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Facultad de Enfermería

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Contents

Editorial

An International Year to Celebrate Nursing

María de los Ángeles Rodríguez Gázquez[1]

On 16 May 2019, the 72nd World Health Assembly designated 2020 as the International Year of Nursing. The decision was made by bearing in mind the substantial contribution made by this profession to the population's health, and that this year marks the bicentennial of the birth of Florence Nightingale, one of the founders of modern nursing.[(1)]

The World Health Organization (WHO) states that, although nurses are half the health workers globally, it is necessary to add nine million of these professionals before 2030. The aforementioned seeks to reach the universal coverage in health, which is an indispensable goal to achieve the planet's sustainable development objectives.[(2)]

The 2020 initiative: *International Year of Nursing* is supported by the WHO, the International Confederation of Midwives, the International Nurses Council, the campaign Nursing Now, and the United Nations Population Fund. Throughout the year and globally activities will be undertaken to celebrate the work of nursing and which

1 Editor of Investigación y Educación en Enfermería. Universidad de Antioquia, Colombia.
Email: maria.rodriguezg@udea.edu.co

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show to public opinion the difficult conditions these professionals encounter, situations that must be improved by promoting investment to increase training and employment of this personnel as part of each country's commitment with health for all.[2]

For 38 years, our journal, Investigación y Educación en Enfermería, has exalted the essential role of nurses in caring for individuals and communities, and will continue supporting efforts on the dissemination of knowledge to collaborate in the growth of this discipline, which, although young, presents a wealth of research as never seen before.[3] By this means our readers, authors, reviewers and members of the Editorial Committee are invited to, and not only for this year, write and publish about what they think, feel, and do for Nursing to help to make this world become a bit better each day.

Happy International Year of Nursing

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Original article

Stages of Behavior Change for Physical Activity in Airport Staff: a quasi-experimental study

Khalil Mahmoudi[1]
Ali Taghipoor[2]
Hadi Tehrani[3]
Hadi Zomorodi Niat[4]
Mohammad Vahedian-Shahroodi[5]

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Stages of Behavioral Change for Physical Activity in Airport Staff: a quasi-experimental study

Abstract

Objective. This work sought to determine the effect of an educational intervention based on the stages of change in promoting physical activity in employees in the Mashhad airport in Iran. **Methods.** This was a quasi-experimental study conducted with the participation of 60 volunteers (30 in the intervention group and 30 in the control group) who were in the stages of contemplating or preparing for change in physical activity. The intervention consisted in educational activities provided during home visits, telephone calls, group training sessions, and delivery of printed material. To gather the information, the study used five questions on the stage in which they were for behavioral change in physical activity, according to the Theoretical Model by Marcus *et al.,* (1. pre-contemplation, 2. contemplation, 3. preparation, 4. action, and 5. maintenance), and the International Questionnaire on

1 M.Sc. Student. Department of Health Education and Health Promotion, Mashhad University of Medical Sciences, Mashhad, Iran.
Email: MahmoudiKH1@mums.ac.ir

2 Associate Professor, Epidemiology, Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.
Email: taghipoura@mums.ac.ir

3 Assistant professor of Health Education and Health Promotion, Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran. Email: Tehranih@mums.ac.ir

4 M.Sc. Department of Management, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran. Email: ZomorrodiNH1@mums.ac.ir

5 Associated Professor of Health Education and Health Promotion, Social Determinants of Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran. (Corresponding author)
Email: Vahedianm@mums.ac.ir

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Conflicts of interest: none.

Physical Activity. Changes in the stages were evaluated during three moments: upon entering the study, at the end of the intervention (8th month), and two months after the second evaluation (10th month). **Results.** During the 10th month evaluation, it was noted that 26.7% of the subjects from the intervention group versus 3.3% from the control group improved their physical activity and were in the action stage ($p<0.01$). **Conclusion.** The educational intervention based on stages of change is effective in promoting physical activity in the participants and may be used in educational programs that seek to improve physical activity in the employees studied.

Descriptors: health education; exercise; airports; control groups; surveys and questionnaires; models, theoretical.

Etapas del cambio de comportamiento para la actividad física en el personal del aeropuerto: un estudio cuasiexperimental

Resumen

Objetivo. Determinar el efecto de una intervención educativa basada en las etapas de cambio en la promoción de la actividad física en los empleados del aeropuerto de Mashhad en Irán. **Métodos.** Estudio cuasiexperimental realizado con la participación de 60 voluntarios (30 en el grupo de intervención y 30 en el grupo control) quienes se encontraban en las etapas de contemplación o preparación para el cambio en la actividad física. La intervención consistió en actividades educativas proporcionadas durante visitas domiciliarias, llamadas telefónicas, sesiones de capacitación en grupo y entrega de material impreso. Para la recolección de información se utilizaron 5 preguntas sobre la etapa en la que se encontraba para el cambio de comportamiento en la actividad física, según el Modelo Transteórico de Marcus *et al.* (1. precontemplación, 2. contemplación, 3. preparación, 4. acción y 5. mantenimiento), y el Cuestionario Internacional de Actividad Física. Los cambios en las etapas se evaluaron en 3 momentos: al ingreso al estudio, al finalizar la intervención (mes 8) y dos meses después de la segunda evaluación (mes 10). **Resultados.** En la evaluación de los 10 meses se apreció que el 26.7% de los sujetos del grupo de intervención versus el 3.3% del grupo control mejoraron su actividad física y se encontraban en la etapa de acción ($p<0.01$). **Conclusión.** La intervención educativa

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basada en las etapas de cambio es efectiva en la promoción de la actividad física en los participantes por lo que puede ser empleada en programas educativos que tengan como objetivo mejorar la actividad física de los empleados

Descriptores: educación en salud; ejercicio; aeropuertos; grupos control; encuestas y cuestionarios; modelos teóricos.

Etapas de mudança de comportamento da atividade física no pessoal do aeroporto: um estudo quase-experimental

Resumo

Objetivo. Determinar o efeito de uma intervenção educacional baseada nos estágios de mudança na promoção da atividade física nos funcionários do aeroporto de Mashhad, no Irã. **Métodos** Estudo quase experimental realizado com a participação de 60 voluntários (30 no grupo intervenção e 30 no grupo controle) que estavam nos estágios de contemplação ou preparação para a mudança na atividade física. A intervenção consistiu em atividades educativas realizadas durante visitas domiciliares, telefonemas, sessões de treinamento em grupo e entrega de material impresso. Para a coleta de informações, foram utilizadas 5 questões no estágio em que se destinava à mudança de comportamento na atividade física, conforme o Modelo Transteórico de Marcus et al. (1. pré-contemplação, 2. Contemplação, 3. Preparação, 4. Ação e 5. Manutenção) e o Questionário Internacional de Atividade Física. As alterações nas etapas foram avaliadas em três momentos: na admissão ao estudo, ao final da intervenção (mês 8) e dois meses após a segunda avaliação (mês 10). **Resultados.** Na avaliação de 10 meses, observou-se que 26.7% dos indivíduos no grupo intervenção versus 3.3% no grupo controle melhoraram a atividade física e estavam no estágio de ação ($p<0.01$). **Conclusão** A intervenção educacional baseada nos estágios de mudança é eficaz na promoção da atividade física dos participantes e pode ser usada em programas educacionais que visam melhorar a atividade física dos funcionários.

Descritores: educação em saúde; exercício; aeroporto; grupos controle; inquéritos e questionários; modelos teóricos.

Introduction

Due to the increasing mechanical life and the rapid development of today's world, physical activity has been considered important and lack of attention to this important cause increased several diseases,[1] especially in employees, like airport staff who may sit for continuous long hours and may be exposed to high stress. Sedentary lifestyle has been known as risk factor for various diseases. In many areas of health care in health care programs, the physical and psychological benefits of regular physical activity in reducing mortality has been proven with adequate reasons.[2] Physical inactivity or lack of physical activity is the fourth risk factor for mortality in the world, which includes 6% of mortality worldwide and approximately 3.2 million deaths occur each year because of it. In 2016, 71% of worldwide deaths was from non-communicable diseases (NCD).[3] According to the World Health Organization, in 2020 the rate is estimated to be at 73% (three quarters of all deaths) and 60% of the (burden of diseases), respectively.[4]

The findings of the national health survey among Iranian adults show that >80 percent of the Iranian population is physically inactive and has inactivity lifestyles so that 44.4% of Iranians never practice sports during their leisure time.[5] Given that today many jobs are sedentary (sitting), employees are also at risk of illness due to inactivity. Physical activity not only improves the performance and health of employees, but also increases production, reduces injury, creates spirit of cooperation, and increases communication and job satisfaction.[6]

One of the models used in health education and health promotion is the stage of change model or trans-theoretical model introduced in the late 1970s by Prochaska. A trans-theoretical model is a model sensitive to minor variations in the progress of a behavior; it is much more practical to measure physical activity compared to other patterns of behavioral change that are viewed by all or not.[7] Among the important structures of the model is stage of change, which to understand and predict health behaviors focuses on the cognitive factors affecting the decision that people protect themselves from traumatic events. The stage of change suggests time dimension and means that change occurs over time.

The stage of change suggests that the person is not ready to change, or the person is not placed in at least the same level of readiness, so people should be intervened as different from one another according to the stage of their change; these stages are the conditions of motivation including five steps: pre-contemplation, contemplation, preparation, action, and maintenance. Within this structure, the pre-contemplation stage is defined as the stage where

the person has still not thought about changing or adopting a behavior at least for the next six months.[8] In the contemplation stage, the person really thinks of changing the behavior during the next six months, but is not yet prepared to take the necessary action. In the preparation stage, people seriously think about changing behaviors and want to make changes in the near future (normally in the following month). The action stage is the stage where the person has created appropriate changes in lifestyle during the past six months. In the maintenance stage, we see a longer period of strengthening the behavioral changes (>6 months), but active and conscious effort is needed to maintain it.[9] Prochaska believes this pattern has been successfully applied in health education interventions.[10]

Familiarization by nurses with the model of change stages is important because it considers behavioral change as a stage process; to change people's behaviors towards healthy behaviors, interventions proportional to the preparation stage of individuals and helping them to go through various stages are needed.[11,12] The aim of this study was to determine the impact of the effect of education based on the structure of stage of change in physical activity promotion of Mashhad Airport staff in Iran and it is expected that the results of this study could provide a suitable and applied solution to increase physical activity among airport employees.

Methods

This was a quasi-experimental interventional study with case group. The researched community was employees from the Mashhad Airport staff in Iran, during 2018. In determining the sample size, to achieve the average effect size of 0.6 for each group[13] at least 40 subjects were allocated to each group. Data collection from the airport staff was done randomly, so after an initial review and data analysis based on stage of change, among airport employees who were in the contemplation and preparation groups, 30 were selected as the intervention group and 30 were selected as the control group.

The intervention and control groups were selected randomly; hence, the two groups were not related to each other and were in different work shifts. The control group was chosen in such a way that they did not have a common place of work with the intervention group or in a shift that did not belong to the intervention group in that shift. On the first session (30 min), the participants were informed of the importance of the study and the objectives and how to answer the questionnaire's questions. The intervention program was conducted with the intervention group. To evaluate the effectiveness of the intervention immediately and two months after the intervention, the data were re-collected with the same questionnaire. Descriptive and analytical tests, such as Chi-square, paired t-test, and independent t-test were used to determine the difference among the distribution of variables between the intervention and control groups and data were analyzed via SPSS software version 16. Inclusion criteria involved having at least one year of work experience, having a mobile phone, and having no restrictions or prohibitions on engaging in physical activity, which were verified through interview and informed consent to participate in the research. Exclusion criteria involved the reluctance to cooperate with the researcher and failure to answer at least 10% of the questions.

Data were collected through a researcher-made questionnaire including demographic data, stage of change questions, and changes to the native version of the International Physical Activity Inventory,[14] which included the following sections: a) demographic information containing questions in terms of age, level of education of subject and wife, marital status, monthly income; b) based on stage of change in physical activity in transtheoretical model consisted of five questions measured by a five-item scale (yes or no) prepared by Marcus *et al*.,[14] that the stages based on physical activity included: 1. pre-contemplation stage,

2. contemplation stage, 3. preparation stage, 4. action stage, and 5. maintenance stage; c) short form of the International Physical Activity Questionnaire (IPAQ), which includes seven questions about high and moderate physical activity, sitting, and walking in the last seven days. Intensity of physical activity for each activity is calculated by metabolic equivalent minutes/week. Self-reported data from physical activity are collected by the short form of the standard physical activity questionnaire. The international physical activity questionnaire was expanded by a group of experts in 1998 seeking to show the importance of physical activity to facilitate the study of physical activity based on international standards.[15] This questionnaire has been validated by Karimzadeh in Iran.[16] The original authors recommended the short version of the physical activity questionnaire for researches in physical activity because this questionnaire takes shorter time compared to the long form and answers the questions more accurately and more completely. The international physical activity questionnaire is translated into different languages, including Persian.[17]

Description of the Educational Intervention. For the intervention group, the educational content was provided by the researcher during three 30-min training sessions per week. For this purpose, the educational content was compiled as a CD-ROM and autographed according to the headings of the Ministry of Health and Medical Education on physical activity and was provided to the intervention group on a daily basis and monitored weekly by short message services (SMS) for four times. The activities involving the study groups are detailed in Table 1.

Table 1. Activities involving the study groups

Stages	Groups		Description
	Intervention	Control	
1	Enrollment	Enrollment	During the first month of the research, the informed consent is signed and sociodemographic and clinical data are collected.
2	Measuring of self-care behaviors	Measuring of self-care behaviors	For all patients, baseline self-care behaviors were measured upon enrollment. In the intervention group, the second measurement happened before the start of the second educational meeting (8th month) and, in the control group, before the only meeting (9th month).
3	Home visit	No	Home visits take place in months 1 and 8, during which the patient's basic social conditions for health care are evaluated. The family and patient receive indications from the nurse to improve self-care.
4	Telenursing	No	In months 2, 3, 4, 5, 6, and 7 self-care was evaluated by phone, using a guide to monitor the nursing plan recommended during the previous contact.
5	Educational meeting at the start of the research	No	This took place during the first month. Patients and their families share experiences and knowledge about what heart failure is, care for the disease, importance of physical exercise, and stress management techniques. A workshop on healthy cooking is offered afterwards.
6	Educational meeting at the end of the research	Educational meeting at the end of the research	This took place in month 8 in the intervention group, returning to the self-care behavior aspects observed during telenursing that caused most difficulties; before the educative activity, self-care behaviors are measured. In the control group, this activity took place in month 9, involving the same activities as during the first educational meeting with intervention group patients.

Table 1. Activities involving the study groups (cont.)

Stages	Groups		Description
	Intervention	Control	
7	Distribution of educational brochure during the first educational meeting	Distribution of educational brochure at the end of the research	The brochure didactically describes how to plan activities to avoid fatigue, general aspects like diet, and alarm signs of Heart Failure Decompensation, when to ask for help, adaptation to the therapeutic regime, weight control and ingested and eliminated fluid. In addition, the brochure contains a contract for patients to sign to take care of themselves. This brochure also contains tables to control weight, ingested and eliminated fluids, and medication administration.

This article is part of the results of a dissertation approved by the Master's degree in Health Education and Health Promotion of Mashhad University of Medical Sciences, approved by the Ethics Committee of the Faculty of Medicine of the university with IR.MUMS.REC.1395.236. Ethical considerations of this research include providing a written letter of permission and obtaining permission from the Mashhad Airport's General Office to conduct the research, introducing itself to each of the research units and explaining the objectives and nature of the research, assuring research units regarding the confidentiality of information, satisfaction, respect for trust and honesty in reviewing texts and analyzing information.

Results

In this study, 60 airport employees were entered and were divided into two groups. These two groups had the same demographic variables and were followed up till the end of the study.

Table 2 shows that no statistically significant difference existed in the general characteristics of the study groups.

