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Abstract

The present study examined differences in three types of jealousy (reactive, anxious, and preventive jealousy) between the major ethnic groups in Surinam (Maroons, Creoles, Hindustani, Javanese, and Mixed). About 100 participants from each ethnic group (total $n = 500$) were interviewed. Results showed differences between the groups in anxious and preventive jealousy, but not in reactive jealousy. More specifically, Maroons reported most anxious and preventive jealousy, followed by Creoles, and Javanese. The Hindustani and Mixed groups reported the lowest levels of anxious and preventive jealousy. These results did not alter after controlling for demographic variables. In addition, differences in jealousy could not be explained by differences between the groups in intrasexual competitiveness and attitudes toward multiple sexual relationships. Findings suggest that whereas preventive jealousy and anxious jealousy are sensitive to cultural influences, reactive jealousy is not. Future studies may further explore the variables that may explain differences in jealousy between ethnic groups in Surinam.

Keywords

Ethnic groups, intrasexual competitiveness, jealousy, multiple sexual partners, Surinam

Romantic jealousy is a universal phenomenon; no culture is known where such jealousy does not exist. Furthermore, the factor analytic structure of jealousy-related experiences and feelings (Hupka et al., 1985) as well as jealousy evoking characteristics (e.g.,

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Buunk & Dijkstra, 2015) is quite similar across divergent cultures. For instance, men, irrespective of culture, generally find partner behaviors indicative of sexual infidelity more upsetting than partner behaviors indicative of emotional infidelity, while the opposite applies to women (e.g., for a review, see Edlund & Sagarin, 2017). Nonetheless, also intercultural differences exist in the experience of jealousy. For instance, in a sample of U.S. undergraduates, Zandbergen and Brown (2015) found that jealousy in response to partner behaviors indicative of sexual infidelity was more strongly predicted by the extent to which individuals adopt collectivistic norms than by gender. Likewise, Canto et al. (2017) showed that men from Portugal and Brazil—countries both classified as high honor cultures—who identified more strongly with cultural norms emphasizing the importance of honor, felt more upset by a partner's sexual acts of infidelity.

Insight into possible cultural differences in jealousy is important to better understand the challenges jealousy may have for the quality of intimate relationships in different cultural contexts. However, there is little research on overall cultural differences as regards the level of jealousy. Establishing such differences is fraught with problems, including the issue of equivalence of measures and response formats in different languages. Emotional concepts such as jealousy are language and culture specific and may evoke different associations and meanings in different cultures (e.g., Joyce & Hupka, 2002). Therefore, translating valid scales of jealousy from one language to another does not guarantee that the same concept will be assessed in this other language. The present study examines differences in the overall level of different types of jealousy between culturally very distinct ethnic groups that, despite their cultural differences, speak the same language: Dutch. These groups live in the Republic of Surinam, a former Dutch colony, a sovereign state since 1975 and situated on the northeastern coast of South America. Although it is the smallest country in South America, with its population of approximately 566,000, it is ethnically very diverse (Hassankhan & Hira, 1998). The present study is therefore one of the few studies that examines cultural differences in the level of jealousy without suffering from potential validity problems due to language differences.

Types of jealousy

We examined the three types of jealousy distinguished by Buunk (1997) measured with scales in the Dutch language that have been extensively validated in The Netherlands. *Reactive* jealousy refers to the emotional upset individuals experience when they find out their partner is engaging in specific intimate behaviors with a third person. *Preventive* jealousy refers to the efforts people engage in to prevent contact of the partner with potential rivals. This may even include not allowing the partner to leave the house alone, or prohibiting having opposite sex friends. Finally, *anxious* jealousy refers to the rumination and worrying people engage in when they feel their relationship with their partner is threatened by a real or imagined rival. Important to note is that whereas reactive jealousy occurs in response to an actual relationship threat, anxious jealousy and preventive jealousy may also occur in response to merely *imagined* relationship threats. Various studies have shown that these three types of jealousy are associated with other variables in distinct and theoretically plausible ways. For instance, in three samples in

The Netherlands, Barelds and Barelds-Dijkstra (2007) found reactive jealousy to be positively related to relationship quality, anxious jealousy negatively related to relationship quality and preventive jealousy as not significantly related to relationship quality. Reactive jealousy may therefore be best viewed as a sign of love and commitment, whereas anxious jealousy reflects insecurity and a lack of trust in the relationship. The lack of relationship between preventive jealousy and relationship quality may be due to the ambivalent nature of preventive jealousy, as preventive jealousy may be expressed in a way that both contributes to relationship quality (e.g., buying a partner flowers to keep his or her attention from wandering off to rivals) as well as in a way that undermines relationship quality (e.g., prohibiting a partner from engaging in certain activities).

