the infidelity scenarios support the established view that men become more upset by sexual aspects of infidelity compared to women. This result is also in line with previous studies conducted in Norway (Kennair et al., 2011; Bendixen et al., submitted). In search of possible moderators connected to earlier relationship experiences I investigated the possible moderation of whether the participants were in a relationship or not, whether the participants have experienced infidelity or not, and whether the participants were in their earlier twenties or late twenties. The results indicate that none of these three factors acted as moderators. For the participants who had experience with infidelity, I investigated the possible moderation of whether the infidelity happened in a previous or current relationship, how long ago since the infidelity occurred, and the degree of commitment in the relationship where the infidelity occurred. None of these three factors resulted in any positive findings. Overall, the results of this thesis indicate that the sex-difference is quite robust in terms of different relationship experiences. In the discussion I emphasize that future research should replicate my negative findings with larger sample sizes and with samples containing other respondents than just undergraduate students. This thesis show that the quest to find stable moderators of the established sex difference in jealousy may be harder than previously thought.

1. Introduction

The aim of this thesis is to investigate how earlier life experiences can moderate how people react to imagined infidelity scenarios. More precisely; I will look at how earlier relationship experiences can moderate the established sex difference in jealousy. This research question is based upon the assumption that there exists a stable sex-difference in jealousy (Buss, 2000; Sagarin et al, 2012). It is therefore a natural starting point to explain the theoretical basis for such a sex difference and not at least how documented such a sex-difference is in the literature. There have been quite some methodological discussions of how we should interpret the empirical evidence concerning the hypothesized sex difference. These methodological discussions are important for the understanding and interpretation of the empirical literature. I will therefore consider the main points from these discussions. I will especially take a close look at the two greatest methodological discussions: 1) What is the right criterion to evaluate the sex difference, and 2) Forced choice vs continuous measures. With these discussions clarified, I will be ready for a review of the empirical literature. The three meta analyses performed to date (Harris. 2003; Carpenter 2012; Sagarin et al, 2012), and earlier studies conducted in Norway (Kennair et al, 2011; Bendixen et al, submitted), will form the foundation for this review. In the last part of the introduction I will finally look at what has been suggested as possible moderators of the sex-difference. I will in that section shortly look at moderators in a broad sense (e.g. how also research design can moderate the sex-difference), but most space will naturally be given to the investigation of how earlier relationship experiences can act as possible moderators.

1.1 Sex-differences in jealousy

No sex differences in jealousy was the established view among researchers in the sixties and the seventies (Buss et al, 1992; Buss, 2000). The reason for this view was simple: until then no studies had found any sex differences in jealousy. Dozens of studies had looked at the psychology of jealousy and none had found any sex differences in either the frequency or intensity of jealousy (Buss, 2000). No sex differences in the frequency or intensity of jealousy is also the established view today (e.g. Buss, 2000; Sagarin et al 2003).

Symons (1979) and Daly, Wilson and Weghorst (1982) were the first researchers who considered jealousy from an adaptationist evolutionary perspective. Looking at jealousy as a functional feeling

differed from previous research. Earlier work had tended to define jealousy as either a pathology, a character defect, a product of culture, or a product of capitalism (Buss, 2013). The function of jealousy is in an adaptationist framework hypothesized to protect the bonds between mates and to promote reproductive fitness (Daly, Wilson and Weghorst, 1982; Buss et al., 1992; Maner and Shackelford, 2008). Jealousy, according to this view, should be activated by threats to the mating relationship between women and men. By “threats” we mean such as sexual infidelity, time and resource investment in other relationships, and other threats that might cause the other person to leave the relationship. If these threats didn’t produce any feelings at all, then men and women would not be motivated to engage in actions that would deal with such threats. Humans who reacted to threats directed against their relationship would most likely have reproductively outperformed humans who were indifferent to such threats. Therefore, jealousy is considered to be a basic and necessary emotion for the existence of human relationships (Buss et al, 1999; Buss, 2013).

Evolutionary theory only expects the sexes to differ in domains where the sexes have met different adaptive problems over evolutionary time (Kennair, 2002). Different threats to the relationship have posed different adaptive problems for men and women. The psychological design of jealousy should therefore to some extent differ between the sexes (Buss et al, 1992). Both Symons (1979) and Daly, Wilson and Weghorst (1982) suggested that the challenge of parenteral uncertainty exerted selective pressures on men that boosted their jealousy responses to sexual infidelity. Men should therefore, relative to women, have a psychology that is more directed against sexually jealousy. In comparison, Symons (1979) and Daly, Wilson and Weghorst (1982) suggested that the challenge of ensuring paternal investment exerted selective pressures on women that boosted their responses to emotional infidelity. Women should therefore, relative to men, have a psychology that is more directed against emotional jealousy.

Building on the theoretical works of the first prominent evolutionary psychologists (Symons, 1979; Daly, Wilson and Weghorst, 1982), Buss et al. (1992) were the first to investigate the hypothesized sex-difference in jealousy with a systematic approach. Based on the earlier theoretical works Buss et al (1992) expected to find that the sexes differed in the patterns of jealousy exhibited in response to emotional infidelity and sexual infidelity: Men would respond stronger than woman to scenarios of sexual infidelity, while women would respond stronger than men to scenarios of emotional infidelity. With this in mind, Buss et al (1992) designed a methodology where the respondents were forced to choose between which of two infidelity scenarios they felt were the most distressing. The scenarios were the following: (A) Their partner having sexual intercourse with someone else, or (B)

Their partner becoming emotionally involved with someone else. This methodology has since been called "the forced choice methodology". Using a survey format Buss et al (1992) collected data from 511 college students. The analysis showed that 83 % of the women found the emotionally infidelity scenario the most upsetting, whereas only 40 % of the men did. In contrast, 60% of the men found the sexual infidelity scenario the most upsetting, whereas only 17% of the women did. This constituted a huge sex difference of 43 %. Buss et al (1992) clearly showed that evolutionary derived hypotheses could reveal possible sex-differences that had previously gone unnoticed by the more domain-general approaches (Buss, 2013)

1.2 Two methodological discussions

Before looking further at studies conducted after Buss et al.'s (1992) original study, I want to clarify and specify what the evolutionary prediction really is. It's necessary to do this explicitly because of the great confusion regarding this subject (see Sagarin et al, 2012 for an extensive discussion). Let us first take the debate about the right criterion: Buller's (2005) criticism of the sex-difference in jealousy is what most researchers (e.g. Carpenter, 2012) cite as the evolutionary psychologists' counterpart in the interpretation of the empirical data. Buller (2005) argues that the evolutionary hypothesized sex difference in jealousy must be evaluated by comparing type of infidelity for each sex (not between sexes). In other words, Buller's criterion (2005) demands a main sex effect from the empirical data: Males must be more distressed by sexual infidelity than emotional infidelity, and women must be more distressed by emotional infidelity than sexual infidelity. Empirical findings that show one of the sexes being more distressed by an infidelity than the other, do not meet Buller's criteria (2005). Using this criterion, Buller (2005) reviews some of the empirical literature and concludes that there is no support for a sex difference in jealousy.

The second largest meta-analysis conducted to day concerning sex-difference in jealousy (Carpenter, 2012) use Buller's criteria to determine whether there exists a sex difference in jealousy or not. It is therefore of great importance to evaluate the validity of Buller's criteria (2005). It seems to me very logical (and fair) that the criteria should be based upon what the original evolutionary hypothesis and following predictions really claim. According to Buss et al. (1992 p. 251), "both sexes are hypothesized to be distressed over both sexual and emotional infidelity, and previous findings bear this out (Buss, 1989). However, these two kinds of infidelity should be weighted differently by men and women". This quotation makes it clear that Buss et al. (1992) did not predict

a main sex effect, with men being more distressed by sexual than emotional infidelity, and women being more distressed by emotional than sexual infidelity. The best way is rather to characterize the predicted sex-difference in terms of the “different weights” that women and men assign to different types of infidelity. Buss and Haselton (2005) wrote a response to Buller’s critique (2005). They argue that Buller (2005) has misunderstood what the evolutionary prediction really is. Buss and Haselton (2005, p. 506) stress that the evolutionary prediction is not about a sex difference in the absolute level of jealousy, but is rather about “sex differences in sensitivities to different forms of infidelity”. Both Buss et al (1992) and Buss and Haselton (2005) show that the evolutionary prediction does not concern an absolute sex-difference in jealousy, but rather predicts a relative sex-difference in jealousy. Such a prediction only demands that men choose the sexual infidelity scenario more than women do, and that women choose the emotional scenario more than men do. Whether both sexes are more distressed by the emotional infidelity scenario or the sexual infidelity scenario is irrelevant when we use the criterion based on the evolutionary prediction formulated by Buss et al. (1992).

Buller’s critique (2005) only seems fair, if Buss et al (1992) and other researcher predicted an absolute main-effect. This has obviously not been the case. It seems like Buller (2005) has wrongfully proposed what evolutionary psychologists have predicted. We should therefore not use Buller’s misleading version of the evolutionary prediction as a criterion to evaluate the sex difference in jealousy. But in Buller’s (2005) defense, there has been some confusion in some of the writings among evolutionary psychologists. Harris (2005) rightly points out that many evolutionary psychologists have analyzed their data with other tests than the predicted interaction effect. For example Buss et al. (1992) in their “study 2” analyzed the data with tests that only could identify simple effects. This discrepancy between prediction and analysis are potentially misleading. In the latest meta-analysis Sagarin et al (2012) also notes that evolutionary psychologists must be guilty in some of the confusion concerning the right criterion: "Indeed, early work from one of this papers author’s (Sagarin et al., 2003, p. 4) includes analysis of simple effects. To this, we can only say that our own thinking on the issue has, over the years, become more theoretical precise."

A second methodological criticism, which is closely connected with the debate about the right criteria, concerns the application of the so called "forced-choice-paradigm". It is obvious that this paradigm does not reflect real life decision making; as humans we are seldom put in a position where we are forced to choose between what is most distressing, either sexually infidelity or emotional infidelity. Continuous scales are therefore suggested as a more ecological valid

alternative to the forced-choice scenarios developed by Buss et al. (1992). Some of the earliest studies using continuous measures reported no sex-difference in jealousy (Wiederman & Allgeier, 1993; DeSteno & Salovey, 1996; DeSteno et al., 2002; Sabini & Green, 2004). Such findings have led critics to suggest that the sex difference in jealousy is just an artifact of the forced choice methodology (DeSteno, 2010). In response to this criticism, Buss et al. (1999) argue that continuous measures do not reveal the evolutionary sex difference because of a "ceiling effect". With "ceiling effect" they mean that continuous scales results in responses that are clustered near the upper range of the response scale for both emotional jealousy and sexual jealousy. This results in a very low variance that makes it difficult to determine which of the two types of infidelity that is relatively worse for men vs. women. Therefore, Buss et al. (1999) argue that the results are only meaningful if researchers force the participants to choose which type of infidelity they feel is the most distressing.

