Developing a Tool for Accession to Assessment Exam Cytological of the Cervix

ORIGINAL

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Abstract

Objective: The main aim si to develop a tool for assessing the adherence of women performing the cytological examination of the cervix.

Method: This is anexploratory, descriptive with quantitative approach, which followed four steps for the construction of the instrument. Held between May and July 2015, using a sample of 384 women attending health facilities in João Pessoa city family. Data were analyzed by applying factor analysis and then correspondence analysis.

Results: Scores were calculated from the influential factors reported by these women to perform the cytological examination, and then these scores were associated with the frequency of the examination. As for frequency, 37% performed annually, 25.1% every two years and 20.5% every six months, associated between the low and medium scores. While the high score was associated with a lower frequency, corresponding to 1.3% of those who underwent the test every three years and 15.9% who said they have set periods for their realization.

Conclusion: The difficulties for not performing the examination, worse adherence to these women that health care, requiring effective interventions of professionals to minimize these barriers.

Keywords

Women's Health, Prevention of Cervical Cancer, Public Health

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Introdution

The cytological examination of the cervix is currently one of the methods used in screening and early detection of cervical cancer(CCU), which is tracking a simple strategyand effective in reducing mortality from this cancer, considered to be the third most frequent type among women worldwide, with a significant number of cases in developed countries. [1-2]

The Ministry of Health recommends the completion of the cytological examination in womenaged 25 to 64 years, with a year periodicity of examination and, after two consecutive negative annual exams, every three years.The determination of this age group as the target population is based to be a period where the o CCUrrence of high-grade lesions emergesmore frequently and are more prone to treatment, with better chances of cure. [3]

The high incidence and mortality related to CCU is worrisome factor in the field of public health, demanding health services, from the performance of managers and health professionals, the implementation of effective and guided control actions in comprehensive care, aimed at prevention and health promotion strategies. [3]

Such strategies gain magnitude and strengthening through the actions developed in Primary Health Care, while preferred gateway and coordinator of care in the Health Care Network, this level of care plays an important role in addressing this issue,by understanding individual character and collective actions that impact on the population in a positive way, in the case of a service establishing direct links with the community. [3-4]

Although early detection of CCU, by conducting the cytological examination, or commonly known as Papanicolau, It is widely distributed in various media, being offered primarily by the services of Primary Health Carewhich is understood that could have a greater range of the target populationto perform this procedure, Brazil still has a fault coverage to reduce mortality from this type of cancer among women in the country, especially in regions where access to such services is precarious. [5]

In this perspective, to guarantee the access of women to health services and understand what are the main obstacles for not performing this care is crucial to confront this problem, and ensure better chances of survival for women who experience this condition, as they know their diagnosis early.

Research conducted in health have been highlighted by the possibility of contributing to improvement of health conditions of individuals, but also modify the process of health-disease as they enable effective actions focused on health promotion and disease prevention. Thus, strategies are being used as the development of tools to support the care the health of individualshelping to address health problems from the simplest to the most complex, such as various types of cancer. [6]

In this context, the study was to develop a tool to assess adherence of women performing the cytological examination of the cervix.

Method

It is a study of exploratory, descriptivewith a quantitative approach, aimed to build a delineated assessment tool from four stages.

In the first stage a literature review was conducted, national and international, aiming to analyze the available evidence on the main factors influencing adherence of women performing the cytological examination. In the second stage, from the identification of the most relevant factors, the researchers developed the questions for the instrument construction, in order that women to be interviewed could identify whether these factors influenced their commitment to achieving the cytological examinationand once influencing, report how this influence o CCUrred, positively encouraging the realization of the exam, or negatively, creating barriers before their realization.

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After this step, the instrument was applied to the target population, women attending the Family Health Units (USF) the municipality of João Pessoa-PB. The setting of the study was composed of 20USF, selected randomly through an R software package, located in the five health districts (DS) the municipality, ensuring randomness in the selection of components. Based on the number of Units per District, It was possible to distribute the amount of services for the sample in proportion to: DSI -5, DS II - 4, DS III - 5, DSIV - 3, DSV - 3, totaling 20 health services.

It was determined a random sample proportional to the size of each extract DS, with a confidence level of 95%. Thus, the sample consisted of 384 women distributed proportionally among the USF selected for the study. Thus, were interviewed: 94 women in the DF I territory, 80 women in DS II, 99 women in DS III, 61 women in DS IV and 50 women in the DS V.