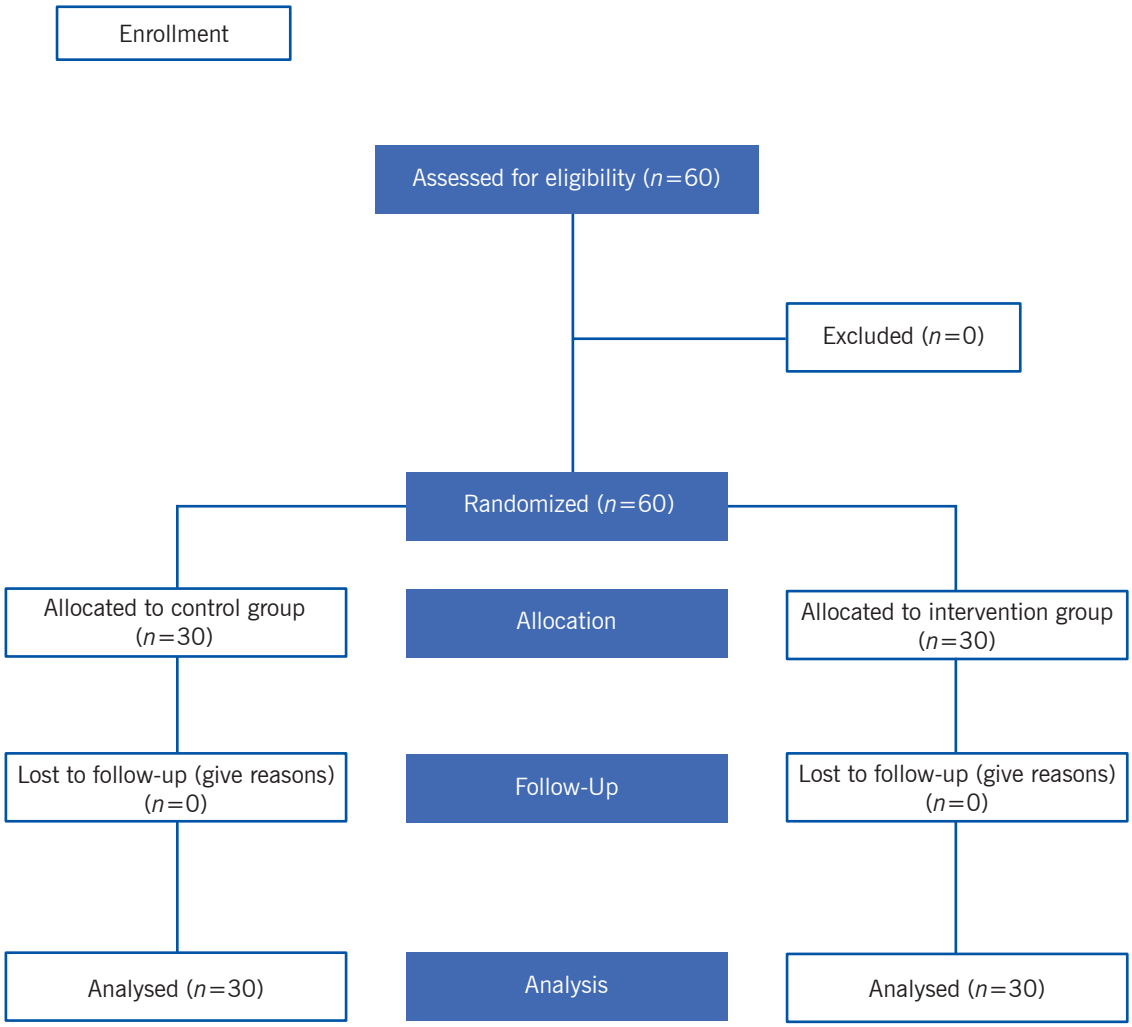

Diagram 1. Sample Selection Stages and Follow-ups

The characteristics of the whole group prevailed with age between 31 and 40 years (61.4%, mean of 33 ± 2.7 years), married marital status (70.2%), with one to two children (56.1%), official or A treaty employment (31.6% each), with work experience between 6 and 10 years (36.8%), and Bachelor's degree (93%).

The mean age of airport employees was 34.7 ± 12.8 years old and 92% were male and the rest were female. Most of the employees (57%) had undergraduate and graduate degrees, and the majority were married (87%). The results showed that both groups had no significant difference in terms of demographic variables and none of the participants left the study (Table 2).

Table 2. Frequency distribution of demographic information in the intervention and control groups

Variable	Control *n*=30	Intervention *n*=30	*p* value
	***n* (%)**	***n* (%)**	
Age (years)			0.35
Less than 35	19 (63.3)	15 (50)	
35 to 45	8 (26.7)	8 (26.7)	
More than 45 years	3 (10)	7 (23.3)	
Marital status			0.67
Married	28 (93.3)	26 (86.6)	
Single	2 (6.7)	4 (13.4)	
Gender			0.69
Male	28 (93.3)	28 (93.3)	
Female	2 (6.7)	2 (6.7)	
Education grade			0.67
Under the Diploma	4 (13.3)	2 (6.7)	
Diploma	9 (30)	7 (23.3)	
Undergraduate and Bachelor	15 (50)	17 (56.6)	
More than Bachelor	2 (6.7)	14 (13.4)	
Service record			0.14
Less than 10 years	17 (56.7)	13 (43.4)	
Between 10 and 20 years	10 (33.3)	8 (26.60	
More than 20 years	3 (10)	9 (30)	
Spouse education			0.08
Under the diploma	4 (13.4)	2 (6.6)	
Diploma	10 (33.3)	6 (20)	
Undergraduate and Bachelor	13 (43.3)	15 (50)	
More than Bachelor	1 (3.3)	3 (10)	

According to the findings in Table 3, the subjects of the intervention and control groups were selected with respect to stage of change from the contemplation and preparation groups. Immediately, and after two months of intervention, 29 people (97%) of the subjects in the intervention group changed level and entered the higher stage in terms of the level of physical activity in stages of change. After the intervention, only one person (3%) of the control group changed level and entered the higher stage, and others remained at the previous level. Independent t-test results showed that before the intervention, two groups were homogeneous in terms of stage of change. The results of chi-square test showed significant differences in frequency changes in the stages of change on the intervention group immediately and two months after the intervention.

Table 3. Comparison of the frequency of stage of change before, immediately after, and two months after the intervention between both groups

Stage of change	Intervention			Control		
	Before the intervention *n* (%)	Immediately after the intervention *n* (%)	Two months after the intervention *n* (%)	Before the intervention *n* (%)	Immediately after the intervention *n* (%)	Two months after the intervention *n* (%)
Contemplation	13 (43.3)	1 (3.3)	1 (3.3)	11 (36.7)	9 (30)	10 (33.3)
Preparation	17 (56.7)	24 (80)	21 (70)	19 (63.3)	21 (70)	19 (63.3)
Action	0 (0)	5 (16.7)	8 (26.7)	0 (0)	0 (0)	1 (3.3)
Test result	$X^2=24.16$ $p<0.001$			$X^2=0.89$ $p=0.64$		

Discussion

This study investigated the effect of education based on stage of change in physical activity promotion of Airport staff and the results indicated the effectiveness of principal counseling in this regard. In the trans-theoretical model, the stage of change is the strongest predictor of physical activity.[18] Therefore, to promote physical activity in people, this structure should be especially considered in educational interventions.[19] Interventions performed based on the structure on stage of change have more effectiveness in facilitating behavioral change compared to other studies. In other words, interventions focusing on stage of change and having a specific training program for each step should have more positive outcomes.[20]

In this study, based on stages of change in physical activity, the educational program was performed for individuals in the contemplation and preparation stages. After performing the educational program, significant difference was observed in the stages of change in the intervention group; this difference was not significant in the control group that reflects the impact of the intervention. In the intervention group, 40% of individuals in the contemplation stage were reduced and moved to higher stage of engaging in regular physical activity. In the interventions based on stage of change, the main purpose is that of reducing the number of people in the inactive stages and increasing the number of people in the preparation and action stages. These results are similar in many interventional studies conducted in this area.[20-22]

In terms of the transition from the contemplation stage to the action stage, Tehrani *et al.,*[21] showed that the educational intervention was effective on the process of transition from pre-contemplation and contemplation stages to the action stage, so that 83% of the intervention group and 17% of the control group had entered the action and maintenance stages after one year of follow-up.

There was no significant difference in the physical activity of both groups before the intervention, but after the intervention, the mean of the physical activity score in the intervention group was significantly higher than in the control group, indicating the effect of the educational program on increasing physical activity. The study by Tehrani *et al.* [21] confirmed our findings, so that their results showed that the amount of physical activity before the intervention was not significantly different in the intervention and control groups, but the independent t-test results showed that the mean score of physical activity after the in-

tervention had significant difference between both groups, and the mean of the above mentioned significantly increased in the intervention group. Also, the findings by Vafaee *et al.,* [22] confirmed the findings of the present study, showing that comparing the groups indicated that a greater proportion of the cases in the intervention group (75%) were in middle level of physical activity, which represents an increase in mean physical activity after the intervention in the intervention group. In the study by Mardani,[23] physical activity increased after the intervention, consistent with the present study.

This study confirms the effectiveness of systematic educational programs based on stages of change to promote physical activity in Mashhad airport staff. It seems that stages of change can be used as a framework to design educational programs to improve employees' physical activity and reduce sedentary lifestyle-related diseases.

Considering the effectiveness of the educational intervention to increase the physical activity of the staff, educational programs for all employees in the airport should be encouraged.

The limitations of this study were to collecting the information on the amount of physical activity through self-reporting, which tried to minimize the participants by trusting the participants. It is suggested that interview method be used in future researches and the results compare with self-reporting method.

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Original article

Social representations of female sex workers about their sexuality

Pablo Luiz Santos Couto[1]
Bianca Pereira Correia Montalvão[2]
Arilene Rodrigues Silva Vieira[3]
Alba Benemérita Alves Vilela[4]
Sérgio Correia Marques[5]
Antônio Marcos Tosoli Gomes[6]
Núbia Rego Santos[7]
Luiz Carlos Moraes França[8]

UNIVERSIDAD DE ANTIOQUIA
1803

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Abstract

Objective. To know the social representations of female sex workers about their sexuality. **Methods.** Qualitative study based on the Theory of Social Representations. Thirty-nine women from a health region of Alto Sertão Produtivo Baiano - Brazil agreed to participate. For the production of empirical data, the techniques of Free Word Association and in-depth interviews were used. The answers were analyzed based on Constellation Target Content Analysis and Semantic Content Analysis. **Results.** Two thematic categories emerged: "negative representation of sexuality"; "my pleasure is the money". Therefore, the theme sexuality and meanings derived from the social representations elaborated by the sex workers about sexuality, based on their experiences and daily life, showed that the work involved a negative representation of sexuality when associated with sexual satisfaction with the client, in addition to the allusion to sex as a source

1 Nurse, Master. Professor, Higher Education Center of Guanambi, Brazil. Email: pablocouto0710@gmail.com

2 Nurse, Specialist. Professor, Higher Education Center of Guanambi, Brazil. Email: biancapcm1@gmail.com

3 Nurse, Specialist. Professor, Higher Education Center of Guanambi, Brazil. Email: leneemariana@gmail.com

4 Nurse, PhD. Professor, State University of Southwest Bahia, Brazil. Email: albavilela@gmail.com

5 Nurse, Doctor. Professor, State University of Rio de Janeiro, Brazil. Email: sergiocmarques@uol.com.br.

6 Nurse, Doctor. Professor, Rio de Janeiro State University, Brazil. Email: mtosoli@gmail.com

7 Nurse, Specialist. Professor, Higher Education Center of Guanambi, Brazil. Email: nubia.net12@gmail.com.

8 Nurse, Master. Professor, State University of Rio de Janeiro, Brazil. Email: lcmoraesfranca@hotmail.com

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of income. **Conclusion.** The social representations about sexuality constructed by sex workers are linked to the feeling of denial of pleasure and obtaining money for subsistence. Reflecting on sexuality points out ways to rethink the care to be provided for a stigmatized and vulnerable group.

Descriptors: female; sex workers; pleasure; sexuality; sexual behavior; qualitative research.

Representaciones sociales de las trabajadoras sexuales sobre su sexualidad

Resumen

Objetivo. Apreender las representaciones sociales de las trabajadoras sexuales sobre su sexualidad. **Métodos.** Estudio cualitativo, basado en la Teoría de las Representaciones Sociales. Aceptaron participar 69 mujeres de una región productiva bahiana de salud en el Sertão (Brasil). Para la producción de los datos empíricos, se utilizaron las técnicas de Asociación Libre de Palabras y entrevistas a profundidad. Las respuestas se analizaron a partir del Análisis de Contenido por Objetivo de Constelación o de Contenido Semántico. **Resultados.** Surgieron dos categorías temáticas: "Representación negativa de la sexualidad" y "Mi placer es el dinero". Para las trabajadoras sexuales, la sexualidad tiene una representación negativa cuando se asocia con la satisfacción sexual con el cliente, además de la alusión al sexo como fuente de ingreso económico. **Conclusión.** Las representaciones sociales de la sexualidad construidas por las trabajadoras sexuales se refieren al sentimiento de negación del placer y a la obtención de dinero para la subsistencia. Reflexionar sobre la sexualidad aporta caminos para repensar el cuidado a un grupo estigmatizado por la sociedad y con alta vulnerabilidad social

Descriptores: femenino; trabajadores sexuales; placer; sexualidad; conducta sexual; investigación cualitativa.

Representações sociais de trabalhadoras sexuais sobre sua sexualidade

Resumo

Objetivo. Apreender as representações sociais de trabalhadoras sexuais sobre sua sexualidade. **Métodos.** Estudo qualitativo, fundamentado na Teoria das Representações Sociais. Aceitaram participar 69 mulheres de uma região de saúde do Sertão Produtivo Baiana (Brasil). Para a produção dos dados empíricos utilizou-se as técnicas de Associação Livre de Palavras, e a entrevista em profundidade. As respostas foram analisadas a partir da Análise de Conteúdo por Alvo de Constelação e de Conteúdo Semântica. **Resultados.** Surgiram duas categorias temáticas: "representação negativa da sexualidade" e "meu prazer é o dinheiro". Para as trabalhadoras sexuais, a sexualidade envolve a representação negativa quando associado à satisfação sexual com o cliente, além da alusão ao sexo como fonte de renda. **Conclusão.** As representações sociais sobre a sexualidade construídas por trabalhadoras sexuais remetem ao sentimento de negação do prazer e a obtenção do dinheiro para a subsistência. Refletir sobre a sexualidade apontam caminhos para repensar o cuidado a um grupo estigmatizado e de vulnerabilidade pela sociedade.

Descritores: feminine; profissionais do sexo; prazer; sexualidade; comportamento sexual; pesquisa qualitativa.

Introduction

The practice of prostitution has been a vulnerable work marginalized by society, because besides involving sexuality and human sexual practices in exchange for money, it is permeated by social stigmas. Women, the social actresses involved in sex work, find themselves inserted in a daily routine in which they resort to sexual practice as a service to offer in order to obtain profit and income for their own support and that of their families.[1] In this universe of sexual service, these workers set limits with clients on what is and/or is not allowed during sex, as a form of protection, as some of them support themselves in the sense of protection, since there is no guarantee on the part of the State of safety against violent situations and possible abuses that many clients tend to commit. Sex workers (a term used by the Ministry of Labor and Employment for prostitutes) offer a service that provides them autonomy and financial independence, as well as the satisfaction of personal and family needs.[1-3]

Due to the social contexts in which they work and the subjectivity that is the product of affection and culture, sex workers are inserted into the group of vulnerable populations by various social reasons. For example, they use sex as service and are susceptible to Sexually Transmitted Infections (STIs). Also, they circulate and work in a diversity of spaces, including bars, brothels, hotels, squares, streets and avenues, places that do not offer security.[4] However, these workers object the way society inserts them into these vulnerable groups, because most of them protect themselves, care for themselves and prevent STIs.[5] What they claim is the protection of the State, recognition of the profession, guarantee of labor rights, security and protection against various types of violence, as well as respect for the service offered, and the less stigma and prejudice.[1-3]

The situations of vulnerability lived and experienced by them, due to neglect on the part of the State, make it difficult for health professionals to recognize sexuality and sexual health in all their contexts as a human need. It is noteworthy that the term vulnerability can be conceptualized as a condition in which people (such as sex workers) experience, whose situations interfere in the health-disease process, and the confrontation of life becomes impaired as a result of failures in the attention from the State and society.[5] Health professionals, especially nurses, those at the cutting edge of care, focus their care only on preventing sexually transmitted infections (STIs), living aside the subjective issues surrounding sexuality, such as pleasure and sexual satisfaction[5] and subjective and interpersonal conflicts.[1,2] The repressions against sexual service and everything that refers to human sexuality, such as the sexual pleasure and sexual practice of sex workers, are seen by scientific, medical and religious discourses as surrounded by social prohibitions, denials and interventions in the naturalization of sex.[6] The social construction of

sexuality occurs through various processes within power relations, among them the power that society exercises over bodies (biopower), determining attitudes consistent with what is expected of boys and girls.[7]

Sexual satisfaction, as a multifaceted spectrum of sexuality, is conceptualized by the World Health Organization as an indicator of sexual health in the context of quality of life and sexual and reproductive rights, covering issues of physiological (sexual functioning) and also subjective nature under the aegis of affective relationships and the relationship with socioeconomic and cultural factors.[2,8] In this context, the difficulty in recognizing sexuality as a necessity of human life is constant in the practice of nursing professionals, as well as the difficulty to develop proposals that benefit the sexual health of female sex workers, and prevent STIs. These reflections indicate a clear need for nurses to awaken to raise awareness of this problem and then, based on the social representations elaborated by prostitutes about their sexuality, identify meanings that govern attitudes and behaviors, and from this start point, plan practices of specific care for the groups to which these people belong.[8-10]

The Theory of Social Representations is necessary for studies carried out with vulnerable populations, such as women who work with sexual practice, as it enables the understanding of how these themes are experienced in the daily work of the group, as well as in the way knowledge is elaborated, shared and spread among them.[11,12] In this context, this study aimed to grasp the social representations of sex workers about their sexuality.

Methods

This is a qualitative study, based on the Theory of Social Representations in its procedural approach. Social representations are instances of practical knowledge that originate in human mental systems (the place where ideas, meanings are built and stored in the unconscious - cognitive system) and that lead to dialogue and to the perception of each person's social, material and ideational context.[11,12] The collaborators of the study were sex workers of the Microregion of Guanambi-BA, headquarters of Alto Sertão Produtivo Baiano - Brazil, which covers 19 municipalities with just over 400 000 inhabitants.[13] The non-probabilistic convenience sample consisted of 69 women who met the following inclusion criteria: aged 18 years and older, and practice of acts of prostitution during the collection period. Since this group has social invisibility, there are few official records about them, either at regional or national level, making it difficult to estimate the population size. The women were contacted through Community Health Agents, who made the invitations in advance and stressed the voluntary and anonymous nature of participation.

Professionals from the Regional Counseling and Testing Center of Alto Sertão Produtivo municipality approached the participants. Data collection was performed by the coordinator of the umbrella project along with two students (all authors of the present study) who were previously trained to apply the instruments. The instruments were applied between April and June 2017 on an individual base to women who accepted the invitation, in a first stage of the project, in closed rooms of two Basic Family Health Strategy Units and simultaneously by the researchers themselves, located near the workplace of these women. However, as some of them were unable to travel to these units, visits were scheduled, with prior authorization from the Testing and Counseling Center, to collect information at the participants' homes or workplaces. The participants were informed about the project, and its objectives and the reasons/purpose. The researchers introduced themselves, saying their names, and institutional affiliation. Data were produced through the application of a script created by the researchers, which contained items for the characterization of the participants, inducing stimuli for the Free Word Association Test (FWAT), and three open questions to guide the in-depth interview. The questions prepared for character-

ization of the sample included the variables age, education, religion, job satisfaction, and use of condoms and contraceptive methods. Immediately after that, they said five words that came to mind when they heard the following inducing expressions, one after another: sexual act; sexuality; pleasure. Of the 69 women who contributed to the FWAT, 30 agreed to continue and participate in the in-depth interview, answering the open questions.

