

# The effect of sexual experience on the social representation of sex in Portuguese young adults

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#### **Abstract**

This study aimed to observe the effect of sexual experience on the social representation of sex in Portuguese young adults. According to social representation theory, the central core of the social representation should be the same in all individuals that share a common social ground, however differences should be found in the peripheral system. It was used a free evocation task to assess the social representation of sex in Portuguese individuals aging between 18 and 25 years old. Nine hundred and sixty individuals were grouped by their sexual experience and condom use habits. A prototypical analysis was conducted to assess the structure of the social representation and statistical differences were analyzed using the qui-square independency test to search for an association between the structure and the group evoking it. The results supported the hypothesis of a common central core for all groups that shows a romanticized vision of sex. The differences found in the peripheral system suggest that sexual experience affects the representation of sex in a way that seems clearer to these individuals the necessity of protection when it comes to sex.

# Introduction

The field of sexuality presents strong challenges for the public health of young adults. The fact that sexual relations are a vehicle for sexually transmitted infections and/or unwanted pregnancies has made it necessary to promote the consistent and correct use of condoms. Studies on the use of condoms have been centered mainly on the relationship between intent and behavior, a relationship that has been described as only moderate in the meta-analyses performed. 2,3

Bromnick and Swinburn observed that the representations of unprotected sexual experiences were positive and romanticized, and suggest that social representations may offer a good field of explanation of at-risk sexual behaviors.<sup>4</sup> Thus, it appears to be relevant to

study the social representation of sex in young adults in order to understand what elements structure the representations that they make of their sexual experiences, contributing to an understanding of the at-risk behaviors, especially the inconsistent use of condoms which has been observed in Portuguese young adults.<sup>5,6</sup>

The social representations may be seen both as a product, to the extent that they are a set of explanations about persons, events or objects, originating daily in communication among individuals, that facilitates the construction of a reality common to a social group, but also as a process, which acts as a guide for the action and for social relations through a group interpretation grid, in which rational and irrational aspects are integrated to explain or predict situations and behaviors that are strongly practical in nature.

As for structure, Abric defines the central nucleus, represents the beliefs rooted and stabilized in the collective memory of the group that prepares the social representation, and the peripheral system that displays a dimension of functionality, sensitivity and permeability to individual experiences and perceptions, capable of integrating new information without modifying the central and normative aspects.<sup>11</sup> The organization and articulation between the concepts offer guidelines for individual behavior which, if known, could offer an explanation to the variability observed.

However, the nature of the social representations makes it difficult to measure them, since the relationship with behavior is not directly perceived by participants. Wagner proposed the use of two complementary methodological levels: 12 an individual level, referring to cognitive and behavioral aspects of the individual, with recourse to a free evocation task for data collection, 13 with the prototypical analysis of Vèrgesfor data treatment; 14 and a social level achieved through analysis of the content of the social documents.

The measurement of the social representation of sex in Portuguese newspapers and magazines showed a romanticized view of sex, and we noted the absence of aspects related to risk, sexually transmitted infections or unwanted pregnancies.<sup>15</sup>

From the individual perspective, a romanticized view was also observed, with a central nucleus made up of love and pleasure, in which sexually transmitted infections and condoms only appeared in a peripheral system. 

There was found to be a relationship between pleasure and sexually transmitted infections, and between love and the condom, but without any concomitant relationship between the condom and sexually transmitted infections. 

Pleasure was the guiding word for the social representation structure. 

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Abric affirms that the peripheral system

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tends to adjust itself to include individual experiences, and it is possible to find differences among the social representations shared by a same group. 11 It should be assumed, however, that individuals who have experienced sexual relations have a social representation of sex different from individuals have not yet had this experience.

