

Validation of the *Sexuality Attitudes and Beliefs Survey* (SABS) for the Portuguese population

Validação para a população portuguesa do *Sexuality Attitudes and Beliefs Survey* (SABS)

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Keywords

Nursing research; Students nursing; Nursing; Validation studies; Sexuality; Sexual behavior

Descritores

Pesquisa em enfermagem; Estudantes de enfermagem; Estudos de validação; Sexualidade; Comportamento sexual

Submitted

December 3, 2014

Accepted

December 18, 2014

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DOI

<http://dx.doi.org/10.1590/1982-0194201500034>

Abstract

Objective: To describe the validation process of the *Sexuality Attitudes and Beliefs Survey* (SABS) for the Portuguese language and its respective psychometric properties.

Methods: A methodological and quantitative study with the participation of 49 nursing students. After the translation of the SABS, ensuring the semantic, idiomatic and conceptual equivalence of the content of items, its psychometric qualities were determined.

Results: In terms of reliability, the Cronbach's alpha for the final version of 11 items was 0.72, which was 0.80 in the test-retest. The discriminant validity was proven.

Conclusion: The Portuguese version of the SABS is valid and reliable for use in investigation studies, both in terms of training as in clinical practice.

Resumo

Objetivo: Descrever o processo de validação para a língua portuguesa do *Sexuality Attitudes and Beliefs Survey* (SABS) e suas respectivas propriedades psicométricas.

Métodos: Estudo metodológico e quantitativo. Participaram 49 estudantes de enfermagem. Após o desenvolvimento da tradução do SABS, atendendo à equivalência semântica, idiomática e conceitual do conteúdo dos seus itens, procedeu-se à determinação das qualidades psicométricas.

Resultados: Ao nível da confiabilidade, obteve-se um alfa de *Cronbach* para a versão final de 11 itens de 0,72, que, no teste-reteste, foi de 0,80. Foi comprovada a validade discriminante.

Conclusão: A versão portuguesa do SABS é válida e fiável para utilização em estudos de investigação, quer ao nível da formação quer da prática clínica.

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Conflicts of interest: no conflicts of interest to declare.

Introduction

The development of *The Sex Knowledge and Attitude Test* (SKAT), created by Miller and Lief in 1979 is associated to the beginning of research on sexuality.

⁽¹⁾ This is an instrument that evaluates knowledge and attitudes about physical aspects of sexuality and specific sexual behaviors (heterosexual relationships, sexual myths, abortion and masturbation). In nursing, the results of two decades of research using the SKAT suggest that the knowledge of sexuality among nurses has not improved and that there is a conservative trend in their sexual attitudes.⁽²⁾ On the other hand, studies with nursing students have been fairly consistent in documenting greater knowledge and more liberal attitudes, compared with nurses.⁽³⁾ However, students and nurses have revealed less knowledge and more conservative attitudes comparing to other graduates.

The development of the *Sexuality Attitudes and Beliefs Survey* (SABS) by Reynolds and Magnan came from the need to collect more general information on sexuality, such as the attitudes, comfort or confidence related to the clinical nursing practice, and also from the need of creating an instrument more concise and easy to apply in any context.⁽⁴⁾ Initial studies with this instrument were carried out with nurses in outpatient services, oncology, medicine, surgery, obstetrics/gynecology and rehabilitation.⁽⁴⁻⁶⁾ The most apparent barriers associated with the incorporation of sexuality in nursing clinical practice identified globally were the following beliefs of nurses: patients do not expect that sexuality is addressed, the lack of time, the lack of confidence, and the personal comfort to address sexual issues.⁽⁷⁾

In the first observation of students by using the SABS, it was reported that the studies had not included the vision of sexuality in relation to the nursing practice, but analyzed only the knowledge and attitudes toward specific sexual behaviors.⁽²⁾ The results are similar to those found with the nurses, i.e., the barriers that limit the incorporation of sexuality are perceived since the period of education in nursing. This suggests that at this level, training should not only increase knowledge about sexuality,

but also help students to develop positive attitudes, and provide mainly the communication skills, in order to operationalize this knowledge.⁽⁷⁻⁹⁾

A review on the use and/or adaptation of the scale showed its use in a study with 576 nurses in oncology services in the United States (context originating in the scale) and identified the same barriers.⁽¹⁰⁾ In the European context, two studies were identified: a scale adaptation into Turkish carried out with 125 students in a military nursing school, showing that its use in the context of the study population was appropriate, and observing the persistence of the aforementioned barriers;⁽¹¹⁾ another study in Sweden, with 88 nurses, showed the lack of time to discuss sexual issues with patients as a barrier for 80% of the nurses, while for 60% it was the fact that they did not trust their abilities to approach their sexual concerns with patients.⁽¹²⁾

In Portugal, no studies on the SABS validation for the Portuguese population were identified, and there is no knowledge about any instrument to assess the attitudes and beliefs regarding sexuality in clinical nursing practice. The objective of this study was to describe the validation process of the SABS for the Portuguese language and its psychometric properties.

