



Universidade do Minho

Escola de Psicologia

Ricardo Bruno Barbosa Pinto

**The relationship between sexual and
emotional promiscuity and infidelity**



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Trabalho efetuado sob a orientação da

Doutora Joana Arantes

CIPsi, Escola de Psicologia, Universidade do Minho

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DECLARAÇÃO

Nome: Ricardo Bruno Barbosa Pinto

Endereço eletrónico: a57169@alunos.uminho.pt

Número do Cartão de Cidadão: 13813572

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Orientador: Doutora Joana Arantes, CIPsi, Escola de Psicologia, Universidade do Minho

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*“Don't test me now
Cause it's a test that you can't cheat”
Rumour Mill, Rudimental*

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A relação entre promiscuidade e infidelidade sexual e emocional

Resumo: O principal objetivo do estudo presente é relacionar, pela primeira vez, as vertentes sexual e emocional da infidelidade, que é caracterizada por qualquer forma de contato físico ou envolvimento emocional com outra pessoa enquanto se está num relacionamento (Brand, Markey, Mills & Hodges, 2007) com a promiscuidade, que é tipicamente definida pela máxima procura de prazer sexual (Markey & Markey, 2007) ou quão facilmente e frequente um indivíduo se apaixona (Jones, 2011). Um outro objetivo é investigar potenciais diferenças entre sexos dentro dos dois domínios. A pesquisa compreende dois estudos: o estudo 1 serviu como base para o estudo 2, onde a 74 participantes (30 homens e 44 mulheres) foi pedido que dessem exemplos de infidelidade emocional e sexual, com o objetivo de desenvolver uma escala que avalie a infidelidade nos seus dois domínios. O estudo 2 juntou 369 participantes (92 homens e 277 mulheres) para responderem a um questionário online que recolheu informações sobre infidelidade e promiscuidade, juntamente com informações sociodemográficas. Os resultados demonstraram que todas as componentes se encontram relacionadas, mais especificamente a infidelidade sexual e emocional com a promiscuidade sexual e emocional.

Palavras-chave: infidelidade sexual, infidelidade emocional, promiscuidade sexual, promiscuidade emocional, diferenças entre sexos

The relationship between sexual and emotional promiscuity and infidelity

Abstract: The main aim of the present study is to relate, for the first time, the sexual and emotional sides of infidelity, that is characterized by any form of close physical or emotional involvement with another person while in a committed relationship (Brand et al., 2007) with promiscuity, which is typically defined by the search for the maximum sexual pleasure (Markey & Markey, 2007) or how easily and often someone falls in love (Jones, 2011). We also aim to investigate potential sex differences within both domains. Our research comprehends two studies: Study 1 served as base to Study 2, where 74 participants (30 males and 44 females) were asked to give examples of sexual and emotional infidelity, in order to develop a scale to assess infidelity in both domains. Study 2 gathered 369 participants (92 males and 277 females) to answer to an online questionnaire that collected information about infidelity and promiscuity, in addition to some sociodemographic questions. Results show that all domains are related, specifically sexual and emotional infidelity with sexual and emotional promiscuity.

Keywords: sexual infidelity, emotional infidelity, sexual promiscuity, emotional promiscuity, sex differences

Introduction

In a world where infidelity and promiscuity are increasingly experienced (Brand et al., 2007; Jones & Paulhus, 2012), few studies have focused on their emotional and sexual domains.

The most accurate definition of infidelity may be the one that states infidelity as any form of involvement, romantic or sexual, short or long-term, while the individual is in a committed romantic relationship with another person (Brand et al., 2007). Just as romantic couples experience love, joy and caring, they also experience, almost inevitably, negative moments in their romantic path, being one of the most distressing the suspicion of or the actual experience of infidelity (Leeker & Carlozzi, 2014). As some studies show, infidelity can be one of the most painful experiences for a person, while in a committed romantic relationship (Fisher et al., 2008), sometimes leading to serious consequences, e.g., loss of trust, mental problems, a reduction in sex confidence, low self-esteem, anger and also separation and/or divorce (Fisher et al., 2008; Roscoe, Cavanaugh & Kennedy, 1988; Russell, Baker, & McNulty, 2013; Wilson, Mattingly, Clark, Waidler & Bequette, 2011). Some studies have focused on the predictors of unfaithful behaviors, and such predictors include feelings of inequity in the relationship, revenge, lack of commitment, low relationship satisfaction and attraction to another person (Atkins, Baucom, & Jacobson, 2001; Drigotas, Safstrom, & Gentilia, 1999; Roscoe et al., 1988; Seal, Agostinelli, & Hannet, 1994). In what concerns relationship satisfaction, Adamopoulou (2013) found that the less satisfied a couple is, the more probable is the incidence of infidelity. Moreover, he found that those who have been unfaithful on their past relations are more prone to be in their present as well.

It is known that for many people, infidelity only incorporates the involvement in unfaithful sexual behaviors, but in fact it can also refer to emotional betray (Brand et al., 2007; Leeker & Carlozzi, 2014). Therefore, infidelity can be divided into two domains: sexual infidelity and emotional infidelity (Kinsey, Pomeroy, & Martin, 1949). Sexual infidelity is the occurrence of sexual acts with a third person, violating the ground rules established by the romantic couple, and these acts range from kissing and fondling, to sexual intercourse, including oral, vaginal and anal sex (Brand et al., 2007; Leeker & Carlozzi, 2014). On the other hand, emotional infidelity is characterized by the involvement with a third party in emotional acts, where the ground rules established by the couple are broken, and these acts involve falling in love with another person, being vulnerable with another, being more

committed to another, flirting, dating, share deep thoughts with another, among other behaviors (Barta & Kiene, 2005; Leeker & Carlozzi, 2014).

Infidelity problems affect men and women, with both sexes engaging in extra-conjugal behaviors (Atkins et al., 2001). However, men tend to engage more in sexual affairs, whereas women in emotional affairs (Sagarin, Becker, Guadagno, Nicastle & Millevoi, 2003). Barta and Kiene (2005) conducted a study about sexual and emotional motivations for infidelity. Sexual motivators involve wanting more sexual partners, as well as more frequent sexual relations and to find partners with different sexual interests. On the other hand, emotional motivators include anger, no satisfaction and neglect. Results from Barta and Kiene's study showed that females are more prone to engage in emotional infidelity behaviors, while men in sexual ones. Research (Green & Sabini, 2006; Schützwohl, 2008; Shackelford, Buss, & Bennett, 2002) has also shown that women find it more difficult to deal with emotional infidelity and are more likely to finish a relationship due to this behaviors, whereas men have more difficulty to deal with sexual infidelity and are more prone to terminate a relationship due to sexual infidelity. Possible explanations on sex differences related to infidelity are provided by evolutionary theories (Cramer, Lipinski, Meteer & Houska, 2008; Green & Sabini, 2006; Sabini & Green, 2004; Sagarin et al., 2003). They state that men have difficulty in the matter of forgiving sexual infidelity due to paternal certainty because there is a risk that the male will be investing in another's man offspring, therefore failing to propagate his own genes. Regarding females, emotional infidelity is more harmful than sexual infidelity, because when a male develops emotional involvement with another woman, the risk of losing the resources and long-term commitment increases – thus reducing the probability of bearing a child and disseminate her genes through generations (Wilson et al., 2011).