The sample selection of participants was carried out by accessibility, as they sought any kind of service in selected USF, and they accepted to participate in the study by signing the Consent Form Clarified.

The questionnaires were administered in the three months between May and July 2015, during the USF of service hours selected from Monday to Friday, from 7h00min to 11:00 and 13:00 to 17:00.

The fourth and final stage, the data were entered and organized in Microsoft Office Excel version 2010 and analyzed using SPSS version 20 program, as well as the Mplus version 7. The latter was used to perform the Exploratory Factor Analysis (AFE) to identify the factors - latent variables - of the questionnaire.

The items of the instrument were analyzed using descriptive statistics and the application of factor analysis, which could be analyzed item by item and its relevance on the results in the data collection, and obtain construct validity of evidence. Subsequently, a correlation analysis between the factors that influence women in making the cytological

examination and the frequency of the examination reported the same was carried out, seeking to portray women's self-care related to how often perform cytological examination of the cervix.

The study was conducted in compliance with all the ethical principles of research involving human beings of the National Health Council, and approved by the Committee on Ethics in Research of the Federal University of Paraíba Health Sciences Center in CAAE: 42611715.5.0000.5188.

Results

The instrument was structured in three parts, containing the approach to the socio-demographic data (six items),a second part concerning issues related to realization of the cytological examination (four items) and the third part on the possible influential factors in their implementation (23 items) as presented in figure 1.To investigate these factors and better understanding of the chosen target audience, the dichotomous nature was adopted for items, facilitating and optimizing the instrument application.

The results obtained showed that the study participants had an average age of 38.8 years, most were in a consensual union (stable) or married, declared themselves brown, belonged to the Catholic religion, had less than 8 years of schooling and income family less than two minimum wages.

As for the influential factors on adherence to completion of the cytological examination was applied to AFE, to investigate the factor loadings of each item and its relevance to the outcome of research from the results. Thus it noted that items 21 and 24. which correspond respectively to pregnancy and the examination by a male professional factors were excluded from the analysis since there was no response variability.From the criterion of self-worth was chosen by a factor structure and the results are shown in **table 1**.

Items 13 and 20 on the factor loadings presented, were not considered for the following analyzes, sin-

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Table 1. Exploratory factor analysis instrument, João Pessoa, Brazil, 2016.

n	Item	Load Factor
1	Existence of vaginal problems	0.809
2	Absence of vaginal troubles	0.624
3	Prevent cervical cancer	1.078
4	Fear of examination	0.865
5	Anxiety	0.857
6	Educational work	1.071
7	Shame	0.774
8	Insecurity	0.360
9	Exam information before realizing it	0.819
10	Ache	0.592
11	Home in the health service	0.809
12	Deadline for receiving the exam	0.804
13	Medical recommendation	-0.262
14	Family issues	0.799
15	Mate absence	0.603
16	Lack of knowledge about the exam	0.782
17	Care professional	0.899
18	Position to take the exam	0.825
19	Health Unit service routine	0.365
20	Fear of having cancer	0.261
22	Body changes with age	0.662
23	Multiparity vaginally	0.819

ce they are less than 0.30. Observaram-se ainda os seguintes índices de ajuste: Índice de Ajuste Comparativo = 0,846, Índice de Tucker Lewis = 0,830, $\chi^2 = 782,71$, $p < 0,001$. The factor of the index of reliability through Cronbach's alpha, was equal to 0.845. The resulting factor of factor analysis can be identified as factors that impact adherence of women performing the cytological examination of the cervix.

Among the items evaluated and identified as facilitators of adherence to the completion of the cytological examination of the participants were receiving information about the exam, conducting educational work, prevention of CCU, professional service and reception at USF. As for items that act as a barrier to the realization of the most significant cytologic examination were: shame, anxiety, deadline for receiving the test results, the USF care routine and the position for the examination.

Upon completion of the AFE, where it was established that the relevant factors in the result obtained by collecting data, a correlation analysis was performed by applying a score.

The scores were categorized according to the answers given to each item, where a score of 0 indicated a positive influence (facilitator) 1 indicated that the item did not exercise any influence on the examination and 2 indicated the factors that hindered the membership the examination. With the analysis of categorized scores presented were obtained values between 13 and 30 for the sample. was classified then the scores below, with values 13 and 14 in average values 15 and 16 and the high 17-30.

