Dimensionality and Transcultural Specificity of the Sexual Attraction Questionnaire (SAQ)

Juan Fernández¹, María Ángeles Quiroga¹, Vanessa J. Icaza², and Sergio Escorial¹

¹Universidad Complutense (Spain) ²Universidad Católica de Santa María (Peru)

Sexual attraction was considered a component of sexual orientation from the beginning of the second half of the 20th century to present times. However, some recent researchers have studied sexual attraction as an independent field measuring it by the Sexual Attraction Questionnaire (SAQ). This study analyzes sexual attraction through the SAQ in 400 university students from a Peruvian catholic university. These participants -191 women and 209 men- show a very diverse curricular background. The following hypotheses were tested: a) the structure of the SAQ, pointing out two concepts: attraction to men and attraction to women; b) the high inverse correlation between these two concepts or factors; c) the specific impact of this context in sexual attraction: higher percentage of attracted by none of the sexes and lower percentage of attracted to the opposite sex, in comparison with other contexts; and d) the Lippa prediction (2006, 2007), regarding a higher polarization of sexual attraction for men than for women. Results support the first three hypotheses. Clarifications are laid down with regard to the fourth one. Discussion focuses on theoretical and applied advantages of using the SAQ as opposed to the frequent use of a single item of sexual attraction for each sex.

Keywords: sexual attraction typology, sexual orientation, dimensionality, contexts, polarization.

La atracción sexual se ha venido considerando, desde el inicio de la segunda parte del siglo XX hasta nuestros días, como un componente más de la orientación sexual. Recientemente, se han realizado algunas investigaciones de la atracción sexual considerada en sí misma. Una de las formas de valorarla ha sido mediante el CAS (Cuestionario de Atracción Sexual). Un grupo de 400 estudiantes universitarios peruanos (191 mujeres y 209 varones), con una gran diversidad curricular, cumplimentó este instrumento. Se han puesto a prueba las siguientes hipótesis: a) la estructura del instrumento, materializando dos conceptos: la atracción hacia varones y la atracción hacia mujeres, b) la existencia de una relación inversa alta entre estos dos constructos o factores; c) la incidencia diferencial de este contexto en las frecuencias con que se manifiestan algunos tipos de atracción sexual: mayor porcentaje de los no atraídos por ningún sexo y menor de los atraídos por el otro sexo, en comparación con otros contextos; y d) la predicción de Lippa (2006, 2007) de la mayor polarización de la atracción sexual en los varones que en las mujeres. Los resultados suponen un apoyo a las hipótesis planteadas, aunque se establecen determinadas matizaciones con respecto a la cuarta. Por último se discuten las ventajas, tanto teóricas como aplicadas, de la utilización de un instrumento como el CAS frente al uso, tan frecuente, de un único ítem de atracción sexual para cada sexo.

Palabras clave: tipología de la atracción sexual, orientación sexual, dimensionalidad, contexto, polarización.

Correspondence concerning this article should be addressed to Juan Fernández. Departamento de Psicología Evolutiva y de la Educación, Facultad de Psicología, Campus de Somosaguas. 28223 Pozuelo de Alarcón – Madrid (Spain). E-mail: jfernandez@psi.ucm.es Web page: http://sites.google.com/site/jfsprofile/

Sexual attraction has been analyzed from a wide range of viewpoints. Darwin's is one of the most extensive. He considered sexual attraction as an essential factor of his theory of evolution (Darwin, 1871). Within the general scope of evolutionist psychology, we can find the extensive and documented Bussian work regarding the evolution of sexual desire (Buss, 2003). Evolutionist theories try to explain the universal aspects of sexual attraction through the features that have enabled the species' survival and reproduction (Reis & Sprecher, 2009). At an ontogenetic level, sexual attraction would be the result of adrenarche, at the age of 10, with the appearance of a stable sexual attraction to others (McClintock & Herdt, 1996). However, these same authors admit that the cultural contexts preceding gonadarche play an important role in the understanding of the emergence of human sexual attraction (Herdt & McClintock, 2000). In this sense, theories such as social constructionism, biosocial theory or social context theory consider that attitudes, behaviors and experiences related to sexuality are directed by socio-cultural "scripts", as they induce the appearance of differences in sexual attraction, according to the different environments (Eagly & Wood, 2005; Reis & Sprecher, 2009; Wood & Eagly, 2002). These differences are expressed in the frequencies with which men and women report feeling an attraction towards the opposite sex, the same sex, both sexes and neither sex. Within socio-cultural environments, religious belief is one of the factors with a higher influence on sexual attraction (Paul, Fitzjohn, Eberhart-Phillips, Herbison, & Dickson, 2000).

The concept of sexual attraction has not been well defined. Initially it was considered a synonym of sexual orientation. Later, it was included as a component of sexual orientation, as this sexual orientation was considered to be multidimensional (Berkey, Perelman-Hall, & Kurdek, 1990; Coleman, 1987; Davis, Yarber, Bauserman, Schreer, & Davis, 1997; Klein, 1990; Sell, 1996, 1997; Weinrich et al., 1993). At the moment, sexual attraction exhibits overlapping with many related terms: physical attraction / beauty, sexual desire, occasional sex, pairing, lust or romantic love, among others. This makes comparison between studies very difficult (Diamond, 2003, 2008; Landau et al., 2006; Langlois et al., 2000).