For the in-depth interview, the women answered three open questions: 'Tell me why you associated these words in the previous test'; 'Tell me how you see your sexuality at the moment you are having sex with the client'; 'Tell me about your motivation to continue being a sex worker'. The average time of FWAT responses was 35 seconds for each participant. The interviews were recorded using a mobile device, lasted 15 to 20 min on average, and were later transcribed in full length by typing the speeches in the Microsoft Office Word 2016. The interview made it possible to understand the deepening and the connections established between the evoked words. Data obtained with the FWAT were analyzed by content analysis of words evoked by the constellation target.[14] The analysis took place from the following perspective: comparative analysis of different semantically similar words; determination of internal dualities; organization of words into categories based on frequencies to create a figure with circles where words with higher frequencies (a minimum of 04 was adopted as the cutoff point for frequency of repetition of words) or representative words are found within the circle, and those with lower frequency are left in the periphery.[14]

Right after that, the speeches from the interviews were analyzed through semantic content analysis,[15] started with a fluctuating reading and followed by a critical reading of the material selected for classification of codes and text units, so as to build inferences and interpretations. Then, thematic, descriptive and qualitative analysis was performed, and allowed the identification of semantic similarities and divergences in the contents of the interpreted and triangulated results, with the result of evocations from the FWAT.[15]

This work followed the ethical principles of Resolution nº 466/2012 on research with human beings, which was submitted to Brazil Platform for consideration and analysis by the Research Ethics Committee, and was approved with protocol number 2.007.080 / 2017.

Results

Of the total participants, the majority were between 18 and 35 years old (78.2%), had a low level of education (53.6%), reported being of the Black race (59.4%), Catholic (55.1%), worked for less than 05 years (68.1%), were not satisfied with their profession (58%), used condoms (63.8%) and contraceptive methods (66.7 %) in sexual relationships. The triangulation of the analysis of the speeches from the FWAT and from the interviews, as well as the convergence by semantic approximation of words, produced two thematic categories: 'Negative representation of sexuality'; 'My pleasure is the money'. These categories reveal aspects arising from the unconscious (region in the brain of people where representations are elaborated, which refers to the cognitive system and symbolic memory) of female sex workers about their sexuality, which are responsible for the formation of meanings, ideas and memory, and therefore constructs of social representations.

Negative representation of sexuality

Figure 1 presents the most frequent words (repetitions) evoked by women, and which are statistically significant for the formation of social representations. Thus, the words sex, pleasure and bad stood out, showing how the group represents sexuality, which has its meaning strongly anchored in the sexual practice.

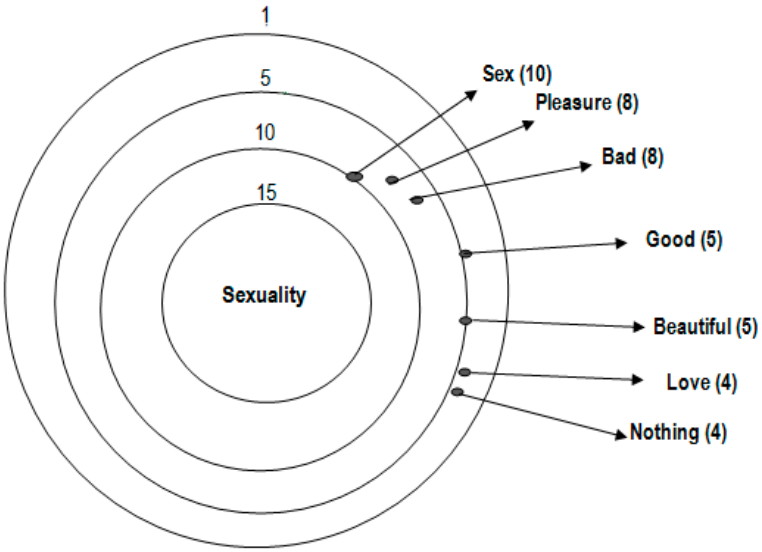

Figure 1. Constellation target of attributes of the stimulus 2: 'Sexuality'

These words are also present in the speeches of the group and express the consensus thinking, showing the acceptance of belonging, as female sex workers and, therefore, the conformation for the construction of their social representations: *I don't know, what do you mean sexuality?* [Sex worker 22]. *When I think of sexuality, I don't think of good things, it's always bad* [Sex worker 3]. *It's not pleasant, it's disgusting as trash, the only reason why I'm here is to get money, sexuality is very bad, it's really because I need, it's service* [Sex worker 10]. *I have to show my face, life has ups and downs, I don't give in, I'm afraid of falling in love, afraid of being beaten again, so I worry about finishing quickly* [Sex worker 1]. *Sexuality is sex, in the profession involves money, and in the relationship the feeling, I know how to separate the two moments, it's different at work, and with my partner* [Sex worker 16]. *It's always bad. I was raped by an uncle of mine when I was a girl, so when any man touches me, I don't feel anything, so I'd rather think about the money, because if it's not because of that, no one man will touch me* [Sex worker 13].

My pleasure is the money

The evocations that were most significant for the term sexual act were money, I don't like it, and sex, as can be seen in Figure 2. The inducing term pleasure was associated with money, partner, and nothing, as shown in Figure 3.

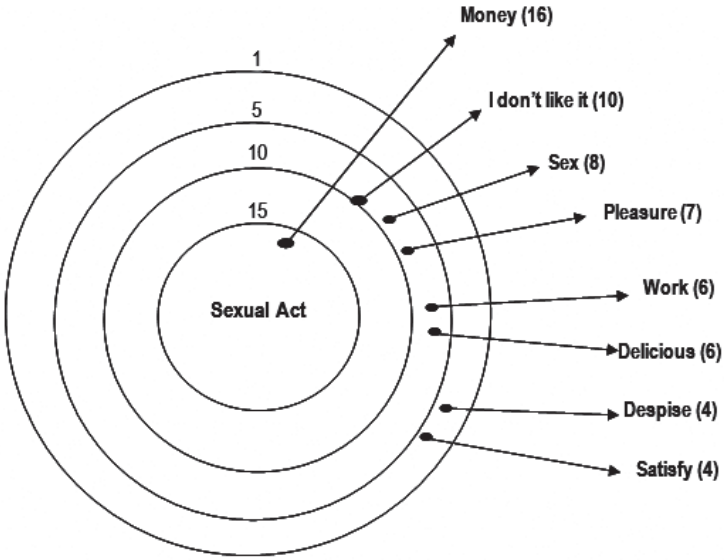

Figure 2. Constellation target of attributes of the stimulus 2: 'Sexual Act'.

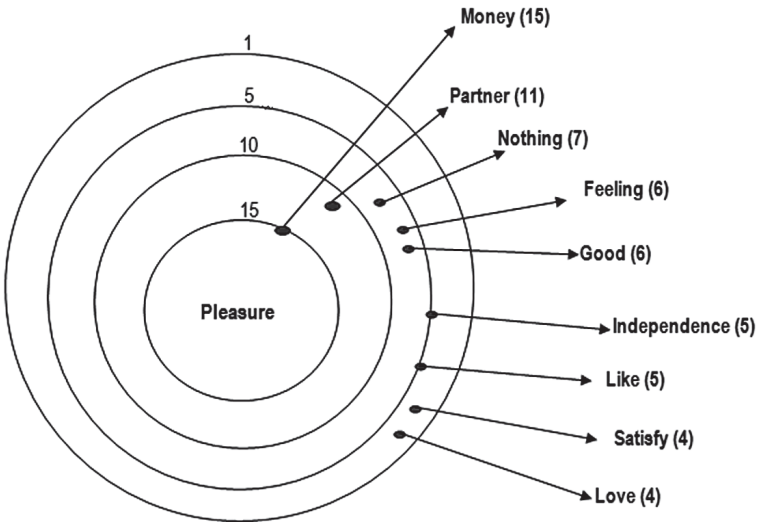

Figure 3. Constellation target of attributes of the stimulus 3: 'Pleasure'.

The social representations of the group to which these women belong are far from the view of society that sex work alone arouses pleasure and orgasm. It differs from the view presented by the group studied, because they understand that pleasure is associated with feeling of love and affection, and they develop these feeling towards their companions. With the men with whom they practice prostitution, the purpose is to guarantee profit and money for survival, in order to purchase goods and provide quality of life for them and their families. Some even pointed out that when they are not enjoying the moment with the client, they yearn to end the program as soon as possible, as can be seen in the following lines: *When I do a work, I am a professional, I do not choose the man who is with me, I have fun at home with my boyfriend* [Sex worker 19]. *Sex here is for the support of my children, I need to pay my bills, buy clothes. If it wasn't for the needs, I wouldn't make it* [Sex worker 12]. *I can't wait until the end of the month to have money, and a minimum wage doesn't pay my bills! I have even worked in a restaurant, but I feel good here* [Sex worker 7]. *Sometimes the guy doesn't just want to have sex, he comes to talk to me, seek my advice; and I do it, thinking only about money, sometimes I even prefer that* [Sex worker 20]. *At that moment I think about money, what I want for my life, my pleasure is in the money I'm going to earn, and when it's not cool, I close my eyes and just think about money* [Sex worker 9].

Discussion

It was observed that the social representations of the group to which the women belong in relation to their sexuality are built based on experiences and meanings, where they relate sexuality with the sexual act and the practices that occur in their daily work. Their sexuality in the work environment is expressed in the context of professional practice to meet the needs of both involved (workers and clients). Female workers differentiate their sexual service and the identification (for them) of who their clients are or may be and how their relationships with them should be established. They also determine the duration of work, the amount, and the forms of payment. Thus, relationships and pleasure in the sphere of sexuality are determined by the sex workers, where the payment of money represents the way the relationship is represented, both to the provider (prostitutes) and to the consumer (clients).[16] In this context, the practice is carried out without guilt by some (those who are empowered and have faced adversity in their journey in this profession and have taken the control of situations), but qualified as negative, bad, not pleasant by others, due to the vulnerabilities to which these labor practices expose them, arising from social stigmas and from the absence/lack of state protection, such as fear of violence.[17]

It is reiterated that human sexuality and, within its context, sexual health, has been a challenge for groups attached to social stigmas and vulnerable populations. This makes it important to understand this phenomenon and to raise hypotheses about the representational centrality of sex workers about their sexual satisfaction.[18-20] Social representations are elaborated based on their understanding of pleasure and the way it is felt and experienced with clients or partners in some cases. However, sexual satisfaction had a negative connotation in most cases. Sex workers set symbolic limits on their own bodies as to personal and professional life, based on what they determine that can or cannot be done sexual intercourse. Within these limits, it is the sexual satisfaction associated with orgasm (pleasure), because satisfaction is experienced either in the private space with the partner or by a client who aroused in them some feeling (personal life). The professional relationship developed with other clients, whose purpose is to make them achieve pleasure and obtain the established profit, refers to their professional life and the 'sexual contract' signed with men.[21]

However, by having access to goods and meeting needs, the pleasure is represented by the profit obtained from sex work[22] also presented in a

study carried out in France with French prostitutes, problematizing the fact that society considers the exchange of sexual pleasure for swearing of masters and fantasies acceptable, but cannot value sex and charge the satisfaction reached with it.[23] It is in sex that money becomes synonymous for lust, love, leisure, and fun, not as a tool for buying or exchanging, but as an object of desire and sexual exchange.[24]

In a survey of 30 female sex workers in the city of Barcelona, Spain, the authors showed, based on the experience of the participants, that addressing the experiences of prostitution transcends environmental and personal concerns.[6] They are structural problems where sexuality is related to bad experiences of professional practice, and reflect the interpenetration of these structures in the individuals' lives, both in their social and historical context, with the association of denial with orgasmic pleasure in the sexual act with clients.[6] In another study of 40 female sex workers aged 15 to 25 in Cabo Verde, Rio Grande do Sul, it was identified that these women seek their partners, even in the practice of prostitution, not just the desire, which is often not found, but also economic means to support the family. They point out that orgasm is not sustained in this type of relationship, because they associate the practice with a profession.[25] This representation of the relationship with the client possibly originates in childhood, on the part of some, due to acquired vulnerabilities such as exposure to promiscuity and indirect incentive to prostitution; however, it is emphasized that most of them are in sex work of its own accord, because they see that this profession makes it possible to have access to goods and services that are often neglected by the State, escaping the stereotype created in society that sex workers have no other choice of profession; indeed many have, however the subhuman conditions proposed by employers are even an affront to their needs.[26]

The representational consensus of sexuality, whether due to profit and negation of sexual pleasure, grasped from the collective memory of sex workers, is associated with the sexual act and is in line with the representational discourses of sex workers in the bohemian zone located in the center of Belo Horizonte.[27] However, as noted in the positive elements such as self-esteem, good, affection, vibe, and feeling, even though orgasm itself is rare in the case of clients, studies suggest that it may occur when there is a greater bond between prostitutes and steady partners or clients with whom they develop a more affective relationship.[1,28] This view is in line with the thinking of feminists who have embraced the concept of empowerment and undo discourses of oppression of victims and women's lack of resilience. Thus, these discussions assume an essential role for the contextualized understanding of prostitution as a social construct, both for the analysis of the constitution of micro-powers in the production of discourses on sexuality and subjugation of women, who have their sexuality and their body exposed as a bargaining chip[7] as in social representations[12] which are built by the experience as a group and by common sense, which interfere with behaviors.

Regarding the effects, this type of stigmatization shows that the way they experience these issues in their daily work interferes with the knowledge of sexuality, contrary to what the scientific community thinks as they mean, especially because they have not discovered or awaken in themselves and reverberate in the depictions of sexuality alluding to profit.[29] To understand the division between the professional and the personal universe, it is necessary to understand the unit of professional activity that these women call the 'date', that is, an elementary unit of the activity of sex workers. Its performance requires agreement on three issues: the inherent work practices, the amount to be charged, and the time of the activity. These practices refer to both the paid sexual act, and to the time the professional spends with the client to talk, without performing any activity considered sexual. And this is what differentiates their sexuality from their professional life, as well as that related to their affective life.[29,30]

Although invisibilities exist, men perceive these women as 'sexually depraved', and therefore seek them to meet their needs, because 'normal' wives or women cannot satisfy them, reaffirming the Judeo-Christian theory of sexual satisfaction associated with a sinful and deviant act.[26] Therefore, specifically in this study, the pleasure aroused by money and not by the partner was a unanimous thinking in the social representations of these women, which reveal facets and nuances of sexuality of this group of women, beyond what macho society establishes as a body to be used for a purely sexual purpose. The speeches of women showed particularities in relation to their work, according to the representations learned about the source of pleasure during the sexual act: the body represented as a work object to obtain money. The body and its borders are legitimizing objects of relationships and partnerships established both inside and outside prostitution; they transversalize the exclusively sexual function to build social meanings of being in the public and private world.[30]

The practice of prostitution contributes to the formation of belonging of a group loaded with social stigmas, which have in their cognition systems representations about sexuality that are distinct from those of society and, specifically, by experiencing sex as work. Sexuality is a multifaceted subject full of contradictions, as it involves feelings, senses and meanings. No health professional can remain indifferent. In order to reduce the exclusion and prejudice associated with prostitution on the part of health professionals and health sectors that provide this type of service to the population, it is essential that scientific studies produce differences in the way they act, think, feel and believe of the particularities associated with this practice.[9,26]

It is concluded that the social representations elaborated by the sex workers of this study reveal the way these women experience sexuality and the rent of their bodies in their daily work, as well as the meanings seized/perceived in the mental fields (unconscious). The meaning of sexuality is linked to the sexual act practiced with clients as a source of income and profit to obtain goods and supply their needs. However, pleasure toward sexual satisfaction is anchored in affection and emotions developed with steady partners, or negative feelings when associated with sex with a client.

The dispute between subjective (pleasure) and practical (obtaining income) meanings of daily prostitution helps to understand the importance that the meanings attributed by sex professionals to the type of work they perform influences the constitution and formation of representations about sexuality, specifically the association with money.

The contribution of this study lies in the fact that nursing professionals, especially nurses, may focus their attention and practices on the meanings of sexuality originated in the social representations expressed by sex workers. By doing so, they will be able to rethink their care strategies for the sexual health of this group of women, encompassing not only the prevention of STIs but also the subjectivity that surrounds sexuality, such as sexual satisfaction, pleasure, emotions and imbricated feelings. As a result of their (sexual) work, these women are stigmatized and socially marginalized, face shame and institutional prejudice, and therefore do not access health services.

This study had as limitations the number of women and the fact that it took place in a poor area in northeastern Brazil, which makes completely prevents generalizations because women and people, in general, have different profiles and living conditions, varying according to culture and place. However, the importance of expanding studies on the health of female sex workers, especially of qualitative nature, is stressed because the daily routines and experiences of these women vary. Such studies may contribute to the appreciation of different contexts, meanings and representations.

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Original article

Effect of an Interactive Training on Choosing Delivery Method among Primiparous Pregnant Women: An Interventional Study

Nahid Zarifsanaiey[1]
Alireza Bagheri[2]
Faezeh Jahanpour[3]
Samaneh Nematollahi[4]
Parviz Azodi[5]

UNIVERSIDAD DE ANTIOQUIA
1803

Effect of Interactive Training on Choosing Delivery Method among Primiparous Pregnant Women: An Interventional Study

Abstract

Objective. To evaluate the effect of interactive training conducted during pregnancy on choosing delivery method among primiparous women. **Methods.** Quasi-experimental study carried out in 2017 in two hospitals in the city of Bushehr (Iran), with the participation of 108 primiparous pregnant women in an educational program consisting of eight 2-hour sessions every two weeks in which interactive training activities were performed (group discussions, classroom sessions, and delivery of printed educational material) on themes related with physiological delivery, painless vaginal delivery methods, and complications of cesarean delivery without indication, among others. Before and after the intervention, the Knowledge and Preferred Method of Delivery Questionnaire by Moradabadi *et al*., was used to obtain information. **Results.** The results

1 Ph.D. Virtual School, Shiraz University of Medical Sciences, Shiraz, Iran.
Email: sanaieyn@sums.ac.ir. Corresponding author.