Buss et al.'s (1999) point about the possible problems with ceiling effects is valid, but this is not a good enough reason to not discuss studies using continuous measures. This current thesis is only going to analyze infidelity scenarios that uses forced-choice responses, but to ignore the empirical finding concerning continuous measure, would be to ignore a lot of the current empirical discussion on the subject. Therefore the next section will also point out the empirical findings concerning continuous measures. Before doing that, I want to clarify how studies using continuous measure should be evaluated in light of the evolutionary prediction about an interaction-effect. An interaction-effect means that studies can show men being more distressed by emotional infidelity than sexual infidelity (a main infidelity-effect) without this disconfirming the evolutionary prediction. It also means that women can have a higher score than men on the sexual jealousy responses (a main sex-effect) without this disconfirming the evolutionary prediction. It is only if studies show men not having higher relative scores than women on sexual jealousy that we can start criticizing the evolutionary explanation. With "relative scores" we mean the difference between the scores when we subtract the scores on the sexual scale with the scores on the emotional scale. A higher score (positive) will than indicate a stronger weighting of the sexual aspect, while a lower score would indicate a stronger weighting of the emotional aspect. The evolutionary prediction is that this "relative score" will be significantly higher for men than for women. A null-finding of this interaction is the only empirical finding that would question the evolutionary prediction. It's very important to keep this in mind when I go through the studies in the following sections.

1.3 Meta-analyses

Buss et al (1992) soon became a catalyst for many studies that investigated jealousy in the nineties. The predicted sex difference was soon reported by different investigators and in different countries (e.g. Buunk, Angleitner, Oubaid, and Buss, 1996; DeSteno & Salovey, 1996; Geary, Rumsey, Bow-Thomas, & Hoard, 1995; Wiederman & Allegeier, 1993). All these studies, have made it possible to investigate the sex difference using meta-analytical tools. To the present day three meta-analyses have been published that specifically look at the sex-difference in jealousy (Harris, 2003; Carpenter, 2012; Sagarin, 2012).

Harris` (2003) meta-analysis, which included 32 studies, found support for the sex difference when the forced-choice methodology was used with heterosexual samples. Her meta-analysis also showed that the sex-difference was moderated by the age of the sample: The effects were smaller in samples that were older than the typical college age. In the same paper Harris argued that continuous measures did not find a sex difference in the amount of jealousy aroused by the two types of infidelity. It must be pointed out that this claim was based on only a few studies. At the time of Harris` (2003) publication, there were not enough studies employing continuous measures to test that assertion meta-analytically.

Nine years later Carpenter (2012) presented a meta-analysis that contained a total of 54 papers and 172 effect sizes. Carpenter analyzed each of the six forced choice scenarios proposed by Buss et al. (1999) separately. For every infidelity scenario the meta-analysis showed a moderate sex effect in sexual jealousy. Like Harris (2003), Carpenter (2012) also found that the effect was stronger in samples of heterosexual participants and college students. Across cultures and different sample characteristics the analyses showed that women in the forced choice scenarios found emotional infidelity more distressing than sexual infidelity. This main effect did not appear when Carpenter (2012) analyzed the male samples. The analysis revealed that samples containing American college students were the only samples that showed men being more distressed by sexually infidelity than emotional infidelity. The other samples, which consisted of American nonstudents and males outside of America, showed men being more distressed by emotional infidelity than sexual infidelity. Because of the large growth of studies using continuations measures, Carpenter (2012) could for the first time in the field's history perform meaningful meta-analysis of these scales. The continuous measures showed that both men and women rated the sexual infidelity as more distressing than the emotional infidelity. Carpenter (2012) did not report analyses considering possible interaction effects.

Carpenter (2012) used Buller's criteria (2005) to evaluate whether there existed a sex-difference or not. The largest meta-analysis to date, Sagarin et al. (2012), does not agree with Buller's criteria (2005). Sagarin et al. (2012) argues, as I have done in the previous section, that the data must be analyzed in the light of an interaction-effect. Therefore, Sagarin et al. (2012) exclusively focused on the interaction effect. Covering 47 samples and 209 effect sizes the meta-analysis showed moderate sex effects in the predicted direction for jealousy and distress/upset responses. Like the two previous meta-analyses, Sagarin et al. (2012) found sample type (student vs nonstudent samples) to be a significant moderator. In addition the meta-analysis revealed five other significant moderators: Age, year of publication, random sampling, inclusion of a forced choice question and number of points in the response scale. The important point for this thesis, is that the meta-analysis by Sagarin et al. (2012) clearly demonstrates that the sex difference is well established across several studies and that it is not an artifact of response format.

1.4 Previous studies conducted in Norway

Besides the three meta-analysis, especially of relevance is the two studies conducted in Norway (Kennair et al, 2011; Bendixen et al., submitted). The first study (Kennair et al, 2011) consisted of 506 undergraduate students responding to two of the forced choice scenarios developed by Buss et al (1999). The results showed support for the evolutionary prediction; men, relative to women, clearly weighted the sexual infidelity as more distressing than the emotional infidelity, and women, relative to men, clearly weighted the emotional infidelity as more distressing than the sexual infidelity. Kennair et al (2011) also reported two main effects: Men significantly rated the two sexual infidelity scenarios as more distressing than the two emotional infidelity scenarios, and women significantly rated the two emotional infidelity scenarios as more distressing than the two sexual infidelity scenarios. Again, it is important to emphasize that these main effects were not necessary to confirm the evolutionary prediction. The other study (Bendixen et al., submitted) used the same two infidelity scenarios as (Kennair et al, 2011) and had a sample size of 480 undergraduate students. Bendixen et al (submitted) also reported the same findings as Kennair et al (2011): Men significantly rated the two sexual infidelity scenarios as more distressing than the two emotional infidelity scenarios, and women significantly rated the two emotional infidelity scenarios as more distressing than the two sexual infidelity scenarios.

To sum up, all three meta-analysis reported a sex-difference in jealousy with studies using the

forced choice methodology. The sex-difference in jealousy, when we apply a forced choice methodology, seems to be uncontroversial. The two Norwegian samples (Kennair et al., 2011; Bendixen et al., submitted) also greatly supports this conclusion. When using continuous measures, there is not the same consensus among researchers (eg. Carpenter, 2012). As we have seen, this lack of consensus can largely be explained by different views of which threshold or criteria we should use to either confirm or disconfirm the sex difference. The different conclusions reached by Sagarin et al (2012) and Carpenter (2012) clearly illustrate this point: The sex difference is well confirmed if we look at the sex-difference as an interaction, but the sex-difference is more diffuse if we demand a main-effect. We can therefore with great certainty say that the evolutionary prediction is well established in the literature, and that the inclusion of studies using continuous measures haven't changed this picture (Sagarin et al., 2012).

1.5 Possible moderators of the sex-difference

The previous sections have explained the evolutionary prediction of the sex-difference in jealousy, and showed that this sex-difference is well established in the literature. The next natural step is therefore to ask: What moderates this sex-difference?

It is important to note that evidence of moderation is not contradicting the predictions of evolutionary psychologists. Moderation is not only just compatible with evolutionary predictions, it is also in many cases expected by evolutionary psychologist (e.g. Buss, 1995). A simple example of expected moderation is that most evolutionary psychologist expect some cultural variability in almost every psychological adaptation (Tooby & Cosmides, 1995). Intuitively speaking I also think it would be strange if the sex-difference in jealousy was not in some way moderated by other factors. Sagarin et al (2012, p. 3) shares the same thoughts; "...it would be foolish to think that sexually dimorphic selection pressures compromised the only factor impacting responses to the scenarios". Indeed, Sagarin et al. (2012) reviews several methodological factors that could alter how the sexes respond to the scenarios. Examples are among others the usage of global, retrospective measures (Feltman et al., 1998) and the presentation of different definitions of sexual jealousy (Daly and Wilson, 1988; Kaighobadi, Schacleford, & Goetz, 2009).

Methodological factors are not quite what we have in mind when we think about possible moderators. Instead of looking at possible moderators connected to how researchers design their

surveys, I want to explore how different social factors can moderate the sex difference in jealousy. To get a meaningful investigation of possible “social” moderators, one cannot look at everything at once. Therefore this paper is limited to considering how previous relationship experiences can moderate the sex difference in jealousy. Relationship experiences have previously been investigated to some extent by Bendixen et al (submitted). This paper must be seen as an extension of that work.

Actual infidelity as a moderator. Whether you have experienced infidelity or not, has been proposed as a significant moderator. Harris (2003) proposed that experience with actual infidelity may potentially eliminate the sex difference in jealousy. Such a suggestion is not totally without support. One study by Sagarin and colleagues (2003) found some differences between men who had experienced some sort of infidelity (unspecified) and men who had not experienced infidelity; earlier experience with infidelity were associated with less distress to the sexual infidelity scenario. It is important to note that the same study found no such results for the women. To my knowledge, no later works have managed to replicate the finding of an effect on males by Sagarin et al. (2003). Sagarin et al.'s (2012) meta-analysis included seven studies that compared actual infidelity with hypothetical infidelity. Across these seven studies men found sexual infidelity significantly more distressing than women did. Sagarin et al.'s (2012) results suggest that previous experience with infidelity should not affect the sex-difference.

Bendixen et al. (submitted) lends further support for Sagarin et al.'s (2012) conclusions: Prior studies had only analyzed whether the respondents had experienced infidelity or not. Bendixen et al. (submitted) was the first study to also make the distinction between sexual and emotional infidelity experiences. This distinction did not eliminate the sex-difference: Men generally reported more sexual jealousy regardless of type of infidelity and whether actual infidelity had occurred or not. Like Bendixen et al. (submitted) I will differ between emotional infidelity and sexual infidelity in my analysis of actual infidelity vs. hypothetical infidelity. Previous research (e.g. Sagarin et al., 2012) suggests that actual infidelity will not act as a moderator.

Time as a moderator. Bendixen et al. (submitted) recommends future work to measure how long it has been since the infidelity occurred. Bendixen et al. (submitted) argues that how recent the experience was may influence how the participants responds to the infidelity scenarios. The rationale for this proposed moderator is that more recent experience may be more emotionally distressing than older ones. If this assumption holds true, then whether the infidelity occurred in a previous or current relationship should also make a difference. To my knowledge, no earlier studies of jealousy

have investigated this sort of recency effect.

Relationship commitment as a moderator. No earlier studies have explored the association between relationship commitment and how you respond to the infidelity scenarios. Bendixen et al. (submitted) proposed this association as an interesting question for future research. A study by Sprecher and colleagues (1998) have looked at relationship commitment in connection with distress after break-up. In their data set they found that higher relationship commitment was significantly related to the degree of distress after break-up. If commitment produces more distress after break-up, it is possible that there will be a similar connection between relationship commitment and distress about infidelity. This connection may change how men and women respond to the infidelity scenarios.