The American Psychological Association (2008) considers sexual orientation as an enduring pattern of emotional, romantic, and/or sexual attractions to men, women, or both sexes. Sexual orientation defines the group of people in which one is likely to find the satisfying and fulfilling romantic relationships. This conception clearly describes the wide range that the concept of sexual orientation covers. The concept of sexual attraction is more restricted. It makes reference to the desire or inclination to prefer sexual contacts with one sex over the other, with both sexes or with neither (American Psychiatric Association, 2000; Fernández, Quiroga, & Rodríguez, 2006). With these delimitations, the behavioral patterns, emotions, thoughts and social image that a person

manifests in their sexual preferences defines the type of sexual attraction that characterizes them. This differentiation gives way to all the variability resulting from the combination of the types of orientation with the types of sexual attraction. In this way, people with a heterosexual orientation, but without sexual attraction to either sex (without any pathological or health problem) would have their own entity or identity (Bogaert, 2006).

Since sexual attraction has generally only been considered as one of the multiple components of sexual orientation, it has lacked an independent and detailed analysis. In fact, in most research it has been assessed by means of a single item-"How sexually attracted are you to women or to men" (Lippa, 2006, 2007)-or, at best, through a few number of direct questions aimed at finding out the sex is each person attracted to (Busseri, Willoughby, Chalmers, & Bogaert, 2008; Galliher, Rostosky, & Hughes, 2004; Giovazolias & Davis, 2001; Hinderliter, 2009; Rostosky, Owens, Zimmerman, & Riggle, 2003). However, sexual attraction, far from being a mono-faceted dimension, is a versatile dimension with emotional, cognitive, social and behavioral aspects incorporated. Therefore, a single question referring only to the object of attraction (men or women) is insufficient to capture the many aspects that sexual attraction shows due to its heterogeneous qualities (Stokes, Millar, & Mundhenk, 1998). Consequently, an instrument of assessment with good psychometric properties is needed. It would allow assessing the sexual attraction profile for each person across different populations, with or without similar characteristics. Thus, data could be obtained from different environments, allowing the extraction of the general and specific components of sexual attraction.

Up to now, the lack of instruments for the assessment of sexual attraction is generating considerable difficulties in different fields (research, clinical or educational), as professionals involved in its evaluation are forced to consider unique something that is plural in its nature (Bogaert, 2006; Fernández, Quiroga, & Del Olmo, 2006a; Stokes et al., 1998). Not only do the specialists and professional associations have to deal with such difficulties, but also the persons subject to study, especially in the clinical field (Bernsen, Tabachnick, & Pope, 1994; Harris, 2001; Harris & Harriger, 2009; Ladany et al., 1997; Pope, Keith-Spiegel, & Tabachnick, 2006; Sell & Becker, 2001).

In order to satisfy some of these needs, Fernández et al. (2006) have developed a new assessment instrument for sexual attraction. The Sexual Attraction Questionnaire (SAQ) was elaborated to assess sexual attraction among young people. It is made up of statements that reflect thoughts, feelings, emotions, behaviors and social image. Answers are collected using a Likert-type rating scale. It offers a scoring for each scale: Attraction to men and Attraction to women. This instrument can be administered individually or collectively, so it can be used both for

clinical and research purposes. The typological classification is performed from the mean points of the rating scale. Each person's sexual attraction profile allows for all the richness of the subtle individual differences of their sexual attraction to be observed. When applied to groups, in transnational studies, it allows detecting common aspects related to culture as well as environmental specific aspects (Fernández, Quiroga, Del Olmo, Buizza, & Imbasciati, 2009). These authors compared sexual attraction in two groups of young people, one from Italy and the other from Spain (both similar in culture). Results showed great similarities regarding sexual attraction typologies and differences in the answer trends of Italian women, who rarely chose the extreme values of rating scale (attraction reduction) in comparison with Spanish women. This is precisely the aspect that the polarization hypothesis suggested by Lippa (2006, 2007) deals with. According to Lippa's studies, when asked "How attracted are you to women" and "How attracted are you to men", men attracted to women show a higher response polarization than women attracted to men. However, it is possible that this response trend varies amongst men and women, when they are asked about the different facets of sexual attraction.

The aim of this study is to analyze sexual attraction in university students with a diverse curricular background, from a non-European Spanish—speaking country (Peru), studying in a catholic university. The objectives are: a) to verify if SAQ adequately measures sexual attraction in a different context (Peru) to which it was developed in (Spain) and b) to observe if it allows to differentiate between common and differential aspects (percentages) of the type of sexual attraction of those university students.

Two groups of hypotheses will be tested. Firstly, those that make reference to the dimensionality of the sexual attraction instrument (SAQ) and secondly, those that refer to specificity. The hypotheses for the first group are (a) sexual attraction in young adults is organized according to two factors that reflect attraction to women and attraction to men. In other words, the dimensional structure of SAQ reproduces a bifactorial model; (b) these two factors should be inversely related when dealing with participants who have not been biased a priori according to their sexual orientation.