Ethnic groups in Surinam

The present study includes the five largest ethnic groups in Surinam, with sizes varying from 13% to 27% of the population. These groups differ considerably in their familial and marital practices, as also their attitudes toward engaging in multiple sexual relationships, which might lead to differences in jealousy.

Maroons. The Maroons constitute about 22% of the population and are the descendants of slaves from Africa who fled slavery from the plantations and settled inland (Helman, 1977). The Maroon community is known as a closed group that has kept its traditions, standards, and values (Landveld, 2005) and consists of various tribes who live in the jungle in small villages. Their social organization is based on matrilineal kinship in which the role of the mother is crucial: The name of the mother and not the father is passed on to the children. Girls in the village are already prepared from a very young age onward to engage in reproduction (Landveld, 2005). Originating from African cultures, polygyny is allowed—often with wives living in different villages—and also maintained because men often work elsewhere and are away from home for longer periods of time.

Creoles. The term Creoles is currently used in Surinam to describe individuals settled in the city, with a descent as a result of interbreeding between former slaves from Africa and mostly Dutch Europeans. The Creole community constitutes about 16% of the population and includes many single-parent households, where the mother is the breadwinner and head of the family. The father is often absent among others due to work-related factors, and many men have concubines. This kind of relationship originates from the 17th and the 18th century, when White men took black concubines as housekeepers, who also fulfilled their sexual needs. Cohabitation is institutionalized and recognized by private employers and the Government (Tanner, 1974). Marriages are not uncommon within the Creole community, but the number of married Creoles is smaller than the number of unmarried Creoles who cohabit.

Hindustani. The largest ethnic group in Surinam, forming about 27% of the population, is the Hindustani, descendants from contract workers who came from India to Surinam in 1873. As they were free to express their cultural ways after working hours, their Indian

culture has been well preserved (Bloemberg, 1995). Although some Hindustani are Muslims or Christians, the vast majority of them profess Hinduism. Marriage in this ethnic group is an essential event in a person's life and is seen as a sacred, long-lasting and lifelong connection between two people (Ramdas, 2006). Characteristic is the extended family that may live in the same house and may consist of three or even four generations, including daughters-in-law (Lalmahomed, 1992). Women are often not considered equal, yet tend to tolerate their position out of fear of consequences, particularly the fear of losing support from their family.

Javanese. The Javanese are the fourth largest population of Surinam (14%). They were brought to Surinam as contract workers from Indonesia between 1890 and 1939. One of the core values of the Javanese community is *rukun* (literally harmony): keeping peace or harmony among each other and having good relationships with one another (Helman, 1977). Characteristic is the joint-family system, consisting of parents, children, grandchildren, spouses, and other live-in family members of both husband and wife. Due to the unequal sex ratio among the Javanese, women often feel free to end relationships and to form new relationships or have extra sexual relations. They also feel free to enter into loose relationships with different men (Suparalan, 1976).

Mixed. This increasing group of individuals consists of people with ancestors of different ethnicity and currently constitutes about 13% of the population. They are descendants of the various ethnic groups already mentioned as well as the indigenous people and Chinese. A person who identifies themselves as mixed can be born to parents who both have a different ethnic background or one or both of them are also mixed. Being of mixed descent is an identity itself: These people see themselves as a mixed person and take an active role in choosing their identity (Crosson, 2014).

Intrasexual competitiveness and attitudes toward multiple sexual relationships

The present study is primarily descriptive, aiming to investigate potential differences between ethnic groups in the level of jealousy. There are no clear theoretical grounds on which to expect one group to be more jealous than another group. Given polygyny among Maroons and the high occurrence of single motherhood, as well as the presence of concubines among the Creoles, one might, for instance, expect preventive and anxious jealousy to be particularly prevalent in these groups. Yet the same might be argued for the Javanese where the relative lack of men might induce more jealousy among women, or for the Hindustani with their quite strict norms with respect to marital traditions (Buunk & Castro Solano, 2012). To better understand potential differences between the ethnic groups in jealousy, we also examined if two variables—intrasexual competitiveness and attitude toward multiple sexual relationships—could explain potential differences in jealousy between the ethnic groups. Intrasexual competitiveness reflects the degree to which individuals view the confrontation with same-sex individuals in competitive terms, as rivals, among others, for their partner's attention (Buunk & Fisher, 2009). Individuals high in intrasexual competitiveness can be expected to perceive relatively many relationship threats, also those that are imaginative. In line with this, one