Some authors defend that infidelity may come as a consequence of promiscuity, and that frequently both concepts go side by side (Feldman & Cauffman, 1999; Mark, Janssen & Milhausen, 2011). Promiscuity can be understood as the willingness to engage in sexual activities with several partners, have casual sex and get involved in sexual activities sooner rather than later (Jones & Paulhus, 2012). In an interpersonal level, people have different perspectives toward this concept, some stating that promiscuity is a simple expression of sexual freedom, others declaring it as a moral flaw, and some stating that promiscuity is simply a way to obtain as much physical pleasure as possible (Markey & Markey, 2007).

As opposed to infidelity, there are only few studies in the field of promiscuity (Jones, 2011; Jones & Paulhus, 2012; Markey & Markey, 2007; Penke & Asendorpf, 2008; Schmitt, 2004). However, promiscuity can also be divided into two domains: sexual and emotional

(Jones & Paulhus, 2012; Markey & Markey, 2007). Sexual promiscuity can be defined as the engagement in uncommitted sexual activities, with non-monogamous partners (i.e. one-night stands), and with multiple partners (Garcia, MacKillop, Aller, Merriwether, Wilson & Lum, 2010; Jones & Paulhus, 2012). Emotional promiscuity, on other hand, is the tendency to fall in love easily and often (Jones & Paulhus, 2012). This is a recent concept in the literature, with only one manuscript focused on this topic (Jones & Paulhus, 2012).

Sociosexuality is a term strongly associated with sexual promiscuity, essentially because sociosexuality describes individual differences in the willingness to one engage in uncommitted sexual relations, where no closeness, commitment, among other indicators of emotional bonding are present (Kinsey et al., 1949). Simpson and Gangestad (1991) studied two dimensions of sociosexuality: *restricted* and *unrestricted* sociosexual orientation. Individuals who show *restricted* sociosexual orientation are characterized by the need of closeness with a partner before engaging in sexual relations, insist in commitment in a relationship and hardly had sexual intercourse with someone on only one occasion. In opposition, *unrestricted* sociosexual orientation individuals feel comfortable and enjoy engaging in sexual relations without commitment and they have sexual intercourse with others only at one time, on different occasions - sexual promiscuous individuals. A study on sex differences in the field of sociosexuality showed that men possess more promiscuous behaviors, therefore engaging in unrestricted practices, whereas women tend to show more restricted behaviors (Buss & Barnes, 1986). In an evolutionary perspective, males engage in more unrestricted behaviors due to offspring matters, trying to disseminate as much of their own genes to future generations, while females show more sociosexual restricted behaviors, because once a good mate is selected, the female will secure the mate, given the resources and healthy genes provided to offspring (Treger & Sprecher, 2011).

Even though there are no previous studies that relate both domains of infidelity and promiscuity, few studies have investigated the relationship between infidelity and sexual promiscuity (e.g., number of short-term relationships throughout life). For example, Barta and Kiene (2005), and Feldman and Cauffman (1999) found that individuals that show permissive behaviors, associated with increased number of sexual partners are more prone to engage in infidelity. Seal, Agostinelli and Hannett (1994), showed that higher sociosexual scores are associated with an individual selecting sexual infidelity as being more distressing, whereas lower scores are associated with selecting emotional infidelity as more distressing.

Our study

Infidelity and promiscuity are, as stated before, often side by side in the world we live in (Feldman & Cauffman, 1999; Mark et al., 2011). There are studies that focused on sexual and/or emotional infidelity (e.g., Brand et al., 2007; Drigotas et al., 1999; Leeker & Carlozzi, 2014; Sagarin et al., 2003; Shackelford et al., 2002; Wilson et al., 2011), as well as studies on sexual and/or emotional promiscuity (e.g., Jones, 2011; Jones & Paulhus, 2012; Markey & Markey, 2007; Penke & Asendorpf, 2008; Schmitt, 2004). However, no prior scientific research have related all these domains – sexual and emotional for promiscuity and infidelity. Analyzing these variables will constitute an innovation in the field, and will have important applications. For example, it is known that promiscuity and infidelity are related to risky-behaviors, such as alcohol intake and unprotected sexual relationship (Jones & Paulhus, 2012; Schmitt, 2004).

Therefore, our study aims to investigate the relationship between sexual and emotional promiscuity with sexual and emotional infidelity. In addition, we intend to analyze possible sex differences.

However, there are no instruments in the literature that assess both sexual and emotional infidelity in terms of the degree that a person is unfaithful (Babin & Dindia, 2005; Wilson, Mattingly, Clark, Waidler & Bequette, 2011). Therefore, in Study 1 we developed a sexual and emotional infidelity scale, which will serve as a base to Study 2. Study 1 is important because we can only study the relationship between sexual and emotional promiscuity and infidelity with a reliable instrument that measures both sexual and emotional infidelity patterns.

Our hypotheses are: i) Emotional promiscuity is positively correlated with emotional infidelity; ii) Sexual promiscuity is positively correlated with sexual infidelity; iii) Sexual and emotional infidelity are positively correlated; iv) Sexual and emotional promiscuity are positively correlated; v) Male individuals tend to be more sexual promiscuous and sexual unfaithful; and vi) Female individuals tend to be more emotional promiscuous and emotional unfaithful.

Study 1

The main objective of Study 1 was to identify a list of situations for sexual and emotional infidelity. For that, participants were given a definition of sexual and emotional infidelity, and were then asked to give examples of situations portraying these concepts. This list served as a

base to Study 2, where a scale that measures these two types of infidelity – the Sexual and Emotional Infidelity (SEI) scale.

Method

Participants

Our initial sample comprised 111 participants. After the exclusion of 37 non-completed questionnaires, our final sample was constituted by 74 participants. From those, 30 were males and 44 were females. Their mean age was 22.69 years ($SD = 3.55$; range: 19 to 42 years). All were Portuguese. Regarding their sexual orientation, 55 (74%) reported being heterosexual, 10 (14%) homosexual and 9 (12%) bisexual. When asked about their relationship status, 40 (54%) said they were involved in a close relationship, while 34 (46%) said they were not in a relationship. Of those that were involved in a relationship, the mean relational satisfaction was 4.3 ($SD = .76$).

Participants did not receive monetary compensation, and were recruited through personal and institutional e-mails, as well as through online social networks (e.g., Facebook).

Measures

Sociodemographic questionnaire

Participants answered questions regarding their age, sex, nationality, sexual orientation and relationship status. Those involved in a relationship were also asked about their relationship satisfaction using a Likert scale from 1 (“not satisfied at all”) to 5 (“extremely satisfied”).