2 M.Sc. Bushehr University of Medical Sciences, Bushehr, Iran. Email: bagheri54@yahoo.com

3 Nurse, Ph.D. Nursing and Midwifery School, Bushehr University of Medical Sciences, Bushehr, Iran. Email: f_jahanpour@yahoo.com

4 M.Sc. Shiraz University of Medical Sciences, Shiraz, Iran. Email: samane.nematolahi@yahoo.com

5 Nurse, M.Sc. Paramedical Faculty, Bushehr University of Medical Sciences, Bushehr, IR Iran.
Email: azodi.parviz@gmail.com

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indicated that the level of knowledge in the group of mothers increased significantly between the pre-intervention and post-intervention assessment (13.2 versus 19.4, of 20 possible maximum points; p <0.001). Additionally, significant difference was observed in the selection of the vaginal delivery method before and after the intervention (74.1% versus 98.1%; p<0.001). **Conclusion.** Implementation of interactive training increased knowledge of pregnant women on the delivery and induced a positive effect to encourage the primiparous mothers to have a vaginal delivery.

Descriptors: pregnancy; parity; cesarean section; delivery, obstetric; unnecessary procedures.

Efecto de un entrenamiento interactivo en la elección del método de parto en madres primíparas. Un estudio de intervención

Resumen

Objetivo. Evaluar el efecto de un entrenamiento interactivo realizado durante el embarazo sobre la elección del método de parto en mujeres primíparas. **Métodos.** Estudio cuasiexperimental realizado en 2017 en dos hospitales de la ciudad de Bushehr (Irán). 108 mujeres embarazadas primíparas participaron en un programa educativo consistente en ocho sesiones de dos horas de duración cada dos semanas, en las que se realizaron actividades de capacitación interactiva (discusiones grupales, clases magistrales y entrega de material educativo impreso) sobre temas relacionados con el parto fisiológico, los métodos de parto vaginal sin dolor, las complicaciones del parto por cesárea sin indicación, entre otros. Antes y después de la intervención se utilizó, para la toma de información, el *Knowledge and Preferred Method of Delivery Questionnaire* de Moradabadi *et al*. **Resultados.** Los resultados indicaron que el nivel de conocimiento en el grupo de madres aumentó significativamente entre la evaluación preintervención a la posintervención (13.2 versus 19.4, de 20 puntos máximos posibles; p<0.001). Además, se observó una diferencia significativa en la selección del método de parto vaginal antes y después de la intervención (74.1% versus 98.1%; p<0.001). **Conclusión.** La implementación

de la capacitación interactiva aumentó el conocimiento de las embarazadas sobre el parto e indujo un efecto positivo para alentar a las madres primíparas a tener un parto vaginal.

Descriptores: embarazo; paridad; cesárea; parto obstétrico; procedimientos innecesarios.

Efeito de um treinamento interativo na escolha do método de parto em mães primíparas. Um estudo de intervenção

Resumo

Objetivo. Avaliar o efeito de um treinamento interativo realizado durante a gravidez na escolha do método de parto em mulheres primíparas. **Métodos** Estudo quase experimental realizado em 2017 em dois hospitais na cidade de Bushehr (Irã). 108 gestantes primíparas participaram de um programa educacional composto por oito sessões de duas horas a cada duas semanas, nas quais foram realizadas atividades de treinamento interativas (discussões em grupo, master classes e entrega de material educacional impresso) sobre questões relacionadas ao parto métodos fisiológicos, parto vaginal sem dor, complicações do parto cesáreo sem indicação, entre outros. Antes e após a intervenção, o Questionário de Conhecimento e Método Preferido de Entrega de Moradabadi et al. **Resultados** Os resultados indicaram que o nível de conhecimento no grupo de mães aumentou significativamente entre a avaliação pré-intervenção e a pós-intervenção (13.2 versus 19.4, de 20 possíveis pontos máximos; $p<0.001$). Além disso, foi observada diferença significativa na seleção do método de parto vaginal antes e após a intervenção (74.1% versus 98.1%; $p<0.001$). **Conclusão** A implementação do treinamento interativo aumentou o conhecimento das gestantes sobre o parto e induziu um efeito positivo para incentivar as primíparas a terem um parto vaginal.

Descritores: gravidez; paridade; cesárea; parto obstétrico; procedimentos desnecessários.

Introduction

Delivery is one of the most important and crucial services provided by the healthcare system in any community as every service should be provided with the minimum cost and mental-physical side effects.[1] The cesarean delivery method is no exception in this regard. It is necessary in cases where vaginal delivery is not safe for the mother and the child. The standard cesarean operation rate is 15% to 20% for the pregnant population in each society. The average rate of cesareans in Iran is reported at 40%, which is higher than the rate defined by the World Health Organization (5% to 15%). Studies show that 92% of these cesareans are without any urgent need and due to fear of pain and side effects of vaginal delivery.[2] In addition, it is higher than the cesarean rate in developed countries, such as the United States (33%) and England (32%).[3]

According to the statistics issued by the Ministry of Health, Mothers' Health Department in 2011, out of 1.3-million registered births in the country, about 53% of deliveries were by cesarean section and 47% by vaginal methods, revealing high and disturbing cesarean section rates in the country.[4] In the Bushehr Province, the level of cesareans is higher than the standard, such that in 2013, 10 865 cases out of 20 500 deliveries (53%) were conducted through cesarean section. Indeed, the unreasonable increase in cesarean section delivery is one of the problems of health systems in all societies, and Iran is no exception to this rule. Certainly, many factors affect this situation. The rate of cesarean delivery has tripled compared to the 1970s, and the rate of increase is higher than expected. Increasing age of marriage, increasing age at the first delivery, increasing employment rate of women, and gaining access to health services, as well as advanced technology has placed them in a vicious cycle causing increased cesarean section deliveries.[5,6]

Study results have suggested that the risk of maternal death from cesarean delivery is greater than that from vaginal delivery.[7] Other maternal cesarean risks include maternal morbidity during and after surgery, wound infections, infertility, and venous thrombosis of the feet. Cesarean delivery, if performed appropriately, helps reduce maternal mortality and morbidity.[8] Nowadays, definitive cesarean sectional indices, such as misalignment of the head with pelvis, placental or fetal mileage, peripheral placenta, premature pairing, umbilical cord prolapse, and severe preeclampsia are present. In all circumstances, the life of the mother or the fetus in the absence of intervention surgery is at risk, which is estimated to be between 5.8% and 8.8% for all birthdays.[6]

Achieving the Millennium Development Goals (MDG) is one of the international obligations of Iran. One of the MDG indicators is maternal health. Cesarean delivery is one of the indicators used to monitor this goal.[9] Lack of awareness about the side effects of cesarean and negative views about vaginal

delivery are among the most important causes of women's tendency to cesarean method. Some researchers believe that the attitudes of doctors and midwives, as well as the degree of psychological support that women receive have a significant role for women in relation to the impact of giving birth. According to some researchers, the only way to reduce the rate of cesarean section is to inform and train women. Training should be provided for all patients, physicians, and nurses. Studies also show that women are influenced by external and internal factors, including doctors and midwives in decision-making for selecting the type of delivery.[10] Nowadays, education to the client is accepted as a part of the activities of all the health system staff with one of the important roles of midwives being their educational role. Effective teaching during pregnancy can play a significant role in reducing the number of illnesses and complications while also promoting health.[11]

In this regard, guiding and teaching pregnant women can reduce unnecessary cesarean section cases where mothers can choose the appropriate method by gaining the required awareness and the physician's discretion, thereby, avoiding unnecessary cesarean cases. Carter *et al*., in their study aimed at examining the effect of pregnancy educational classes on maternal health. They found that classes during pregnancy could have a positive effect on the decision of mothers to choose a type of delivery.[12] Navaee, in a study, observed a significant reduction in the rate of cesarean sections in the trained group.[13] Darsareh *et al*.,[14] in a study conducted in 2016, pointed to the role of education in the form of a belief in the health model and its positive role in the tendency of pregnant women to choose vaginal delivery. In most review studies, education was investigated only via one educational method, especially lecture-based method while the use of other interactive strategies (lecture-based method and group discussion) has remained largely understudied. In accordance with the increasing importance of teaching pregnant women through interactive approaches, the present study aims to examine the effect of interactive educational intervention during pregnancy on the choice of delivery method at Bushehr University of Medical Sciences.

Methods

This research is an interventional study with a one group pre-test post-tests design, aimed at investigating the effect of organized interactive training during pregnancy on the choice of delivery method in primigravidae women referring to prenatal clinics of two hospitals located in Bushehr city, Iran.

Samples and setting. A convenience sample included 130 pregnant women referred to prenatal clinics of two hospitals in Bushehr, Iran. The study was conducted between November 2017 and June 2018. Eligible subjects were primigravidae women aged 18 to 45 years; they were at most at 28 weeks of gestation and were willing to participate in the research while living in Bushehr city. Exclusion criteria involved any medical or pregnancy complications during the intervention and elective cesarean section, unwillingness to continue collaboration in the research, and not attending the training sessions during the study. Up to implementation of the study, 22 of women did not attend more than one session due to travel and family problems; so they were excluded from the study and 108 women were analyzed ($n=108$).

Intervention. After receiving approval from the Vice Chancellor for Research and Ethics Committee of the University, required arrangements were made with the Educational administration of Bushehr University of Medical Sciences. Then, the researchers started to develop appropriate contents related to maternity care through library browsing as well as valid national and international papers. The instructional content included an introduction to routine pregnancy training, physiological delivery, and various vaginal deliv-

ery methods without pain, complications of cesarean delivery without indication, the facilities of labor delivery room and the maternity ward to assure the mother, practical exercises including stretching, breathing, and relaxing exercises. The instructional content was approved by five faculty members of the Department of Maternity Nursing at Nursing and Midwifery School of Shiraz University of Medical Sciences.

After presenting the research setting, the sampling was made and the study objectives were explained. The written informed consent was obtained from the women. Initially, the levels of knowledge and selected method of delivery were examined in all participants before the training. Then, the research samples underwent eight 2-hour sessions of organized interactive training classes within 16 weeks (every two weeks). One week following the last intervention session, the levels of knowledge and selected method of delivery of the research samples were assessed again. In each 2-hour session (eight sessions), a short lecture was taught by one of the researchers qualified in this area. Thereafter, in addition to modifying the learning environment and seating arrangements, the women engaged in 10 small groups to discuss the topic and share their experience, as well as challenges with each other. The professor played the role of facilitator at this stage, provided the necessary guidance to the research samples, and encouraged them to participate in the discussion. In the next stage, the instructor provided additional information and explained the educational content using PowerPoint and instructional videos, while also answering questions from the participants. During each class, interaction among participants, as well as between participants and teachers was encouraged. To supplement the presentation and provide a more effective program, at the end of each session, a pamphlet was given to the mothers to review the content at home.

Data collection tools. a) *Demographic information* (age, age of marriage and pregnancy, level of education, and occupation of the participants and their spouses); and b) *Knowledge and Preferred Method of Delivery* questionnaire: this questionnaire was developed by Moradabadi *et al.,*[15] to measure knowledge of the advantages and disadvantages of various delivery methods and selected method of delivery. The study by Moradabadi *et al.*,[15] content validity was used to approve the validity of the questionnaire where it was given to five experts (two healthcare specialists, two gynecologists, and a statistician). Test-retest was used to evaluate the reliability of the research instrument. A reliability coefficient of 75% was estimated and approved. This tool contains 20 multiple-choice questions, scored from 0 to 1. The total score of the respondents ranges from 0 to 20.

Ethical issues. At the beginning of the training program, after introducing himself, the researcher explained to the pregnant women the aims of the study and the written consent was obtained from all the participants. Also, participants were assured that all information collected from them would remain confidential.

Statistical Analysis. Data analyses were performed by using SPSS version 16; results of the analyses were provided in form of descriptive and inferential data. A significance level of 0.05 was considered for the tests.

Results

In this study, 108 pregnant women completed the research process. The mean age of the participants in the study was 27.7 years, ranging between 16 and 37 years, while the marriage age varied from 14 to 33 years. The most frequent levels of education among the study participants and their spouses were diplomas and college degree with frequencies of 38.9% and 44.4%, respectively.

The first objective in this research was to compare the participants' preferred method of delivery before and after the intervention. As can be seen in Table 1, the McNemat test showed that most pregnant women had a greater tendency to vaginal delivery after the intervention ($p<0.001$).

Table 1. Comparison of the participants' *Preferred Method of Delivery* before and after the intervention

Selected delivery method	Sub-group	*n*	%
Before the intervention	Cesarean	28	25.9
	Vaginal	80	74.1
After the intervention	Cesarean	2	1.9
	Vaginal	106	98.1

The second objective of this study was to compare the participants' knowledge about the method of delivery before and after the intervention. As can be observed in the Table 2, the Wilcoxon test revealed significant difference between before and after the intervention on the level of knowledge of pregnant mothers ($p<0.001$).

Table 2. Comparison of the Mean ± SD of knowledge before and after educational intervention in the pregnant women

		Mean ± SD	Min.	Max.
Knowledge	Before the intervention	13.2 ± 4.0	3	20
	After the intervention	19.4 ± 1.0	4	20

The sociodemographic variables in this study did not act as confounders in the relationship between the delivery method selection and having or not having received the intervention.

Discussion

The present study was conducted to investigate the effect of an organized Interactive approach (group discussion, lecture presentation with questions and answers plus educational pamphlets) on knowledge and preferred method of delivery in pregnant women. The results revealed a significant increase in the pregnant women's level of knowledge, and they displayed a positive attitude toward vaginal delivery after the intervention. Our study also indicated that Interactive education leads to improved level of knowledge in the pregnant women. In an interactive learning environment, a variety of individual and group learning techniques should be used to enhance learning. In this regard, one of the interactive educational methods in our research was group discussion. Working within a group has greater advantages for learners, as they share their views, observations, and previous experiences with each other and create new knowledge.[18,19]

Furthermore, individual learning is a very important element in the interactive learning environment. Individual learning emphasizes that learning can take place anytime, anywhere with any speed. We used the educational pamphlet to promote learning independently in our research. The pregnant women in our study were given a pamphlet at the end of every session. This method allowed them to interact with educational content and to learn at their desired time, location, and learning pace.[17] This finding is in line with similar results regarding the effects of an educational pamphlet on knowledge and anxiety in women with preeclampsia,[20] on pregnant women with fear of pain of childbirth,[21] and on the level of women's knowledge. The results revealed that the levels of women's knowledge were improved after the intervention.

However, unlike the results obtained from the present study, other studies, such as those by Kjaergaard *et al*.,[22] and Kosan *et al.,*[23] no significant difference was observed between education and level of pregnant women's knowledge and selecting the vaginal delivery method. The difference in the results may be due to the training methods used in those studies and the underlying variables of the study samples.

The findings of the present research also showed a significant relationship between age and height and selected delivery method. The younger and shorter women had a greater tendency to selecting cesarean method. This can be due to social factors such as the importance of beauty and the prevention of body deformation, changes in lifestyle, intolerance to labor pain, and fear of pain, followed by worry about fetal health, and fear of reproductive system rupture during vaginal delivery.[21,22,24] Interestingly, there was no difference after the intervention.

In conclusion, the findings of the study showed that training pregnant women and designing interactive programs to educate them could have a significant role in increasing their knowledge and reducing the rate of selecting cesarean section without indication. Thus, to prevent the side effects of cesareans in mothers and avoid the higher care costs, it is suggested to use various ways to inform mothers about routine pregnancy training, physiological delivery, and various pain-free vaginal delivery methods, complications of cesarean delivery without indication, the facilities of labor delivery room and the maternity ward to assure the mother, as well as practical exercises including stretching, breathing, and relaxing exercises.

Limitations: This study was performed in only two clinics and needs to be implemented on a wider scale for generalization. Also, only short-term effects were studied, there is a need for long-term follow-ups.

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Original article

Social representations of nurses. Differences between incoming and outgoing Nursing students

Franco Bastias[1]
Itatí Giménez[2]
Pablo Fabaro[3]
José Ariza[4]
María José Caño-Nappa[5]

UNIVERSIDAD DE ANTIOQUIA
1803

Social representations of nurses. Differences between incoming and outgoing Nursing students

Abstract

Objective. This article explored and compared social representations of nurses held by incoming and outgoing Nursing students in the Technical Nursing Program in San Juan, Argentina. **Methods.** Our research was descriptive and utilized the prototypicality method of analysis for social representations, from a structural approach. The sample was made up of 194 students (104 incoming and 90 outgoing), to whom we applied the word association technique for the term "nurse". **Results.** Differences were found in the representations that incoming and outgoing students had. i) For incoming students: we observe a wide and general concept of a nurse, expressed in non-specific terms such as "health" in the central core, while for outgoing students the term "care" emerged; ii) We infer distancing from the hegemonic medical model on the part of outgoing students, as well as an emphasis on the

1 Psychologist, Psychology Ph.D. student. Professor, Catholic University of Cuyo, San Juan, Argentina. Email: francobastias@uccuyo.edu.ar

2 Nurse, National University of San Juan, San Juan, Argentina. Email: itatigimenez@gmail.com

3 Nurse. National University of San Juan, San Juan, San Juan, Argentina. Email: pablofabaro@gmail.com

4 Nurse, Masters student. Professor, National University of San Juan, San Juan, Argentina. Email: lic.arizajose@hotmail.com.ar

5 Nurse, Masters in Nursing. Professor, National University of San Juan and Catholic University of Cuyo, San Juan, Argentina. Email: enfermeria.investiga.sj@gmail.com

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relational, as terms such as “vocation”, “humanization”, “love” and “empathy” are evoked, while the term “illness” decreases; iii) We understand that outgoing students highlight their autonomy with respect to doctors and nursing as a profession with the term “professional” with no mention of “assistance”, “help” and “assistant”, terms which did appear with incoming students; iv) Outgoing students convey a sense of a nurse’s diverse roles that go beyond the hospital setting, as instead of mentioning “hospital” and “injection” like incoming students, they mention “prevention” and “research”. **Conclusion.** The comparison of representative structures held by incoming and outgoing students suggests a transformation of self-image through a process of academic education.