may expect anxious and preventive jealousy—the types of jealousy that may also be evoked by imaginative relationship threats—to be related positively to intrasexual competitiveness. Reactive jealousy is a more common, adaptive response to *actual* relationship threats. One can therefore expect reactive jealousy to be less rooted in intrasexual competitiveness and more in attitudes toward multiple sexual relationships. Individuals who disapprove of such relationships will be more likely to respond with reactive jealousy when their partner gets involved in erotic and sexual behavior with others. Indeed, there is clear evidence that less moral disapproval of extradyadic sexual relationships is associated with less reactive jealousy (Buunk, 1991). There is less reason to expect that the attitude toward multiple sexual relationships is associated with anxious or preventive jealousy.

Goals of the present study

The primary goal of the present study is to examine differences in anxious, preventive, and reactive jealousy between five ethnic groups in Surinam. Identifying levels of jealousy of these ethnic groups and differences in jealousy between these groups may help better understand relationship functioning and the occurrence of relationship problems among members of these groups. Insight into these issues may increase awareness of the problems jealousy may cause when dealt with inadequately and help partners in interethnic relationships anticipate potential differences in jealousy, for instance by up-front discussing the boundaries of their relationship in terms of fidelity and trust. In addition to examining differences in the levels of jealousy between these five ethnic groups, the present study aims to examine the following seven research questions (RQs):

RQ 1: Are differences in jealousy between ethnic groups independent of demographic differences between the ethnic groups?

RQ 2: Are there differences between the ethnic groups in intrasexual competitiveness, and if so, are these differences independent of demographic differences between the ethnic groups?

RQ 3: Can differences in intrasexual competitiveness between the groups explain differences in jealousy between the ethnic groups?

RQ 4: Are anxious and preventive jealousy more strongly related to intrasexual competitiveness than reactive jealousy?

RQ 5: Are there differences between the ethnic groups in their attitudes to multiple sexual relationships, and if so, are these differences independent of demographic differences between the ethnic groups?

RQ 6: Can differences in attitudes to multiple sexual relationships explain differences in jealousy between the ethnic groups?

RQ 7: Are attitudes to multiple sexual relationships more strongly associated with reactive jealousy than with both other types of jealousy?

Because many studies have shown that the experience of jealousy is different for men and women (e.g., Buunk & Dijkstra, 2015), we included gender as a factor in all analyses.

Method

Sample

The sample consisted of 500 participants, aged 25–50 years, $M = 36.56$, $SD = 7.79$. There were approximately equal numbers of randomly selected participants in each ethnic group, that is, 102 Creoles (20.4%), 95 East Hindustani (19.0%), 98 Javanese (19.6%), 102 Maroons (20.4%), and 103 people of Mixed descent (20.6%). There were 243 men (48.6%) and 257 women (51.4%). About half (248) of the participants (49.6%) came from rural areas, and the other half (252) from the capital Paramaribo (50.4%). The level of education completed was generally low: a large minority (43.5%) had elementary school education or less, 29.6% a lower level of high school, 20.7% a higher level of high school, and only 6.2% a higher education. In terms of religion, the majority were Christians (Catholics 21.8% and Protestants 34.9%), followed by Muslims (18.5%), Hindu's (17.1%), other religions (2.4%), with only 5% reporting no religion. With respect to civil status, 29.3% of the sample was married, 34.4% living together, 14.6% with a steady partner but not living together, 4.2% with several or changing partners, and 13.7% did not have a steady partner. Of the respondents, 11.6% had no income, 17.4% earned less than 1,000 Surinamese dollars (S\$), 38.0% between 1,000 S\$ and 2,000 S\$, 14.8% between 2,000 and 3,000 S\$, 4.8% between 3,000 and 4,000 S\$, and 4% more than 4,000 S\$. The value of 1,000 Surinamese dollars at the time of the interview was equivalent to around US\$ 450 or €400. As reported in the previous analyses of the present data, there were significant differences between the ethnic groups in demographic variables. There was a relatively high percentage of housekeepers among the Hindustani (28%, as compared to less than 20% for all other groups) and a somewhat elevated level of unemployment among the Maroons (9%, as compared with 5% or less for the other groups). Only among the Hindustani was the majority legally married (over two third of the respondents), whereas among the Maroons fewer than 10% were legally married, with the figures for the Javanese and Mixed between these extremes. Among the Maroons, the majority was living together without being married, but also among the Creoles, Javanese, and Mixed, about a third or more were living together. Among the Hindustani (70%) and the Javanese (61%), a substantial majority grew up in a family in which the father was present, whereas this occurred only for minorities of around 40% of the Creoles and Maroons. Finally, income and educational level were highest among the Mixed, with minor differences between the other ethnic groups (Buunk, Leckie & Pollack, 2019).