Sexual and emotional infidelity examples

Participants were given a definition of sexual infidelity (“*Sexual infidelity is defined by the occurrence of sexual involvement with people other than the current partner, where the conventional rules of what it is to be in a romantic relationship are broken*”) and were asked to write up five behaviors that they consider being an example of this type of infidelity. They were also given (in a counterbalanced order) a definition of emotional infidelity (“*Emotional infidelity is defined by the emotional involvement with people other than the current partner, without any sexual contact, where the conventional rules of what it is to be in a romantic*

relationship are broken”) and were asked to write up five behaviors that they consider being an example of emotional infidelity.

Procedure

First, we identified specific situations that portrayed examples of emotional and sexual infidelity. For that, the participants were asked to complete the demographic questionnaire, followed by the request for sexual and emotional infidelity examples. No time limit was imposed on the task.

Second, the participants’ responses were coded, and the 11 most cited examples of each type of infidelity were selected, leading to a total of 22. This analysis was made independently by two researchers and they agreed on 100% of the examples chosen. The examples were then converted in order for each one to be scored on a 7-point Likert scale, with 1 = “It never happens to me” and 7 = “It happens to me often”. Adjustments of the items of the scale and language adequacy were made by discussions within the members of our research lab.

Participants’ responses were recorded on an Internet webpage using Qualtrics software, Version 2013 of the Qualtrics Research Suite (www.qualtrics.com). The questionnaires were anonymous and no content of the data collected was used or shared for other studies/researches other than this.

Data Analysis

The data collected in Study 1 was analyzed with resource of Statistical Package for Social Sciences (SPSS; v. 21) and comprehended an ANOVA with repeated measures to verify if differences existed between the number of sexual and emotional unfaithful situations that male and female participants provided.

Results and discussion

Occasionally, participants described situations of emotional infidelity as sexual infidelity and vice versa. Situations that were visibly in the wrong category (e.g., describing oral sex as an example of emotional infidelity) were eliminated. A total of 9 situations from the sexual infidelity category and a total of 15 from the emotional category were discarded. Two

independent researchers performed this task, and they agreed on 94% of these classifications ($k = .94$). Differences were resolved by discussion.

Sexual and emotional items were separately coded. Each description of the situations were categorized by word matching, synonyms or the explicit idea given by the participant. For example, *give more attention to others* and *express more importance to other people* show the same idea, therefore these were coded to the same item. Two independent researchers performed this task, and they agreed on 92% of these classifications ($k = .93$). Again, differences were resolved by discussion.

Participants provided a mean of 2.84 situations for emotional infidelity and a mean of 2.30 for sexual infidelity. Women provided a mean of 3.05 ($DP = 1.43$) situations of emotional infidelity and 2.25 ($DP = 1.22$) of sexual infidelity, whereas men provided a mean of 2.53 ($DP = 1.28$) situations of emotional infidelity and 2.37 of sexual infidelity ($DP = 1.35$). The total number of items were analyzed using a repeated measures ANOVA, with infidelity type (sexual versus emotional) as a within-subjects factor and sex as between-subjects factor. A significant effect for infidelity was found $F(1,72) = 8.26, p < .01$, showing that participants gave more examples of emotional infidelity than of sexual infidelity. The interaction between infidelity type and sex approached significant, $F(1,72) = 3.19, p < .08, d = .04$, showing that women seems to have a tendency to give more examples of emotional infidelity than man, whereas men seems to have a tendency to give more examples of sexual infidelity than women.

Overall, participants provided a total of 35 items regarding emotional infidelity, and 16 items regarding sexual infidelity. From the 51 situations mentioned by the participants, we then selected the 11 most cited from each type of infidelity (see Table 1).

Table 1

The most cited situations of emotional and sexual infidelity.

	N _{Total}	%	N _{Male}	N _{Female}
Emotional infidelity situations				
Think about other person in a romantic/sexual way	19	25.68%	7	12
Exchange text messages / phone calls / online chats with others	18	24.32%	6	12
Search for romantic connections with others	11	14.86%	5	6
Prefer others' company	11	14.86%	4	7
Flirt with others	11	14.86%	5	6
Seduce others	11	14.86%	3	8
Go on dates (hiding) with others	9	12.16%	4	5
Give more importance to others (indifference towards the partner)	9	12.16%	2	7
Share important information with others	8	10.81%	1	7
Think of others while having sexual intercourse with the partner	8	10.81%	3	5
Intimacy with others	7	9.46%	4	3
Sexual infidelity situations				
Sexual intercourse with others (vaginal)	65	87.84%	24	41
Kiss others (mouth, neck, etc.)	33	44.59%	16	17
Touch others with pleasure (genitals, breasts, masturbation).	11	14.86%	3	8
Fondling with others	9	12.16%	5	4
Sexual intercourse with others (oral)	9	12.16%	2	7
Online relations with others (switch sexual photos, sexual texting, sexual phone calls, search for other people)	9	12.16%	4	5
Sexual intercourse with others (anal)	6	8.11%	2	4
Cheat with others	6	8.11%	3	3
Search for another sexual partner	3	4.05%	1	2
Seduction with others (sexual conversations)	3	4.05%	0	3
Exchange seductive eyes and sexual fondling with others	3	4.05%	2	1

Note. N_{Total} = total of participants that mentioned each situation.

Study 2

The main purpose of Study 2 was to analyze the relationship between sexual and emotional promiscuity and infidelity. Additionally, we also wanted to explore any possible sex differences within these domains. To accomplish that we translated and validated two

scales for the Portuguese population – the revised Sociosexual Orientation Inventory (SOI-R) to assess sexual promiscuity, and the Emotional Promiscuity (EP) scale to assess emotional promiscuity – and we developed the Sexual and Emotional Infidelity (SEI) scale, having as a base Study 1.

Method

Participants

Our initial sample included 630 participants. After excluding partially-completed questionnaires ($n = 261$), our final sample comprised 369 participants. From those, 92 were males (24.93%) and 277 were females (75.07%). The mean age of participants was 23.40 years ($SD = 5.47$; range: 18 to 56 years). In terms of nationality, 357 (96.75%) were Portuguese, 7 (1.90%) were Brazilian and the remaining 5 (1.36%) were Cabo-Verdean, Canadian, Spanish and Bulgarian. Regarding sexual orientation, 334 (90.51%) identified themselves as heterosexual, 23 (6.23%) bisexual and 12 (3.25%) homosexual. In terms of relationship status, 246 (66.67%) said that were currently involved in a close relationship. From those, the mean relational satisfaction was 5.75 ($SD = 1.20$). Among those not currently in a relationship ($n = 123$; 33.33%), 91 (73.99%) said that they had been involved in a relationship in the past, whereas 32 (26.01%) participants said that they had never been in a relationship.

Similarly to Study 1, participants did not receive monetary compensation, and were recruited through personal and institutional e-mails, and online social networks.