Activation of prior infidelity experiences. The most original result in Bendixen et al. (submitted) was the finding that women and men responded more sex-typical to the infidelity scenarios when prior infidelity experiences were activated through question order manipulation. Even if this doesn't count directly as "earlier relationship experience", I will nevertheless try to replicate this interesting three-way interaction.

Age of the respondent: Age is not directly connected to relationship experience, but it is more likely that the older part of my sample have had more relationship experience than the younger part of my sample. This logical consequence of aging may act as a moderator. In fact all of the three meta-analysis showed that age mattered: Harris (2003) found that the sex difference was less in samples that were older than the typical college age, Carpenter (2012) likewise report the sex difference to be greater in college samples, and Sagarin et al. (2012) also report age as being a significant moderator. The three meta-analyses clearly make a case for age being a possible moderator.

1.6 Aims, Hypotheses and Research Questions

The first aim of this thesis is to replicate the established sex-difference in sexual jealousy using four of the forced choice scenarios gathered from Buss et al. (1999). The first hypothesis is therefore the following:

H1: The typical sex difference in sexual jealousy will be replicated, with men reporting being more

distressed by sexual infidelity than women (Buss et al. 1992; Buss et al., 1999; Kennair et al., 2011; Bendixen et al., in press).

The second aim of this thesis is to investigate how earlier relationship experiences can moderate the sex-difference in jealousy. Buss et al. (1992) results suggest that experiences with a committed sexual relationship will make men more inclined to choose the sexual aspect as the most distressing. Buss et al. (1992) didn't find such an effect with the women in the sample; earlier experiences with a committed sexual relationship did not moderate how women responded to the infidelity scenarios. These results suggest that current relationship status could act as a moderator in the same way. I think I have enough grounds to hypothesize that men who are in a current relationship should have a greater sexual jealousy score (SJS) than men who report not being in a current relationship. My second hypothesis is therefore the following:

H2: Current relationship status will moderate how men respond to the infidelity scenarios; Men who are in a current relationship will have higher scores on sexual jealousy than men who currently are not in a relationship.

Experience with actual infidelity has been suggested as a moderator that could possibly eliminate the sex difference (Harris, 2003). In line with previous research (Sagarin et al., 2012) I predict that actual infidelity experiences will not change the direction of the sex difference:

H3: Regardless of actual infidelity experiences, men more than women will find the sexual infidelity aspect more distressing than than the emotional infidelity aspect (Sagarin et al., 2012; Bendixen et al., submitted).

Bendixen et al., (submitted) results suggest that activation of prior infidelity experiences could act as a moderator. I obviously wants to replicate this interesting finding of how question order manipulation moderates the sex difference:

H4: When activated through question order manipulation, prior infidelity experiences will produce more pronounced sex-typical differences to the forced choice scenarios (Bendixen et al., submitted).

Age of the respondent has in the previous research been found to be of significance: all the three meta-analysis (Harris, 2003; Carpenter, 2012; Sagarin et al., 2012) found that younger samples

yielded significantly larger effects than older samples. I therefore predict that age will also act as a moderator in this sample:

H5: Age will be negatively correlated with the magnitude of the sex difference.

I also want to investigate possible moderators that only concern the people who have experienced infidelity. As we have seen, little research has investigated such moderators. Bendixen et al. (submitted) proposed three such possible moderators: Time passed since the infidelity occurred, whether the infidelity occurred in the current relationship or not, and how committed the person was in their relationship. These three suggestions form the basis of my research questions:

RQ1: To what extent, if any at all, does it matter whether the infidelity occurred in the current or previous relationship?

RQ2: To what extent, if any at all, does the length of time passed since the infidelity occurred influence how people respond to the infidelity scenarios?

RQ3: To what extent, if any at all, does relationship commitment influence how people respond to the infidelity scenarios?

2. Method

2.1. Design and subjects

I have used a 2x2 factorial design. The first factor was whether the questions about the infidelity scenarios used continuous measure or forced choice as a response format. The second factor was whether questions regarding infidelity experiences and commitment were presented before or after the infidelity scenarios. This design resulted in four different versions of the survey (all four versions of the survey can be seen in the Appendix):

- A: Continuous measure, Infidelity scenarios last.
- B: Continuous measure, Infidelity scenarios first
- C: Forced choice, Infidelity scenarios last
- D: Forced choice, Infidelity scenarios first

It is important to note that I collected data using all of the four versions of the survey, but that I in this thesis are only going to analyse the versions using the forced choice response format (version C and version D). This means that I are only going to use half of the initially collected data (N=1142). The reason for this limitation, is that my hypotheses and research questions do not concern whether I used continuous measures or forced choice. If I had included the continuous measures in my analyses, than I had to perform separate analyses of these measures. This would result in unnecessary analyses that would not be relevant for this thesis. This do not mean that the 2x2 design was pointless; The versions using continuous scales will be of good use for future papers that will be published by the jealousy-research community at the Norwegian University of Science and Technology (NTNU). To use only half of the data for this thesis, was also the intention before I started the data collection.

The participants were 473 heterosexual students, 281 women (mean age 21.2, SD=2.1) and 192 men (mean age 21.6, SD=2,2) enrolled in undergraduate studies at the Norwegian University of Science and Technology (NTNU). One hundred and ninety five participants (41.2 %) reported being in a current relationship and a total of 132 participants (28.5 %) reported having experienced either emotional and/or sexual infidelity in their life.

The survey used a continuous scale to measure which sex the participants were most sexually attracted to. Since my hypotheses and research questions only were about heterosexual participants, I had to set a criterion for heterosexuality. I decided to use a strictly heterosexual criterion where I only included female participants reporting "only men" and male participants reporting "only women". A wider heterosexual criterion, which also included participants answering "mostly men" and "mostly women", would result in a sample of 536 participants. A total of 63 participants were therefore removed from the data file.

2.2. Procedure

Two research assistants collected all of the data. Before the data collection, I used a few hours to train the assistants in how to inform and invite possible participants to take the survey. After this training, the assistants went to different preselected lectures at the Norwegian University of Science and Technology (NTNU). I had beforehand contacted the professors who were responsible for the lectures, and made a deal of using a lecture break to inform the students about the survey. It was therefore never a surprise for the lectures when the assistants showed up with the survey.

The research assistants entered the classrooms five minutes before the break started. Right before the break started the professors shortly said that some people from the Psychological Institute were going to inform about a survey. Then the two research assistants immediately entered the stage and started the presentation. The presentation contained the following sequence: 1) First, the assistants presented who they were, where they came from and who were responsible for the survey. 2) Then the assistants informed about the subject of the survey (How you respond to different infidelity scenarios) and that it took less than 15 minutes to finish the survey. 3) It was then made very clear that the participation was voluntary and anonymous. The assistants were beforehand instructed to mention this important information twice in their presentation. 4) The assistants used the last part of the presentation to explain why the students' participation were important contributions for research on jealousy and the progress of psychological knowledge in general. The assistants finished the presentation by asking if there were any questions from the audience.

After the presentation the assistants asked the students to make some distance between themselves and the people who were sitting besides them. This was done to secure anonymity and to highlight the fact that the survey was not a group exercise. It was also explicitly said that it was very

important to read the questions closely and answered them as honestly as you can. Since most of the lectures did not contain more than 100 students, the assistants had no problems with the distribution of the surveys. In the biggest lecture (ca. 300 students) the assistants got help from two other students to distribute the survey.

When the participants had finished the survey, they were instructed to go in front of the classroom and deliver the survey in a box. This box was at all time controlled and looked after by one of the assistants. The participants who were the last to finish, got the opportunity to place their contribution in the middle of the stack of the other surveys. If we had not given them this opportunity, then the last persons to deliver would easily be identified as the contributions laying on the top of the stack. We would then have a problem with our promised anonymity.

No incentives or academic credits were given for participation. For the written instruction given to the participants in the beginning of the survey, please see the Appendix for further details.

2.3. Measurements

2.3.1. Jealousy

In this study I used four of the six forced-choice infidelity scenarios developed by Buss et al. (1999). The four scenarios were selected based on their frequent use in prior studies as indicated by two recent meta-analyses in the literature (Carpenter, 2012; Sagarin et al 2012). The two most frequent scenarios are naturally the two first scenarios formulated by Buss et al. (1992), while the other two scenarios are mainly developed to test the so-called "double shot hypotheses" (Buss et al, 1999). So the last two scenarios are not only important because of their frequency in the literature, but they are also important additions in testing other theoretical explanations. See the precise formulation in the sections below.

In the selection of infidelity scenarios, it was also of great importance to include the same scenarios used by the two other Norwegian studies (Kennair et al, 2011; Bendixen et al, in press). Both studies used the same two infidelity scenarios. These two scenarios were also among the four most frequently used scenarios in the literature (see the previous section). It was therefore no need to

change any of the scenarios.

The two earlier studies conducted in Norway had used the original English formulation of the infidelity scenarios. In this study I used a Norwegian translation for the four infidelity scenarios. The translation process included me first translating the scenarios into Norwegian, and then a second person (a professional) translated them back into English. Thereafter we discussed the words and sentences that differed from the original formulations in Buss et al. (1999). We reached a consensus of what was the best Norwegian translation.

The first scenario read "Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else. What would upset you or distress you more (please circle only one; A or B): (A) Imagining your partner forming a deep emotional (but not sexual) relationship with that person, or (B) Imagining your partner enjoying a sexual (but not emotional) relationship with that person.

The second scenario read: "Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else. What would upset you or distress you more (please circle only one; A or B): (A) Imagining your partner falling in love with that other person, or (B) Imagining your partner trying different sexual position with that person.

The third scenario read: "Imagine that your partner both formed an emotional attachment to another person and had sexual intercourse with that other person. Which aspect of your partners involvement would upset you more (please circle only one; A or B): (A) the sexual intercourse with that other person , or (B) the emotional attachment to that other person.

The fourth scenario read: "Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else. What would upset you or distress you more (please circle only one; A or B): (A) Imagining your partner having sexual intercourse with that person, but you are certain that they will not form a deep emotional attachment, or (B) Imagining your partner forming a deep emotional

attachment to that person, but you are certain that they will not have sexual intercourse.

Internal consistency (Cronbach's Alpha) for the four scenarios was 0.76. If we look at the inter-item correlation we find that scenario two and scenario four are the scenarios that correlates the least (0.30), while scenario one and scenario three are the scenarios that correlates the most (0.55). If I deleted one of the scenarios, it would only decrease the internal consistency. The biggest decrease in internal consistency would have appeared if I removed scenario one (0.66) and scenario three (0.67). If I removed scenario two I would get 0.73, and if I removed scenario four I would get 0.74. None of these numbers indicate that I would gain something by removing one of the scenarios.

Because of the acceptable internal consistency for the four scenarios ($\alpha = .76$), I have the opportunity to compute a meaningful score that summarises all the four scenarios. In line with Buss and colleagues' (1996) recommendations I coded responses for each scenario as follows: 0=emotional infidelity, and 1=sexual infidelity. I computed a Sexual Jealousy Score (SJS) summing the responses of the four scenarios. Higher scores reflect being more upset by sexual infidelity across the scenarios.