Procedure

A random sample was drawn from the five largest ethnic groups using figures from the Algemeen Bureau voor de Statistiek in Suriname (ABS: General Office for the Statistics in Surinam (2012)) in Surinam. Based on the highest concentration of ethnicity according to

the GBS, the following areas were chosen: the Paramaribo district as urban area, and Saramacca, Commewijne, Marowijne (Moengo), and Para as rural areas. Next, streets in these areas were selected randomly and all houses in these streets visited. For each ethnic group in the urban sample, data collection stopped when 50 participants consisting of 25 men and 25 women were interviewed. The same procedure was followed in the rural sample. Interviewers were of the same ethnic group as the respondents. Participants were individually interviewed privately at their homes between October 2015 and December 2015. Interviews were conducted in Dutch, in line with common practice regarding survey interviews conducted in Surinam. At the start of the interview, participants were told that their answers would be dealt with respectfully and recorded anonymously. Some respondents needed reassurance that their answers could not be traced back to them. None of the responders refused to answer any questions. When the interview was completed, participants were given a ballpoint pen (without a logo) for their participation.

Measures

Jealousy. This was measured with the 15-item scale for jealousy developed by Buunk (1997) consisting of three subscales that consist of 5 items each. To assess *reactive jealousy*, participants were asked how upsetting they would find it if their partner would have sexual contact with someone else, would discuss personal things with someone else, would flirt with someone else, would dance intimately with someone else, and would kiss someone else. The five possible answers vary from 1 (*not at all upsetting*) to 5 (*extremely upsetting*). Cronbach's α for this scale was .75. The scale for *anxious jealousy* consists of 5 items that all refer to the frequency of worrying over the potential sexual and intimate contact of the partner with someone of the opposite sex, for example, "I am concerned about my partner finding someone else more attractive than me." Possible answers ran from 1 (*never*) to 5 (*always*). The Cronbach's α of this scale was .86. The scale for *preventive jealousy* assesses the degree to which the respondent is inclined to prevent contact between the partner and members of the opposite sex. An example item of this scale is: "I don't want my partner to meet too many people of the opposite sex." Possible answers ranged from 1 (*not applicable*) to 5 (*extremely applicable*). The scale had a reliability of .83. Exploratory and confirmatory factor analyses support the conceptual independence of the three scales. Barelds and Dijkstra (2003) applied principal component analysis (PCA) with an oblique rotation (oblimin) to the answers of 1,366 participants to all these items. Three components were found (based on a Scree test and its interpretation) which explained 57% of the variance. All 15 items loaded highest on the expected factor. In addition, congruence coefficients (Tucker's ϕ ; Tucker, 1951) were computed between the three a priori factors, that is, the three theoretical subscales, and the three factors found in the explorative PCA. These congruencies were very high (reactive jealousy $\phi = .98$, preventive jealousy $\phi = .97$, and anxious jealousy $\phi = .99$), which strongly supports the structural validity of the scale. In addition, Table 1 presents that, in the present study, among both men and women in the current research preventive jealousy had moderate correlations with anxious jealousy and small correlations with reactive jealousy, but no correlation between anxious jealousy and reactive jealousy. Thus, also the present study supports the idea that these variables are quite independent,

Table 1. Differences between five ethnic groups in Surinam on the present study’s variables.