In relation to specificity, the first hypothesis is that diverse social contexts (developed versus developing countries) can show variations in the percentage of people classified according to the four-fold typology—attraction to both sexes, to men, to women or to neither. It is plausible to infer that the Catholic university context could increase the group of those attracted to neither sex and decrease those attracted to the opposite sex.

The second hypothesis for specificity is that, according to Lippa's hypothesis, within the group of those attracted to the opposite sex, males attracted to women will show a higher polarization than females attracted to men. However, this polarization may not be of the same magnitude in each and every one of the items.

Method

Participants

The study was carried out with 400 Peruvian university students (191 women and 209 men). Mean age was 20.21 (SD = 1.93) for women and 21.30 (SD = 2.45) for men. Age range was 17-31 for women and 17-33 for men. Participants came from a wide range of graduate programs: 52 from Social Sciences, 92 from Law and Business Sciences, 106 from Health Sciences and 150 from Engineering Sciences.

Instrument

The shortened Sexual Attraction Questionnaire (SAQ) is made up of 16 items: eight of them refer to attraction to men and eight to attraction to women (Fernández et al., 2009). These items relate to: 1) thoughts and fantasies; 2) feelings, emotions and affections; 3) actions and behaviors; and 4) social image. Each item is rated by means of a 7point Likert scale (1 for the lowest agreement and 7 for the highest one). The scores from items related to attraction to men, together with the ones related to attraction to women, make possible a four-fold typology. The first type are those attracted to men, with scores higher than the mean value of the rating scale measuring attraction to men (that is 32, since the rating scale ranges from 1 to 7-4 being its half valueand there are 8 items) and scores lower or equal to this mean value (32) on the attraction to women scale. The second type are those attracted to women, with scores higher than the mean value of the attraction to women scale and scores lower or equal to the mean value of the attraction to men scale. The third type refers to those attracted to both sexes, with scores higher than the mean value on both scales. Finally, the fourth type are those not attracted by either sex, with scores lower or equal to the mean value of both scales.

Internal consistency values obtained from previous research are high for both scales: Attraction to men (.98) and Attraction to women (.97). Exploratory factor analyzes carried out with different versions of the SAQ support the hypothesis of two inversely related factors. However, in some cases, only a single bipolar factor has appeared (Fernández et al., 2006; Fernández, Quiroga, & Del Olmo, 2006b; Fernández et al., 2009).

After a previous pilot study carried out amongst Peruvian students, certain minor changes (words) were carried out in four items (1, 3, 9 and 18), without affecting the English version. The item numbers always correspond to the numbering in the first SAQ version (22 items) in order to facilitate comparison between studies, regardless of the version used.

Procedure Results

The SAQ was applied during the students' regular classes, upon coordination with the appropriate university authorities and approval by professor and students. Students were asked to be honest and were reassured about the anonymity of the test. They were not told at any moment about the goals of the questionnaire.

Data Analysis

In order to study the structure of SAQ-its dimensionality-a confirmatory factor analysis (CFA) was carried out. Such analysis was performed over the polychoric correlations matrix due to the ordinal nature of the items composing this instrument. The maximum likelihood (ML) procedure was used in view of the advantages to the study of dimensionality that some authors attribute to it (Ferrando, 1996).

Two models were contrasted. One model was the one in which all SAQ items load in a single bipolar factor (unidimensional model), the other model is the one in which the SAQ items load into two inversely related factors (bidimensional model). To perform these statistical analyzes, the LISREL 8.80 for Windows computer program was used (Jöreskog & Sörbom, 2004).

A contingency table analysis (χ^2 , contingency Coefficient "C" with Sakoda corrections) was performed between the sexual attraction typology and sexual dimorphism, in order to analyze the influence of the context on the amount of men and women that exhibit each type of sexual attraction.

As for the sexual attraction polarization, correlations were obtained separately for each sex, and only for individuals attracted to men and for those attracted to women, between the items with similar meaning in each scale. The SAQ was designed so that each scale would contain items reflecting thoughts, feelings, behaviors and social image, verbally adapted to each sex's reality. Therefore, from a strictly formal standpoint, items from each scale are not completely equivalents. Correlations were calculated for the five items of each scale with evident contents resemblance. Furthermore, we have analyzed men and women's answers distributions for those items in order to see specifically the answer trends (similarities and differences in polarization) for men and for women. Analyzes were carried out with the SPSS 17, setting type I error at Cronbach's alpha = .05.

Table 1
CFA Models of the SAQ and Goodness-of-Fit Indexes

MODEL	χ^2	df	RMSEA	NNFI	RMSR
1 factor	3015.98	104	.260	.82	.089
2 factors	283.60	103	.066	.99	.028

Table 1 shows the goodness-of-fit indexes for the models tested in this study. In accordance with usual criteria (Hu & Bentler, 1999; Schreider, Stage, King, Nora, & Barlow, 2006), the fit of the two-factor model was quite appropriate, while the single-factor model did not show a satisfactory fit.

Since the single-factor model is nested in the second model, it is possible to compare the fit for both of them to check if a substantial improvement is obtained when changing from single-factor model to the two-factor model. The hierarchical test of the difference between both models gives a value of $\Delta\chi^2_{(1)} = 2732.38$, which indicates that a substantial improvement is achieved in the adjustment of the two-factor model.