2.3.2. Infidelity experiences and infidelity status

Participants were asked four questions regarding infidelity experiences in their former and/or current relationship. Respondents were asked if they (or their partner) ever had been sexually unfaithful to current or prior partners, and correspondingly, if they (or their partner) ever had been emotional unfaithful (i.e., life-time prevalence). Responses were coded 0=no and 1=yes. From these scores I calculated two new variables reflecting the respondent's infidelity status (1) Been cheated on and (2) Cheated on partner. Scoring was 0=no cheating, 1=sexual cheating only, 2=emotional cheating only, 3=both sexual and emotional cheating.

After the four mentioned questions, I also asked a fifth question: "How long has it been since you last experienced some of these infidelities?" Since I already knew the length of their current relationship, this question made it possible to decide if the last infidelity-episode had occurred in a current relationship or in a former relationship.

2.3.3. Commitment

Participants were asked three questions about their commitment in the relationship where their last infidelity-experience had occurred. All these questions were asked right after the questions about infidelity. The first two questions asked about the participants own commitment in the relationship, while the last question asked about the partners commitment in the relationship:

Question one: "To what extent did you feel connected to your partner?"

Question two: "To what extent did you experience your relationship with your partner as committed?"

Question three : To what extent do you believe your partner experienced the relationship as committed?"

All three questions used a Likert response option that ranged from value 1 (#) to value 9 (#). The values between value 1 (#) and value 9 (#) were discrete options. The participants could therefore answer each question with nine different responses. Internal consistency for the three items was, $\alpha = 0.66$. This medium consistency was expected because item number three is measuring something very different than the first two items. If we look at the internal consistency for only the first two items (your own feeling of commitment), we end up with, $r = 0.76$. If we look at the inter-item correlation we find that question one and question three are the questions that correlates the least ($r = 0.13$). The correlation between question two and question three gives us $r = 0.46$. For the analysis I computed a "commitment variable". This variable only consist of the first two questions and is the mean value of these to scores.

2.4. Analyses

Both the questions regarding infidelity status and the questions regarding the infidelity scenarios gives me categorical data. I must therefore use a chi-square test to test whether the data shows a sex-difference or not. A chi-square test will be performed for each of the four infidelity scenarios (H1), In addition, as mentioned earlier, I have computed a Sexual Jealousy Score (SJS) summing up the responses of the the four scenarios. This score gives each respondent a possible value ranging from zero to four, with scores higher than two reflect being more upset by the sexual infidelity and lower scores than two reflect being more upset by the emotional alternative. Since the Sexual

Jealousy Score (SJS) is a continuous measure, I can perform a t-test to test the hypothesised sex-difference. I also used the corresponding d-values to investigate the effect sizes (Cohen, 1992).

All of my five hypotheses concerns the sample as a whole, and will therefore be analysed before I analyse different sub-samples (RQ1, RQ2 and RQ3). Hypothesis 5 predicts age to act as a general moderator of how people respond to the infidelity scenarios. I will therefore include age of the respondent as a co-variate in all of the analyses below.

To test the potential moderation of current relationship status (H2), I will perform a 2 (Sex of the respondent: female vs. male) by 2 (Relationship status: single vs. going steady) two-way ANCOVA. To test whether report of actual infidelity can moderate how the participants respond to the infidelity scenarios (H3), I will perform two 2 (Sex of the respondent: female vs. male) by 4 (Infidelity status: none, only sexual, only emotional, and both) two-way ANCOVAs. To test the hypothesis concerning activation of prior infidelity experiences (H4), I will perform a 2 (Sex of the respondent: female vs. male) by 2 (Been cheated on: yes vs. no) by 2 (Infidelity activation: Getting the infidelity questions before the scenarios vs. getting the infidelity questions after the scenarios) three-way ANCOVA.

My three research question (RQ1, RQ2 and RQ3) only concerns the part of the sample who have experienced infidelity. I will therefore analyse these questions separately in the end of the result section. To investigate if it makes a difference whether the infidelity occurred in the current relationship or in the previous relationship, I will perform a 2 (Sex of the respondent: female vs. male) by 2 (When the infidelity occurred: Current relationship vs. previous relationship) two-way ANCOVA. To investigate RQ2 and RQ3 I will perform a two-way ANCOVA where the continuous variables “Time since the infidelity occurred” and “Commitment” are additional co-variates.

3. Results

3.1. Replication of the sex difference in sexual jealousy

From table 1 below the descriptives for all four scenarios clearly shows that men, more than women, find the sexual aspect the most distressing. In none of the scenarios are women more distressed than men by the sexual aspect. On average the difference between the sexes is 29,4 %. Women find the emotional aspect most distressing in absolute all four scenarios. The highest percentage gets Scenario 2 (92.8 %), while the lowest percentage is found in Scenario 4 (65.8 %). Men find the emotional aspect slightly more distressing in all but one scenario: Scenario 4 shows 58.7 % of men reporting the sexual alternative as the most distressing. We can also see that Scenario 2 stands out as the most emotional distressing scenario for both sexes, while Scenario 4 stands out as the most sexually distressing scenario for both sexes.

Table 1. Descriptives for all four scenarios

<u>Scenario</u>	<u>Emotional</u>	<u>Sexual</u>	<u>Sex Difference</u>
Scenario 1			
Men	52.9 %	47.1 %	
<u>Women</u>	<u>84.5 %</u>	<u>15.5 %</u>	<u>31.6 %</u>
Scenario 2			
Men	62.4 %	37.6 %	
<u>Women</u>	<u>92.8 %</u>	<u>7.2 %</u>	<u>30.4 %</u>
Scenario 3			
Men	51.1 %	48.9 %	
<u>Women</u>	<u>81.9 %</u>	<u>18.1 %</u>	<u>30.8 %</u>
Scenario 4			
Men	41.3 %	58.7 %	
<u>Women</u>	<u>65.8 %</u>	<u>34.2 %</u>	<u>24.5 %</u>
Total scenario 1-4:			
Men	51.9 %	48.1 %	
<u>Women</u>	<u>81.3 %</u>	<u>18,7 %</u>	<u>29.4 %</u>

To determine the sex-difference, I performed a Chi-Square test for all of the four scenarios. The

results from Scenario 1 showed that the sex difference was significant, $\chi^2(1, N = 466) = 55.14, p < 0.001, \phi = .34$, indicating that men, more than women, regarded the sexual aspect of infidelity far more upsetting than the emotional aspect. The results from Scenario 2 also showed a great sex difference, $\chi^2(1, N = 467) = 66.15, p < 0.001, \phi = .38$. The results from Scenario 3 showed a little less sex difference than Scenario 1 and 2, but the sex-difference is still great and significant, $\chi^2(1, N = 462) = 49.74, p < 0.001, \phi = .33$. The results from Scenario 4 clearly stands out compared to the three other scenarios, $\chi^2(1, N = 464) = 27.37, p < 0.001, \phi = .24$. Even if Scenario 4 showed a lesser χ^2 -value (27.37) and a lesser effect size ($\phi=0.24$) than the three other scenarios, the results clearly indicates that men, more than women, regarded the sexual aspect of infidelity as far more upsetting than the emotional aspect.

The computed variable "Sexual Jealousy Score" showed men ($M=1.92, SD=1.55$) having a greater score than women ($M=0.75, SD=1.01$). The "Sexual Jealousy Scale" contains values ranging from zero to four, with higher scores reflect being more upset by sexual infidelity across the four scenarios. The midpoint of this scale is value 2. A value higher than 2 therefore reflect choosing the sexual alternative in most cases, while a value lower than 2 reflect choosing the emotional alternative in most cases. With this in mind, we can see that even if men have a higher mean value than women ($M=1.92$ vs. $M=1.01$), both sexes are still on group-level choosing the emotional alternative as the most distressing. However, the mean values still represents quite some difference between the sexes. A t-test also suggest that that men, more than women, regarded the sexual aspect of infidelity as far more upsetting than the emotional aspect, $t(463) = -9.82, p < .001$. A calculation of the effect size indicates a large sex difference, $d=0.91$.

3.2. Relationship status

195 participants (41.2 %) reported being in a current relationship. The sex balance between these 195 participants is 128 women (65.6 %) and 67 men (34.4 %). More female (45.6 %) than men (34.9 %) report being in a current relationship. A Chi-square test showed that this is also a significant sex difference, $\chi^2(1, N = 473) = 5.35, p < 0.05, \phi = .11$.

3.3. Infidelity status

I have chosen to report the descriptives for the infidelity status separately according to whether your partner cheated on you or if you cheated on your partner. From table 2 we can see that the men in this sample reported a little bit less cheating on their partner than the women did; 82.9 % of the women reported never been cheating, while 87.5 % of men reported never been cheating. This sex-difference is anyway not significant, $\chi^2(1, N = 472) = 1.90$. If we in table 2 look more closely at specific forms of cheating, we can see that men report an equal amount of “only sexual infidelity” (5.2 %) and “only emotional infidelity” (5.2 %). For the women, on the other, emotional infidelity (9,6 %) clearly outnumbers the incidents of sexual infidelity (2.9 %). By just looking at the descriptives in table 2, it seems like higher incidents of emotional infidelity can to a large extent explain the different reports in the total amount of cheating between the sexes. However, a Chi-square test showed that men and women did not differ in their reports about whether the infidelity was sexual, emotional or both, $\chi^2(3, N = 472) = 6.87$, ns. Because of the low n for men, especially if we look at “both” in table 3 ($n = 4$), some caution must be taken in the interpretation of these Chi-square tests.

Table 2. Descriptives of infidelity status according to your own infidelity

<u>Type of infidelity</u>	<u>Women</u>	<u>Men</u>
Sexual	8 (2.9 %)	10 (5.2 %)
Emotional	279 (6 %)	10 (5.2 %)
Both	134 (6 %)	4 (2.1 %)
None	232 (82.9 %)	16 (87.5 %)

From table 4 we can see that more women (27,2 %) than men (12.2 %) reported having been cheated on. With other words, women reported experiencing more than twice as much cheating by partner than the men did. A chi-square test clearly shows that this is a significant sex difference, $\chi^2(1, N = 468) = 15.34$, $p < 0.001$, $\phi = .18$. Table 3 shows that both women and men report more emotional cheating by partner than sexual cheating by partner. We can also see that women report more cheating than men for every type of infidelity. By just looking at the descriptives in table 3, it seems like women especially report more incidents than men of “both types of infidelity” (11.8 % vs. 2.6 %). A Chi-square test can also show that the sex-difference in this type of infidelity (both infidelities at once) is significantly greater than the sex-difference in the other two types of infidelity, $\chi^2(3, N = 468) = 19.06$, $p < 0.001$, $\phi = .20$. Because of the low n for men, especially if we look at “sexual” ($n = 4$) and “both” ($n = 5$), some caution must be taken in the interpretation of these Chi-square tests.