Measures

Sociodemographic questionnaire

Participants answered questions regarding their age, sex, nationality, sexual orientation, relationship status and, those who were in a close relationship, were also asked about their relationship satisfaction using a Likert scale from 1 (“not satisfied at all”) to 7 (“extremely satisfied”). Those that were not currently in a close relationship were also asked if they had ever been involved in a close relationship.

The revised Sociosexual Orientation Inventory (SOI-R)

The SOI-R was developed by Penke and Asendorpf (2008) to answer to some criticisms to the original SOI scale (Simpson & Gangestad, 1991), namely regarding its psychometric values (e.g., low internal consistency, multifactorial structure). The SOI-R has as the main purpose to evaluate the sociosexuality or sociosexual orientation, and it is commonly used to assess sexual promiscuity (e.g., Vrangalova & Ong, 2014).

This scale comprises 9 items and it is divided in three parts. The first part is composed by 3 items (e.g., “*With how many different partners have you had sexual intercourse on one and only one occasion?*”), each scoring on a scale that ranges from 0 to 20 people or more. The second part comprehends 3 items (e.g., “*Sex without love is OK.*”), to be rated on a 5-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). The third part also includes 3 items, each scoring on a 5-point Likert scale from 1 (“never”) to 5 (“nearly every day”).

According to Penke and Asendorpf (2008), the SOI-R produces three factors, “behavior”, “attitude” and “desire”, each assessing, respectively, the behavioral (items 1 to 3), the attitudinal (items 4 to 6) and the hidden desires (items 7 to 9) of sociosexuality. In terms of psychometric values, the three-factor model produces a very good fit (CFI = .99, NFI = .98, SRMR = .04), and demonstrated good internal reliability ($\alpha = .83$).

Emotional Promiscuity (EP) Scale

The EP scale (Jones, 2011) was developed to assess emotional promiscuity, separately from romanticism or sexual promiscuity. This scale comprehends 9 items, scored on a 5-point Likert scale (ranging from 1, “strongly disagree”, to 5, “strongly agree”), and one additional item regarding the number of people that they have fallen in love with during their life. The scale is composed by two factors, “easily” and “often”. These two domains are associated with emotional promiscuity in literature (Jones, 2011), indicating the difficulty and the frequency of falling in love that characterize emotional promiscuous people: they fall in love easily (i.e., low difficulty) and often (i.e., high frequency). According to Jones’s study (2011), items from 1 to 5 loaded on the “easily” factor and items 6 to 10 on the “often” factor. Also, the two-factor model produced a good fit (CFI = .90; TLI = .93; SRMR = .08), and showed an acceptable internal reliability ($\alpha = .75$).

Sexual and Emotional Infidelity (SEI) Scale

The main scope of the SEI scale is to assess both emotional and sexual infidelity. The final version comprises 14 items, 7 regarding emotional infidelity (e.g., “I give more attention and prefer the company of people other than my partner”), and 7 regarding sexual infidelity (e.g., “I have sexual intercourse (vaginal) with people other than my partner”). Each item is scored on a 7-point Likert scale, with 1 = “It never happens to me” and 7 = “It happens to me often”. All the items were randomly presented. The base for the development of this instrument is described in Study 1. The following instructions were added at the beginning: *“For each of the following items please indicate the frequency that you perform those behaviors when you are in a close relationship, using a scale from 1 (“It never happens to me”) to 7 (“It happens to me very often”). Please answer having as a base all the close relationships you had throughout your life, that is, think about your current relationship (if you are currently involved in one) and on your past relationships.”*

History of infidelity questions

Participants were asked four questions regarding their own infidelity behaviors. More specifically, participants were asked if they have ever been sexual and/or emotional unfaithful in their past relationships, and (for those currently involved in a close relationship) if they have ever been sexual and/or emotional unfaithful to their partner.

Procedure

Since the SOI-R and the EP scale had not been previously translated and validated to the Portuguese population, the standard procedure for adapting scales in cross-cultural research were followed (Geisinger, 1994). Each instrument was carefully translated into European Portuguese and language adequacy for all items was discussed. After that, the translated instrument was translated back to English by a bilingual researcher and compared with the original one. No major discrepancies were noted. All items from both instruments were discussed in our research lab for linguistic and theoretical.

Participants answered first to the demographic questionnaire, followed by the revised Sociosexual Orientation Inventory (SOI-R), the Emotional Promiscuity (EP) scale, the Sexual and Emotional Infidelity (SEI) scale, and the history of infidelity questions, in a counterbalanced order. Participants that were not currently involved in a close relationship and that had never been in a relationship in the past did not respond to the SEI scale and to the

history of infidelity questions. Participants' responses were recorded on an Internet webpage using Qualtrics software, Version 2013 of the Qualtrics Research Suite (www.qualtrics.com). The questionnaires were anonymous and no content of the data collected was used or shared for other studies/researches other than this.

Data analysis

All the data collected in our study were exported to an Excel spreadsheet. The analyses were then conducted with Statistical Package for Social Sciences (SPSS; v. 21), and included: i) Pearson correlations, to examine the associations between the different variables in our study; ii) *t*-tests, to examine sex differences, to compare our data with previous studies, and to determine differences between participants with different pattern to infidelity behaviors; iii) ANOVA to examine possible differences between the participants sexual orientation regarding promiscuity and infidelity; and iv) exploratory factor analyses to validate the scales. The confirmatory factor analyses were realized with the AMOS software (v. 20) and we reported four indices of the models' fit, the Comparative Fit Index (CFI), the Standardized Root Mean Square Residual (SRMR), the Tucker-Lewis Index (TLI) and the Normed Fit Index (NFI). A criterion of $p < .05$ was used for all significance tests.

Results and Discussion

Sexual and Emotional Promiscuity

The sexual promiscuity scale (SOI-R) and the emotional promiscuity scale (EP) used in this study have not yet been translated and validated to the Portuguese population. Therefore, analyses of the psychometric properties of the scales were performed. The first step was the analysis of the scales' sensitivity through frequency tables and distributions of the data. Results revealed good sensitivity for all items of both scales. After the Bartlett sphericity test ($p < .001$ for both scales) and the Kaiser-Meyer-Olkin test (SOI-R: .84; EP: .82) confirmed the factorability of the data, the second step was to measure the construct validity using exploratory and confirmatory factor analyses.

An exploratory analysis with Varimax rotation revealed two factors for the SOI-R, which accounted for 68.82% of the variance, with all the items having a loading of $\geq .61$. However, based on theoretical considerations and prior research (Penke & Asendorpf, 2008; Simpson & Gangestad, 1991), we forced the analysis to extracted three factors. These factors accounted for 79.70% of the variance, and all the items had a loading $\geq .61$. A confirmatory factor

analysis (see Figure 1) showed a good fit of the three-factor model to the SOI-R ($\chi^2 = 55.25$; CFI = .99; SRMR = .03; TLI = .98; NFI = .98), similarly to prior work (Penke & Asendorpf, 2008).