Thus, the objective of this study is to analyze the effect that sexual experience of young adults has on the structure of the sexual representation of sex, by virtue of their level of use of condoms (low, medium or high risk), and of sexual experience (with or without). The hypothesis is that the central nucleus will be the same for all groups, given the properties of the peripheral system that will avoid altering it in light of group differences. It is to be expected that there will be qualitative and statistically significant differences at the level of peripheral systems, since this structure is responsible for the integration of new elements through group and individual experiences, allowing flexibility for differences of reality provided by these same differentiated experiences.<sup>11,17</sup>





#### **Materials and Methods**

# **Participants**

It was used a non-probabilistic and convenient sample of students from higher education and students from professional schools and professional training centers. The inclusion criterion was their age (range: 18 to 25).

Nine hundred and sixty individuals were considered eligible for a comparison between sexual experience (with, n=810; without, n=150) and 839 participants for a comparison of risk levels by the use of condoms (low risk, n=441; medium risk, n=212; high risk, n=186). These levels were defined accordingly to the participant's answer to condom use frequency: low risk level corresponds to answers 7 to 6, medium risk level corresponds to answers 5 to 3 and finally, high risk level, answers 2 to 1. These groups were formed after the sample selection.

The mean age of the general sample collected is 20.93 years ( $\pm 2.110$ ); 33% are men and 67% are women; 85.5% are students and 98.5% are single.

## Measurements

#### Sexual history and condom use

The participants were questioned as to whether they had experienced full sexual relations (oral, anal and/or vaginal) which determined the sexual experience. For the risk measurement, the participants were asked how often they used condoms in their sexual relations (scale of 7 points: 1=mothing; 7=totally).

#### Free evocation task

In the instructions to the free evocation task, the participants were asked what words or expressions were suggested by the word *sex*. For the purpose, 15 blank spaces were provided, and they were instructed to fill in the spaces, according to the order of importance of each word to the individual.

#### **Procedure**

#### Data collection procedure

The date were collected through a link, placed on-line and distributed through an institutional electronic address, to students at Portuguese universities and students at schools and professional training centers, with the permission of the respective deans.

All necessary ethical procedures were followed, such as information on the objective, informed consent for participation and the guarantee of anonymity of the data collected.

## Data analysis procedure

The data collected was analyzed by using the SPSS v. 17, as well as the EVOC2000 programme.  $^{18}$ 

The prototypical analysis crosses two criteria to define which words could be part of the central nucleus of a social representation: the average order of evocation and the frequency with which the word/category occurs. According to the analysis, the words with high frequency and evoked in the first positions would likely be the elements that constitute the central nucleus.

Whole words are used for the analysis. The

words were lemmatized in order to reduce them to their simplest form, making the corpus homogeneous in number and gender from the viewpoint of spelling. Compound expressions were analyzed as a single element (e.g., make love).

The minimum frequency selected corresponds to the words evoked by at least 5% of the sampling. The intermediate frequency was selected through qualitative observation. The average order of evocation was calculated through the arithmetic mean of the order of evocation of each word. The values obtained depend on the subgroups under study and are presented along with the results.

## **Results**

# Prototypical analysis by sexual experience

In order to analyze among the groups who had experienced, and had not experienced, sexual relations, 860 responses were considered. For the group that had already experienced sexual relations, the minimum frequency considered resulted in a total of 19 words, which occurred 2134 times. The average order of evocation was 4.4, so we can affirm that the participants evoked, on average, between 4 and 5 words. For the group that had not experienced sexual relations, we observe that 18 words were evoked 320 times. The average order of evocation was about 4.5, so we can affirm that on average the participants also referred between 4 and 5 words (Table 1).

The words most evoked, and thus most consensual, are *Love* and *Pleasure*, with the first

Table 1. Comparative prototypical analysis among groups with and without experience in sexual relations.