Methods

This is a methodological and quantitative study. The questionnaire included characterization data (gender, age, course year and participation in activities on sexuality), the SABS and *The Marlow-Crowne Social Desirability Scale – Short Form* (MCSDS-SF).⁽¹³⁾

SABS

The SABS assesses the attitudes and beliefs of nursing professionals related with the approach of sexuality in the context of practice. It is a self-assessment scale, unidimensional, consisting of 12-item set, each rated on a Likert scale of six positions, ranging between 1 for strongly disagree and 6 for strongly agree. The respondents should indicate the number that best represents their position. The items 1, 2, 4,

6, 8, 10 and 12 must be recoded due to the nature of their formulation. The result of the scale is the sum of the items, which may vary between 12 and 72, with higher values indicating more barriers to incorporate the evaluation/guidance of human sexuality in the nursing practice.

In the initial validation study, in terms of internal consistency, were observed Cronbach's alpha values of 0.75 and 0.82 in two separate applications at 7 to 10 day intervals. It showed to be a stable measure with a high test-retest value ($r = 0.85$, $p < 0.001$). The construct validity was assessed by the association of the SABS with the attitude subscale of the SKAT, which showed a significant correlation ($r = -0.37$; $p < 0.05$), observing also an inverse relationship between the SABS and the sexual myths subscale of the SKAT ($r = -0.43$; $p < 0.01$).

Regarding the use of the SABS in other studies, the Cronbach's alpha ranged from 0.70 and 0.74.^(2,5) In the study of adaptation to Turkish, an excellent temporal stability was observed ($r = 0.90$) with a 2-month interval.⁽¹¹⁾

MCSDS-SF

The desirability corresponds to the tendency to give answers according to what is socially desirable, even if involuntarily. The MCSDS-SF used was a version that had already been used in the validation process of the SABS.⁽¹³⁾ This version has 13 items; among them, five must be answered as true (4, 7, 9, 10 and 13) and eight as false (1, 2, 3, 5, 6, 8, 11, and 12). Each correct answer is assigned a score of 1, and the zero score is assigned for every incorrect answer. The final value is obtained by summing the items, with higher values corresponding to answers with greater social desirability. In this study, the internal consistency assessed by the Kuder- Richardson formula was 0.77, a reasonable value.

Development of the Portuguese version of the SABS

After the authorization request to authors and its subsequent approval, began the translation process of the SABS into Portuguese. The adaptation process followed the procedures used in the original version.

In the translation phase, it was essential to use a translator fluent in the languages involved (English and Portuguese), who understood the purpose of the questionnaire and the rationale for its design. The SABS was translated by a technician of the health area with a degree in languages. A semantic translation was carried out in order to maintain the conceptual and idiomatic equivalence. This version was back-translated by a student of higher education in the area of health sciences, who also majored in English, and without any knowledge of the original scale. Then, the two versions of the scale were delivered to two teachers of polytechnic higher education of the scientific area of nursing and experts in English, who appreciated the three versions: translation, back-translation and the original scale. They analyzed the semantic, idiomatic and conceptual equivalence of the content of items. Some specific changes were made, reaching consensus about the version made available. Finally, this version was assessed by an expert in the area of sexuality, who suggested minor changes in order to allow a sense of colloquial language, resulting in the final version.

Study of the psychometric properties

The questionnaire was administered to a convenience sample consisting of 49 students of the undergraduate nursing course. A consent form was included in the questionnaire in order that each participant could participate freely. Each respondent informed their agreement in participating of the study by marking a specific space.

The study of the psychometric properties was operationalized by determining the reliability of the SABS: (1) internal consistency: Cronbach's alpha and split half coefficient; (2) temporal stability: test-retest and discriminant validity.