Table 3. Descriptives of infidelity status according to your partners infidelity

<u>Type of infidelity</u>	<u>Women</u>	<u>Men</u>
Sexual	16 (5.7 %)	4 (2.1 %)
Emotional	27 (9.7 %)	14 (7.4 %)
Both	33 (11.8 %)	5 (2.6 %)
None	203 (72.8 %)	166 (87.8 %)

3.4. Relationship status and sexual jealousy

I wanted to investigate whether relationship status could moderate how the participants responded to the force choice scenarios. For this purpose I performed a 2 (sex of respondent) by 2 (relationship status) two-way ANCOVA. In the analysis I used “age of the respondent” as a co-variant.

In table 4 you can see the descriptives for the sexual jealousy score, sorted by relationship status and sex of the respondent. We can easily see that men who are in a relationship have a higher mean score ($M=2.12$) than the women who are in a relationship ($M=0.79$). As mentioned before, the midpoint of the sexual jealousy scale is 2, where a value higher than 2 reflect choosing the sexual alternative in most cases, while a value lower than 2 reflect choosing the emotional alternative in most cases. With this in mind, we can say that women who are in a relationship clearly goes for the emotional alternative ($M=0.79$), while men who are in a relationship are slightly in favour of choosing the sexual alternative ($M=2.12$). Table 4 also shows that women who are not in a relationship have a quite low score on the sexual jealousy scale ($M=0.72$). There do not seem to be much difference whether you as a woman are in a relationship ($M=0.79$) or not ($M=0.72$). However, we can see from table 4 that men who are not in a relationship ($M=1.80$) have some lower score than men who are in a relationship ($M=2.12$). Since the midpoint on the scale is 2, we can say that men who are not in a relationship are slightly in favour of choosing sexual alternative.

Table 4. Descriptives: Relationship status and Sexual Jealousy Score

<u>Relationship Status</u>	<u>Sexual Jealousy Score</u>		
	<u>N</u>	<u>M</u>	<u>SD</u>
In a relationship			
Women	127	0.79	1.10
Men	65	2.12	1.65

Not in a relationship			
Women	149	0.72	0.93
Men	124	1.80	1.49

The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than women), $F(1, 465)=96.48, p< .001$. The analysis showed no effect of relationship status, $F(1, 465)=2.34$. Whether the participants were in a relationship or not, did not influence how they responded to the infidelity scenarios. The interaction between relationship status and the sex of the respondent was also not significant, $F(1, 465)=1.01$. Age of the respondent did neither show any significant effect, $F(1, 465)=0.08$. The last result showed that controlling for age did not influence how the participants responded to the infidelity scenarios.

3.5. Infidelity status and sexual jealousy

I wanted to investigate whether report of actual type of infidelity (sexual, emotional or both) could moderate how the participants responded to the force choice scenarios. To that end I performed two 2 (sex of respondent) by 4 (infidelity status) two-way ANCOVAs. The analysis was done separately according to the two groups: cheated on partner and been cheated on by partner.

In table 5 you can see the descriptives for the sexual jealousy score, sorted by infidelity status and sex of the respondent. Table 5 shows us that participants who never have experienced infidelity clearly outnumber participants who have had been cheated on. As noticed before, we can see that we have a especially low n for male participants experiencing only sexual infidelity ($n = 4$) and for male participants experiencing both sexual and emotional infidelity. It is also very clear from the “sexual jealousy score” that men have a higher mean score for every “infidelity status”. The mean score for the men have a range from 1.38 to 2.20, and the women have a range from 0.72 to 0.96. This shows us that the highest mean score for the women ($M=0.96$) is still much lower than the lowest mean score for the men ($M=1.38$). Since the midpoint of the sexual jealousy scale is two, we can see that almost every mean score, for both men and women, falls below this midpoint. Every score that falls below two, reflect choosing the emotional alternative in most cases. With this in mind, we can clearly see that all of the four female mean scores ($M=0.72-0.96$) clearly indicates that women, on group level, find the emotional aspect as the most distressing. For the male participants the mean score are located much closer to the the midpoint, but the mean scores still

indicates that also men, on group level, find the emotional aspect as the most distressing. The only group passing the midpoint is the men who have experienced both sexual and emotional infidelity (M=2.20). This is the only group who are slightly in favour of choosing sexual alternative as the most distressing.

Table 5. Descriptives: Been cheated on and Sexual Jealousy Score

Infidelity status	Sexual Jealousy Score		
	N	M	SD
Sexual			
Women	16	0.75	0.93
Men	4	1.75	1.26
Emotional			
Women	27	0.96	1.13
Men	13	1.38	1.33
Both			
Women	32	0.72	0.85
Men	5	2.20	1.79
None			
Women	200	0.73	1.03
Men	164	1.96	1.57

The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than women), $F(1, 461)=15.59, p< .001$. The analysis showed no effect of infidelity status, $F(3, 461)=0.28$. Whether the participants had been cheated on emotionally, sexually, both, or not at all, did not influence how they responded to the infidelity scenarios. The interaction between infidelity status and the sex of the respondent was also not significant, $F(3, 461)=1.23$. Age of the respondent did neither show any significant effect, $F(1, 461)=0.48$. The last result showed that controlling for age did not influence how the participants responded to the infidelity scenarios.

In table 6 you can see the descriptives for the sexual jealousy score, sorted by infidelity status and sex of the respondent. It is also very clear from the “sexual jealousy score” that for every “infidelity status” men have a much higher mean score than women. The mean score for the men have a range from 1.80 to 2.60, and the women have a range from 0.38 to 1.08. This shows us that the highest mean score for the women (M=1,08) is still much lower than the lowest mean score for the men

(M=1.80). For the women in the sample, all the four mean score strongly indicates that women finds the emotional alternative to be the most distressing. The men, on the other hand, have mean scores that are located more around the midpoint. Two of the male mean scores are located slightly below the midpoint (M=1.80 and M=1.81) and two of male mean scores are located above the midpoint (M=2.25 and M=2.26). This gives not such a clear picture as was seen with the female scores; some men finds the emotional alternative as the most distressing, while some men finds the sexual alternative as the most distressing. Men who have been cheated on partner sexually have the highest mean score among the men (M=2.60), while women who have been cheated on partner emotionally have the highest score among the women.

Table 6. Descriptives: Cheated on partner and Sexual Jealousy Score

Infidelity status	Sexual Jealousy Score		
	N	M	SD
Sexual			
Women	8	0.50	0.76
Men	10	2.60	1.65
Emotional			
Women	26	1.08	1.09
Men	10	1.80	1.48
Both			
Women	13	0.38	0.77
Men	4	2.25	2.06
None			
Women	228	0.75	1.01
Men	165	1.87	1.54

The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than women), $F(1, 464)=29.98, p < .001$. The analysis showed no effect of infidelity status, $F(3, 464)=0.25$. Whether the participants had cheated on partner emotionally, sexually, both, or not at all, did not influence how they responded to the infidelity scenarios. The interaction between infidelity status and the sex of the respondent was also not significant, $F(3, 464)=1.45$. Age of the respondent did neither show any significant effect, $F(1, 464)=0.16$. The last result showed that controlling for age did not influence how the participants responded to the infidelity scenarios.

3.6. Activation of prior infidelity experiences

I manipulated the question order (questions regarding infidelity experiences were presented either before or after the infidelity scenarios) because I wanted to investigate to what extent men's and women's jealousy responses differed, if any at all, in response to activation of earlier infidelity experiences. For this purpose I had to perform a 2 (Sex of respondent) by 2 (Been Cheated on) by 2 (Infidelity activation) three-way ANCOVA. Due to the low number of cases (n below 5) in some of the male groups, I had to collapse the three been cheated-on groups (emotional, sexual, both) into one group called "been cheated on".

In table 7 you can see the descriptives for the sexual jealousy score, sorted by whether you have been cheated on or not, and the sex of the respondent. The first four rows concern participants who got the questions about earlier infidelity experiences after they had answered the questions regarding the infidelity scenarios. The last four rows, labeled "activated", concern the participants who had to answer the question about infidelity experience before answering the questions about the infidelity scenarios. From table 8 we can clearly see that men got a higher mean score than women for every group. Even the highest female mean score ($M=0.88$) is much lower than the lowest male mean score ($M=1.30$). Most of the male scores is near the midpoint of the scale, except for those men who had been cheated on in the "activated" category ($M=1.30$). All the four female mean scores indicate strongly that they find the emotional alternative as the most distressing. Since none of the male mean scores are above the midpoint, also the men seem to go for the emotional alternative in most cases.

Table 7. Descriptives: Activation of prior infidelity experiences

Been cheated on?	Sexual Jealousy Score		
	N	M	SD
No			
Women	103	0.72	1.04
<u>Men</u>	<u>82</u>	<u>1.96</u>	<u>1.50</u>
Yes			
Women	32	0.88	0.98
<u>Men</u>	<u>12</u>	<u>1.92</u>	<u>1.24</u>
No (Activated)			
Women	97	0.74	1.01

<u>Men</u>	82	1.96	1.65
Yes (Activated)			
Women	43	0.77	0.97
<u>Men</u>	10	1.30	1.57

Like the previous analyses, also this analysis showed a strong main sex effect (men reporting more sexual jealousy than women), $F(1, 461)=35.35$, $p < .001$. I did not find any main effect for Been cheated on, $F(1, 461)= 0.75$, or Infidelity activation, $F(1, 461)=1.13$. This indicates that whether you had been cheated on or not, or whether you had to answer questions about infidelity experiences before or after the infidelity scenarios, did not influence how you responded to the four infidelity scenarios.

None of the three possible two-way interactions were significant: Been cheated on x Infidelity activation, $F(1, 461)=1.27$, Been cheated on x Sex of the respondent, $F(1, 461)=1.81$, and Infidelity activation x Sex of the respondent, $F(1, 461)=0.64$. In contrast with Bendixen et al. (submitted), I could not find a significant three way interaction between sex of respondent, been cheated on and infidelity activation, $F(1, 461)=0.56$. The analysis suggest that in this sample it did not matter whether you got the questions about infidelity before or after the infidelity scenarios. Like the previous analyses, I also in this analysis used “age of the respondent” as a co-variate. The analysis again showed that age didn’t influence how the participants responded to the four infidelity scenarios, $F(1, 461)=0.53$.

3.7. Additional analysis of sub samples

The following analyses (3.7.1-3.7.3) only includes participants who have experienced infidelity.

3.7.1. Previous relationship vs. current relationship

As previously mentioned in the method section, the survey included variables that measured the time since the infidelity had occurred and how long the current relationship had last. This made it possible to determine when the infidelity had last occurred, whether it was in a current relationship or in a previous relationship.