		00 1			
I have l	had sexual relations (N=810)		I have not h	nad sexual relations (N=150)	
	AOE			AOE	f
Word			Word		
Love	$2.43^{a}$	456*	Love	2.72c 8	8***
Pleasure	3.11a	437*	Pleasure		2***
Passion	$4.02^{a}$	155**	Desire	$3.95^{\circ}$	9****
Affection	$4.36^{a}$	119**	Affection	****	7****
Intimacy	$3.95^{\mathrm{a}}$	91**	Man		4****
Good	$2.96^{\mathrm{a}}$	72**	Woman		4****
Woman	$3.26^{\mathrm{a}}$	69**	Intimacy		)****
Boyfriend	$3.75^{a}$	64**	Surrender		****
Relationship	$3.08^{a}$	64**	Involvement		****
Man	$2.98^{a}$	51**	Two people	3.13 <sup>c</sup> 8	****
Element			Element		
Desire	4.71b	102**	STD		5****
Foolishness	$4.95^{\rm b}$	59**	Condom		5****
Orgasm	$6.00^{ m b}$	59**	Sexual act		1****
Sharing	5.17b	54**	Foolishness		)****
Body	$5.04^{ m b}$	52**	Pregnancy	****	****
Fun	$4.55^{\rm b}$	47**	Orgasm	5.89d 9	****
STD	$7.61^{\rm b}$	43**			
Bed	$5.88^{\mathrm{b}}$	41**			

AOE, average order of evocation.

aAOE<4.4; bAOE>4.4; cAOE<4.5; dAOE>4.5.





word being most frequently evoked first. The remaining words are distributed into quadrants, making sure there were no words so consensual as those that could constitute the central nucleus.

The words most evoked and with the least average order of evocation were *Love* and *Pleasure*. The remaining words were distributed into quadrants according to their frequency and average order of evocation, however no more words were found with the same degree of frequency. However, the same central nucleus was observed in both of the representations.

Between both representations there are various qualitative differences, which were considered significant as a whole ( $\chi^2$ =53.256, gl=1, P=0.001) in part because of the number of words in which the representations differ.

The words good ( $\chi^2$ =6.722, gl=1, P=0.010), boyfriend ( $\chi^2$ =3.959, gl=1, P=0.047) and relationship ( $\chi^2$ =5.833, gl=1, P=0.016) are exclusively and significantly associated with the group that had already experienced sexual relations. However, the existence of the association of sexually transmitted diseases to the group that had not yet had sexual relations was verified ( $\chi^2$ =6.722, gl=1, P=0.010), since this word was referred by both groups.

Regarding the differences between the average orders of evocation, it was verified that

individuals who had already begun their sexual life placed more value on *pleasure*, which recorded an average order of evocation lower than the non-sexually active participants  $(t_{(84,346)}$ =-2.28, P=0.026, d=0.50). No other significant differences were observed between the representations of the two groups.

# Prototypical analysis by level of condom use (risk)

To verify the risk level of the participants, the issue was considered regarding condom use: *How often do you use condoms*. The answer had 7 possible values, with 1 representing *never* and 7 *always*. The participants were grouped into three risk levels, according to the answer provided to the question: low risk level (answers 6-7), medium risk level (answers 3-5) and finally, high risk level (answers 1-2). The prototypical analysis was performed considering these three new groups, which allowed observation of the distinct social representations of sex (Table 2).

The first group, with low risk, is made up of 441 individuals. The minimum frequency referring to the words evoked by at least 5% of the sampling reduced the social representation to 19 different words evoked 1133 times.

It was observed that the words *love* and *pleasure* are the most consensual for this group. There was no verification of words with

greater frequency, supporting the centrality of these concepts. Regarding less frequent words, a great dispersion was observed. Potential differences between medium and high risk groups shall be presented jointly.

The average risk subgroup consists of 212 participants. The words evoked by at least 5% of the sampling reduced the analysis to 21 words referenced 605 times. Similar to earlier prototypical analyses, the most central elements are *love* and *pleasure*.

The high risk group contains the least number of participants of the sampling (N=186). At least 5% of these participants used 23 words, evoked 525 times, to describe the concept of sex. Similarly, *love* and *pleasure* are the central themes of this prototypical analysis.