	Anxious jealousy M (SD)	Preventive jealousy M (SD)	Reactive jealousy M (SD)	ISC M (SD)	MSR M (SD)
Maroons	13.24 (5.50) _{a,b,c}	13.38 (5.86) _{a,b,c}	22.42 (3.79)	21.49 (12.13)	6.37 (3.83)
Creoles	12.22 (5.47) _d	12.51 (5.49) _d	22.48 (3.24)	24.51 (11.27)	6.77 (4.00)
Hindustani	10.98 (6.16) _a	11.35 (6.09) _a	22.59 (3.30)	23.79 (13.13)	6.84 (4.20)
Javanese	10.49 (4.70) _{b,d}	10.62 (4.89) _{b,d}	21.87 (4.11)	24.57 (12.77)	7.14 (4.23)
Mixed	11.36 (5.25) _c	11.50 (5.70) _c	22.68 (3.79)	23.39 (9.95)	6.74 (3.83)

Note. ISC = intrasexual competitiveness; MSR = attitude toward multiple sexual relationships. For jealousy, groups with the same subscript letters in the same column differ significantly from each other.

which justifies examining the effects on these variables in separate analyses, involving only a low risk of α slippage.

Intrasexual competitiveness. Intrasexual competitiveness was assessed with the Intrasexual Competition Scale (Buunk & Fisher, 2009). The instrument measures competitive responses when confronted with individuals of the same sex, especially in, but not restricted to, mating contexts. Example items of this scale are “I can’t stand it when I meet another man/woman who is more attractive than I” and “I want to be just a little better than other men/women.” The version for men and for women is identical with exception of the use of “other men” or “other women,” respectively. The scale has 12 items. Each item has 7 possible answers, ranging from 1 (*not at all applicable*) to 7 (*completely applicable*). Scores for the scale are obtained by summing up the items. In the present study, Cronbach’s α was .86.

Attitudes toward multiple sexual relationships. We employed four questions to assess these attitudes. With respect to both men and women, we asked: “It is normal that a man/woman has more sexual relationships simultaneously” and “It is normal that a man/woman has sexual relationships with others when he/she is married or has a steady relationship.” The questions were answered on a 5-point scale from 1 = *totally disagree* to 5 = *totally agree*. An exploratory factor analysis over the 4 items showed a strong, single factor that explained 68.71% of the variance, with all items loading higher than .80 on this factor. We therefore decided to construct a scale combining the 4 items and only analyze the effects on this summed scale. A higher score indicates a more positive attitude. Cronbach’s α for this scale was .85.

Results

Because of the large number of analyses conducted to examine our seven research questions, we only paid attention to effects for which p reached .01 or smaller.

Differences between ethnic groups in jealousy

The primary goal of the present study was to examine potential differences between five ethnic groups in three types of jealousy. In order to do so, a series of General Linear

Modeling (GLM) was conducted studying the effects of gender, ethnic group and their interaction on the three types of jealousy. Gender had an effect only on anxious jealousy, $F(1, 498) = 19.44, p < .001, \eta^2 = .038$, but no effect on the two other types of jealousy, $F_s(1, 498) < 1.03, p_s > .31$. Women reported more anxious jealousy ($M = 12.69, SD = 5.69$) than men did ($M = 10.58, SD = 5.09$). There were significant effects of ethnic group on anxious jealousy, $F(4, 498) = 3.94, p < .01, \eta^2 = .038$, and on preventive jealousy, $F(4, 498) = 3.68, p < .01, \eta^2 = .029$, but not on reactive jealousy, $F(4, 498) = 0.83, p = .51$. There were no significant interactions between ethnic group and gender, $F_s(4, 498) < 2.24, p_s > .06$. As Table 1 presents, the pattern for anxious jealousy was the same as that for preventive jealousy. The Maroons expressed the highest level of anxious as well as preventive jealousy, and these levels were significantly higher than those of the three other groups, with the exception of the Creoles. The Creoles were the second highest in anxious and preventive jealousy, although they differed significantly only from the Javanese. The other three ethnic groups did not differ in anxious and preventive jealousy.

To examine RQ 1—if differences in jealousy between ethnic groups are independent of demographic differences between the groups—a multivariate GLM was conducted using the three types of jealousy as dependent variables, gender and ethnic group as predictors, and employment status, civil status, income level, educational level, and presence of a father during childhood as covariates. The results showed that according to Roy's Largest Root (R , the appropriate index for this type of analysis), none of the covariates had a significant effect, for employment status, $R = 0.33, p = .81$; for civil status, $R = 1.46, p = .23$; for income level, $R = 0.78, p = .51$; for educational level, $R = 1.27, p = .29$; and for the presence of a father during childhood, $R = 0.63, p = .59$, and all effects of gender and ethnic group were maintained.