The *Statistical Package for the Social Science*[®] version 19.0 for Windows was used for the analysis. We resorted to descriptive and inferential statistics. The inferential statistics included the Kolmogorov-Smirnov test, the Pearson correlation test, the Spearman-Brown correction, Cronbach's alpha, the Kuder-Richardson formula, and the Mann-Whitney U test.

Table 1. Measures of central tendency of the items of the *Sexuality Attitudes and Beliefs Survey (SABS)*

Item	Mean	Standard deviation
4. Estou mais à vontade para falar com os meus doentes sobre assuntos sexuais do que a maioria dos enfermeiros com quem trabalho*	4.08	0.98
12. Os doentes esperam que os enfermeiros os questionem sobre as suas preocupações sexuais*	3.78	1.01
6. Eu arranjo tempo para discutir com os meus doentes as suas preocupações sexuais*	3.51	0.92
8. Confio na minha capacidade para abordar com os doentes as suas preocupações sexuais*	3.04	0.91
5. A maioria dos doentes hospitalizados está demasiado doente para se interessar pela sexualidade	2.71	1.08
1. Discutir sexualidade é essencial para os resultados em saúde dos doentes*	2.18	0.97
11. A sexualidade deveria ser abordada somente quando a iniciativa partisse do doente	2.10	0.92
7. Sempre que os doentes me fazem uma pergunta relacionada com a sexualidade, aconselho-os a discutir o assunto com o seu médico	2.08	1.06
2. Compreendo como as doenças e os tratamentos dos meus doentes podem afetar a sua sexualidade*	1.71	0.79
10. Permitir que um doente fale sobre as suas preocupações sexuais é uma responsabilidade de enfermagem*	1.71	0.74
9. A sexualidade é um assunto demasiado privado para discutir com os doentes	1.57	0.74

* Recorded items

The development of the study met the national and international standards of ethics in research involving human subjects.

Results

A Cronbach's alpha value of 0.67 was obtained. As the inter-item and inter-total correlation values associated with the item 3 were very low, it was removed. The Cronbach's alpha value with 11 items was 0.72. In the test-retest for the SABS with 11 items, the alpha value was 0.80.

In determining the coefficient of participation, we obtained a value of 0.707 that went to 0.828 after applying the Spearman-Brown correction formula.

The same version was applied to the same 49 subjects 3 weeks after the first application. In total, 40 questionnaires were considered valid because the remaining ones were only partially filled. After proving the distribution normality of the two variables by the Kolmogorov-Smirnov test ($p > 0.05$), significant, moderate and positive correlations were observed between the two time points ($r(40) = 0.38$, $p = 0.01$).

There was no significant correlation between the SABS and the MCSDS-SF ($r(49) = 0.25$, $p = 0.08$).

No association was found between the SABS and the age of students ($r(49) = 0.21$, $p = 0.16$) and no significant differences in terms of year of course ($U = 228.5$, $p = 0.16$) and previous exposure to sex education programs ($U = 160.5$, $p = 0.61$).

Regarding the mean score, the score of the SABS was 28.49 (SD = 5.24) with a minimum of 19 and maximum of 38. The measures of central tendency for each of the 11 items are shown in table 1. The following items appeared with higher values: "I'm more comfortable talking with my patients about sexual matters than most nurses I work with" (M = 4.08, SD 0.98); "Patients expect that nurses ask them about their sexual concerns" (M = 3.78, SD 1.01) and "I make time to discuss with my patients about their sexual concerns" (M = 3.51, SD 0.92).

Discussion

The study limitations are essentially due to this being a convenience sample, of small size, and with a specific group (nursing students). The study of sexuality also poses difficulties at methodological level, such as obtaining minimally dependent responses of social desirability, because this is a subject of intimate nature and still permeated by prejudices and taboos, not always easy to overcome.

At the level of discussion of the results, an aspect stood out. In the current nursing context, research is needed to help understanding the perceptions and attitudes of nurses and nursing students about human sexuality, in order to make it possible to care for such a sensitive area of nursing. Thus, the validation of the SABS can be an important contribution to this goal.

In this study, the SABS adaptation process started by the translation – back-translation, ensuring

the conceptual, semantic and operational equivalence. The methodology did not reveal difficulties, and it was possible to keep the different statements of the scale, the response indications, and the respective response scale, as in the original. We were careful to use a colloquial language, trying to adapt it to the target-population of the instrument, i.e., nursing students. Other studies that carried out the process of adaptation in the European context did not mention difficulties.^(11,12)

In the evaluation study of the psychometric properties, 87.8% of the participants were female, aged between 18 and 31 years, 20.31 years old on average (SD = 2.50).