The point of my first research question (RQ1) is to investigate to what extent, if any at all, it matters whether the infidelity had occurred in a previous relationship or in a current relationship. For this purpose I performed a 2 (sex of respondent) by 2 (when the infidelity last occurred) two-way ANCOVA. Due to the low number of cases (n below 5) in some of the male groups, I could not in my analysis separate between “cheated on partner” and “been cheated on”. Therefore I collapsed these two groups into one more general category: “Having experiences with infidelity”. As in the previous analyses, I used “age of the respondent” as a co-variate.

In table 8 you can see the descriptives for the sexual jealousy score, sorted by when the infidelity last occurred and sex of the respondent. We can clearly see that the category “current relationship” do not contain many participants for neither of the the sexes ($n= 13$ for women and $n= 6$). The difference in n between infidelity in current relationship and infidelity in previous relationships was expected; Since infidelity have a tendency to end relationships I expect it to have a higher frequency in previous relationships than in current relationships. Besides the low n , it is also clear from looking at table 8 that there is quite some sex-differences in both previous and current relationships. The two female mean scores ($M=0.82$ and $M=0.62$) indicates that women find the emotional alternative as the most distressing. For the men it is not easy to determine which alternative they choose as the most distressing. This is because one of the mean score lies on the “emotional part” of sexual jealousy scale($M=1.92$), while the other male mean score lies on the “sexual part” of the sexual jealousy scale($M=2.50$). Again, I must emphasize that the low n in “current relationship” demands some caution in the interpretation of the following results.

Table 8. Descriptives: When the infidelity last occurred and Sexual Jealousy Score

When the infidelity last occurred	Sexual Jealousy Score		
	N	M	SD
Previous relationship			
Women	82	0.82	1.02
Men	29	1.90	1.50
Current relationship			
Women	13	0.62	0.77
Men	6	2.50	1.76

The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than

women), $F(1, 130)=22.25$, $p < .001$. The analysis showed no effect of when the infidelity last occurred, $F(1, 130)=0.42$. Whether the participants had experienced infidelity in a previous relationship or in a current relationship did not influence how they responded to the infidelity scenarios. The interaction between “when the infidelity last occurred” and the sex of the respondent was also not significant, $F(1, 130)=1.66$. Age of the respondent did neither show any significant effect, $F(1, 130)=0.01$. The last result showed that controlling for age did not influence how the participants responded to the infidelity scenarios.

3.7.2. Time since the last infidelity occurred

This section must be seen in connection with the previous section (3.4) since they both investigate whether the recency of the infidelity moderates the sexual jealousy score. 96 women and 36 men answered how long it has been since the last infidelity occurred. The mean score was reported in number of years and was $M=2.91$ ($SD=1.88$) for the women, and $M=2.96$ ($SD=2.21$) for the men. These descriptives suggest that its gone, on average, almost three years since the last infidelity occurred for both men and women. But the high standard deviation also shows quite some variability among the participants. A t-test suggest that men and women do not differ in their reports of how long it has been since the last infidelity occurred, $t(130)= 0.11$.

Since “time since the infidelity occurred” is a continuous measure I could not use it as a fixed factor in my ANCOVA. To investigate whether time is of essence, I therefore used “time since the infidelity occurred” as a co-variate in my ANCOVA. The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than women), $F(1, 130)=27.17$, $p < .001$. The analysis showed no effect of time since the infidelity occurred, $F(1, 130)=0.08$. Age of the respondent did neither show any significant effect, $F(1, 130)=0.01$. These two last results (the co-variates) showed that controlling for “time since the infidelity occurred” and “age of the respondent” did not influence how the participants responded to the infidelity scenarios.

3.7.3. Degree of commitment

I used a computed variable of two items (see the method section) to measure the respondents degree of commitment. Comparing men`s and women`s score on the commitment variable suggest that

men ($M=6.43$, $SD=1.82$) more than women ($M=5.36$, $SD=2.30$) reported higher scores of commitment in the relationship where the infidelity had last occurred, $t(130)=2.50$, $p<.05$. The two questions regarding commitment are measured on a likert scale that goes from 1 to 9 with 1 representing “to a very low degree” and 10 representing “to a very high degree”. Since the midpoint of the scale is 4.5, both the male mean score ($M=6.43$) and the female mean score ($M=5.36$) are located on the top half of the commitment scale.

Since also the commitment variable is a continuous measure, I could not use it as a fixed factor in my ANCOVA. To investigate if degree of commitment could act as a possible moderator, I therefore had to use the commitment variable as a co-variate in my ANCOVA. The analysis expectantly showed a main sex effect (men reporting more sexual jealousy than women), $F(1, 130)=24.98$, $p<.001$. The analysis showed no effect of the commitment variable, $F(1, 130)=0.35$. Age of the respondent did neither show any significant effect, $F(1, 130)=0.00$. These two last results (the co-variables) showed that controlling for “degree of commitment” and “age of the respondent” did not influence how the participants responded to the infidelity scenarios.

3.8. Overview

In table 9 I present an overview of the sex difference in jealousy sorted by each of the conditions I have hypothesized as possible moderators. In the categories “Been cheated on” and “Cheated on partner” I only presents results according to “yes” or “no”. This is because a low n , especially for men, makes it impossible to present separate analysis for whether the infidelity was sexual, emotional or both. From table 9 we can clearly see that the sex difference is large for every condition (Cohens d ranging from 0.65 to 1.65). If we ignore the largest and lowest effect size it seems like we have a stable sex-difference with a Cohens d ranging from 0.82 to 1.10. My highest effect size (Cohens $d=1.65$) is obtained from the condition “Infidelity in previous relationships”. Because of the low n for this condition ($n=6$ for men and $n=13$ for women), some caution must be taken in the interpretation of this result.

Table 9. Overview: Sex-difference sorted by type of moderation/ different conditions

Type of moderation	Sexual Jealousy Score			The Sex-difference			
	N	M	SD	T	df	P	Cohens d
None (the whole sample)							

Women	276	0.75	1.01				
Men	189	1.92	1.55	9.82	463	<0.001	0.91
In a relationship							
Women	127	0.78	1.10				
Men	65	2.12	1.65	6.70	190	<0.001	0.97
Not in a relationship							
Women	149	0.72	0.93				
Men	124	1.81	1.49	7.36	271	<0.001	0.89
"Activated"							
Women	141	0.74	1.00				
Men	94	1.86	1.64	6.49	233	<0.001	0.85
"Not Activated"							
Women	135	0.76	1.03				
Men	95	1.97	1.46	7.41	228	<0.001	0.98
Been Cheated on (Yes)							
Women	75	0.81	0.97				
Men	22	1.64	1.40	3.15	95	<0.005	0.65
Been Cheated on (No)							
Women	200	0.73	1.03				
Men	164	1.96	1.57	9.00	362	<0.001	0.95
Cheated on Partner (Yes)							
Women	47	0.79	1.00				
Men	24	2.21	1.61	4.57	69	<0.001	1.10
Cheated on Partner (No)							
Women	228	0.75	1.01				
Men	165	1.87	1.54	8.74	391	<0.001	0.88
Infidelity in previous relationship							
Women	82	0.82	1.02				
Men	29	1.90	1.50	4.30	109	<0.001	0.82
Infidelity in current relationship							
Women	13	0.62	0.77				
Men	6	2.50	1.76	3.31	17	<0.001	1.61

4. Discussion

4.1. Hypotheses and research questions

My first hypothesis concerned the established sex-difference in jealousy. My results support this hypothesis: As predicted men significantly more than women report the sexual infidelity as more upsetting than emotional infidelity when imagining partner's infidelity. These results are in line with the original findings by Buss and his colleagues (e.g. Buss et al. 1992; Buss et al., 1999), previous studies conducted in Norway (Kennair et al., 2011; Bendixen et al., submitted), and the latest meta-analysis concerning the forced choice format (Carpenter, 2012).

My second hypothesis concerned how current relationship status might moderate how the men in the sample responded to the infidelity scenarios. Previously findings (Buss et al., 1992) suggest that experiences with a committed sexual relationship will make men more inclined to choose the sexual aspect as the most distressing. My results do not support this hypothesis: Whether the participants were in a relationship or not, did not influence how they responded to the infidelity scenarios. My null finding compared to Buss et al (1992)'s positive finding indicates that relationship status is not a stable moderator that can be reliably replicated across different samples. It would seem that the sex difference is more robust than the effect of this moderator.

My third hypothesis concerned how experience with actual infidelity could make a difference in how the participants responded to the infidelity scenarios. Previously findings (Sagarin et al., 2012, Bendixen et al., submitted) suggest that regardless of actual infidelity experiences, men more than women should find the sexual infidelity aspect more distressing than the emotional infidelity aspect. My results support these previously findings: Whether the participants had been cheated on emotionally, sexually, both, or not at all, did not influence how they responded to the infidelity scenarios. Harris (2003) suggested that experience with actual infidelity could possibly eliminate the sex difference in jealousy. To date there exist no evidence in the empirical literature to support such a claim.

My fourth hypothesis concerned how activation of prior infidelity experiences could act as a possible moderator. This hypothesis is based upon the results of Bendixen et al. (submitted) that suggest that when activated through question order manipulation, prior infidelity experiences will

produce more pronounced sex-typical differences to the forced choice scenarios. My results showed no support for this hypothesized three way interaction: The analysis suggest that in this sample it did not matter whether you got the questions about infidelity before or after the infidelity scenarios. My results question the reliability of the three way interaction found by Bendixen et al. (submitted).

My fifth hypothesis concerned the possible moderation of the respondents age. All of the three meta-analysis conducted to date (Harris, 2003; Carpenter, 2012; Sagarin et al, 2012) clearly make a case for age being an important moderator. These three meta-analyses indicate that the magnitude of the sex-difference should decline with higher age. My results do not support this hypothesis: I used “age of respondent” as co variate in all of my analyses of variance. I did not find any significant finding in any of the analyses of “age of the respondent”. My null-findings may be a result of too little variance in the participants age. See the next section for a short discussion of how future research may in a better way investigate the possible moderation of age.

In addition to the mentioned hypotheses, I also investigated three research questions. These research questions only included participants who had experienced infidelity. None of my analyses showed any positive findings concerning these possible moderators: The analyses showed that controlling for when the infidelity last occurred, time since the infidelity occurred, and degree of commitment did not affect the sex-difference in jealousy. Since these subsample analyses only included participants who had experienced infidelity, I had some problems with a low number of participants in some of the groups (especially the male groups). Therefore I advice caution in the interpretation of these results. Still, they show the same robustness of the sex difference finding.

To sum up the analysis of the hypotheses and research questions, I can conclude that the sex-difference is remarkable robust to the moderators tested in this thesis. The overview presented in the last part of the result section (table 3.9) clearly shows that the sex difference is quite stable across the many suggested moderators and conditions. The effect sizes reported in the overview shows a stable sex-difference around Cohens $d=1$ for most of the conditions. This value constitutes a large and meaningful sex-difference (Cohen, 1988).