Correspondence analysis is a statistical model that can transform any quantitative trait in qualitative, performing a partition of your change of domain classes and being more effective if the data matrix (two-dimensional table) is quite large, so that the visual inspection or simple statistical analysis can not reveal its structure.

This is a method for determining a membership system between two or more sets elements, seeking to explain the association structure of the factors in question, allowing the visualization of the relationship between the sets, where the proximity of points concerning the line and the column indicate association. The results of this analysis can be viewed in **table 2**.

The solution of multiple correspondence analysis was used to assess associations between the characteristics and frequency score categorized. The solution with two dimensions reaches 100.0% of the total inertia, where the size 1 was chosen to explain 96.1% of the total variation of the data.

This model provides a graphic display of the most important relationships of the large group of variables, through the distances between the points

Table 2. Correspondence analysis for the crossing frequency score categorized, João Pessoa, Brazil, 2016.

Dimension	Singular value	Inertia	Chi-Square	Sig.	% Inertia
1	0.780	0.608			96.1
2	0.157	0.025	234,133	<0.001	3.9
Total	-	0.633			100. 0

representing the table categories. These points are plotted in Cartesian systems in which the axes are generally two or three orthogonal factorial axes containing the maximum possible information on the variables, which are represented in a perceptual map by a distance metric based on distances chi-square where the vicinity indicate the level of association between the variables rows or columns. **(Figure 1)**

The analysis in question, the association between diagram levels of categories of these variables has two groups where low scores are associated with high frequencies and high scores are associated with low frequency. The frequency was categorized from 1 to 5, where 1 corresponded to the exam twice a year, once a year 2, 3 of two years, 4 every three years and 5 had not defined periodicity.

Figure 1: Association Diagram between categorized scores and frequency of the resulting examination of correspondence analysis. João Pessoa, Brazil, 2015.
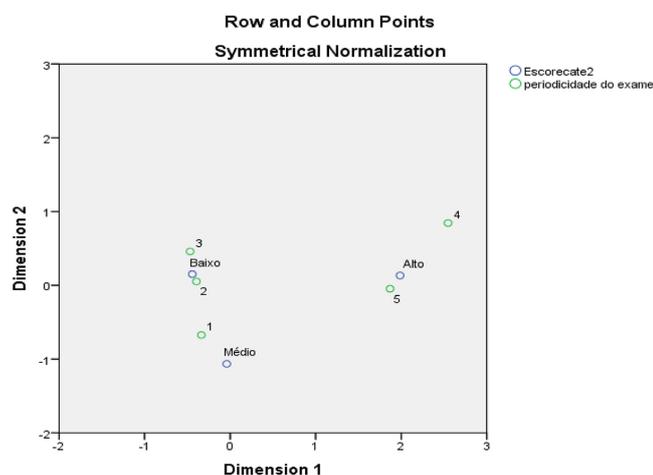

Discussion

This instrument presented construct validity of evidence from factor analysis, which according to Pasquali [7] can define the dimensionality of this instrument and still produce results that allow the decision-making process regarding the quality of covered items as a whole.

The ability to identify influential factors in women's adherence to completion of the cytological examination allows health professionals, especially nurses, joint strategies for combating the factors that act as barriers, and strengthen those recognized as adhesion facilitators.

Health education, focusing on information and guidance on the importance of health care are relevant to consolidate this accession. Corroborating the findings of this study a survey conducted in Minas Gerais pointed out that the information appears as a main ally in the realization of membership. Thus, health education should be a practice of all family health team, focused on establishing solid links with this clientele, establishing a relationship of trust and considering the user in its entirety. [8]

The relationship between health professionals and their users and the organization of the health service may contribute to poor adherence of these women the realization of this preventive care, even if they recognize the importance of such care. A good relationship with the family health team, and the clarification of several questions about the procedure, allows an understanding about the importance of making the cytological examination, and even overrides the feelings of anxiety, shame, fear and difficulties access by the service routine that arise as barriers to this clientele. [2]

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Among the main difficulties experienced by women in achieving the cytological examination are to shame, anxiety and fear of such a procedure, some perceive this practice as aggressive process, perhaps by the position to do so. Despite the regional and cultural differences in each location, it is observed that these feelings are unanimous among women, whereas other studies in Minas Gerais, Mato Grosso and Roraima also mentioned how poor adherence factors for the examination among women investigated such feelings. [8-10]

From the moment it is recognized that such difficulties may arise for this examination is necessary indeed health professionals, most often nurses, can know the reasons that prevent this examination. The instrument developed allows us to trace scores that measure the difficulties for the accession of women to achieving the cytological examination, and thus suggests the degree of compliance of these users, allowing the professional to intervene as necessary in each case.