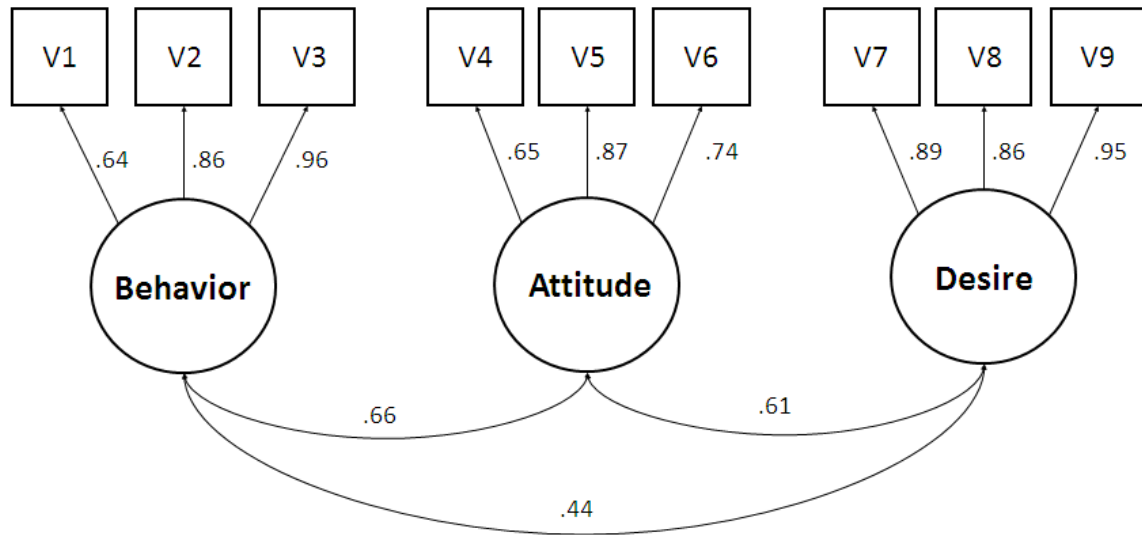


Figure 1. SOI-R model fit.

Concerning the EP, two factors were extracted with an exploratory factor analysis, similarly to the original scale. Those two factors accounted for 57.68% of the variance. All items had a loading of at least .46, and their loadings were similarly to the loadings in the original scale. The exceptions were items 1, 3 and 10, with items 1 and 3 loading more on the often factor, and item 10 loading more on the easily factor. However, having in consideration the theoretical bases of the scale, as well as the fact that each of these three items loaded highly on both factors ($\geq .46$), we decided to maintain them on the original factors. Similarly to the original author (Jones, 2011), a confirmatory factor analysis showed a good fit of the two-factor model ($\chi^2 = 156.85$; CFI = .91; SRMR = .08; TLI = .87; NFI = .89), after error terms for items four and five, and six and seven were correlated (see Figure 2).

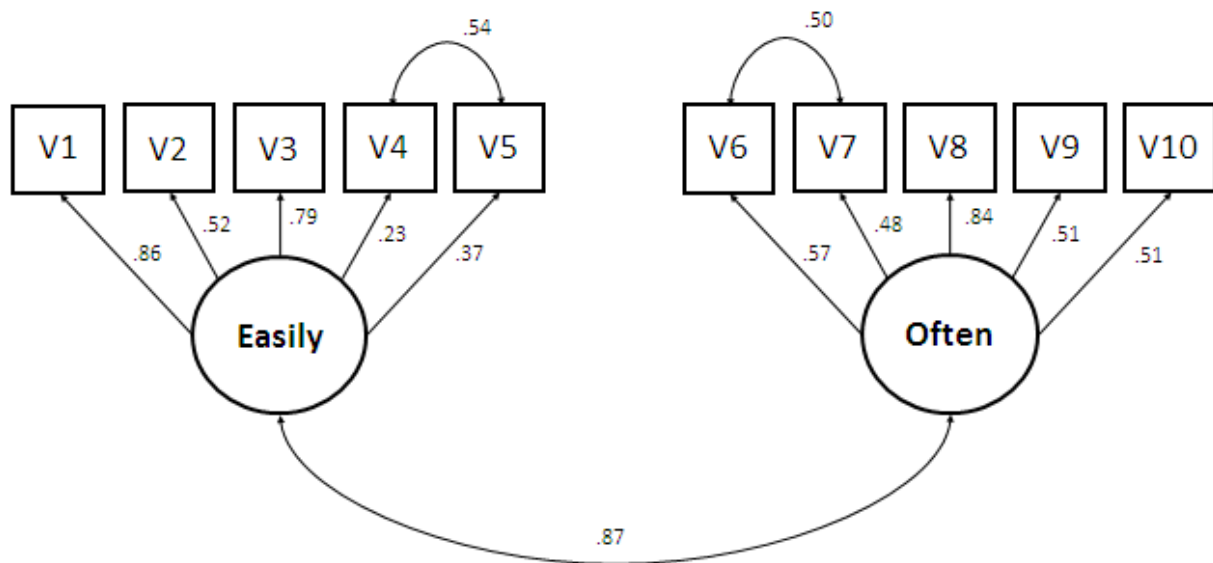


Figure 2. EP model fit.

Our third step was to examine the reliability of the scales. Results showed that both scales presented good reliability ($\alpha = .88$, SOI-R; $\alpha = .82$, EP). When the analyses were performed removing any of the items, the Cronbach's α did not increase considerably, confirming that all items should remain as part of the scale.

Comparison with previous studies

We examined the distributions for individual variables of the SOI-R and the EP, and the averages were compared with previous studies, in order to determine if the responses given by the participants in the present study were similar or different from prior ones.

Concerning the SOI-R, results showed that our male's responses to the SOI-R ($M = 3.22$; $SD = .89$) were similar to those reported by Penke (2011) ($M = 3.07$; $SD = .82$), $t(90) = 1.63$, $p > .05$. However, our female's responses to the SOI-R ($M = 2.11$; $SD = .71$) had lower scores than those reported by Penke (2011) ($M = 2.60$; $SD = .80$).

Regarding the EP, the data of our male sample ($M = 2.82$; $SD = .86$) was similar to those reported by Jones and Paulhus (2012) ($M = 2.94$; $SD = .60$), $t(89) = -1.70$, $p > .05$. Similarly, our female sample ($M = 2.71$; $SD = .66$) was also similar to those reported by Jones and Paulhus (2012) ($M = 2.75$; $SD = .65$), $t(270) = -1.06$, $p > .05$.