Descriptors: social perception; students, nursing; teaching.

Representaciones sociales sobre el enfermero. Diferencias de los estudiantes que ingresan con respecto a los que egresan de la carrera de Enfermería

Resumen

Objetivo. Indagar y comparar las representaciones sociales sobre el enfermero que de ello tienen los estudiantes que ingresan o con respeto a los que egresan de la carrera Tecnicatura Universitaria en Enfermería, en San Juan, Argentina. **Métodos.** Investigación tipo descriptiva. Se utilizó el método de análisis prototípico de las representaciones sociales, desde el enfoque estructural. Constituyeron la muestra 194 estudiantes (104 ingresantes y 90 por egresar), a quienes se les aplicó la técnica de asociación de palabras frente al término inductor “enfermero/a”. **Resultados.** Se encuentran diferencias en cuanto a las representaciones del enfermero entre estudiantes ingresantes y por egresar: i) En ingresantes se observa una concepción amplia y general del enfermero, expresada en términos inespecíficos como “salud” en el núcleo central, mientras que en los que van a egresar emerge “cuidados”; ii) Se infiere un alejamiento del modelo médico hegemónico por parte de aquellos por egresar y un énfasis en lo relacional, en tanto se evoca “vocación”, “humanización”, “amor” y “empatía” y disminuye la aparición de “enfermedad”; iii) se entiende que los estudiantes por egresar destacan su autonomía ante el médico y a la enfermería como profesión al evocar “profesional” y al no mencionar “asistencia”, “ayuda” y “auxiliar” como sí lo hicieron los ingresantes; iv) los estudiantes por egresar manifiestan la diversidad de roles del enfermero más allá del ámbito hospitalario y mencionan

“prevención” e “investigación**”,** en lugar de evocar “hospital” e “inyección” como los ingresantes. **Conclusión.** La comparación de las estructuras representativas de los estudiantes ingresantes y por egresar sugiere una transformación de la autoimagen en el proceso de formación académica.
Descriptores: percepción social; enfermeras y enfermeros; estudiantes de enfermería; enseñanza.

Representações sociais sobre o enfermeiro. Diferenças dos estudantes que ingressam com os que se formam na carreira de Enfermagem

Resumo
Objetivo. Este estudo investigou e comparou as representações sociais sobre o enfermeiro de estudantes que ingressaram ou saíram do Curso Superior de Enfermagem, em San Juan, Argentina. **Métodos** A pesquisa foi descritiva e utilizou o método de análise prototípica de representações sociais, a partir da abordagem estrutural. A amostra constituiu 194 alunos (104 participantes e 90 de graduação), aos quais a técnica de associação de palavras foi aplicada contra o termo indutor “enfermeiro”. **Resultados** Diferenças nas representações do enfermeiro são encontradas entre os estudantes que entram e saem: i) Nos participantes, observa-se uma concepção ampla e geral do enfermeiro, expressa em termos inespecíficos como “saúde” no núcleo central, enquanto nos que estão se formando “cuidado” emerge; ii) Infere-se um afastamento do modelo médico hegemônico por parte dos graduados e uma ênfase no relacional, evocando “vocação”, “humanização”, “amor” e “empatia” e diminuindo a aparência de “doença” ; iii) entende-se que os estudantes de graduação destacam sua autonomia perante o médico e a enfermagem como profissão, evocando “profissional” e sem mencionar “assistência”, “ajuda” e “auxiliar”, assim como os participantes; iv) os estudantes que se formaram expressam a diversidade de papéis do enfermeiro além do ambiente hospitalar, em vez de evocar “hospital” e “injeção” como participantes, mencionam “prevenção” e “pesquisa”. **Conclusão** A comparação das estruturas representativas dos estudantes que entram e saem sugere uma transformação da auto-imagem através do processo de formação acadêmica.

Descriptores: percepção social; enfermeiras e enfermeiros; estudantes de enfermagem; ensino.

Introduction

Over the last few decades in Argentina, the nursing world has undergone different social, political and educational processes, all linked to an alarming deficit and scarcity of nursing professionals in health centers. New norms at the regulatory level have given the nursing discipline greater opportunities both in academia and in the professional realm. In academia, efforts have been directed at the professionalization of nursing, as only 11% of nursing personnel in Argentina have university credentials (approximately 5 years of academic instruction), 41% have technical credentials (approximately 3 years of instruction) and 48% are medical assistants (approximately 1 year of instruction).[1] In the workplace, especially in hospitals, work has been done to bring to light and act on the working conditions of nursing staff, their precarious job situation and the lack of professional and social recognition.[2,3] In this sense, the job of a nurse is conditioned by the way in which the profession is seen, giving it a certain role with specific functions, assigning it a status within the interdisciplinary health team and legitimizing and justifying a certain salary and certain physical spaces.[4] For example, in the city of Buenos Aires, strong demands were recently made for the recognition of nurses as health professionals rather than technical-administrative personnel, a category that limits their salary and workplace possibilities.[5] In this context of change, which is also occurring at the international level, the nursing discipline finds itself in a stage of transition, undergoing processes of transformation of the representation of nurses themselves, both inside and outside their professional group.

The theory of social representations[6,7] is presented as an adequate theoretical framework for understanding the thoughts of individuals in society and, in this case, for understanding who a nurse is and what makes someone a nurse for a certain social group. This study seeks to carry out critical-reflexive research on the social representations of nurses that nursing degree students have. We have chosen this population based on the fact that the construction of professional identity begins during the academic period and then wields a strong influence during the entire professional career.[8] Students entering the degree program, far from being mere receptors of a university education, are active co-constructors of their education and their academic process. From the beginning, they attend university not only with their previous academic knowledge, but also with motivations and expectations regarding their professional education, and with representations of the role and function of the professional they will become. In general, this type of knowledge is not evaluated and explored during the program, where education seems to be limited to "academic" knowledge. Nevertheless, beliefs, expectations and social representations of the profession and its work have a relevant role for future professional performance, as they may limit or broaden one's opportunities.[9]

The objective of this research is to compare the social representations of nurses that incoming nursing students hold with those that outgoing students of the Nursing Technical Program, a 3-year program, hold. We expect that the symbolic and subjective world of the student will be transformed during their time at university through the negotiations that the learning process generates and requires. Nonetheless, this transformation will not only take place in connection with formal education, but also in connection with the different actors that participate in the education process –especially professors who serve as models-, with professional practice and with the exchange that occurs with society itself while the student acquires a new professional identity.[10-13]

Methodology

Study type and participants. We carried out a descriptive and transversal study, with a non-probabilistic sample. One hundred ninety-four university students from the province of San Juan, Argentina participated in the study. Of the total, 90 were finishing the last semester of the 3-year program to obtain their Technical Degree in Nursing, while 104 were participating in the entrance course to access the program. The participants were invited to take part in the study voluntarily and anonymously. The signing of an informed consent form was required.

Data collection. Data collection was carried out in San Juan, Argentina in February (for incoming students) and October (for outgoing students) of the year 2017. Using the University's facilities, participants were gathered in classrooms and given written surveys to complete. These surveys contained questions regarding sociodemographic variables and university program information and instructions corresponding to the word association technique:[7] "Please write the first five words that come to mind when you think of a nurse".

Data analysis. A prototypicality analysis was carried out to define the structure of the social representation of "nurse". This lexicographic analysis allows us to obtain an organization of content of the social representations by considering how frequent items appear in the sample and their range of association. This range refers to the order in which words were mentioned. We infer that the earlier the mention or appearance, the greater its importance. If five words are to be mentioned, a range of one or near one means greater importance and a range of five or near five means lesser importance. According to this analysis, those words that appear with greater frequency and importance will make up the *central core* of the representation; those with greater frequency but lesser importance will make up the *first periphery*; the terms with lesser frequency but greater importance will conform the *contrast zone*; and lastly, those with lesser frequency and importance will form the *second periphery*. IRaMuTeQ 0.7 Alpha 2 software was used to complete this analysis.

Results

194 individuals participated in the study, 104 incoming students and 90 outgoing students from the Nursing Technical Program. General characteristics of the incoming group include: 71% female with an average age of 22.7±5.5 (minimum = 17 and maximum = 40). General characteristics of the outgoing group include: 73% female with an average age of 23.7±4.5 (minimum = 20 and maximum = 42).

Incoming students to the Nursing Technical Program produced 519 words, of which 125 are different words; that is, an average of 1.20 different words per person. For their part, outgoing students of the program produced 450 words, of which 107 are different; that is, an average of 1.18 different words per person. The words obtained were put through a lemmatization

process in which they were reduced according to gender (masculine-feminine), number (singular-plural) and semantic context of belonging (see Table 1). In all cases, we opted to use the term that was most frequent to represent less frequent terms of the same semantic context.

Table 1. Reduced forms and semantic context

Word	Semantic Context
assist+	to assist
	assistance
help+	help
	to help
care+	care
	to care
heal+	to heal
	healing
	healer
educat+	educator
	to educate
humani+	humanization
	humanized
	humanity
	humanitarian
injec+	injection
	injections
	injectable

For the incoming group, the prototypicality analysis (See Table 2) indicated that the central core of the social representation of "nurse" is made up of the words health, assistance, care and responsibility. Whereas for the outgoing group, the core is made up of the terms care, professional, love, humanization, vocation and health (See Table 3). Although the term health appears in both groups, for incoming students it has a greater percentage of appearance (59% of the subsample total) and greater importance (range = 2.4) as compared to outgoing students (20%, range = 2.8). The opposite happens with the notion of care, which has greater mention and greater importance for outgoing students (f = 57; range = 1.6) than for incoming students (f = 38; range = 2.8). Other differences in the central core are the presence of the concepts of responsibility and assistance for the incoming group and of the concepts professional, love, humanization and vocation for the outgoing group.

Table 2. Social representation of "nurse" for incoming students to the Nursing program

	Range < 2.83			Range ≥ 2.83		
	Central core	*f*	*Range*	*First periphery*	*f*	*Range*
f ≥ 14.85	health	57	2.4	hospital	24	3.5
	assist+	43	2.5			
	care+	38	2.8			
	responsibility	31	2.8			
	Contrast Zone	*f*	*Range*	*Second periphery*	*f*	*Range*
	heal+	14	2.6	illness	13	3.1
	professional	10	2.1	solidarity	12	3.1
	love	10	2.6	wellbeing	12	3.8
	life	9	2.6	help+	12	3.0
14.85 < *f*	vocation	8	2.2	work	12	3.5
	service	8	2.0	dedication	12	3.2
	aid	7	1.7	effort	11	3.4
				injec+	9	3.1
				comradeship	8	4.1
				respect	6	3.8
				patience	6	3.2
				hand washing	5	3.2
				culture	5	3.6
				attention	5	3.0

Note. Terms with a frequency of less than five are not considered in the table.

For incoming students, the first periphery is made up only of the word hospital, while for outgoing students it includes the terms commitment, empathy, assist and knowledge. For its part, the contrast zone for the incoming group is made up of the terms heal, professional, love, life, vocation, service and assistant; and for the outgoing group, heal and patient.

Table 3. Social representation of "nurse" for outgoing students

	Range < 2.83			Range ≥ 2.83		
	Central core	*f*	*Range*	*First periphery*	*f*	Range
f ≥ 14.57	care+	57	1.6	committment	24	3.1
	professional	24	2.6	empathy	19	3.1
	love	22	2.0	assist+	19	3.0
	humani+	20	2.6	knowledge	16	3.3
	vocation	19	2.2			
	health	18	2.8			
	Contrast zone	*f*	*Range*	*Second periphery*	*f*	*Range*
14.57 < *f*	heal+	6	2.7	comradeship	14	4.2
	patient	6	2.7	solidarity	13	3.7
				educa+	10	3.2
				respect	7	4.7
				research	7	3.7
				work	6	3.8
				technique	6	3.3
				dedication	6	4.5
				prevention	6	3.3
				illness	5	4.0
				predisposition	5*	4.0

Note. Terms with a frequency of less than five are not considered in the table.

Lastly, for incoming students, the second periphery includes the terms illness, solidarity, wellbeing, help, work, dedication, effort, injection, comradeship, respect, patience, hand washing, culture and attention. For outgoing students, it includes comradeship, solidarity, education, respect, research, work, technique, dedication, prevention, illness and predisposition.

Discussion

At present, nursing as a profession and as a discipline is undergoing an important transformation that not only implies new positioning in academia and in the professional realm, but also in relation to its identity. Nevertheless, what has been achieved is often not enough to modify the perception that society, health workers and nurses themselves traditionally have of the profession, a profession seen many times as being a subsidiary of medicine, without autonomy and centered on the hospital. This search for the specification of the role, which implies establishing the tasks, practices and functions of a nurse with the greatest regularity possible, is especially important during the period of university education.[11] In this sense, studying the processes of education and transformation of what it means to be a nurse during academic formation may help us to understand future professional practice, the group's direction, its

public image and its struggle for better positioning within the health system. Our research seeks to make a contribution in this sense, comparing the social representations of nurses that incoming and outgoing students of the Technical Nursing Program have.

When comparing the social representations of both groups, we point out that incoming nursing students seem to have a broad and general concept of what it means to be a nurse. This can be deduced by looking at the predominance of the term "health" in this group, mentioned by more than half of the sample (59%). This word could also be associated with a large number of health professions. On the other hand, outgoing students mention the word "care" much more than their counterparts, giving it greater importance (according to its range) and greater frequency (mentioned by 63% of the subsample), while relegating the term "health" to only 20% of the group. In any case, health and care are the only terms observed in the central core of both representations. In effect, the healthcare of human beings is the epistemic object of nursing. This notion, located in the central core, is strongly linked to the identity and collective memory of a social group and is resistant to the immediate context of starting or finishing a university program. The relevance of the notion of care reported in this study coincides with that of previous studies. For example, Ten Hoeve et al. found care to be the factor that most influenced the development of the self-concept and professional identity of nurses.[14] Likewise, using the word association technique, Roland-Lévy and Mounguenguila found that the term "care" was the term most mentioned by professional nurses.[15]

Outgoing students characterize and relate nursing to vocation, humanization and love, locating these terms in the core of their representation. Likely humanization, whose semantic field includes the term humanized, characterizes care and other nursing tasks; instead of focusing on illness as does the hegemonic medical model, here it is centered on the patient as an individual and on therapeutic connections. The associations love and empathy, located in the first periphery, are coherent with this idea and the term "illness" appears less for outgoing students than for incoming students. The importance of the relational dimension of their profession for the group as a whole has been highlighted in the work of Roland-Lévy and Mounguenguila, where the words welcome, listen, empathy and relationship were four of the five words most mentioned by French and Gabonese nurses when describing their profession.[15] On the other hand, as opposed to incoming students, outgoing students emphasize the professional nature of their future role, mentioning the word "professional" (term with the second greatest frequency in this subgroup). In that regard, we consider that mentioning the term "professional" could be unnecessary as it is seen as an obvious characteristic of a university program. Nevertheless, this word does make sense if it is thought of as confirming and reaffirming the present processes of the professionalization of nursing.

Now it is interesting to note how three elements (professional, love and vocation) found in the core of the outgoing students' representation are found in the contrast zone of the incoming students' representation. In accordance with the central core theory,[7,16] this could indicate the presence of a controversial representation within the incoming group that is fighting for its place against the hegemony. In this case, a representation associated with the nurse's role itself would be opposing a representation of the nurse from the hegemonic medical model. At the same time, the contrast zone could reflect the perspective of a subgroup within the incoming group who use terms of great importance to refer to themselves but, due to a small number of members, do not achieve high frequency. Therefore, the results suggest that towards the end of the university program this minority becomes a majority and/or this representation, previously controversial, becomes hegemonic.

It is important to highlight the presence of certain elements in the incoming group's structure that

are absent in the outgoing group's structure. If we compare both cores, we see that the ideas of responsibility and assistance are found with incoming students but not for outgoing students. Perhaps concern for responsibility, if it does occur, is less for advanced students who have already achieved a certain level of self-confidence. However, the absence of the term "assistance" in the central core of outgoing students is noteworthy and could indicate progressive distancing from the idea of nurses being "doctors' assistants". In this sense, at least three terms can be understood: the concept of "help" (which could be both "helping the patient" and "helping the doctor"), frequent with the incoming group and absent from the outgoing group, the idea of "assisting" and "service", both terms of great importance according to their range for incoming students but absent for outgoing students.

As has been mentioned, some studies point to the lack of knowledge that society in general has about nursing, with many believing that nursing is strictly administering injections, unaware of tasks such as prevention, care or healthcare promotion.[14,17,18] In this sense, we note that the term "injection" does appear nine times for incoming students but is completely absent from the outgoing group. This latter group recognize nursing functions, including prevention, research and education, terms that were not mentioned by incoming students. Something similar occurs with the word "hospital", which has high frequency for incoming students and does not appear with outgoing students. This could indicate that incoming students think of the nursing profession as centered on the hospital environment, limiting workplace contexts. Similar results were obtained by Albar and Sivianes-Fernández, where fourth year nursing students differed from first year students in their perceptions of professional roles regarding research and academic development.[8] The findings suggest that incoming students have less knowledge of the tasks and functions of a nurse, even after having chosen the program, reflecting the image of nurses that society has in general.