Figure 1 represents the model that shows the best fit. It incorporates the factor loadings for each item as well as the correlation between both factors. It is worth noting the high value of this negative correlation (r = -.84; p < .001), similar or higher than those obtained in previous research (Fernández et al., 2009).

The obtained internal consistency values (.97 for the Attraction to men factor and .97 for the Attraction to women factor) are adequate, both in comparison with other studies and from an absolute point of view, that is, taking into account the range of values of this coefficient.

Table 2 shows the association between attraction typology and sexual dimorphism, which is statistically significant, χ^2 (3, N=400) = 310,164; p<.001, and substantially high (C=.66; $C^*=.93$). Residual analyzes show that association is due to three of the four categories (standardized residuals \geq 2): those participants of both sexes attracted to men or to women and those not attracted by either sex. In the case of those attracted to men and those attracted to women, there are a lot less that feel attracted to their own sex than is to be expected under the independence between variables assumption. In the case of those not attracted to either sex, there are more women and fewer men than is to be expected.

In light of these results, there are various aspects that deserve to be highlighted in accordance with the proposed hypotheses on the influence of context in sexual attraction (majority & minority). First, women are, in their majority, attracted to men and men are attracted to women. This group represents a 77.25 % of participants. Secondly, the ratio of participants that report not feeling attracted to either sex ascends to 21.25%. Thirdly, the amount of people attracted

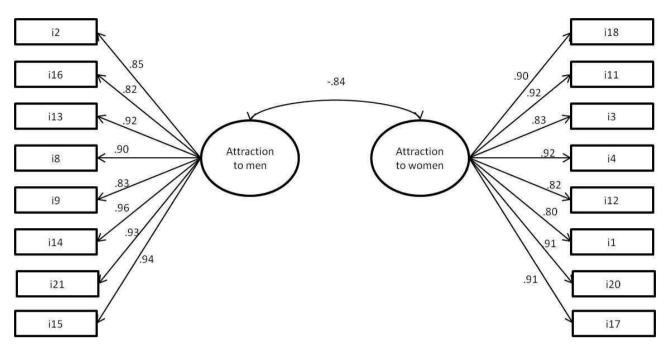


Figure 1. SAQ's Two-Factor Model (16 items).

Table 2
Association Between Sex and Sexual Attraction Typology

		Sex	Total
Sexual Attraction Typology	Woman	Man	
Attracted to neither sex			
Frequency	57	28	85
Standardized residuals	2.6	-2.5	
Attracted to men			
Frequency	130	1	131
Standardized residuals	8.5	-8.2	
Attracted to women			
Frequency	2	179	181
Standardized residuals	-9.1	8.7	
Attracted to both sexes			
Frequency	2	1	3
Standardized residuals	.5	5	
Total Frequency	191	209	400

to both sexes is very low (0.75%). The same occurs with the number of people attracted by their own sex (0.75%).

The hypothesis of a higher polarization in males has only been analyzed for the majority group (those attracted by the opposite sex), *heterosexuals* in Lippa's (2007) study. Obtained data appear in Table 3 and in Figure 2. Essentially, they show that polarization depends partially on the specific contents of the different items: (a) higher polarization for men in items 3/16, 4/21 and 20/8. In these items the correlation is higher for men than for women, the difference being statistically significant (Z = 3.38, 2.43 and 4.61,

respectively); (b) Higher polarization for women in items 12/9 (Z = -2.73); (c) No statistically significant differences in items 11/14.

Moreover, polarization is higher for both sexes in what they reject, as score 1 is proportionally higher compared to score 7. However, regarding what they accept or what they feel attracted to, scores show more variability: answering frequencies divide up among 7, 6, 5 or 4. The analysis of each one of the items enables to make slight clarifications, because they present certain differences as shown in Figure 2.

Table 3

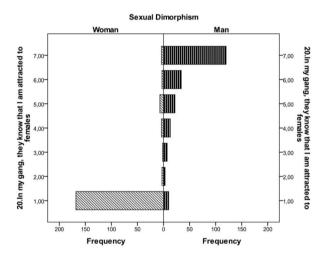
Correlations, for Men and Women Separately, Between Similar Items from Attraction to Women and Attraction to Men's Scales

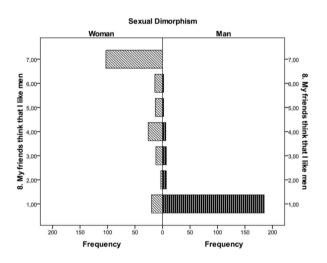
Attraction to Women's Scale	Attraction to Men's Scale	Women ($N = 132$)	Men $(N = 180)$	Z
20. In my gang, they know that I am attracted to women	8. My friends think that I like men	228**	432**	4.61**
12. I find some female TV presenters very erotic	9. I like to look at photographs of superstars if they are attractive men	229**	102	-2.73*
4. I would like to know that a woman is attracted to me	21. I would like it very much if a man were in love with me	127	240**	2.43*
11. I would like to sleep with a woman	14. I would like to engage in sexual relations with the man I choose	266**	254**	-0.26
3. At parties, I like to be near (in physical contact with) women	16. Sometimes I feel like seducing men	041	200**	3.38**

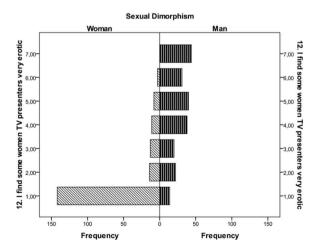
^{*} *p* < .05; ** *p* < .01.