Sexual and Emotional Infidelity (SEI) scale

In order to examine the validity of our SEI scale, initially we assessed the scale's psychometric properties. Analyses of the frequency tables and distributions of the data showed that all items from the SEI scale had good sensitivity. Then, we confirmed the factoriability of the data through the Bartlett sphericity test ($p < .001$) and the Kaiser-Meyer-Olkin test (.94). Then, we measured the construct validity with resource of exploratory and confirmatory factor analyses. An exploratory factor analysis using a Varimax rotation produced two factors, which accounted for 69.16 % of the variance. In this phase, 8 items were excluded because they loaded poorly on the expected factor.

After the exclusion of these items, a 14 item scale remained and new psychometric properties analyses were conducted. A principal component factor analysis with Varimax rotation performed on the SDQ produced two factors, accounting for 69.39% of the variance, and all items had a loading of $\geq .58$. With a total of 14 items, 7 loading in the sexual factor and 7 in the emotional factor (see Figure 3), a good fit of the model was produced ($\chi^2 = 416.15$; CFI = .92; NFI = .90; TLI = .90; SRMR = 0.05). The scale also demonstrated good internal reliability ($\alpha = .93$).

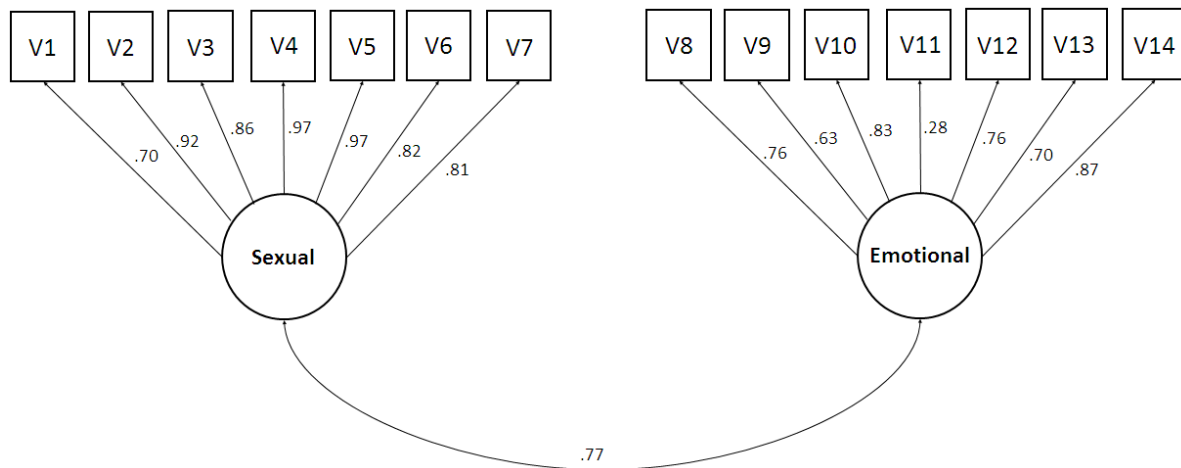


Figure 3. SEI scale model fit.

Therefore, our SEI scale is constituted by the following items, which should be randomly presented:

I send intimate photographs and/or maintain sexual relations via internet or phone with people other than my partner (V1)

I have sexual intercourse (vaginal) with people other than my partner (V2)

- I have sexual intercourse (anal) with people other than my partner (V3)*
- I have sexual intercourse (oral) with people other than my partner (V4)*
- I touch on intimate parts of people other than my partner (V5)*
- I kiss people (mouth, neck, etc.) other than my partner (V6)*
- I have more than one relationship (boyfriend/girlfriend or partner) at the same time (V7)*
- I think of people other than my partner in a romantic and/or sexual way (V8)*
- I give more attention and prefer the company of people other than my partner (V9)*
- I have seduction behaviors (court, gallant), in person or on the internet, with people other than my partner (V10)*
- I share secrets and/or important information with people other than my partner (V11)*
- I have intimacy (emotional and romantic) with people other than my partner (V12)*
- I have romantic feelings for people other than my partner (V13)*
- I trade seductive looks with people other than my partner (V14)*

Promiscuity and Infidelity: A correlational analysis

In order to analyze the relation between promiscuity and infidelity, Pearson correlations were conducted. Results are shown in Table 2. Age was significantly positively correlated with sexual promiscuity [$r(359) = .257, p < .001$], and with emotional promiscuity [$r(361) = .141, p < .01$], showing that older participants tend to be more promiscuous than younger participants. Additionally, age was significantly positively correlated with both sexual infidelity [$r(327) = .238, p < .001$] and emotional infidelity [$r(327) = .218, p < .001$], indicating that older participants tend to be more unfaithful than younger participants.

Relationship satisfaction was significantly negatively correlated with sexual promiscuity [$r(241) = -.322, p < .001$] and emotional promiscuity [$r(241) = -.243, p < .001$], indicating that participants who perceived their relationship satisfaction as being lower tend to be more promiscuous. Relationship satisfaction was also significantly negatively correlated with sexual and emotional infidelity [$r(241) = -.196, p < .01$, and $r(241) = -.407, p < .001$, respectively] indicating that participants who perceived their relationship satisfaction as being lower tend to be more unfaithful.

Sexual promiscuity was significantly positively correlated with emotional promiscuity [$r(356) = .261, p < .001$], as well with sexual infidelity [$r(323) = .595, p < .001$] and emotional infidelity [$r(323) = .676, p < .001$], indicating that sexually promiscuous participants also tend to be emotionally promiscuous, and sexual and emotional unfaithful.

Similarly, emotional promiscuity was significantly positively correlated with sexual infidelity [$r(324) = .123, p < .05$] and emotional infidelity [$r(324) = .319, p < .001$], suggesting that emotionally promiscuous participants tend to be emotional unfaithful and sexual unfaithful. Additionally, sexual and emotional infidelity were also significantly positively correlated [$r(327) = .716, p < .001$], showing that sexual unfaithful participants also tend to be emotional unfaithful.

Table 2

Correlations between promiscuity and infidelity variables.

	Emotional infidelity	Sexual infidelity	Emotional promiscuity	Sexual promiscuity
Age	.218***	.238***	.141**	.257***
Relation satisfaction	-.407***	-.196**	-.243***	-.322***
Sexual promiscuity	.676***	.595***	.261***	
Emotional promiscuity	.319***	.123*		
Sexual infidelity	.716***			

Note. *** $p < .001$; ** $p < .01$; * $p < .05$.

History of infidelity

In the questionnaire there were dichotomous variables regarding the history of infidelity. Therefore we used t-test to analyze if there were differences regarding promiscuity and infidelity between those participants that have been unfaithful in their past relationships or in their current relation and those participants that were faithful. Results showed that participants that reported been sexually unfaithful in the past were more sexually promiscuous $t(58.88) = 8.26, p < .001, d = 1.11$, emotionally promiscuous $t(66.44) = 3.37, p < .001, d = 1.67$, sexually unfaithful $t(50.98) = 5.64, p < .001, d = -.56$ and emotionally unfaithful $t(56.52) = 6.50, p < .001, d = .31$ than those that have been sexually faithful in the past. Additionally, participants who have been emotionally unfaithful in the past were less satisfied with their current relationship, $t(133.42) = -2.30, p < .05, d = -.32$, more sexually promiscuous $t(154.11) = 4.09$,

$p < .001$, $d = 1.23$, emotionally promiscuous $t(185.09) = 5.84$, $p < .001$, $d = 1.77$ and more emotionally unfaithful $t(142.98) = 5.03$, $p < .001$, $d = .44$.