This study step is essential in the adaptation process of a measuring instrument, and fits in what is called the equivalence measure. It allows evaluating to what degree the psychometric properties of an instrument are similar to versions of the same instrument in different languages.

The internal reliability assessed by internal consistency and the split-half, showed acceptable values of the SABS. The internal consistency measured by Cronbach's alpha for the 12 items of the scale was 0.67, a figure that shows low reliability for most authors. However, assessing the inter-item and total-item correlations simultaneously is fundamental, since the larger these correlations, the greater the homogeneity of the items and the consistency with which is measured the same theoretical dimension or construct. As the values obtained were very low, the item 3 was removed, because the values were mostly associated with it. Then, its internal consistency was reanalyzed, passing to 0.72, considered a reasonable value for being between 0.70 and 0.80. Although this Cronbach's alpha value is within those found in other studies, it is noteworthy that the alpha values should be interpreted in the light of the characteristics of the concerned measure, the number of items on the scale, and the population in which this measurement was taken. Hence, this leads to the understanding of values with tendency to be lower: it is due to sexuality being a construct permeated with prejudice and taboos in all cultures, because this scale has a low number of items and has been applied to nursing professionals and students

whose attitudes and beliefs about sexuality are evident. In the study of scale validation, was obtained a higher value of Cronbach's alpha in the test-retest, of 0.82, observing the same trend in the present study with the value of 0.80.

The split-half coefficient value is higher than the Cronbach's alpha after correction by the Spearman-Brown formula, since it is 0.828, a value that suggests high internal fidelity. However, such value must be treated with caution, as there may be other assumptions of division among items that may, consequently, give a different value.⁽¹⁴⁾

The temporal stability of the SABS shows a moderate and significant value ($r(40) = 0.38, p = 0.01$) with 3-weeks interval, contrary to the validation study in which the SABS appeared as a measure with high temporal stability ($r = 0.85; p < 0.001$) for an interval of 7 to 10 days between applications,⁽⁴⁾ which was confirmed in the Turkish study ($r = 0.90$) with an interval of 2 months.⁽¹¹⁾

From these three studies emerge one of the problems that can affect the temporal stability: the interval between the two applications, because it has not been equal in none of them. Considering that participants of other studies have been subjected to unknown conditions, and observing a high temporal stability, it can be inferred that the longer period of time may have facilitated the memorization of answers, or allowed learning the subject in question. However, the authors are not unanimous in defining the period of time between the two applications. Another problem that can be a source of measurement error is the difficulty in maintaining the same conditions in both applications, as, for example, the motivation of participants to collaborate.

The non-association of the answers to the SABS with the social desirability scale shows there was no tendency to give socially desirable responses, confirming the discriminant validity, that is, a measure has discriminant validity if it is not significantly correlated with measures of other variables, which in theory are not related to it. According to some authors, the SABS can expose a tendency to give socially desirable answers when measuring attitudes and beliefs

regarding sexuality, because this is an intimate and still embarrassing subject, impregnated with myths and taboos.⁽⁸⁾

The mean score value of the SABS shows that overall, the Portuguese nursing students have more favorable attitudes and beliefs about sexuality in nursing practice, contrary to the Swedish nurses.⁽¹²⁾ In fact, in the group of all studies that used this instrument, the Swedish study found the highest value. There may be effects of age and years of service in relation to nurses, because those aged under 40 years and with less than 10 years of service have identified more barriers to the sexuality approach than those older and more experienced.⁽¹⁰⁾ This finding needs to be explored, because it contradicts previous results and can show the importance of the context where the nursing intervention is developed, as well as its influence in this attitudinal position. This latest study was developed in the context of oncology nursing, while the others were mostly in the contexts of medical and surgical nursing.

In summary, we suggest the development of studies that contribute to the assessment of the validity and fidelity of the SABS with students or nurses from different cultures and contexts of practice.

Conclusion

The validation process of the *Sexuality Attitudes and Beliefs Survey* (SABS) for the Portuguese population showed that the instrument was valid and reliable for use in investigation studies, both in terms of training and clinical practice. Therefore, the SABS showed to be an instrument with adequate psychometric properties.

Collaborations

Dias HMS contributed the project design, analysis and interpretation of data and writing of the article.

Sim- Sim MMSF contributed to critical revision of intellectual content and final approval of the version to be published.

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