Attraction to Women's Scale

Attraction to Men's Scale







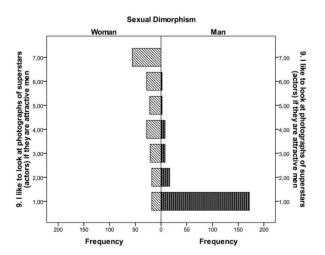
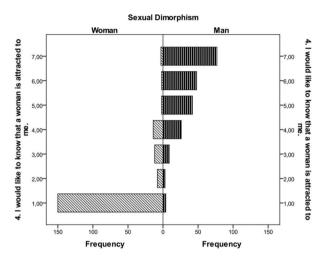
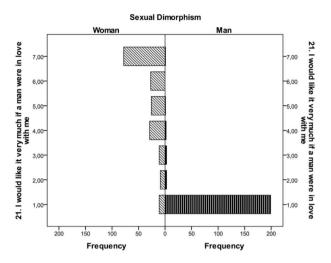


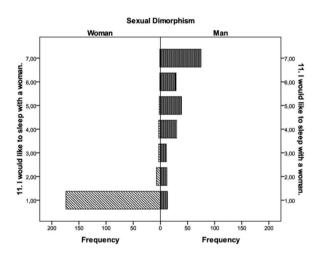
Figure 2. Sexual Attraction Polarization Levels According to Different Items of SAQ.

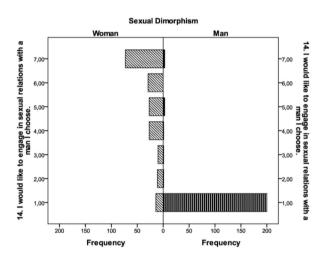
Attraction to Women's Scale

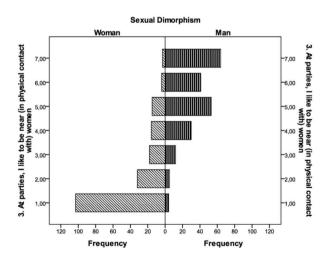
Attraction to Men's Scale











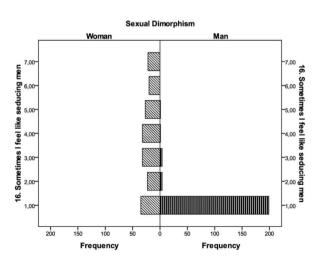


Figure 2 (cont.). Sexual Attraction Polarization Levels According to Different Items of SAQ.

Discussion

Results are quite conclusive in terms of the sexual attraction predictions assessed through SAQ. The two hypotheses that refer to dimensionality of the questionnaire receive a clear empirical support, as the two factors predicted are confirmed. These two factors are inversely related: Attraction to women and Attraction to men. These results, obtained using CFA, seem to corroborate previous studies in which factor analyzes and cluster analyzes were both used (Fernández et al., 2006; Fernández et al., 2009).

In view of these results, we may conclude that, in the different countries analyzed to date (Spain, Italy & Peru), the assumptions underlying the elaboration of SAQ are ratified. This means that sexual attraction is shown in behaviors, thoughts, feelings and social image, organized around the two considered objects of attraction: women and men (Fernández et al., 2006; Fernández et al., 2006b; Fernández et al., 2009). Given that SAQ maintains its psychometric properties across the different countries evaluated to date, researchers may now substitute the single question on sexual attraction by an instrument that enables taking different facets of sexual attraction into account: thoughts, feelings, actions and social image (Busseri et al., 2008; Galliher et al., 2004; Giovazolias & Davis, 2001; Lippa, 2006; Rostosky et al., 2003).

The evaluation of sexual attraction in four expression levels allows to differentiate between what is thought and/or felt and what is done. To be able to differentiate between the sexual attraction internally expressed (thoughts and feelings) from the sexual attraction expressed in actions is relevant, above all and especially, at an individual level and specifically for young adults. For example, the lack of consistency between thoughts/feelings and behaviors could result in a greater vulnerability ("diathesis-stress model") and its early detection could be crucial to establish educational interventional programs. When it comes to therapists, data on the sexual attraction they feel towards the persons who request their services show how relevant the difference is between the internal and the external expression of sexual attraction. Results show a clear difference in percentages between their thoughts/feelings (high) and their actions (low). In this specific case, the inconsistency between what the therapists think/feel (certain sexual attraction towards some clients) and their behavior is a result of the self-control and the maturing they are believed to have achieved (Bernsen et al., 1994; Harris, 2001; Harris & Harriger, 2009; Ladany et al., 1997; Pope et al., 2006; Sell & Becker, 2001). These two examples illustrate the usefulness of SAQ in the assessment of the sexual attraction manifestations at an individual level and within the adult world. It is also useful amongst young adults, when the interest is to obtain the sexual attraction profiles of the tested group (Fernández et al., 2006). Obviously, these suggestions must be submitted to an

empirical study in further research, as they have not been analyzed in this study.