People that were in a relationship and reported being sexually unfaithful to their partners were less satisfied with their current relationship, $t(30.08) = -3.15$, $p < .05$, $d = 4.40$, more sexually promiscuous $t(36.38) = 9.21$, $p < .001$, $d = .62$, emotionally promiscuous $t(35.53) = 3.46$, $p < .001$, $d = 1.82$, sexually unfaithful $t(30.70) = 5.38$, $p < .001$, $d = -.88$ and emotionally unfaithful $t(32.78) = 6.79$, $p < .001$, $d = .04$. Similarly, people that stated being emotionally unfaithful to their current partner were less satisfied with their relationship, $t(42.16) = -4.70$, $p < .001$, $d = 4.40$, more sexually promiscuous $t(47.61) = 5.92$, $p < .001$, $d = .67$, more emotionally promiscuous $t(50.94) = 6.17$, $p < .001$, $d = 1.85$, sexually unfaithful $t(38.22) = 3.35$, $p < .05$, $d = -.81$ and emotionally unfaithful $t(40.42) = 6.63$, $p < .001$, $d = .09$.

Promiscuity and Infidelity: Demographic variables

Sex differences

Figure 4 shows the scores for SOI-R and EP for both males and females. Male participants were found to be more sexually promiscuous ($M = 3.22$; $SD = .89$) than females ($M = 2.11$; $SD = .71$), $t(131.23) = 10.88$, $p < .001$, $d = 1.38$. However, regarding emotional promiscuity, no significant differences were found between sexes ($M_{\text{males}} = 2.82$; $SD_{\text{males}} = .68$; $M_{\text{females}} = 2.71$; $SD_{\text{females}} = .66$), $t(148.73) = 1.34$, $p < .182$, $d = .16$.

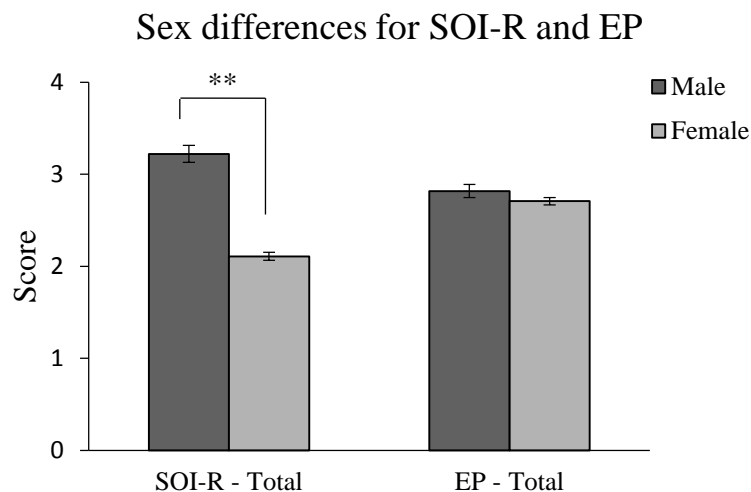


Figure 4. Sex differences for SOI-R and EP.

A *t*-test was performed in order to explore if there are any differences between males and females in terms of sexual and emotional infidelity. Results indicated that males are more sexually unfaithful than women $t(86.03) = 4.70, p < .001, d = .71$. Additionally, males seem to also be more emotional unfaithful than women $t(99.22) = 5.86, p < .001, d = .84$, as shown on Figure 5.

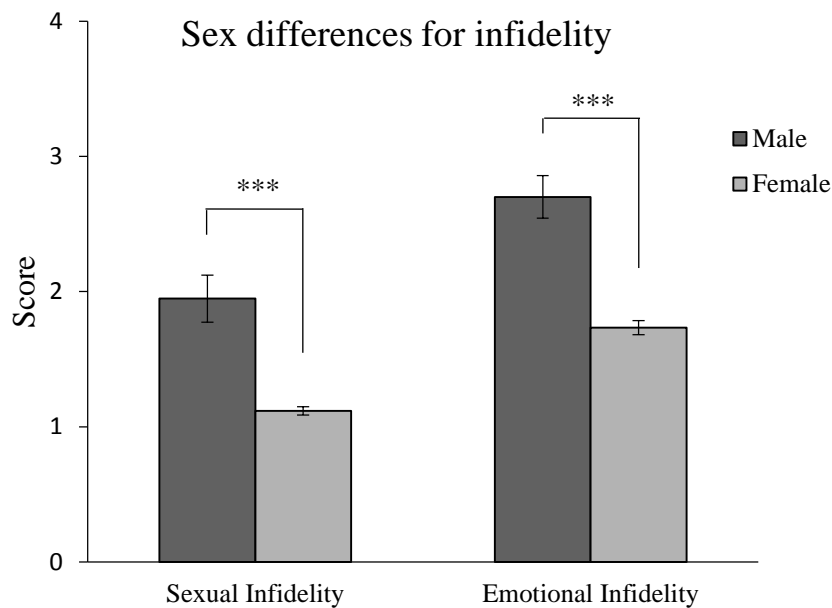


Figure 5. Sex differences for sexual and emotional infidelity.

Differences in relationship status

In order to reveal if there are any differences between people who were currently involved in a close relationship and those who were not, a *t*-test was conducted. Results revealed that individuals who were in a relationship tended to be more emotional promiscuous $t(211.33) = 2.45, p < .05, d = .28$, whereas individuals who were not in a relationship tended to be more sexual promiscuous $t(222.96) = -2.66, p < .01, d = -.30$. No differences were found regarding infidelity (neither emotional nor sexual).

Differences in sexual orientation

Unidirectional ANOVAs were performed to examine possible differences in sexual and emotional promiscuity and infidelity depending on the sexual orientation of the participants. Results showed a significant effect of sexual promiscuity, $F(2,356) = 23.86, p < .001$. Post-hoc Bonferroni tests showed that there was a significant difference between heterosexuals and

homosexuals ($p_s < .001$), and between heterosexuals and bisexuals. There are no differences between homosexuals and bisexuals regarding sexual promiscuity ($p > .05$). For emotional promiscuity, no differences were found $F(2,358) = 1.35, p > .05$.

In terms of infidelity, differences were found for both domains, that is, for sexual infidelity, $F(2,324) = 11.69, p < .001$, and emotional infidelity, $F(2,324) = 6.66, p < .01$. Post-hoc Bonferroni tests revealed a significant difference between heterosexuals and bisexuals ($p_s < .01$). No differences were found for heterosexuals and homosexuals and homosexuals and bisexuals ($p_s > .05$).