We conclude by pointing out that, in agreement with Emeghebo, self-image and perception of nurses change throughout one's professional program.[11] Through education, new elements are integrated into the existing structure of the representation, transforming it with growing complexity. In this study, we observe how the differences in representations of nurses held by incoming and outgoing students relate to the tasks and functions of a nurse, to the autonomous character of his or her role, to the value given to nursing as a profession and to the diversity of nursing roles that go beyond the hospital environment. We propose that future research include comparisons between incoming students' vision and that of the non-healthcare public in general.

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Effectiveness of Milieu Therapy in reducing conflicts and containment rates among schizophrenia patients

Original article

Sandhya Bhat[1]
Sreevani Rentala[2]
Raveesh Bevinahalli Nanjegowda[3]
Xavier Belsiyal Chellappan[4]

UNIVERSIDAD DE ANTIOQUIA
1803

Effectiveness of Milieu Therapy in reducing conflicts and containment rates among schizophrenia patients

Abstract

Objective. To evaluate effectiveness of Milieu Therapy in reduction of conflict and containment rates among schizophrenia patients. **Methods.** This study utilized quasi experimental non-equivalent control group pre-post design. One hundred schizophrenia patients admitted in acute psychiatric wards were non-randomly assigned to either of the experimental ($n=50$) or control group ($n=50$). The experimental group received both milieu therapy and routine hospital treatment. The Milieu Therapy intervention Included environmental modification and structuring ward activities, establishing effective interaction with patient, and teaching caregivers on managing conflict behavior of patient. The control group received only routine treatment in the hospital. Outcome measures on conflict and containment rates were evaluated for both the groups at baseline and at 2nd, 3rd and 15th day. The Patient–Staff

1 Staff Nurse, District Hospital, Dharwad, Karnataka, India. Email: sandhyabhat1973@gmail.com

2 Nursing Professor and Head, Dharwad Institute of Mental health and Neuroscience, Karnataka, India. Email: sreevani.phd@gmail.com. Corresponding author

3 Professor and Head, Dept. of Psychiatry, Mysore Medical College, Mysore, India. Email: raveesh6@yahoo.com

4 Assistant Professor, College of Nursing, AIIMS Rishikesh, India. Email: jinbelsi@gmail.com

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Conflict Checklist Shift Report (PCC-SR) was used to collect information about rates of conflict and containment. **Results.** Compared with control group, the experimental group participants showed decrease in aggressive behavior, self-harm behavior and general rule breaking behavior at baseline and 2nd, 3rd and 15th day (F= 4.61, $p<0.004$, $\eta^2=0.04$; F=11.92, $p<0.001$, $\eta^2=0.11$; F=6.94, $p<0.001$, $\eta^2=0.06$) over seven days interval. **Conclusion**. The present study findings provided evidence for the effectiveness of integrating Milieu Therapy in psychiatric acute wards in reducing conflict behaviors among schizophrenia patients. Milieu therapy should be considered as an integral part of psychiatric care settings in these patients.

Descriptors: schizophrenia; inpatients; psychiatric department, hospital; milieu therapy; aggression; self-injurious behavior

Efectividad de la Terapia Milieu en la reducción de las tasas de conflicto y de contención en pacientes con esquizofrenia

Resumen

Objetivo. Evaluar la efectividad de la terapia Milieu en la reducción de las tasas de conflicto y contención entre los pacientes con esquizofrenia. **Métodos.** Este estudio utilizó un diseño cuasi experimental con grupo control no equivalente y evaluación pre y posintervención. Cien pacientes con esquizofrenia hospitalizados en salas psiquiátricas en un hospital público en Karnataka (India) se asignaron de forma no aleatoria a los grupos experimental ($n=50$) y control ($n=50$). El grupo experimental recibió la terapia de Milieu, además del tratamiento hospitalario de rutina. La terapia de Milieu incluyó la modificación ambiental y la estructuración de las actividades de la sala, el establecimiento de una interacción efectiva con el paciente y la enseñanza a los cuidadores sobre el manejo del comportamiento conflictivo del paciente. El grupo control recibió solamente el tratamiento de rutina en el hospital. Las medidas de resultado (tasas de conflictos y de contención) se evaluaron en ambos grupos en los días de inicio, 2º, 3º y 15º posadmisión. El *Patient–Staff Conflict Checklist Shift Report (PCC-SR)* se utilizó para la recolección de la información acerca de las tasas de conflicto y contención. **Resultados.** En comparación con el grupo de control, los participantes del grupo experimental mostraron una disminución en el comportamiento agresivo, el comportamiento de autolesión y el comportamiento de incumplimiento de las reglas generales al inicio y al segundo, tercer y décimo quinto día (F=4.61, $p<0.004$, $\eta2=0.04$; F=11.92, $p<0.001$, $\eta2=0.11$; F=6.94, $p<0.001$, $\eta2=0.06$). **Conclusión.** Los hallazgos

del presente estudio proporcionaron evidencia de la efectividad de la Terapia Melieu en la reducción de comportamientos conflictivos en el paciente esquizofrénico hospitalizado en fase aguda. La Terapia Milieu debe considerarse como una parte integral en los entornos de atención de estos pacientes.

Descriptores: esquizofrenia; pacientes internos; servicio de psiquiatría en hospital; terapia ambiental; conducta autodestructiva.

Eficácia da terapia Milieu na redução das taxas de conflito e contenção em pacientes com esquizofrenia

Resumo

Objetivo. Avaliar a eficácia da terapia Milieu na redução das taxas de conflito e contenção entre pacientes com esquizofrenia. **Métodos.** Este estudo utilizou um desenho quase-experimental com um grupo controle não equivalente e avaliação pré e pós-intervenção. Cem pacientes com esquizofrenia hospitalizados em salas psiquiátricas em um hospital público de Karnataka (Índia) foram designados não aleatoriamente para os grupos experimental (n = 50) e controle (n = 50). O grupo experimental recebeu terapia Milieu, além de tratamento hospitalar de rotina. A terapia de Milieu incluiu modificação ambiental e estruturação das atividades da enfermaria, estabelecendo uma interação efetiva com o paciente e ensinando os cuidadores sobre o gerenciamento do comportamento conflitante do paciente. O grupo controle recebeu apenas tratamento hospitalar de rotina. As medidas de resultado (taxas de conflito e contenção) foram avaliadas em ambos os grupos nos dias de início, 2, 3 e 15 após a admissão. O Relatório de Mudança de Lista de Verificação de Conflitos entre Pacientes e Funcionários (PCC-SR) foi usado para coletar informações sobre taxas de conflitos e contenção. **Resultados.** Comparados ao grupo controle, os participantes do grupo experimental mostraram uma diminuição no comportamento agressivo, no comportamento autolesivo e no não cumprimento das regras gerais no início e no segundo, terceiro e décimo quinto dia ($F = 4,61$, $p < 0,004$, $\eta 2 = 0,04$; $F = 11,92$, $p < 0,001$, $\eta 2 = 0,11$; $F = 6,94$, $p < 0,001$, $\eta 2 = 0,06$). **Conclusão** Os achados do presente estudo forneceram evidências da eficácia da Terapia Melieu na redução de comportamentos conflitantes no paciente esquizofrênico hospitalizado na fase aguda. A terapia Milieu deve ser considerada como parte integrante do ambiente de atendimento desses pacientes.

Descritores: esquizofrenia; pacientes internados; unidade hospitalar de psiquiatría; terapia ambiental; comportamento autodestrutivo.

Introduction

Conflict and containment rates are associated with a primary diagnosis of schizophrenia.[1] Conflict refers to any patient action that threatens patient or staff safety which may include physical violence, verbal aggression, go absconding, use of alcohol or illegal substances, self harm and medication refusal. Containment refers to any method that psychiatric staffs use to prevent or manage the conflict event, such as seclusion, special observation, de-escalation, time-out, manual restraint and enforced medication.[2]

In contrast to other hospital environments, within psychiatric inpatient settings, patient risk is conceptualized as affecting not only the individual, but also other patients, staff and the general public, widening the sphere of risk.[3] Conflicting behavior in acute psychiatric wards can be a major problem, not only because of the potential injury it may cause to the patients and staff, but also because of the counter therapeutic effects of both violent behaviors and strategies to prevent such behavior. Many hospitals are using pharmacological interventions to manage conflicting behaviors.[4] Although, psychosocial therapies have proved to be effective in managing conflicting behaviors, pharmacological interventions are continued to be widely used. These conflict and containment are important matters for hospital management and nursing practice.[5]

Bowers[6] revealed a set of interventions that can increase safety in psychiatric wards. These interventions reduced aggression, self harm and other risky behaviours by 15% and reduced coercive controls such as restraints by 24%. Creating a therapeutic milieu is a basic intervention in mental health nursing practice, and is inclusive of everything in the immediate inpatient environment. Everything in the milieu is meant to promote healing, and includes the staff, the physical structure of the unit and the emotional climate of the staff and patients on the unit.[7]

A nurse in a psychiatric ward is the responsible person for providing therapeutic environment such as providing the chance for the individuals in expressing feelings, determining the risks of harming self or others, providing a secure and comfortable physical environment.[8] A major challenge in psychiatric inpatient care is to create an environment that promotes patient recovery, patient safety and good working environment for staff. Staff members need to implement safe interventions to patients and gradually bring back responsibility and initiative to the patient.[9] At the same time violence in the ward may negatively affect patient recovery[10,11] staff health,[12,13] and the organization.[14] Therefore, it is important to create a safe environment through primary preventive interventions so that both staff and patient can feel safe. Evidences showed that psychiatric nurses also adopted milieu concepts in inpatient psychiatric settings in western countries.[7]

Milieu therapy interventions are simple, safe, cost-effective and can be used in any inpatient psychiatric settings. For implementing milieu therapy nurses, do not require any specialized training. However there is no known literature on effectiveness of implementing milieu therapy in psychiatric wards in Indian context. The present study was conducted with this background, to test the effectiveness of milieu therapy on conflict and containment rates among schizophrenia patients.

Methods

Study design. This study utilized quasi experimental non-equivalent control group pre-post design.

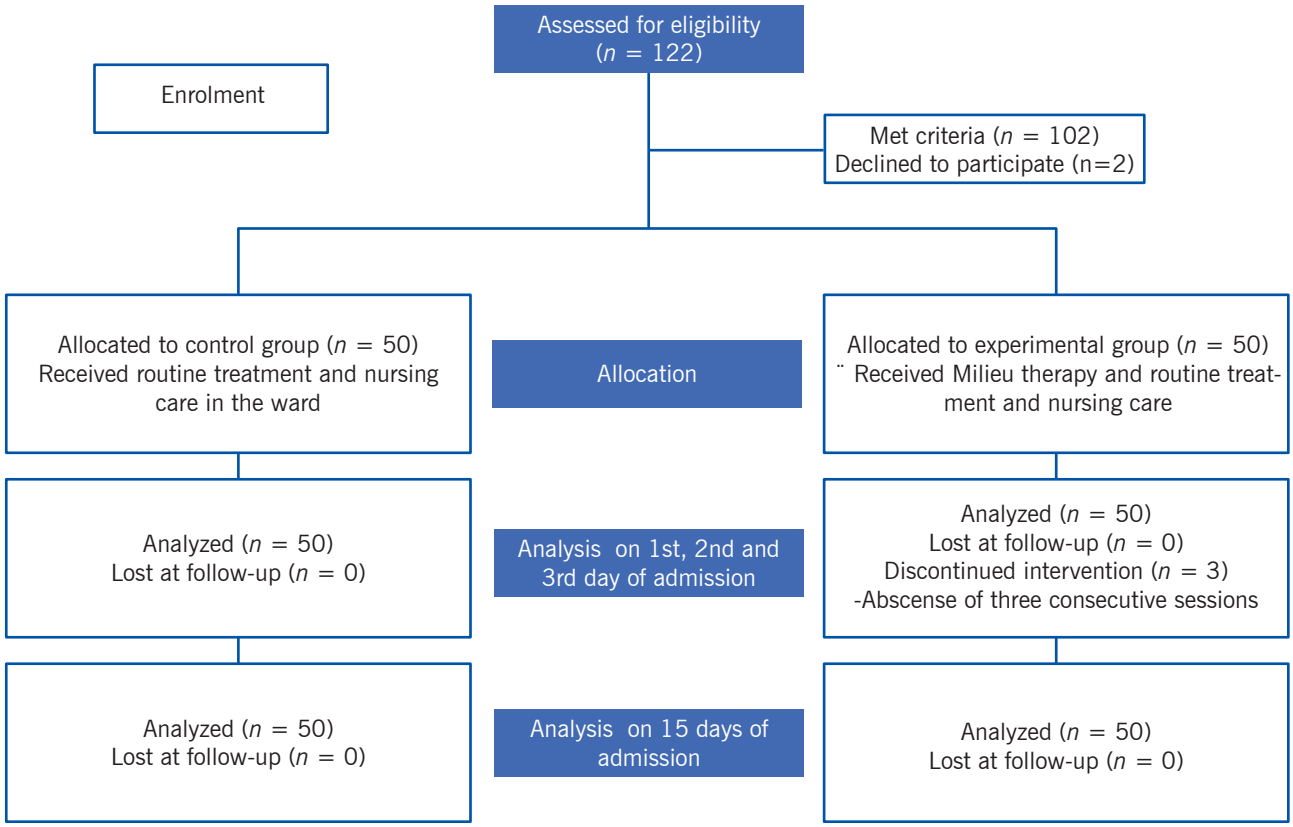
Setting. The present study was conducted at acute psychiatric wards of state government hospital, Karnataka, India. It is a 375 bedded hospital with 20 bedded 4 acute wards. The main objective of this institution is to provide quality services to patients. The clinical services consist of in-patient, outpatient, emergency and rehabilitative services. The 20-bed inpatient acute wards offer a comprehensive treatment program including pharmacology and psychosocial treatment. The in-patient treatment usually spans for 10 to 15 days.

Sample and sampling technique. A total of 122 patients were admitted during the data collection period, 102 met inclusion criteria, 2 participants declined to participate. A total of 50 participants each were selected for the experimental and control group using convenient sampling technique. To prevent intervention contamination the subjects who admitted in two in-patient wards selected for control group and another two in-patient wards for experimental group.

Ethical considerations. This study was approved by the Institutional Ethical Committee. Participants and care givers were informed about the purpose, time duration of therapy sessions and follow-up assessments. Subsequent to explanation of the benefits and risks of the study the participants/ caregivers gave their written consent.

Subject recruitment. Inclusion criteria were age between 20-60 years and a diagnosis of schizophrenia made by a psychiatrist based on ICD 10 criteria with a recommendation for inpatient management. The study excluded patients with co morbid medical disorders, those not willing to stay in hospital for minimum 15 days and those admitted in chronic wards. After obtaining formal permission from the institutional authority recruitment of subjects took place at acute wards. Data was collected between December 2016 and May 2017 in acute psychiatric wards. On an average, 5 to 6 patients were recruited in a week. To prevent intervention contamination, the patients admitted in one male and one female ward was selected for experimental group and those in other wards for control group. Subject allocation to control and experimental group presented in Diagram 1.

Diagram 1. Flow chart



Data collection and intervention. Initially patients who diagnosed with schizophrenia and also on antipsychotics were identified. Each patient was contacted and a personal interview was arranged for baseline assessment which included socio-demographic details, clinical characteristics, conflict and containment rates. After the initial assessment, participants in experimental group underwent milieu therapy along with routine treatment and nursing care. The control group participants received the routine treatment and nursing care offered at wards.

Routine treatments and nursing care. It included pharmacological management and routine nursing care. The routine nursing care includes medication management, providing psycho-education on individual basis, care of activities of daily living, involving recreational and diversional activities of the patient, etc.

Milieu therapy. Milieu therapy was provided to experimental group participants throughout their admission period. Therapy was provided by first author who was a registered nurse. Intervention was given on an individual basis to participants and as group approach to the caregivers. The first author observed the patients in the ward from morning 8 am to evening 4 pm, a total of 8 hours from day 1 to day 15 and noted conflict and containment rates among patients

and implemented therapy. The therapy includes environmental modification, structuring ward activities, effective interaction with patient and teaching caregivers on managing conflict behavior of the patient. The details of these interventions were described in Table 1.

Table 1. Details of Milieu Therapy

Content	Objectives	Activities involved
Environmental modification	·To provide safe and secure environment	·Removing sharp objects from the patient environment
Structuring ward activities	·Provide structured activity schedule	·Preparing activity schedule for activities of daily living, physical exercise, breakfast, lunch and dinner, rest, diversional activities such as music, craft and drawing etc. ·Displaying ward rules
Effective interaction with patient	·To establish rapport with the patient and the caregivers ·To provide supportive environment for venting negative emotions ·To provide positive feedback for adaptive behaviour	·Listening to patient ·Encouraging patient and caregivers to express their feelings ·Teaching on safe and unsafe behavior ·Recognizing adaptive behavior and provide positive reinforcement ·Encouraging the patient to follow structured schedule for their routines
Teaching caregivers on managing conflict behavior of the patient	·Enable the caregivers to manage conflict behaviours of their patients	·Explaining on various conflicting behaviors and their triggers and consequences. ·Describing on effective communication to deal with these conflicting behaviors

Content validity of the intervention module was assessed by a panel of 10 subject experts. Panel members were asked to assess the content of the therapy module for its appropriateness and use among schizophrenia patients. A few suggestions were given by them to ensure that it was better tailored to the needs of patients; these were subsequently incorporated into the module.

Post assessment. Conflicts and containment rates were assessed using patient staff conflict observational check list on 1st, 2nd, 3rd and 15th days of admission.