As for predictions referred to the impact of each context's specificity, it must be said that obtained results through the SAQ make it possible to clearly grasp most of the contextual differences. In this way, it can be stated that the group of people that report not feeling attracted to either sex is very high (21.25%) within this group of highly diverse curricular background. This is especially apparent when it is compared to the data available to date: 3.85% in a group of Spanish university students in 2001, t(580) = 5.33, p < .001; 4.17% in another group in 2006, t(823)= 7.43, p < .001; 1.95% in a group in 2008, t(653) = 6.99, p < .001 and finally, 3.07% in a group of Italian university students in 2008, t(691) = 6.91, p < .001 (Fernandez et al., 2006a; Fernandez et al., 2009). Within the group of people that do not feel attracted to either sex, there is a predominance of women (30% of the total number of evaluated women) over men (14% of the total number of evaluated men). Along this same line but with a random sample of 1800 participants, Bogaert (2004) obtained a 1% of people that did not feel attracted to either sex. Within this 1%, there were more women than men and more religious people than non-religious people. Moreover, asexual women suffered a later menarche, which lead Bogaert to propose that there can be both psychosocial and biological paths that lead to asexuality. This does not necessarily describe a health problem or a pathology, as it can be clearly differentiated from the hypoactive sexual desire disorder (Bogaert, 2006). In the case of attraction to the opposite sex, the percentages, obviously, are again quite discrepant: 77.25% (Peru), 91.20%, 91.25%, and 89.02% (Spain) and 92.83% (Italy), yielding all differences statistically significant (p < .001).

At the same time, the percentage of people attracted to both sexes (0.75%) or by the same sex (0.75%) seems quite low, when the data from the studies above mentioned are taken into account: 1.10%, 2.58%, 5.49% and 2.39% for attraction to both sexes and 3.85%, 1.99%, 3.53% and 1.71% for attraction to the same sex (in approximately 50% of cases, the differences were statistically significant but not in the remaining 50%).

In summary, people attracted to the opposite sex generally amount to 90%, with exceptions such as this present study. The remaining 10% is divided between those attracted to both sexes, to the same sex or to neither sex. The effect of context over the manifestation of sexual attraction can be observed from the percentages with which each type of sexual attraction is shown. Could the religious beliefs of a Catholic university, to where the participants of this study belonged, have influenced the highly different percentages of people not attracted to either sex? This seems very likely, as the data obtained in this study (all differences obtained a statistical significance, p < .001) are similar to data from Paul et al. (2000). In that study, sexual abstinence up to the age of 21

in the New Zealand cohort born in 1972/73 was analyzed. 16% of religious young people had not had sexual relations at the age of 21, whereas this ratio among non-religious young people amounted to 9%. Nevertheless, the percentage of asexuality detected among the university students tested could be the result of a belief system stretching out along all the country of Peru. Finally, we must recall that the 21% of individuals attracted to neither sex could be somehow increased due to social desirability, for the evaluation was carried out within the university lecture rooms. The low percentages of those attracted to the same sex or those attracted to both sexes could be due to the lack of an important influence of the different sexual liberation movements and the heterosexist patterns maintained by some governments. Nevertheless, the fact that not all differences reached statistical significance is relevant because it could indicate that they will slowly decrease.

These percentage comparisons obtained with Peruvian, Spanish and Italian university students, clearly show the usefulness of SAQ in descriptively capturing the possible similarities and differences across countries in relation to sexual attraction.

Concerning the last prediction -a higher polarization of sexual attraction in men - data enable to clarify some of the Lippa conclusions (2006, 2007). What is valid for sexual attraction assessed by means of a single general item, it is not when taking into consideration different sexual attraction expressions. In our data, results show higher polarisation for men in the items that represent behaviour ("At parties, I like to be close-in contact with-women") and social image ("My group knows that I am attracted to women"). However, women show higher polarization than men when dealing with indirect sexual attraction ("I like to look at star's /actor's photographs if they are attractive men"). More interestingly, men and women do not differ in the polarization of their responses when dealing with sexual relationships ("I would like to have sexual relations with the man I choose"; "I would like to have sex with a woman").

It is a common factor among men and women that polarization is much stronger in the no attraction pole than in the attraction one. That is, that both young women and young men are polarized when rejecting what they are not attracted to. And this happens in every item: Men and women attracted to the opposite sex seem to be willing to express that they are not attracted to their own sex, neither in thought, nor in feeling, nor in action nor in social image. Nevertheless, attraction to the opposite sex shows more variability as scorings differ from 7 and, in some items, the variability range goes from 4 to 7 (For example, when referring to the item: "I would like to know that a woman is attracted to me"). As we have already pointed out, items subject to comparison in this work are not completely identical. Therefore, the correlation values obtained could be the consequence of those semantic nuances. In this sense, our data complement Lippa's ones (2007), where men appear to be more polarized when asked about sexual attraction. According to our data, women and men attracted to the opposite sex appear to be more polarized depending on the level of expression of sexual attraction tested (social image in men, *indirect* attraction in women). If future works could confirm this point, it would mean that it is not that women are less polarized, but that they express their polarization in different contexts. This question deserves deeper research.