With regard to the possible differences between the three representations, an attempt was made to verify whether a statistical association existed between different groups of words and the group that evoked them. The *chi-square* showed that the word groups are independent from the analysis group ( $\chi^2$ =53.129, gl=52, P=0.430). However, intergroup qualitative differences have been observed, the significance of which was verified.

The words *attraction*, *seduction* and *warmth* appear only in the social representation of the high risk group. However, this association is not significant. The word *fun* is also exclusive

Table 2. Prototypical analysis by groups of condom use.

Low risk (N=441)			Medium	Medium risk (N=212)			High risk (N=186)		
	AOE	f		AOE	f		AOE	f	
Word			Word			Word			
Love Pleasure Passion Intimacy Good Boyfriend Relationship Man Two people	2.42a 3.40a 3.94a 3.81a 2.78a 4.14a 3.06a 2.90a 3.64a	244* 230* 87** 59** 36** 36** 34** 22**	Love Pleasure Passion Affection Desire Intimacy Woman Relationship Good Boyfriend Man Female	2.953° 3.292° 4.531° 4.645° 6.333° 4.478° 2.952° 3.65° 3.882° 3.375° 3.462° 4.273°	127° 120° 49° 31° 24°° 23°° 21°° 20°° 17°° 16°° 13°° 11°°	Love Pleasure Passion Affection Desire Good Boyfriend Relationship Fun	2.81° 3.04° 5.07° 3.89° 3.87° 2.63° 3.87° 2.13° 3.89°	107# 107# 30# 27# 23# 19# 15# 15# 9#	
Element Affection Desire Woman Sharing Condom Foolishness Orgasm Involvement Trust Bed	4.37b 5.19b 4.53b 5.50b 6.32b 5.24b 6.45b 4.93b 6.36b 6.44b	65** 63** 38** 34** 33** 31** 29** 25**	Element Union Orgasm Foolishness Body Condom Male Bed Trust Satisfaction	4.667 <sup>d</sup> 6.50 <sup>d</sup> 5.611 <sup>d</sup> 6.25 <sup>d</sup> 6.538 <sup>d</sup> 6.083 <sup>d</sup> 6.091 <sup>d</sup> 5.364 <sup>d</sup> 7.455 <sup>d</sup>	21°° 20°° 18°° 16°° 13°° 11°° 11°°	Element Body Foolishness Woman Orgasm Sharing Intimacy Union Attraction Warmth Man Bed Reproduction Seduction Satisfaction	4.65f 6.00f 4.13f 6.67f 4.21f 4.15f 6.00f 4.36f 3.91f 4.54f 6.10f 4.70f 5.60f 7.44f	17## 15## 15## 15## 14## 13## 11## 11## 11## 10## 10## 9##	

AOE, average order of evocation.

aAOE<4.2; bAOE>4.2; cAOE<4.5; dAOE>4.5; cAOE<3.9; fAOE>3.9.

\* $f \ge 230$ ; \*\*f < 230;  $^{\circ}f \ge 120$ ;  $^{\circ \circ}f < 120$ ;  $^{\sharp}f \ge 107$ ;  $^{\sharp\sharp}f < 107$ .





to this group, but, contrary to the previous words, is significantly associated with the high risk group ( $\chi^2$ =6.838, gl=2, P=0.033).

In the medium risk group, differences appear at the level of the words *female* and *male*, without this association being significant.

The low risk group is differentiated by use of the word *involvement* and the expression *two people*. However, these associations are also not statistically significant.

With regard to common words, it was shown that *intimacy* is significantly associated with the low risk group ( $\chi^2$ =5,993, gl=2, P=0.050). In turn, *satisfaction*, common to medium and high risk groups, is significantly associated with the medium risk group ( $\chi^2$ =7.695, gl=2, P=0.021). No other associations were found that were considered significant.