General Discussion

Our main goal was to investigate the relationship between sexual and emotional infidelity and promiscuity. To this end, we conducted two studies. In Study 1, we aimed to develop the SEI scale that would serve as a base to Study 2. In Study 2, additionally to the analysis of the relation between sexual and emotional promiscuity and infidelity, we also explored possible sex differences within these domains, where we had a sample of 369 participants and, by examining the data collected from this sample, we were able to reach some general conclusions that are consistent with the literature.

Regarding the emotional domain, results revealed that there is a positive correlation between emotional promiscuity and emotional infidelity. These findings are consistent with our first hypothesis, and show that individuals that tend to be more emotionally promiscuous also tend to be more emotionally unfaithful.

In terms of the sexual domain, results showed that there is also a positive correlation between sexual promiscuity and sexual infidelity, stating that individuals that tend to be more sexually promiscuous also tend to be more sexually unfaithful. These results support our second hypothesis.

The results of our study showed that sexual infidelity and emotional infidelity are positively correlated, indicating that individuals that are more sexually unfaithful also tend to be more emotionally unfaithful. These findings are consistent with our third hypothesis. Still, these findings do not state that both types are bound with each other; even though sexual and emotional infidelity can co-occur, they also can happen independently from each other (Sabini & Green, 2004). More precisely, a person can grow emotional attachment for another and not want to engage in sexual activities and, similarly, the opposite can be evidenced, a person can get involved in sexual infidelity with another and have no emotional connection

with that person. A best way to clarify these two domains, is by stating that they overlap, but are still different from one another, always knowing that these infidelities bring the greatest damage when present at the same time (Hall & Fincham, 2006).

Regarding promiscuity, our findings suggest that, in the same line as infidelity, sexual and emotional promiscuity are also positively correlated, corroborating our fourth hypothesis. No research relating sexual and emotional promiscuity have been conducted; however we can hypothesize frequent sexual intercourse (sexual promiscuity) rises the possibility of one falling in love with someone (emotional promiscuity) (Jones & Paulhus, 2012). Again, this connection does not mean that both sexual and emotional promiscuity are bounded with each other, since one has its focus on sexual behavior, while the other on emotional feelings. In other words, sexual promiscuity characterizes the comfort of sexual intercourse with multiple people and the desire for sexual relations with diverse partners, whereas emotional promiscuity incorporates the comfort and desire for emotional relationships, experiencing love and falling in love frequently and with multiple partners. Thus, the major difference between these two domains, is precisely the differential emphasis of the emotional versus sexual (physical) aspects of relations (Jones & Paulhus, 2012).

The most popular research on sex differences focused, for promiscuity, on the desire for sexual diversity, whereas for infidelity focused on the jealousy responses based on an evolutionary perspective, as well as which type of unfaithful behaviors are more distressing (Buss, Larsen, Westen & Semmelroth, 1992; Cramer et al., 2008; Green & Sabini, 2006; Penke & Asendorpf, 2008; Schützwohl, 2008). Fewer research has pointed to sex differences in terms of commission, i.e., differences between males and females regarding the frequency of unfaithful or promiscuous behaviors. In terms of infidelity, our results suggest that men are more likely to engage in sexual and emotional infidelity than do women, which is consistent with some findings on literature. Seal, Agostinelli and Hannett (1994) studied the willingness to engage in extradyadic behaviors and found that when participants were presented with a hypothetical opportunity, men showed a greater tendency to be unfaithful than women. Additionally, Spanier and Margolis (1983) reported that men have more extramarital sexual partners than women. Regarding infidelity, studies also report that, of the people who admitted being unfaithful, women say they engaged more in emotional infidelity than men, whereas men engaged more in sexual infidelity than women (Boekhout, Hendrick & Hendrick, 1999; Glass & Wright, 1992; Sheppard, Nelso & Andreoli-Mathie, 1995; Thompson, 1984). Nevertheless, there are some studies that did not find sex differences

regarding infidelity (Babin & Dindia, 2005; Feldman & Caufmann 1999; Prins, Buunk & VanYperen, 1993; Wiederman & Hurd, 1999).

In terms of promiscuity, there are only a few studies that focused on sex differences, showing that men are designed for short-term mating, whereas females for long-term mating (Buss & Schmitt, 1993; Kenrick, Sadalla, Groth, & Trost, 1990). Our study, consistently with this literature, found that men tend to engage in more acts of sexual promiscuity than do women, whereas sex differences were found regarding emotional promiscuity, suggesting that both men and women equally engage in emotional promiscuous behaviors.

Therefore, our fifth hypothesis is partially corroborated. More specifically, men in our sample tended to be more sexual unfaithful and sexual promiscuous than women, but both men and women were equally likely to engage in emotional promiscuous behaviors.

Limitations and Future Research

One limitation of our study is the fact that our data was collected through a one-time online survey, using participants' self-reports of infidelity and promiscuity, which may be vulnerable to bias.

Also, as a second limitation, for the sexual domain of our study, the sensitive nature of some of the questions in the surveys, such as personal infidelity experiences or the total number of people one has had sexual intercourse, there's a possibility that some participants gave answers based on social acceptance.

A third limitation is the age our sample, since the mean age is approximately 24 years. It would be interesting to replicate this study with an older sample and examine if the same pattern of results would be obtained.

Another limitation of our study is the fact that our data were correlational, and consequently casual associations cannot be made. For example, it is possible that individuals with an overall high sexual promiscuity will have a higher tendency to sexually betray their partners over time. It would be interesting to test which paths are the most likely to occur by collecting data in a prospective, longitudinal study.

Additionally, it would be interesting to examine which facets of personality are more likely to engage in sexual and emotional promiscuity and infidelity,

Finally, future research could also investigate what is the effect that infidelity and promiscuity possess in one's partner selection (i.e., partner decision-making).

Conclusion

The data collected from our sample provided a more distinguished insight in the fields of promiscuity and infidelity. The SEI scale developed in our study offers a measure to assess the sexual and emotional levels of infidelity, thus enriching future studies on infidelity. Results showed that sexual and emotional promiscuity are related, as well as sexual and emotional infidelity, suggesting that sexual promiscuous people also tend to be emotional promiscuous (and vice-versa) and those who are sexual unfaithful, also tend to be emotional unfaithful (and vice-versa). Additionally, results demonstrated that sexual and emotional promiscuous individuals, also tend to be sexual and emotional unfaithful, being all these domains related to each other.

Sex differences found with the collected data, also provide evidence for the literature, enriching this way and completing studies that research these differences in the field of infidelity and promiscuity. In this study, results indicated that men are more sexual promiscuous than women, yet for emotional promiscuity, no differences were evidenced, stating that both men and women equally engage in emotional promiscuous behaviors. For infidelity, we found that male individuals engage more in sexual and emotional unfaithful behaviors than women.

Generally, the results of our study provide a deep understanding in matters that are relevant on interpersonal relations, until now lacking in literature and offering new possibilities for future research.

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