The sample obtained the score values between 13 and 30, which were classified as the difficulties as follows: 13:14 low, average values 15 and 16 and the high 17-30.

Thus, the higher the total score more difficulties exist for this woman perform cytological examination, which can not only difficult but also prevent this examination. That said, it is suggested that women are a greater number of barriers/difficulties for the exam, are less adherent to accomplish it.

The scores were related also to the frequency with which women sought to take the examination as a routine. It was established that the higher the frequency, ie, the greater the frequency with which this woman performs the scan, the lower the score. Therefore, the better the woman's attention to self-care for the realization of cytologic and prevention CCU.

As this basis, the results showed that of the 370 women participants who had already accomplished the cytological examination ever throughout life, 37% performed annually, 25.1% every two years and 20.5% six in six months they were categorized between low and medium scores. While the high score was associated with a lower frequency, corresponding to 1.3% of women who underwent the test every three years and 15.9% of women who reported having defined periodicity for carrying out the screening.

The lack of periodicity becomes an alarming situation as these women fail to realize an effective prevention. By categorizing the score regarding the factors that influence women in the examination, among those that have done so ever, the highest scores were those who did not have a periodicity set for the meeting, suggesting greater difficulties to access.

This screening test is a widely adopted strategy on public health in addressing the high incidence and mortality rates by CCU, because it is a safe and effective method for the prevention and early detection of this pathology.11The periodicity recommended for the examination should be three years after two negative tests, with annual range, this determination is justified by the percentage reduction in expectations in the cumulative risk of developing cancer after a negative result is almost the same when the test is performed annually (reduction of 93% of the risk) or when it is held every three years (91% reduction of risk). [2, 12]

The study participants who underwent the test every three years referred do so not because it is so recommended and guided by health professionals, but for several other reasons that hinder this search.Among them were prominent factors: absence of gynecological complaints, anxiety, shame, long-term for receiving the test results, the absence of a companion and an active sex life uncomfortable position for the examination and also the unit's service routine in as regards the time allocated for this procedure.

Therefore, it is important to develop actions that help women overcome these obstacles and work on

the issue of health care considering its subjective aspects, sensitizing them that they are co-responsible for their health and this is not a function only of the professionals.

This process is not enough just to promote the exam, but it is essential that the professional aware women of their real meaning and importance to adhere it in order to minimize the factors that influence negatively in the process of so that they do not appear as barriers to their achievement.

In this context, you can view education and opening dialog production spaces as a key tool not only nursing but all professionals who make up the health team. Developing the potential of every woman on the issues of prevention CCU, considering their prior knowledge, as well as respecting their life history and their experiences.Enables up this way, the construction of a co-responsibility relationship, favoring more humane and effective ways in the work process in health both for users, as for professionals.

Conclusions

Considering the importance of prevention CCU, the study becomes relevant for an assessment of the accession of women to the cytological examination in Primary Healh Care the municipality ofJoão Pessoa, through an instrument that can be applied in daily work of family health teams, from factors that were identified as facilitators and barriers in the exam, based on the perception of women attending USF.

This instrument presented construct validity of evidence from factor analysis, providing support for decision making in health related to this issue. As these factors are identified it is possible that health professionals can take to strengthen and establish a greater commitment of these women to health care, through guidance and health education, strong strategy to establish adhesion between these users.

The issues identified as barriers and facilitate the accession of women to Pap smear testing of the cervix have different origins and may be related to psychobiological factors, lack of information, the relationship and the routine between the user and the professional/service health, and to own the examination procedure.

Therefore, it is notable that simple as it is this examination and the benefits arising with it is necessary that health professionals meet full so that user seeking the health service, considering its entirety and not just the technical realization exam, providing spaces for dialogue for the promotion of health education and thus strengthening the link with this target population.

Considering the importance of the subject at the present time and in the context of public health it is suggested that further studies be conducted to support the expansion of knowledge not only for the nursing practices, but that involves the entire health team that provides the health of these women care, consolidating the actions of prevention and health promotion.

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