In short, it seems that the SAQ fulfils the requirement of consistency in the core point, its dimensionality, consisting of two clear factors: Attraction to women and Attraction to men. Furthermore, it grasps the nuances regarding similarities and differences of the different contexts: common and specific percentages for the four sexual attraction types (attracted to both sexes, to neither sex, to women or to men. Likewise, it makes it possible to evaluate a higher or a lower polarization of both sexes in the different facets of the sexual attraction expression, which is a very interesting aspect when comparing groups belonging to different contexts.

References

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

American Psychological Association. (2008). Answers to your questions: For a better understanding of sexual orientation and homosexuality. Washington, DC: Author.

Berkey, B. R., Perelman-Hall, T., & Kurdek, L. A. (1990). The Multidimensional Scale of Sexuality. *Journal of Homosexuality*, 19, 67–88. http://dx.doi.org/10.1300/J082v19n04 05

Bernsen, A., Tabachnick, B. G., & Pope, K. S. (1994). National survey of social workers' sexual attraction to their clients: Results, implications, and comparison to psychologists. *Ethics & Behavior*, 4, 369–388. http://dx.doi.org/10.1207/s15327019eb0404 4

Bogaert, A. F. (2004). Asexuality: Prevalence and associated factors in a national probability sample. *The Journal of Sex Research*, 41, 279–287. http://dx.doi.org/10.1080/00224490409552235

Bogaert, A. F. (2006). Toward a conceptual understanding of asexuality. *Review of General Psychology*, 10, 241–250. http://dx.doi.org/10.1037/1089-2680.10.3.241

Buss, D. M. (2003). The evolution of desire. Strategies of human mating (Rev. Ed.). New York, NY: Basic Books.

Busseri, M. A., Willoughby, T., Chalmers, H., & Bogaert, A. F. (2008). On the association between sexual attraction and adolescent risk behavior involvement: Examining mediation and moderation. *Developmental Psychology*, 44, 69–80. http://dx.doi.org/10.1037/0012-1649.44.1.69

Coleman, E. (1987). Assessment of sexual orientation. *Journal of Homosexuality*, 14, 9–24. http://dx.doi.org/10.1300/J082v14n01_02

Darwin, C. (1871). *The descent of man and selection in relation to sex*. London, England: Murray.

- D'augelli, A. R., & Patterson, C. J. (2001). *Lesbian, gay, and bisexual identities and youth: Psychological perspectives.* New York, NY: Oxford University Press.
- Davis, C. M., Yarber, W. L., Bauserman, R., Schreer, G., & Davis, S. L. (1997). *Handbook of sexuality-related measures*. Thousand Oaks, CA: Sage.
- Diamond, L. M. (2003). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Developmental Review*, 110, 173–192. http://dx.doi.org/ 10.1037//0033-295X.110.1.173
- Diamond, L. M. (2008). Sexual fluidity: Understanding women's love and desire. Cambridge, MA: Harvard University Press.
- Eagly, A. H., & Wood, W. (2005). Universal sex differences across patriarchal cultures ≠ evolved psychological dispositions. *Behavioral and Brain Sciences*, 28, 281–283.
- Fernández, J., Quiroga, M. A., & Del Olmo, I. (2006a). Is there any relationship between sexual attraction and gender typology? *The Spanish Journal of Psychology*, 9, 3–9.
- Fernández, J., Quiroga, M. A., & Del Olmo, I. (2006b). Is sexual attraction independent of the instrumental and expressive traits? *The Spanish Journal of Psychology*, *9*, 162–170.
- Fernández, J., Quiroga, M. A., & Rodríguez, A. (2006). Dimensionalidad de la atracción sexual [Sexual attraction: Its dimensionality]. *Psicothema*, *18*, 392–399.
- Fernández, J., Quiroga, M. A., Del Olmo, I., Buizza, C, & Imbasciati, A. (2009). Temporal stability and cross-national consistency of the dimensional structure of the Sexual Attraction Questionnaire (SAQ). *The Spanish Journal of Psychology*, 12, 725–736.
- Ferrando, P. J. (1996). Evaluación de la unidimensionalidad de los ítems mediante análisis factorial [Assessing the unidimensionaliy of a set of items using factor-analytic procedures]. *Psicothema*, *8*, 397–410.
- Galliher, R. V., Rostosky, S. S., & Hughes, H. K. (2004). School belonging, self-esteem, depressive symptoms in adolescents: An examination of sex, sexual attraction status, and urbanicity. *Journal of Youth and Adolescence*, 33, 235–245. http://dx.doi.org/10.1023/B:JOYO.0000025322.11510.9d
- Giovazolias, T., & Davis, P. (2001). How common is sexual attraction towards clients? The experiences of sexual attraction of counselling psychologist toward their clients and its impact on the therapeutic process. *Counselling Psychology Quarterly*, 14, 281–286. http://dx.doi.org/10.1080/09515070110100974
- Harris, S. M. (2001). Teaching family therapists about sexual attraction in therapy. *Journal of Marital and Family Therapy*, 27, 123–128. http://dx.doi.org/10.1111/j.1752-0606.2001.tb01145.x
- Harris, S. M., & Harriger, D. J. (2009). Sexual attraction in conjoint therapy. *The American Journal of Family Therapy*, 37, 209– 216. http://dx.doi.org/10.1080/01926180802152032
- Herdt, G., & McClintock, M. (2000). The magical age of 10. *Archives of Sexual Behavior, 29,* 587–606. http://dx.doi.org/10.1023/A:1002006521067
- Hinderliter, A. C. (2009). Methodological issues for studying asexuality. *Archives of Sexual Behavior, 38*, 619–621. http://dx.doi.org/10.1007/s10508-009-9502-x

- Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55. http://dx.doi.org/10.1080/10705519909540118
- Jöreskog, K. G., & Sörbom, D. (2004) Interactive LISREL for MS Windows Opening Systems. Chicago, CA: Scientific Software International.
- Klein, F. (1990). The need to view sexual orientation as a multivariable dynamic process: A theoretical perspective. In D. P. McWhirter, S. A. Sanders, & J. M. Reinisch (Eds.), Homosexuality/heterosexuality: Concepts of sexual orientation (pp. 277-282). New York, NY: Oxford University Press.
- Ladany, N., O'Brien, K. M., Hill, C. E., Melincoff, D. S., Knox, S., & Petersen, D. A. (1997). Sexual attraction toward clients, use of supervision, and prior training: A qualitative study of predoctoral psychology interns. *Journal of Counseling Psychology*, 44, 413–424. http://dx.doi.org/10.1037/0022-0167.44.4.413
- Landau, M. J., Goldengerg, J. L., Greenberg, J., Solomon, S., Martens, A., Pyszczynski, T. ... Gillath, O. (2006). The siren's call: Terror management and the threat if men's sexual attraction to women. *Journal of Personality and Social Psychology*, 90, 129–146. http://dx.doi.org/10.1037/0022-3514.90.1.129
- Langlois, J. H., Halakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxism or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, 126, 390–423. http://dx.doi.org/10.1037/0033-2909.126.3.390
- Lippa, R. A. (2006). Is high sex drive associated with increased sexual attraction to both sexes? *Psychological Science*, 17, 46–52. http://dx.doi.org/10.1111/j.1467-9280.2005.01663.x
- Lippa, R. A. (2007). The relation between sex drive and sexual attraction to men and women: A cross-national study of heterosexual, bisexual, and homosexual men and women. *Archives of Sexual Behavior, 36*, 209–222. http://dx.doi.org/10.1007/s10508-006-9146-z
- McClintock, M. K., & Herdt, G. (1996), Rethinking puberty: The development of sexual attraction. *Current Directions in Psychological Science*, 5, 178–183. http://dx.doi.org/10.1111/ 1467-8721.ep11512422
- Paul, C., Fitzjohn, J., Eberhart-Phillips, P., Herbison, P., & Dickson, N. (2000). Sexual abstinence at age 21 in New Zealand: The importance of religion. *Social Sciences and Medicine*, 51, 1–10. http://dx.doi.org/10.1016/S0277-9536(99)00425-6
- Pope, K. S., Keith-Spiegel, P., Tabachnick, B. G. (2006). Sexual attraction to clients: The human therapist and the (sometimes) inhuman training system. *Training and Education in Professional Psychology*, 8, 96–111. (Reprinted from *American Psychologist*, 1986, 41, 147–158). http://dx.doi.org/10.1037/0003-066X.41.2.147
- Reis, H. T., & Sprecher, S. K. (2009). *Encyclopedia of human relationships* (p. 135). Thousand Oaks, CA: Sage.
- Rostosky, S. S., Owens, G., Zimmerman, R. S., & Riggle, E. D. B. (2003). Associations among sexual attraction status, school belonging, and alcohol and marijuana use in rural high school students. *Journal of Adolescence*, 26, 741–751. http://dx.doi.org/10.1016/j.adolescence.2003.09.002

- Schreider, J. B., Stage, F. K., King, J., Nora, A., & Barlow, E. A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Education Research*, 99, 323–337.
- Sell, R. L. (1996). The Sell Assessment of Sexual Orientation: Background and scoring. *Journal of Gay, Lesbian, and Bisexual Identity, 1*, 295–310.
- Sell, R. L. (1997). Defining and measuring sexual orientation: A review. *Archives of Sexual Behavior*, 26, 643–658. http://dx.doi.org/10.1023/A:1024528427013
- Sell, R. L., & Becker, J. B. (2001). Sexual orientation data collection and progress toward healthy people 2010. American Journal of Public Health, 91, 876–882. http://dx.doi.org/ 10.2105/AJPH.91.6.876
- Stokes, J. P., Miller, R. L., & Mundhenk, R. (1998). Toward an understanding of behaviorally bisexual men: The influence of

- context and culture. Canadian Journal of Human Sexuality, 7, 101–113.
- Weinrich, J. D., Snyder, P. J., Pillard, R. C., Grant, I., Jacobson, D. L., Robinson, S. R., & McCutchan, J. A. (1993). A factor analysis of the Klein Sexual Orientation Grid in two disparate samples. Archives of Sexual Behavior, 22, 157–168. http://dx.doi.org/10.1007/BF01542364
- Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of men and women: Implications for the origins of sex differences. *Psychological Bulletin*, *128*, 699–727. http://dx.doi.org/10.1037//0033-2909.128.5.699

Received May 4, 2010 Revision received February 2, 2011 Accepted March 21, 2011