4.2. Limitations and future research

The sample size is the greatest limitation of this study. In hindsight I should have used the force

choice format in all the surveys I distributed (see Method section 2.1). My decision to use force choice on only half of the surveys resulted in a very low n in some of my analyses. The collected sample size was more than good enough to analyze main sex effects that concerned the whole sample. The limitation is maybe best illustrated in my subanalyses (the last part of the result section) where the condition “Infidelity in previous relationships” only contained 6 men and 13 women. One cannot trust analyses done on such small groups. The analyses of my research questions must therefore be taken with great caution. Future research should replicate this study using a greater sample size. Another way to fix the problem of too few cases in some of the groups, is to be more selective in the recruitment of respondents. Future research may for example only collect data from people who are in a relationship, or people who have experienced infidelity of some kind. Obviously one has to consider that it may be frightening for potential respondents to participate if data collectors presents that the study only concerns “people having experiences with infidelity”. The sample characteristics in this thesis may at least serve as a guideline for how many participants future researcher needs if they wants to perform meaningful analyses of people who have experienced infidelity.

One of my hypotheses concerned how the age of the respondent could moderate the sex-difference. It may be unfair to test this hypothesis in a sample that only contained college students. The investigation of the “age-moderator” obviously demands some variation in the age of the respondents. The female respondents had a mean age of 21.2 with a SD=2.1, while the men had a mean age of 21.6 with a SD=2.2. With most of my sample containing students in the beginning of their twenties, I may have too low variation of age to see any effects at all. A quick review of the studies analysed by Sagarin et al (2005) showed that the hypotheses concerning “age-moderation” may be too vague. It is for example not explicitly mentioned when the effects of age should “set in”: Is there a gradual (linear?) decline of the effect from the early twenties to the late thirties, or do the effect of age suddenly set in at age 30, 40 or 50? Future researchers should be more specific concerning the hypotheses of age-moderation. I would recommend future researchers to include a greater range of age. With an evenly distributed sample from 20 to 50 we would have the data to investigate how this potential moderator could manifest its self.

I used two questions to assess how committed the respondents were in the relationship where the infidelity last occurred. This may have been too few questions for a valid measure of this factor. Maybe there are other questions that may be more valid measures of how committed you were in the relationship. Better indicators of commitment may be questions about whether you and your

partner had engaged in some very committed actions or investments before the infidelity occurred. Such questions might be “Do you have children together?”, “Where you married?” or “Did you and your partner own a house together at the time?”. It would be interesting to see if such questions could make commitment a more significant moderator than what the analysis of this thesis indicates.

4.3. Conclusion

This thesis is to date the third Norwegian study (the other two are Kennair et al., 2011 and Bendixen et al, submitted) that clearly shows than men and women differ in their responses to imagined infidelity scenarios. My investigation lends further support for the established sex-difference in sexual and emotional jealousy (Sagarin et al., 2012). My aim to investigate how different relationship experiences may moderate the sex difference, resulted in no positive findings. The results suggest that whether you are in a relationship or not, whether you have experienced infidelity or not, or whether you are in your earlier twenties or late twenties, didn't moderate the sex-difference. My analyses of subsamples also showed no moderation of whether the infidelity happened in a previous or current relationship, no moderation of how long ago since the infidelity occurred, and no moderation of the degree of commitment in the relationship where the infidelity occurred. These results indicate that the sex-difference is quite robust in terms of different relationship experiences. Even if my analyses are to some degree compromised because of a low number of participants in some of the groups I analyzed, it is quite remarkable that I could not find at least one moderator. Future research should of course replicate these negative findings with larger sample sizes and with samples containing other respondents than just college students. This thesis indicates that the quest to find stable moderators of the established sex difference in jealousy may be harder than previously thought.

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6. Appendix

The following is the four different versions of the survey. To identify the respective versions (A, B, C or D), its enough to look at the bottom of the page.

HVOR SJALU VILLE DU BLITT?

Formålet med denne spørreundersøkelsen er å få mer kunnskap om studenters sjalusiresponser til tenkte utroskapssituasjoner, og å studere individuelle forskjeller når det gjelder sjalusi. Undersøkelsen er en del av et større forskningsprosjekt som handler om sjalusi og seksualadferd. Noen av spørsmålene kan virke nokså nærgående, men det er likevel viktig at du svarer ærlig på dem. Skjul svarene fra personen ved siden av når du fyller ut skjemaet. Resultatene fra undersøkelsen vil bli brukt i undertegnede hovedoppgave og i vitenskapelige publikasjoner.

Det er frivillig å delta i undersøkelsen, og alle som svarer er anonyme. Det skal ikke skrives navn eller annen personidentifiserende informasjon på skjemaet.

Har du spørsmål om undersøkelsen, kontakter du Willy Møller Kristiansen, tlf. 918 29 586.

Takk for at du er villig til å delta i undersøkelsen!

Willy Møller Kristiansen, psykologstudent
Mons Bendixen, førsteamanuensis, veileder
Leif Edward Ottesen Kennair, professor, veileder



LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Vennligst følg disse reglene: <ul style="list-style-type: none">• <i>Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene. Kryss av slik: <input checked="" type="checkbox"/>.</i>• <i>Feilkryssinger kan annulleres ved å fylle <u>høle</u> feltet med farge. Kryss så i rett felt.</i>• <i>Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.</i>
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A. BAKGRUNNSINFORMASJON

1. Kjønn: Kvinne... ₁ 2. Fødselsår: 19 3. Har du egne barn? Ja... ₁
Mann..... ₂ Nei.. ₂

4. Hvem er du *mest* seksuelt tiltrukket av? ⇨

Bare menn	Mest menn	Menn og kvinner like mye	Mest kvinner	Bare kvinner	Ingen / vet ikke
1	2	3	4	5	6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Er du på det nåværende tidspunkt involvert i et seriøst romantisk og/eller forpliktende seksuelt forhold med en annen person? ⇨

Ja... ₁
Nei.. ₂

6. *Hvis ja:* Hvor lenge har dette forholdet vart?
NB: Vennligst oppgi antall år og måneder, evt. bare måneder. ⇨

År Måneder

B. UTROSKAP

Emosjonell utroskap betyr her at man, mens man har en fast partner, etablerer et dypt emosjonelt bånd til en annen av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

1. Har du noen gang selv vært, eller er du nå emosjonelt utro mot en partner? ⇒ Ja... ₁
Nei.. ₂

2. Har du hatt eller har du en partner som har vært emosjonelt utro mot deg? ⇒ Ja... ₁
Nei.. ₂

Seksuell utroskap betyr her at man, mens man har en fast partner, har samleie med en person av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

3. Har du noen gang selv vært, eller er du nå seksuelt utro mot en partner? ⇒ Ja... ₁
Nei.. ₂

4. Har du hatt eller har du en partner som har vært seksuelt utro mot deg? ⇒ Ja... ₁
Nei.. ₂

De siste spørsmålene på denne sida er til deg som svarte «ja» på minst ett av spørsmålene over. Svarte du «nei» på alle fire, hopper du direkte til neste side.

5. Hvor lenge er det siden noe av dette skjedde sist?

NB: Oppgi antall år og/eller måneder og/eller uker.* ⇒

År	Måneder	Uker

**) Feltene vil bli lagt sammen. Var det f.eks. 1½ måned siden (6 uker), kan du skrive 6 i ukefeltet, eller 1 i månedsfeltet og 2 i ukefeltet.*

6. Sist dette skjedde, hvordan opplevde du forholdet til partneren din i tiden umiddelbart før utroskapen skjedde?

	I svært liten grad	1	2	3	4	5	6	7	8	9	I svært stor grad
1. I hvilken grad følte du deg knyttet til partneren din?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I hvilken grad opplevde du forholdet til partneren som forpliktende?....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I hvilken grad tror du partneren opplevde forholdet som forpliktende?....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. HVORDAN HADDE DU REAGERT?

Du vil nå få presentert åtte tenkte situasjoner som handler om deg selv og din partner. Om du for tiden ikke har en partner, vil vi at du forsøker å tenke deg hvordan du ville reagert om du hadde hatt en. Les hver situasjonsbeskrivelse, og svar ærlig på hvordan du ville reagert.

1. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din utvikler et *følelsesmessig* forhold (*men ikke seksuelt*) til denne personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

2. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din utvikler et *seksuelt* forhold (*men ikke følelsesmessig*) til denne personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

3. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din prøver ulike sexstillinger med den andre personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

4. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din blir forelsket i den andre personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

5. Tenk deg at partneren din utvikler *både* et følelsesmessig og et seksuelt forhold til en annen person. Hvor mye ville *det seksuelle aspektet* gjøre deg sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

6. Tenk deg at partneren din utvikler *både* et følelsesmessig og et seksuelt forhold til en annen person. Hvor mye ville *det emosjonelle aspektet* gjøre deg sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

7. Tenk deg at partneren din har sex med en annen person, men du er sikker på at de ikke vil utvikle et følelsesmessig forhold. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

8. Tenk deg at partneren din utvikler et følelsesmessig forhold med en annen person, men du er sikker på at de ikke kommer til å ha sex med hverandre. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

D. SEX OG SEKSUELL AKTIVITET

1. Vennligst svar så ærlig som mulig på de følgende spørsmålene:

1. Hvor mange forskjellige partnere har du hatt sex (samleie) med de siste 12 månedene? 0 1 2 3 4 5-6 7-9 10-19 20+
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2. På skalaen fra 1 til 9, hvor enig eller uenig er du i følgende utsagn?

- | | | | | | | | | | | | | | | | | | | |
|--|--|-----------------|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|----------------|
| | | Veldig
uenig | | | | | | | | | | | | | | | | Veldig
enig |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | | | | | | |
1. Sex uten kjærlighet er OK.....
2. Jeg er komfortabel med tanken på å ha tilfeldig sex med forskjellige partnere
3. Jeg vil ikke ha sex med en person før jeg er sikker på at forholdet kommer til å være seriøst og varig

3. Hvor ofte opplever du følgende?

- | | | | | | | | | | | |
|--|--|-------|-------------------|-----------------------------|--------------------|-------------------------------|-------------------------|--------------------------|------------------|----------------------------|
| | | Aldri | Veldig
sjelden | En gang
hver 2-3
mnd. | Ca. en
pr. mnd. | Ca. en
gang hver
2. uke | Ca. en
gang
i uka | Flere
ganger
i uka | Nesten
daglig | Minst en
gang
daglig |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
1. Hvor ofte fantasierer du om å ha sex med noen du ikke er i et forpliktende kjærlighetsforhold til?
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3. I det daglige, hvor ofte opplever du spontane fantasier om sex med noen du nettopp har møtt?

Takk for at du ville svare på spørsmålene!

HVOR SJALU VILLE DU BLITT?