Measures. At treatment entry, information was obtained about participants' socio-demographics, clinical history, conflict and containment rates. Before administration of questionnaires to study participants, the questionnaires were pretested in a similar setting for suitability and reviewed by experts for accuracy. *1)*Socio demographic information comprised of basic information such as age, gender, marital status, educational status, religion, area of residence, type of family and monthly income. Clinical history comprises of age of onset of illness, duration of psychiatric illness, duration of treatment, number of previous hospitalizations, ECT details, and family history of mental illness. 2) *Conflict and containment rates* were assessed using patient staff–conflict check list (PSCC). It is an observational checklist

consisting of 30 items, 21 items related to 6 conflicting behaviors and 9 items related to containment measures. Based on the observations a score was assigned for each of the conflicting behaviors and the containment measures used by the staff nurse to control such behavior. These scores were added to obtain the frequency of that behavior, with higher scores indicating greater frequencies and increased conflicting and containment rates for the patients. The inter-rater reliability demonstrated a satisfactory Kappa of 0.69.[15]

Data analysis. Baseline characteristics of the control and experimental groups were compared using chi-square or independent t-test for categorical or continuous variables respectively. The changes in the outcome variables from baseline to 15-days were compared using repeated measure analysis of variance. Partial eta-square (η^2) was calculated as the effect size of major statistical tests were based on Cohen's suggestions.

Results

Comparison of baseline socio-demographic variables between groups showed that both the groups were comparable in terms of their baseline, clinical and on outcome variables, except for duration of treatment with antipsychotics and family history of mental illness. Significantly higher number of subjects in control group ($n=30$) had family history of mental illness. There were significantly higher number of subjects in experimental group ($n=23$) with duration of treatment more than 3 years (Tables 2 and 3).

Table 2. Baseline comparison of socio-demographic variables between the groups

Variables		Group		t\x²	*p*-value
		Control ($n=50$)	Experiment ($n=50$)		
Age	20-29 years	18	21	1.131	0.568
	30-39	19	14		
	40 and above	13	15		
Gender	Male	26	22	0.641	0.423
	Female	24	28		
Marital status	Single	16	17	0.045	0.832
	Married	34	33		
Education	Illiterate	12	16	0.97	0.819
	Primary	16	14		
	Secondary	10	8		
	PUC and above	12	12		
Religion	Hindu	44	45	0.102	0.749
	Muslim	6	5		
Residence	Rural	39	44	1.772	0.183
	Urban	11	6		
Type of family	Nuclear	33	32	0.044	0.834
	Joint	17	18		
Monthly family income	≤Rs.5 000	16	10	2.357	0.308
	Rs.5 001 to 10 000	23	30		
	Rs.10 001and above	11	10		

Note: Rs. 70 =1 US Dollar

Table 3. Baseline comparison of clinical characteristics and outcome variables between groups

Clinical characteristics		Group		x^2/ *t*	*p*-value
		Control (*n*=50)	Experiment (*n*=50)		
Age at onset of illness	20-29	26	33	2.140	0.343
	30-39	14	9		
	40 and above	10	8		
Duration of present illness	Up to 3months	31	28	0.626	0.731
	3 to 9 months	8	11		
	More than 9 months	11	11		
Duration of treatment with antipsychotics	Not treated	0	15	30.366	0.0001
	Up to 3 months	16	2		
	3months to 3years	19	10		
	More than 3years	15	23		
No. of previous hospitalizations	No	26	29	3.355	0.3400
	1time	15	9		
	2times	3	7		
	3 and above	6	5		
ECT details	No	36	40	0.877	0.349
	Yes	14	10		
Family history of mental illness	No	20	35	9.091	0.0030
	Yes	30	15		
Conflict rates –Mean (SD)		9.84 (7.90)	20.40 (12.11)	-0.27	0.78
Containment rates –Mean (SD)		2.02 (0.51)	2.04 (0.78)	-0.15	0.88

The changes in outcome variables from baseline to 15 days between the groups showed that there was a significant milieu therapy interventions effect in aggressive behavior, self-harm and general rule breaking between two groups. Compared with the control group, the experimental group showed statistically significant reduction in aggressive behavior, self-harm and general rule breaking, among patients with schizophrenia over 15 days of time (Table 4).

Table 4. Comparison of conflict and containment rates from baseline to 15th day

Time of assessment	Control group Mean (SD)	Experimental group Mean (SD)	Group x Time F-value	*p-value*	η^2
Aggressive behavior					
Baseline (T0)	9.18 (4.18)	9.76 (6.92)	4.61	<0.001	0.04
Day 2 (T1)	6.48 (3.62)	6.80 (5.84)			
Day 3 (T2)	4.50 (3.98)	4.14 (4.81)			
Day 15 (T3)	3.06 (2.97)	1.76 (2.92)			
Self-harm					
Baseline (T0)	0.68 (0.84)	1.83 (2.10)	11.92	<0.001	0.11
Day 2 (T1)	0.66 (0.77)	1.29 (1.98)			
Day 3 (T2)	0.40 (0.63)	0.39 (1.16)			
Day 15 (T3)	0.22 (0.41)	0.22 (0.85)			
General rule breaking					
Baseline (T0)	6.98 (3.17)	5.22 (3.13)	6.94	<0.001	0.06
Day 2 (T1)	3.70 (2.23)	3.52 (2.44)			
Day 3 (T2)	3.22 (2.61)	1.52 (1.92)			
Day 15 (T3)	2.18 (2.87)	0.74 (1.44)			
Drugs or alcohol use					
Baseline (T0)	0.50 (0.50)	0.76 (0.77)	3.11	0.27	0.31
Day 2 (T1)	0.46 (0.50)	0.42 (0.49)			
Day 3 (T2)	0.14 (0.35)	0.06 (0.23)			
Day 15 (T3)	0.00 (0.00)	0.04 (0.11)			
Absconding behavior					
Baseline (T0)	1.08 (0.63)	1.10 (0.81)	1.83	0.14	0.01
Day 2 (T1)	0.36 (0.48)	0.52 (0.54)			
Day 3 (T2)	0.24 (0.43)	0.12 (0.32)			
Day 15 (T3)	0.08 (0.27)	0.16 (0.37)			
Medicine related behavior					
Baseline (T0)	1.42 (0.75)	1.60 (0.69)	1.37	0.251	0.01
Day 2 (T1)	1.20 (0.60)	1.00 (0.67)			
Day 3 (T2)	0.94 (0.71)	0.92 (0.92)			
Day 15 (T3)	0.32 (0.58)	0.28 (0.53)			
Containment Measures					
Baseline (T0)	2.02 (0.51)	0.04 (0.78)	1.38	0.24	0.01
Day 2 (T1)	1.50 (0.50)	1.74 (0.82)			
Day 3 (T2)	1.32 (0.51)	1.48 (0.78)			
Day 15 (T3)	0.90 (0.30)	0.88 (0.62)			

Discussion

Overall, the participants in experimental group showed marked decrease in aggressive behavior, self-harm and general rule breaking behavior. This suggests that milieu therapy interventions added to routine care could be regarded as an additional benefit in the treatment of schizophrenia patients. The findings are in accordance with earlier research which documented that simple interventions aiming to improve staff relationship with patients can reduce the frequency of conflict and containment behaviors among patients.[7]

In the present study, participants in milieu therapy were ensured safe and secure environment, observed constantly and provided structured ward activities to reduce aggression among patients with schizophrenia. Previous study showed that small changes in routine practices of psychiatric ward reduced the conflict events by 15% (95% CI 5.6–23.7%) relative to the control intervention.[16] Ensuring safe environment and safe practices applied by nurses reduced violent behavior of psychiatric patients.[17] In another study ward structure was associated with conflict rates,[18] the ward atmosphere and the relationships between patients and staff contribute to the improvement in symptoms and psychiatric patient functioning and satisfaction.[19]

One-fourth of schizophrenia patients in acute wards showed self-harm and suicidal behaviors.[20] In the present study participants who underwent milieu therapy showed significantly decreased self-harm behavior compared to patients who underwent only routine therapy. In the present study milieu therapy ensured safe and secure environment by removing sharp objects from the patient environment, encouraged patient to express his negative emotions, taught safe and unsafe behavior, reinforced adaptive behavior. Bowers,[5] proposed a safe ward model to reduce conflict and containment rates in psychiatric wards. In this model the strategies included were special observation, patient autonomy and effective communication.

In the current study there was statistically significant reduction in general rule breaking behaviour of experimental group participants compared to control group participants. Experimental group participants' wards had general rules displayed, taught time to time and sensitized with the consequences of breaking these rules. A study reviewed that there is relationship between ward rules and patient aggression.[21] 21 In the present study patient care givers acquired comprehensive knowledge about schizophrenia disorder, how to communicate with schizophrenia patients and how to manage their behaviors. Therapy provided a context for the care givers to realize that conflicting behaviors are merely symptoms of schizophrenic patients and it can be managed by effective communication, structuring daily activities and by modification of environment. The activities present in the intervention module not only help the participants to deal with the problems at hand but also prevent further potential problems and enhance the independence of the patients in their daily living activities. This study has provided preliminary evidence in the Indian context that milieu therapy was effective in reducing conflicting behaviors among schizophrenia patients.

Though the study outcomes are encouraging, there are a few limitations. It is difficult to generalize the findings, as sample size was small. There was lack of long term follow up due to time constraints. The assessment and intervention was conducted for a limited time period during the day (8hours), while inclusion of the whole day (24 hours) will further strengthen the study results. The study used convenient sampling technique to prevent intervention contamination, though use of random sampling technique would lend further credentials to the study results.

This study concluded that schizophrenia patients who underwent milieu therapy intervention implemented by a nurse had statistically significant reduction in conflict rates relative to control group patients. Based on the findings of this study, Milieu Therapy is an effective component that should be considered as an integral part of any acute ward of psychiatric care setting for the schizophrenia patients.

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Original article

Burnout among nursing students: a mixed method study

Maria José Quina Galdino[1]
Laio Preslis Brando Matos de Almeida[2]
Luiza Ferreira Rigonatti da Silva[3]
Edivaldo Cremer[4]
Alessandro Rolim Scholze[5]
Júlia Trevisan Martins[6]
Maria do Carmo Fernandez Lourenço Haddad[7]

UNIVERSIDAD DE ANTIOQUIA
1803

Burnout among nursing students: a mixed method study

Abstract

Objective. Investigate the burnout syndrome among undergraduate students in nursing. **Methods.** Explanatory sequential mixed method study conducted at a public university in Brazil. Of the 119 nursing students, 114 consented to participate and answered a questionnaire composed of sociodemographic, academic variables, and the Maslach Burnout Inventory - Student Survey, which were analyzed by multiple linear regression. The participants of the quantitative phase with the indicative / risk of burnout were interviewed individually (n=21) to provide an in-depth understanding of the students' experiences regarding the dimensions of the syndrome, whose statements were analyzed by the Collective Subject Discourse. **Results.** The prevalence of burnout syndrome was 10.5% among the surveyed. The more advanced the school year, the higher were the exhaustion (p=0.003), depersonalization (p<0.001) and low academic

1 Nurse, Ph.D. Professor, Universidade Estadual do Norte do Paraná (UENP), Bandeirantes, Brasil. Email: mariagaldino@uenp.edu.br

2 Nursing Graduating. UENP, Bandeirantes, Brasil. Email: laioalmeida34@gmail.com

3 Nursing Graduating. UENP, Bandeirantes, Brasil. Email: luziaferreirarigonatti@gmail.com

4 Nurse, Ph.D. Professor, UENP, Bandeirantes, Brasil. Email: edvaldocremer@uenp.edu.br

5 Nurse, Ph.D Student. Professor, UENP, Bandeirantes, Brasil. Email: scholze@uenp.edu.br

6 Nurse, Ph.D. Professor, Universidade Estadual de Londrina (UEL), Londrina, Brasil. Email: jtmartins@uel.br

7 Nurse, Ph.D. Professor, UEL, Londrina, Brasil. Email: carmohaddad@gmail.com

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effectiveness (p=0.012) scores. Students with a higher workload of assignments also had higher scores of exhaustion (p=0.001), depersonalization (p<0.001) and academic (in)effectiveness (p=0.042). Dissatisfaction with the course was related to higher exhaustion (p=0.049) and depersonalization (p=0.001). The collective speeches showed the daily demands of the course, considered as intense, producing overload and exhaustion, which produced symptoms of physical and mental illness. Thus, there was the student's distancing from the course activities, as a defensive attitude, which culminated in feelings of incompetence and frustration. **Conclusion.** The occurrence of burnout syndrome dimensions among nursing students was related to the activities of academic daily life. It is urgent to invest in health promotion and prevention actions of these individuals in the university context.

Descriptors: burnout, profesional; students, nursing; surveys and questionnaires.

Burnout **entre estudiantes de enfermería: estudio de método mixto**

Resumen

Objetivo. Estudiar el síndrome de *Burnout* entre estudiantes de enfermería. **Métodos.** Estudio de método mixto secuencial explicativo realizado en una universidad pública de Brasil. De los 119 alumnos de enfermería, 114 consentieron en participar y respondieron un cuestionario compuesto por variables sociodemográficas, académicas y el *Maslach Burnout Inventory*™ - *Student Survey*. Los participantes de la fase cuantitativa con el indicador de riesgo de *burnout* se entrevistaron individualmente (n=21) para proporcionar una comprensión profunda de las experiencias de los estudiantes acerca de las dimensiones del síndrome**,** cuyos testimonios se analizaron con la técnica de Discurso del Sujeto Colectivo**.** **Resultados.** La prevalencia de sindrome de *burnout* fue de 10.5% entre los investigados. Cuanto más avanzado el año de estudio del alumno, eran mayores los puntajes de agotamiento (p=0.003), despersonalización (p<0.001) y baja eficacia académica (p=0.012). Los estudiantes con mayor carga horaria de asignaturas también presentaron mayores puntuaciones de agotamiento (p=0.001), despersonalización (p<0.001) e (in) eficacia académica (p=0.042). La insatisfacción con el curso se relacionó con un mayor agotamiento (p=0.049) y despersonalización (p=0.001). En los discursos colectivos se evidenciaron las exigencias cotidianas del curso, consideradas como intensas, generadoras de sobrecarga y agotamiento, que producían síntomas de enfermedad física y mental. Por lo tanto, como una actitud defensiva, hubo distanciamiento del estudiante de las actividades del curso que culminó en sentimientos de incompetencia y frustración. **Conclusión.** La aparición de las

dimensiones del síndrome de *burnout* entre los estudiantes de enfermería estuvo relacionada con las actividades de la vida diaria académica. Es urgente establecer acciones de promoción y prevención en salud para estos individuos en el contexto de la universidad.

Descriptores: agotamiento professional; estudiantes de enfermería; encuestas y cuestionarios.

Burnout entre estudantes de enfermagem: estudo de método misto

Resumo

Objetivo. Investigar a síndrome de *burnout* entre estudantes de graduação em enfermagem. **Métodos.** Estudo de método misto sequencial explanatório realizado em uma universidade pública do Brasil. Dos 119 alunos de enfermagem, 114 consentiram a participação e responderam a um questionário composto de variáveis sociodemográficas, acadêmicas e o *Maslach Burnout Inventory*™ - *Student Survey,* que foram analisados por regressão linear múltipla. Os participantes da fase quantitativa com indicativo/risco de *burnout* foram entrevistados individualmente (n=21) para fornecer uma compreensão aprofundada das experiências dos estudantes acerca das dimensões da síndrome, cujos dizeres foram analisados pelo Discurso do Sujeito Coletivo. **Resultados.** A prevalência de síndrome de *burnout* foi de 10.5% entre os pesquisados. Quanto mais avançado o ano letivo maiores foram os escores de exaustão (p=0.003), despersonalização (p<0.001) e baixa eficácia acadêmica (p=0.012). Os estudantes com maior carga horária de disciplinas/matérias também apresentaram maiores pontuações de exaustão (p=0.001), despersonalização (p<0.001) e (in)eficácia acadêmica (p=0.042). A insatisfação com o curso foi relacionada a maior exaustão (p=0.049) e despersonalização (p=0.001). Nos discursos coletivos evidenciaram-se as exigências cotidianas do curso, tidas como intensas, produtoras de sobrecarga e exaustão, que produziam sintomas de adoecimento físico e mental. Assim, houve o distanciamento do estudante das atividades do curso, como uma atitude defensiva, que culminou em sentimentos de incompetência e frustração. **Conclusão.** A ocorrência das dimensões da síndrome de *burnout* entre os estudantes de enfermagem esteve relacionada às atividades do cotidiano acadêmico. Torna-se premente investir em ações de promoção e prevenção da saúde desses indivíduos no contexto da universidade.

Descritores: esgotamento profissional; estudantes de enfermagem; inquéritos e questionários.

Introduction

Significant levels of psychological disorders and psychological distress among higher education students have been reported worldwide, given that during these years there is a peak in prevalence of many mental disorders, particularly major depressive disorder (18.5% to 21.2%), generalized anxiety disorder (18.6% to 16.7%) and drug use disorder (45.9% to 59.8%).[1] This high prevalence is significant both for the suffering it causes in a period of major life transition and for the substantial impairment in academic performance,[2] as well as suicidal thoughts and behaviors.[3] In this context, a psychological disorder widely used as an indicator of mental health in this population is the burnout syndrome or "academic burnout", which occurs when the individual's defense strategies are ineffective in coping with stress and overload from the academic environment. affecting biopsychosocial health.[4,5]

Burnout syndrome among students is characterized by a sense of overload, called emotional exhaustion; distanced and defensive posture in relation to the study, the teachers and the classmates, a process known as depersonalization; and the perception of being an incompetent student who typifies the reduced academic effectiveness.[4,6] In nursing, the syndrome has already been demonstrated among students,[7,8] residents,[9] master's and doctoral students[10] due to the various demands that exist in the training processHowever, among the students, the factors associated with burnout syndrome were not explored, neither by using a mixed approach that encompasses representativeness and the truth implicit in subjectivity.