Differences between ethnic groups in intrasexual competitiveness

To examine the first part of RQ 2—if differences exist between ethnic groups in intrasexual competitiveness—a GLM was conducted with gender and ethnic group as factors and intrasexual competitiveness as dependent variable. There were no effects of gender and ethnic group, nor an interaction between these variables, $F_s < 0.66, p_s > .29$, see also Table 1. Given this lack of effect, it was not relevant to examine the second part of RQ 2, that is, if differences in intrasexual competitiveness between ethnic groups are independent of demographic differences between the groups. Likewise, given the lack of differences in intrasexual competitiveness between groups, the answer to RQ 3—that is, whether differences in intrasexual competitiveness could explain differences in jealousy—is negative.

Associations of jealousy with intrasexual competitiveness

To examine RQ 4—if anxious jealousy and preventive jealousy are more strongly related to intrasexual competitiveness than reactive jealousy—we calculated the correlation between jealousy and intrasexual competitiveness separately for men and women. As shown in Table 2, as expected, intrasexual competitiveness correlates positively with anxious and preventive jealousy for both men and women, but not with reactive jealousy.

Table 2. Correlations between three types of jealousy, intrasexual competitiveness, and attitudes toward multiple sexual relationships.

	1	2	3	4	5
1. Anxious jealousy	X	.46**	.09	.29**	.11
2. Preventive jealousy	.48**	X	.17*	.25**	.06
3. Reactive jealousy	.07	.17*	X	−.06	−.05
4. Intrasexual competitiveness	.24**	.32**	−.13*	X	.33**
5. Attitudes MSR	.03	.04	−.29**	.27**	X

Note. MSR = multiple sexual relationships; correlations for men above, for women below the diagonal.
* $p < .05$; ** $p < .01$.

Differences between ethnic groups in attitudes toward multiple sexual relationships

To examine the first part of RQ 5—if differences exist between the five ethnic groups in the attitude toward multiple sexual relationships—a GLM was conducted studying the effects of gender, ethnic group, and their interaction on the attitude toward multiple sexual relationships. There was only a significant effect of gender, $F(1, 499) = 20.77$, $p < .001$, $\eta^2 = .041$. Men ($M = 7.56$, $SD = 4.30$) had a much more positive attitude toward multiple sexual relationships than women ($M = 5.96$, $SD = 3.55$). The effect of ethnic group was not significant, $F(4, 499) = 0.63$, $p = .64$, and neither was the interaction between gender and ethnic group $F(4, 499) = 0.80$, $p = .53$. Given these findings, it did not make sense to examine the second part of RQ 5, that is, if differences in the attitude toward multiple sexual relationships between the ethnic groups are independent of demographic differences between the groups. In a similar vein, the answer to RQ 6—if differences in attitude to multiple sexual relationships might explain differences in jealousy between ethnic groups—is an unequivocal “no.”

Associations of jealousy with attitude toward multiple sexual relationships

To examine RQ 7—if reactive jealousy is more strongly related to attitudes toward multiple sexual relationships than anxious and preventive jealousy—we calculated the correlations between jealousy and the attitude toward multiple sexual relationships separately for men and women (see Table 2). Among men, attitudes did not correlate with any type of jealousy, $rs < .12$, $ps > .08$. However, among women the prediction was upheld: positive attitudes toward multiple sexual relationships correlated negatively with reactive jealousy, $r = -.29$, $p < .001$, but not with anxious and preventive jealousy, $rs < .05$, $ps > .48$.

Discussion

The present study examined differences in jealousy between the five major ethnic groups in the Republic of Surinam. Because many studies have shown that the experience of jealousy is different for men and women (e.g., Buunk & Dijkstra, 2015), we

also included gender in our analyses. The basic and most important finding is that substantive differences seem to exist between the ethnic groups in anxious as well as preventive jealousy, but not in reactive jealousy. More specifically, the Maroons and next the Creoles expressed the highest level of anxious as well as preventive jealousy. A possible explanation is that, of the five ethnic groups, these two groups can be characterized most clearly as African-Caribbean. In general, people from an African-Caribbean descent tend to have less stable relationships, making individuals from these groups more likely to be vigilant toward the possibility of infidelity of their partners (e.g., van Brummen-Girigori, Buunk, Dijkstra, & Girigori, 2016).