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LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Vennligst følg disse reglene: <ul style="list-style-type: none">• <i>Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene. Kryss av slik: <input checked="" type="checkbox"/>.</i>• <i>Feilkryssinger kan annulleres ved å fylle <u>høle</u> feltet med farge. Kryss så i rett felt.</i>• <i>Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.</i>
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A. BAKGRUNNSINFORMASJON

1. Kjønn: Kvinne... ₁ 2. Fødselsår: 19 3. Har du egne barn? Ja... ₁
Mann..... ₂ Nei.. ₂

4. Hvem er du *mest* seksuelt tiltrukket av? ⇨
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Bare menn | Mest menn | Menn og kvinner like mye | Mest kvinner | Bare kvinner | Ingen / vet ikke |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. Er du på det nåværende tidspunkt involvert i et seriøst romantisk og/eller forpliktende seksuelt forhold med en annen person? ⇨
- Ja... ₁
Nei.. ₂

6. *Hvis ja:* Hvor lenge har dette forholdet vart?
NB: Vennligst oppgi antall år og måneder, evt. bare måneder. ⇨
- År Måneder

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Du vil nå få presentert åtte tenkte situasjoner som handler om deg selv og din partner. Om du for tiden ikke har en partner, vil vi at du forsøker å tenke deg hvordan du ville reagert om du hadde hatt en. Les hver situasjonsbeskrivelse, og svar ærlig på hvordan du ville reagert.

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Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

2. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din utvikler et *seksuelt* forhold (*men ikke følelsesmessig*) til denne personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

3. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din prøver ulike sexstillinger med den andre personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

4. Tenk deg at du er i et forpliktende forhold som har vart en stund, men at kjæresten din blir interessert i en annen. Tenk på at kjæresten din blir forelsket i den andre personen. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

5. Tenk deg at partneren din utvikler *både* et følelsesmessig og et seksuelt forhold til en annen person. Hvor mye ville *det seksuelle aspektet* gjøre deg sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

6. Tenk deg at partneren din utvikler *både* et følelsesmessig og et seksuelt forhold til en annen person. Hvor mye ville *det emosjonelle aspektet* gjøre deg sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

7. Tenk deg at partneren din har sex med en annen person, men du er sikker på at de ikke vil utvikle et følelsesmessig forhold. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

8. Tenk deg at partneren din utvikler et følelsesmessig forhold med en annen person, men du er sikker på at de ikke kommer til å ha sex med hverandre. I hvilken grad ville du følt deg opprørt/sjalu?

Ikke i det hele tatt 1 2 3 4 5 6 7 Veldig mye

C. UTROSKAP

Emosjonell utroskap betyr her at man, mens man har en fast partner, etablerer et dypt emosjonelt bånd til en annen av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

1. Har du noen gang selv vært, eller er du nå emosjonelt utro mot en partner? ⇒ Ja... ₁
Nei.. ₂

2. Har du hatt eller har du en partner som har vært emosjonelt utro mot deg? ⇒ Ja... ₁
Nei.. ₂

Seksuell utroskap betyr her at man, mens man har en fast partner, har samleie med en person av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

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Nei.. ₂

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5. Hvor lenge er det siden noe av dette skjedde sist? NB: Oppgi antall år og/eller måneder og/eller uker.* ⇒

År	Måneder	Uker

**) Feltene vil bli lagt sammen. Var det f.eks. 1½ måned siden (6 uker), kan du skrive 6 i ukefeltet, eller 1 i månedsfeltet og 2 i ukefeltet.*

6. Sist dette skjedde, hvordan opplevde du forholdet til partneren din i tiden umiddelbart før utroskapen skjedde?

I svært liten grad		I svært stor grad						
1	2	3	4	5	6	7	8	9

1. I hvilken grad følte du deg knyttet til partneren din?

2. I hvilken grad opplevde du forholdet til partneren som forpliktende?....

3. I hvilken grad tror du partneren opplevde forholdet som forpliktende?....

D. SEX OG SEKSUELL AKTIVITET

1. Vennligst svar så ærlig som mulig på de følgende spørsmålene:

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- | | | | | | | | | | | | | |
|--|-----------------|---|---|---|---|---|---|---|---|--|--|----------------|
| | Veldig
uenig | | | | | | | | | | | Veldig
enig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | |
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- | | | | | | | | | | |
|--|-------|-------------------|-----------------------------|--------------------|-------------------------------|-------------------------|--------------------------|------------------|----------------------------|
| | Aldri | Veldig
sjelden | En gang
hver 2-3
mnd. | Ca. en
pr. mnd. | Ca. en
gang hver
2. uke | Ca. en
gang
i uka | Flere
ganger
i uka | Nesten
daglig | Minst en
gang
daglig |
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Mann..... ₂ Nei.. ₂

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- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Bare menn | Mest menn | Menn og kvinner like mye | Mest kvinner | Bare kvinner | Ingen / vet ikke |
| 1 | 2 | 3 | 4 | 5 | 6 |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. Er du på det nåværende tidspunkt involvert i et seriøst romantisk og/eller forpliktende seksuelt forhold med en annen person? ⇨
- Ja... ₁
Nei.. ₂

6. Hvis ja: Hvor lenge har dette forholdet vart?
NB: Vennligst oppgi antall år og måneder, evt. bare måneder. ⇨
- År Måneder

B. UTROSKAP

Emosjonell utroskap betyr her at man, mens man har en fast partner, etablerer et dypt emosjonelt bånd til en annen av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

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Nei.. ₂
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- | | | |
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| | | |

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- | | | | | | | | | | | |
|--|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
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| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 1. I hvilken grad følte du deg knyttet til partneren din? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I hvilken grad opplevde du forholdet til partneren som forpliktende?.... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I hvilken grad tror du partneren opplevde forholdet som forpliktende?.... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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Du vil nå få presentert fire tenkte situasjoner som handler om deg selv og din partner. Om du for tiden ikke har en partner, vil vi at du forsøker å tenke deg hvordan du ville reagert om du hadde hatt en. Les hver situasjonsbeskrivelse, og svar ærlig på hvordan du ville reagert.

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Velg det alternativet som passer best for deg, enten A eller B.

A. Tanken på at kjæresten din utvikler et *følelsesmessig* forhold (*men ikke seksuelt*) til denne personen ₁

B. Tanken på at kjæresten din utvikler et *seksuelt* forhold (*men ikke følelsesmessig*) til denne personen ₂

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3. Tenk deg at partneren din utvikler *både* et følelsesmessig og et seksuelt forhold til en annen person. Hvilket aspekt ved dette forholdet ville gjøre deg *mest opprørt/sjalu*?

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A. Det at partneren din har sex med den andre personen ₁

B. Det at partneren din knytter følelsesmessige bånd til den andre personen ₂

4. Hva ville gjøre deg *mest opprørt/sjalu*? Velg det alternativet som passer best for deg, enten A eller B.

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2. På skalaen fra 1 til 9, hvor enig eller uenig er du i følgende utsagn?

- | | | | | | | | | | | |
|--|--------------|---|---|---|---|---|---|---|---|-------------|
| | Veldig uenig | | | | | | | | | Veldig enig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
1. Sex uten kjærlighet er OK.....
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3. Jeg vil ikke ha sex med en person før jeg er sikker på at forholdet kommer til å være seriøst og varig

3. Hvor ofte opplever du følgende?

- | | | | | | | | | | |
|--|-------|----------------|-----------------------|----------------------|-------------------------|-------------------|--------------------|---------------|----------------------|
| | Aldri | Veldig sjelden | En gang hver 2-3 mnd. | Ca. en gang pr. mnd. | Ca. en gang hver 2. uke | Ca. en gang i uka | Flere ganger i uka | Nesten daglig | Minst en gang daglig |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
1. Hvor ofte fantasierer du om å ha sex med noen du ikke er i et forpliktende kjærlighetsforhold til?
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1. Har du noen gang selv vært, eller er du nå emosjonelt utro mot en partner? ⇒ Ja... ₁
Nei.. ₂

2. Har du hatt eller har du en partner som har vært emosjonelt utro mot deg? ⇒ Ja... ₁
Nei.. ₂

Seksuell utroskap betyr her at man, mens man har en fast partner, har samleie med en person av motsatt kjønn (eller av samme kjønn om man er homoseksuell).

3. Har du noen gang selv vært, eller er du nå seksuelt utro mot en partner? ⇒ Ja... ₁
Nei.. ₂

4. Har du hatt eller har du en partner som har vært seksuelt utro mot deg? ⇒ Ja... ₁
Nei.. ₂

De siste spørsmålene på denne sida er til deg som svarte «ja» på minst ett av spørsmålene over. Svarte du «nei» på alle fire, hopper du direkte til neste side.

5. Hvor lenge er det siden noe av dette skjedde sist? År Måneder Uker
NB: Oppgi antall år og/eller måneder og/eller uker.* ⇒ | |

**) Feltene vil bli lagt sammen. Var det f.eks. 1½ måned siden (6 uker), kan du skrive 6 i ukefeltet, eller 1 i månedsfeltet og 2 i ukefeltet.*

6. Sist dette skjedde, hvordan opplevde du forholdet til partneren din i tiden umiddelbart før utroskaperen skjedde?

	1	2	3	4	5	6	7	8	9
I svært liten grad									I svært stor grad
1. I hvilken grad følte du deg knyttet til partneren din?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I hvilken grad opplevde du forholdet til partneren som forpliktende?....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I hvilken grad tror du partneren opplevde forholdet som forpliktende?....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. SEX OG SEKSUELL AKTIVITET

1. Vennligst svar så ærlig som mulig på de følgende spørsmålene:

- | | | | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Hvor mange forskjellige partnere har du hatt sex (samleie) med de siste 12 månedene? | 0 | 1 | 2 | 3 | 4 | 5-6 | 7-9 | 10-19 | 20+ |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Hvor mange forskjellige partnere har du hatt samleie med én og kun én gang? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Hvor mange forskjellige partnere har du hatt samleie med uten at du har hatt interesse for et langvarig, forpliktende forhold med personen?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. På skalaen fra 1 til 9, hvor enig eller uenig er du i følgende utsagn?

- | | | | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Veldig uenig | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Sex uten kjærlighet er OK..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Jeg er komfortabel med tanken på å ha tilfeldig sex med forskjellige partnere | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Jeg vil ikke ha sex med en person før jeg er sikker på at forholdet kommer til å være seriøst og varig | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. Hvor ofte opplever du følgende?

- | | | | | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | Aldri | Veldig sjelden | En gang hver 2-3 mnd. | Ca. en gang pr. mnd. | Ca. en gang hver 2. uke | Ca. en gang i uka | Flere ganger i uka | Nesten daglig | Minst en gang daglig |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1. Hvor ofte fantasierer du om å ha sex med noen du ikke er i et forpliktende kjærlighetsforhold til? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Hvor ofte opplever du seksuell opphisselse når du er i kontakt med noen du ikke har i et forpliktende kjærlighetsforhold til? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I det daglige, hvor ofte opplever du spontane fantasier om sex med noen du nettopp har møtt? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Takk for at du ville svare på spørsmålene!