Possible differences were also observed in averages among the average orders of evocation for each word. Only one difference was verified, of average significance, at the level of the word good (F=3.189, P=0.051). The low risk group (2.78) shows an average order less than the medium risk group (3.88) (P=0.047). No other significant differences were verified.

## **Discussion and Conclusions**

The purpose of this paper was to assess the effect of sexual experience on the structure of the social representation of sex. We explored effects according to sexual experience and the frequency of condom use among those sexually active. The prototypical analysis was conducted to verify possible differences in the structure of agreement with the groups formed. The theory of social representations assumes that the properties of the central nucleus should ensure its transversality, however it theorizes the existence of differences at the level of the peripheral system, motivated by different individual behaviors. The results support the hypothesis formulated, since the central nucleus, consisting of love and pleasure, is transversal to all subgroups under analysis. Abric considers that the central nucleus contains normative aspects, follows a collective memory, and is characterized by stability and resistance to change, granted the character of continuity to the social representation.<sup>11</sup>

The differences found are at the level of peripheral systems which theoretically cover different aspects of the personal history of the individuals.

With regard to the first comparison, the structures presented are significantly associated with the groups that evoked them. The central nucleus consists of the ideas of *love* and *pleasure*. The frequency of both words is similar, however the average order of evocation for *pleasure* is significantly lower in individuals

who have not yet had sexual relations. It is assumed that, despite the idea of pleasure being normative in sex, this may not be as obvious since it cannot be substantiated through the sexual experience.

The words good, boyfriend, and relationship, appear exclusively in the group that had already experienced sexual relations. This association, statistically significant, seems to show that the existence of a relationship is necessary, with a boyfriend/girlfriend, for there to be sexual relations. Sex is then classified as being good and as being fun, attributes of a positive nature which do not exist in individuals who have not yet had sexual relations. This type of attributions can occur only after the experience, since it is difficult to attribute an affective category to something that has not yet been experienced.

In the group that had not yet experienced sexual relations, there is a significant association with the expression *sexually transmitted diseases*, despite the order of evocation being similar for both groups and that, in both, the structures appear in the quadrant that represents the peripheral system. This group also evoked the words *condom* and *pregnancy*, although the association was not significant. These results may suggest that there is a greater concern by individuals who have not yet had sexual relations with the risks inherent in an unprotected sexual relationship.

The reason why these participants had not yet started their sexual life was not controlled; however, there are two questions that could be raised regarding the abstinence of these participants, given the valuation of the condom, pregnancy, and sexually transmitted diseases, and the devaluation of pleasure: could it be that they have not yet had sexual relations because they are aware of the risk involved in sexuality? Or do they still value these aspects because they have not had sexual relations?

The notion of risk and the evaluation of pleasure, and its relationship with at-risk behaviors has been widely studied. For instance, individuals process their personal risk in a biased manner, 18-21 generally minimizing the risk they incur. The relationship of pleasure with at-risk behaviors is already high, since individuals tend to cite loss of pleasure as a barrier to condom use. 22 However, it is considered more plausible that there is a valuation of these aspects because there have not yet been sexual relations, a situation that will be changed by the behavior.

It is possible that, after sexual relations have occurred, the social representation is transformed to value other aspects, allowing the individual to maintain the central nucleus intact, adjusting beliefs in the peripheral system to the new reality (notion of reversibility).<sup>17</sup>

With respect to the three groups with different types of risk, defined based on the condom

use, the structures of the social representations are independent from the originating group. It should also be noted that the responses being studied are practically a subdivision of the group that has already experienced sexual relations and which responded freely to the issue of how often they used condoms. Thus, the differences found between the groups should be interpreted cautiously.

Similar to the previous groups, the central nucleus is made up of the same words, with the frequency distribution very similar among themselves and with *pleasure* appearing with a lower order of evocation, but with no significant differences.