A possible explanation that group differences were only found for anxious and preventive jealousy is that these types of jealousy are more sensitive to the social and cultural environment than reactive jealousy. In the latter case, when a direct threat in the form of a rival is present, individuals in virtually all cultures tend to respond rapidly on the basis of spontaneous, automatic mechanisms (see also Massar & Buunk, 2010). In the absence of a direct rival, individuals may, depending on cultural context, engage in deliberation about possible outcomes and which behavior would be most effective to prevent infidelity. In this deliberation process, group-specific behaviors and norms may affect the formation of the jealousy response. This might explain why intrasexual competitiveness (including rumination on the potential threat due to a rival) was not associated with reactive jealousy, but overall with preventive jealousy. It could also explain why a negative attitude toward multiple sexual relationships, at least among women, was associated with more reactive jealousy, but not with more anxious and preventive jealousy. However, it must be noted that in all cultural groups individuals scored relatively very highly on reactive jealousy (means > 21 on a scale ranging between 5 and 25), but not on anxious and preventive jealousy. An alternative explanation is therefore that a ceiling effect on the measurement of reactive jealousy may have obscured the effect of cultural group.

Remarkably, differences between the groups in anxious and preventive jealousy were found to be independent of large differences between these ethnic groups in employment status, civil status, income, educational level and father absence during childhood, suggesting that the differences between the five ethnic groups pertain to genuine cultural differences. Group differences in jealousy could neither be explained by attitudes toward multiple sexual relationships nor intrasexual competition, since groups did not differ on these variables. A possible explanation for the finding that groups did not differ in intrasexual competitiveness is that intrasexual competitiveness is a relatively stable personality characteristic that may be relatively unaffected by cultural differences (see also Buunk & Fisher, 2009). The finding that groups did not differ in their attitudes toward multiple sexual relationships on the other hand may be attributed to the ongoing acculturation that has taken place in Surinam within and among the various groups during the last decades (e.g., St-Hilaire, 2001). More specifically, both urbanization and the growing use of the Internet may have increased exposure to and contact between members of different ethnic groups, causing a weakening of cultural boundaries. As a consequence, attitudes toward multiple sexual relationships within ethnic groups may have become more similar. Finally, there were a number of noteworthy gender differences. Firstly, in line with numerous studies (Buunk, Dijkstra, & Massar, 2018), among

all ethnic groups, men had more positive attitudes toward multiple sexual relationships. Secondly, also in line with previous studies (e.g., Barelds & Barelds-Dijkstra, 2007), among all ethnic groups, women showed more anxious jealousy than men did.

Contribution, future research, and limitations

To conclude, our findings are among the first to unequivocally show that there are genuine cultural differences in the levels of anxious and preventive jealousy, but not in reactive jealousy. These differences cannot be explained by differences in education, employment status, income, civil status, or father absence. A strength of the present study is that it was conducted in one language only, which makes it possible to overcome the validity problem inherent to the translation of items aimed at assessing emotions such as jealousy. The present study has a number of limitations. First, while we provided evidence of considerable cultural differences within Surinam, it does not imply that similar cultural differences exist anywhere other than in Surinam. Second, we could not provide insight into the psychological variables that may help explain differences between the groups in jealousy. Although some relations were found between different types of jealousy on the one hand and attitudes toward multiple sexual relationships and intrasexual competitiveness on the other hand, these variables could not explain group differences in anxious and preventive jealousy. Future research may help unravel variables that better explain differences in jealousy between ethnic groups, specifically the ethnic groups examined in the present study. A possible variable of interest for future research among these groups is the size and modernism of the community individuals live in. For instance, whereas many Maroons live in small tribes in the jungle where there is hardly any access to modern facilities such as the Internet, many Creoles live in the city with many people and easy access to such modern facilities such as the Internet. In general, in more crowded and modern living environments, people are more exposed to members of the opposite sex, which may fuel a partner's jealousy (Arnocky, Ribout, Mirza, & Knack, 2014). Despite these limitations, the present study contributes to a better understanding of the cultural context of jealousy, by having examined jealousy in an ethnically diverse country with a common language. It may also help in better understanding the differences in relationship functioning among people from different ethnic backgrounds.

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