With regard to the peripheral system, there is an exclusivity (not significant) in the ideas of attraction, warmth and seduction to the group that showed higher risk of a sexually transmitted infection through failure to use the condom. Satisfaction appears in the medium and high risk groups, and is significantly associated with the latter group. Despite all of these words being in the peripheral system, they seem to indicate that the high risk group has a greater propensity to value aspects of the game of seduction involved in sex. It is also this group that has been exclusively associated with the idea of fun which, despite a low frequency, has a high order of evocation.

The word content seems to show a tendency by some individuals in the high risk group to seek sensations, which has been observed as having a relationship with condom use. Arnold et al.23 observed that individuals with a higher score on the scale of seeking sensations tend to use condoms less. An earlier study conducted by Gullette and Lyon shows that women with higher scores in the search for sensations perceived more advantages in the condom use.<sup>24</sup> Thus, this relationship does not appear to be clear, and it cannot be affirmed that the valuation of warmth, attraction, seduction, satisfaction and fun is directly related to the search for sensations, as a way to justify the results found. Parsons et al.25 observed that valuing the benefits of unprotected sex, was more significant in predicting sexual risk than the benefits of condom use. These individuals seem to make a similar valuation, resulting in at-risk behavior. However, it should be noted that the most consistent users do not integrate more favorable aspects to the condom use, in which is perceived a valuation of risk, as occurs in individuals who have not yet experienced sexual relations. The word condom appears in the low and medium risk groups, yet without significant association with any of the groups, with a low level of evocation and frequency.

Indeed, the condom is not considered a prime aspect for any of the subgroups, nor does it apply in the general representation of young adults. <sup>16</sup> Pleasure is a central notion





and, as such, normative, which is an organizer of representation and that conditions the actions of the Portuguese in their sexual relations, especially from a perspective of seeking satisfaction through them. Given the weak relationship between pleasure and condoms, it is understandable that the perceptions of risk would be biased in order to reduce the cognitive dissonance between behavior and the beliefs sustained by this representation. This is the understanding of the relationship between disconnected beliefs, such as, if you love, protect, to justify not needing to use a condom in a loving relationship.<sup>26</sup> Therefore, the introduction of ideas associated with risk appears only in the peripheral system, possibly the result of campaigns to encourage protection in sexual behavior. However, given the reversibility of the social representation, these appear to merely coexist with the idea of pleasure and of love, denoting that there has not yet been a transformation of the social representation of sex in order to integrate the risk associated with it.

Still, it should be noted that about 50% of the sampling seems to act based not on social representation, but rather based on other variables not considered in this analysis. The condom use in Portuguese young adults is described as being more common in younger individuals, with fewer partners, with no steady partner and who have had only one partner in the last 3 months;<sup>5</sup> it has been verified that its use decreases with an increase in age and with the introduction of other contraceptive methods.<sup>6</sup> Individuals with a current partner tend to have a less consistent use,<sup>13</sup> so there seems to be a pattern of abandoning the practice of using the condom.

Some limitations should be address to this paper. Although the convenient sampling method allowed us to collect a sample with a high confidence level (2.9%) to a 95% confidence interval, it did not let a balanced comparison between the groups used in the analysis.

We should also address concern over the majority of female participants and on an unbalanced division of participants over the risk levels, defined through condom use frequency. The majority of female participants is explained by the fact that most of the subjects were college students. In Portugal, exists a majority of women attending to universities,27-29 unbalancing samples that are collected among these samples. Hence it is expected to find a majority of women along these studies. For further studies we suggest a method that embraces the different groups used in the study as strata, and collecting the data upon the relevance of the criteria used to form groups. This measure will improve the study's external validity and permit to compare groups with equal dimensions.

This study shows that the social representation of sex does not contribute to more condom use, showing that there is a trend to guide the behavior of the participants in the direction of seeking pleasure rather than seeking protection. Future studies should be directed toward seeking a model to better explain the action of social representation on behavior, since this relationship is not clear in these results.

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