Among the difficulties experienced by nursing students during their academic training are: the study schemes; fulfillment of activities in a tight deadline; time management; the power relationship between teacher-student; the practices in health services; direct contact with the patient, their suffering and the possibility of their death; ethical dilemmas; fear of making mistakes and dealing with internal demands,[11,12] situations that require student adaptation or may overload the student and predispose to burnout syndrome. That said, burnout syndrome should not be considered an individual disorder, attributed solely to the student who becomes ill, the institution's responsibility should be considered in the academic training process that may lead to the student's illness.[13]

In this context, analyzing burnout syndrome among undergraduate nursing students may provide support for managers to implement prevention and management strategies in relation to the syndrome, in order to ensure health and well-being during the professional training process, as well as providing training for nurses engaged and prepared to provide quality care. Thus, this

study aimed to investigate the burnout syndrome among undergraduate nursing students.

Methods

This is a mixed method, explanatory sequential study that combined quantitative and qualitative approaches. In this design, qualitative data (interviews) provide a deeper picture of the quantitative data (questionnaires) initially obtained. [14] Due to the complementarity character, this integration makes it possible to neutralize the limitations and weaknesses of each research approach.[15]

The research was conducted with undergraduate nursing students from a public university in the southern region of Brazil, since they met the criterion of not being away from academic activities by leaves of absence. The course form generalist nurses through a 4490-hour curriculum matrix (annual series and minimum duration of five years full-time), which inserts the student in theoretical, laboratory and clinical practices in health services.

The quantitative phase was held from July to August 2016, in which all 119 enrolled in the course were invited to participate in the study. Data collection was carried out in the classroom, where participants were informed about the study and the questionnaire was distributed to 114 (95.8% of total) students who agreed to participate voluntarily, of which 31 were enrolled in the first year, 23 in the second, 17 in the third, 21 in the fourth and 25 in the fifth year.

To obtain the data, the authors developed a semi-structured questionnaire containing sociodemographic variables (gender, age, marital status, having children and those with whom they live), lifestyle (physical and leisure) and academic (school year, number of subjects/ lectures attended, total workload assigned to the subjects /lectures, hours devoted to extra-class studies, receiving undergraduate or extension scholarships and satisfaction with the course) for the characterization of the participants. This questionnaire was submitted to a refinement through the evaluation of 5 (five) PhD teachers with experience in occupational health and teaching, who considered that these items were sufficient to reach the objective of the study.

The burnout syndrome was assessed by the Maslach Burnout InventoryTM - Student Survey (MBI-SS), an instrument developed by Schaufeli and colleagues that specifically evaluates burnout syndrome in students, [4] which was validated for Brazilian Portuguese in 2006. (16) This version has satisfactory psychometric properties attested by factorial analysis and Cronbach's alpha between 0.65 and 0.94. It is an instrument consisting of 15 items that measure three dimensions: emotional exhaustion, depersonalization and academic effectiveness in seven-point Likert scale responses (0-6). It is considered that there is an indication of burnout in students who present high scores on emotional exhaustion (≥16 points) and depersonalization (≥11 points) and low scores on academic effectiveness (≥10 points).

Data were analyzed using the Statistical Package for Social Sciences software, version 20.0. Frequencies and percentages were calculated for categorical variables, and measures of central tendency and dispersion for continuous variables. Three multiple linear regressions were performed by the stepwise forward method, considering the dimensions of burnout syndrome as dependent variables and all independent variables (sociodemographic and academic characteristics) that presented $p \leq 0.20$ in the bivariate analysis by simple linear regression. In each model the set of variables that best explained the outcome remained, being applied as statistical criteria: (1) to present statistical significance ($p < 0.05$) and (2) to adjust the values of β by at least 10 %.

Following, began the qualitative phase, which included only participants of the quantitative phase

that showed indicative for burnout syndrome or who have expressed simultaneously high scores on emotional exhaustion and depersonalization. Students who met these criteria were entered into a draw to organize the sequence of interviews to include at least two students per course series to represent their various moments. These individuals were contacted by telephone and invited to participate in a recorded individual interview, scheduled according to their availability, and there were no refusals. To determine the number of interviewees, the criterion of theoretical saturation of the discourses was used, that is, the interviews were ceased when no new elements were identified to deepen theorization, which occurred with 21 students. The interviews were conducted from November to December 2016, by a trained researcher with previous experience in this collection method. The interviews were based on the following questions: Tell me how you characterize your experience of being a nursing student? Are there course activities that are exhausting or promote exhaustion and overload? What strategies do you use to deal with this? How do you evaluate your involvement and performance in the course?

The sources produced in the interviews were analyzed according to the condition of the Collective Subject Discourse. This methodological framework was adopted because it is indicated for mixed methodological designs and constitutes a way of expressing the thought of a collectivity about a given phenomenon, as if it were a "collective person".[15] To support the analysis of qualitative data, we used the DSCsoftTM program, which follows the steps: discourse analysis, in which all narratives were analyzed individually; below the Key Expressions were identified, that is, the excerpts of literal transcriptions with the essential content or underlying theories; following this, the Central Ideas were taken from each key phrase, describing them in a synthethic and punctual manner; subsequently, the Anchorages were established, which explicitly manifested the theory adopted. At the end of the analysis, the statements of different interviewees who had the same meaning were gathered in a first-person singular synthesis-speech.[15] Academic effectiveness was reduced from the perspective of nursing students, which are the dimensions of the syndrome elaborated three synthesis speeches: emotional exhaustion, depersonalization and burnout in this population.

This research was conducted in accordance with national and international standards for research involving human subjects, including approval by the Research Ethics Committee (Opinion No. 354,514). All participants signed an informed consent form.

Results

Among the 114 nursing students in the study, ages ranged from a minimum of 17 to a maximum of 40 years, with a mean of 21.3 ± 3.5 years. Most students were female (89.5%), single (96.5%), childless (92.1%), living with their families (63.2%), leisure activities (53.3%), not working (95.6%) and did not practice physical activity (76.3%).

Regarding the academic characterization, the assignments are offered in the annual series and, thus, the students attended, on average, 7 with extremes in 3 and 14, and the total workload of the assignments attended in the school year varied between 558 and 960 hours, with an average of 783 hours. In addition to the compulsory activities of the course, they devoted an average of 1.8 hours daily to extra-class studies, ranging from zero to 6 hours. It was found that 28.9% received scientific initiation or extension scholarships and 83.3% expressed satisfaction with the course.

Regarding the MBI-SS dimensions, it was found that 76.3% of participants had high emotional exhaustion, 31.6% high depersonalization and 21.1% low academic effectiveness. Aggregating

these dimensions, it was found that 10.5% of nursing students had indicative for burnout syndrome, as well as 30.7% concomitantly had high emotional exhaustion and depersonalization and, therefore, were predisposed to develop the syndrome.

Table 1 shows the multiple linear regression analyzes performed for the three dimensions of the syndrome. The highest emotional exhaustion scores were associated with nursing students without stable marital relationships, who were in the most advanced grades of the course, with the highest workload of signatures and who were dissatisfied with the nursing course. The second model indicated that the higher the student's age, the more advanced the school year and the higher course load, as well as being dissatisfied with the course, the higher the depersonalization scores; whereas undergraduate or extension fellows obtained the lowest scores in this dimension. Regarding academic effectiveness, the more advanced the school year, the greater the workload of assignments attended and the fewer hours of daily extra-class study, the lower the scores presented by students in this dimension.

Models	β (Beta)	β IC95%	p-value
Emotional Exhaustion (R=0.420; R^2=0.176)*			
School year	4.061	1.462; 6.660	0.003
Total workload of assignments attended	0.032	0.014; 0.051	0.001
Satisfaction with the course	-2.812	-0.011; -5.613	0.049
Stable marital relationship	-4.612	-9.953; 0.729	0.090
Depersonalization (R=0.562; R^2=0.316)*			
School Year	4.487	2.238; 6.736	<0.001
Total workload of assignments attended	0.031	0.016; 0.046	<0.001
Satisfaction with the course	-4.049	-1.704; -6.394	0.001
Age	0.251	-0.020; 0.523	0.069
Scientific or extension scholarship holder	-1.633	-0.294; -3.561	0.096
Academic effectiveness (R=0.326; R^2=0.106)*			
School Year	-3.527	-6.253; -0.802	0.012
Total workload of assignments attended	-0.020	-0.039; -0.001	0.042
Hours of extra-class daily study	0.799	-0.033; 1.631	0.059

**Multiple correlation coefficient and coefficient of determination, respectively

The empirical material produced by the 21 interviews was grouped into three summary discourses, which allude to the dimensions of burnout syndrome among students: emotional exhaustion, depersonalization and reduced academic effectiveness, which allowed a better understanding of how the academic context in which they are inserted. may contribute to the development of the syndrome.

Emotional Exhaustion. In this collective discourse, it was evidenced that the nursing students perceived the daily demands of the course as intense, producing overload and physical and emotional exhaustion, as well as indicating symptoms of physical and mental illness: *I feel extremely exhausted and overloaded! The workload is very high, almost without breaks and there are many activities required by the course and the teachers: during the day are theoretical and laboratory classes; I should study at night, because I take several subjects*

[signatures] and each one requires something different: assignments, seminars, monitoring and tests, but I get home extremely tired physically and emotionally, I have no courage to do anything else, the only will I have is to go to my room and rest. When you have practical classes in different sectors of hospitals and basic health units is even worse, we can not go wrong, because we are dealing with people! I have to adapt to the routine of the unit, develop an intense workload, deal with certain situations that I'm unprepared, and teachers always charge what I saw in theory and other subjects [signatures]. The further the course, the more is required. Although it is good for my training, some teachers act rudely, arrogantly and derogatory, making it difficult for me to perform. All this affects my health, I often have headaches, muscle pain, insomnia, fatigue, stress and irritation. (Collective Subject Discourse 1)

Depersonalization. It can be seen in this discourse the student's distancing from all the activities of the course, revealing that the demotivation was linked to the feeling of exhaustion and overload as a defensive attitude, to distance yourself from what causes you suffering: All this routine of the course makes me very unmotivated, because I don't have time to eat properly, for leisure and to do the things I like. Honestly, I have no desire to go to the classes of some subjects [signatures], as relevant as they are, I do not want to hear or study them; so I manage absences not to fail, but in all classes I get late. *The practices are a reality shock, made me realize how bad the health system is, there are not enough materials and resources to serve the patient well. That holistic care and according to the principles of SUS is only in theory. Nor did I imagine the size of the suffering of others, patients and their families, at first I cried every day when I remembered the scenes, now I try not to get involved, it is a lot of suffering. Some teachers put a lot of pressure when you are in the health service and I don't react very well to the pressure, I didn't feel like going, when I came home and I cried, and it made me rethink about the profession, because I get discouraged when I think nursing is an undervalued and underpaid profession. So I don't know if I want this for myself for the rest of my life.* (Collective Subject Discourse 2)

Reduced Academic Effectiveness. It stands out in this speech-synthesis that the reduced academic effectiveness was related to the incompetence feeling, in which the student is frustrated because he believed could have better performance, but can not get involved again with their studies due to his exhaustion and discouragement: *The academic environment is very competitive and this is encouraged by the teachers. I feel incompetent for not getting good grades, pass without final exams and to perform well in clinical practice. I can not get a scholarship of scientific initiation, because these things are for the best students, those proactive. In addition, teachers motivate only good students, people who have more difficulty seem to be invisible or treated as a lost and incapable case. Still, I feel guilty when I see that I could have studied more, but I was carried away by fatigue. The health sector is very complex and makes me anxious not to be a good student, to perform poorly and, consequently, not to be a good nurse.* (Collective Subject Discourse 3)

Discussion

Sociodemographic data of the participants of this research regarding gender, marital status and absence of offspring were also observed in other studies, which identified a trend of female activity in the profession, as well as these students prioritized professional training and financial stability, for later family formation, as it can be an arduous task for women to reconcile full-time academic activities and personal life.[17,18] It was found that 10.5% of participants in this study had indicative for burnout syndrome, a result that was lower than those obtained by investigations conducted with nursing students in Brazil and

abroad, which ranged from 24.7% to 41%.[7,8] These findings confirm that the syndrome can affect individuals still in the process of professional education, which may result in newly graduated nurses with less mastery of occupational tasks, less use of research in daily clinical practice, with the intention of leaving the profession,[7] less empathic and inattentive to the needs of health service users, which may interfere with the quality of care provided. Considering this context, it is necessary for higher education institutions to implement actions to promote the mental health of their students, through a proactive approach to stressors and coping mechanisms,[19] because health and well-being of students are strongly influenced by the organizational context.[20] In this sense, there is an international initiative "Healthy Universities" in which universities are committed to promoting the health and well-being of students and staff through an organizational culture that people feel valued, respected, heard, able to contribute and share their opinions.[13]

Due to the nature of the sequential explanatory mixed research design, the qualitative findings supported the quantitative findings, but also provided contextual meanings. It was shown that 76.3% of respondents had high emotional exhaustion. This is the first dimension of the syndrome to manifest itself, it reflects the lack of energy and psychological resources to deal with the academic overload experienced and can have harmful repercussions for professional education, as it relates to the decline of mental health and interferes with the ability of individual concentration and learning.[6,7,18]

In this study, emotional exhaustion was associated with single students, who were in the most advanced grades of the course, with the largest workload of signatures and were dissatisfied with the course. In addition to corroborating these findings, the speech-synthesis elucidated that the sources of physical and mental overload came from the theoretical and practical classes, the volume of academic work, readings and assessments, which accompanies them day by day. They also mentioned the emotional and physical overload present in the practice of care and that they are not psychologically prepared to face such situations, causing their daily life to be marked by somatic symptoms peculiar to exhaustion and feelings of doubt, disappointment, anxiety, fear, sadness, anger and anguish. These informations are important because it shows students' exposure to long periods of academic activity, particularly in relation to the perceived workload and also the emotional demands of working with people who are ill. The study indicated that it is essential to reduce unnecessary academic overload and help students develop skills to better manage their time. However, it was also reflected that the hours invested in profesional training are fundamental and suggests that the courses should be well designed so that the student's long hours of study are not perceived as somewhat monotonous and unimportant.[19]

Depersonalization is an adaptive psychological response in which the student moves away from the study because it causes suffering and overload,[18] and in this study it was found that the older the student, the more advanced the school year, the greater the course load, being dissatisfied with the course, the higher the depersonalization scores. These results are similar to those found in the occupational environment of nurses, where younger and less satisfied nurses have higher levels of depersonalization, due to the transition period between their idealistic expectations and daily practice.[21]

It was identified that a scholarship of scientific initiation or extension was a protective factor not to distance themselves from the course. The participation of academics in research and extension projects promotes the strengthening of their identity and professional autonomy, and forms a more critical, reflective nurse, committed to the care provided, and better prepared to work in different areas of professional practice[22] and thus, this student gets much more involved with

his studies. The distancing of the study was also related to the hard work process of nurses, which is full of physical and psychological demands, complex interpersonal relationships, lack of recognition, autonomy and devaluation of the class, and daily living with suffering, which is largely reported in the literature.[23,24] Thus this student sees no satisfactory reward for his present effort and expresses his discontent with the course and desire to abandon it.

Finally, the low academic effectiveness was also accentuated in the more advanced school years, with the higher course load, which resulted in fewer hours of extra-class daily study. It was found that the students felt guilty for not being able to study anymore and expressed feelings of incompetence, impotence and inferiority when compared with their peers. Furthermore, the role attributed to the teacher as (dis)motivators in this process was verified, which was already observed in a research carried out in Finland, which also showed that a positive interpersonal relationship between teacher-student promotes self-confidence and motivation in the student, in addition to a more effective and less stressful learning process.[25] In several higher education institutions, the thinking that student health and engagement is the exclusive responsibility of the individual and not of the university still predominates, so it does not value, respect, listen and invest in the improvement of the student who has a disinterested posture. This paradigm shift is necessary, and should start from top management through institutional policies

Limitations include the use of self-report measures that are prone to socially desirable responses, the cross-sectional design, in which causalities cannot be inferred, as well as the cross-sectional bias of the healthy student, because those who developed the syndrome may be off course, which would increase the prevalence. The results obtained cannot be generalized, since they portray the context experienced by nursing students of a Brazilian public university. However, this study provides a deeper understanding of the complex nature of this phenomenon, as well as support for university managers and teachers to develop effective strategies to promote their students' mental health and well-being and, consequently, to increase engagement and student success.

The mixed method study made it possible to analyze the sample in depth and in full, because despite the quantitative result of students with indicative for burnout syndrome being lower than the national standard reported in the literature for nursing students, the qualitative approach can demonstrate the weakness in the coping methods, mental suffering and frustration related to self-collection in the face of academic life. Therefore, higher education institutions must adhere to management models with emotional support policies, through a student assistance program that includes biopsychosocial aspects, especially management strategies and coping with academic stressors.

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Original article

Web-based health Information Seeking and eHealth Literacy among College students. A Self-report study

Fatemeh KHademian[1]
Mahsa Roozrokh Arshadi Montazer[2]
Azam Aslani[3]

UNIVERSIDAD DE ANTIOQUIA
1803

Web-based health Information Seeking and eHealth Literacy among College students. A Self-report study

Abstract

Objective. This study aimed to assess web-based health information seeking and eHealth literacy among Iranian college students. **Methods.** The study was conducted in five colleges of the Shiraz University of Medical Sciences in Iran during 2018. The data were collected by a researcher-made questionnaire consisting of seven questions on a 4-point Likert-type scale, with scores ranging from 7 to 28. These questions were: 'I know how to use the Internet to answer my questions about health', 'I think there is enough information about health-related issues on the Internet', 'I know the vocabulary used in health issues on the Internet', 'I can tell high-quality health resources from low-quality health resources on the Internet', 'I know how to use the health information I find on the Internet to help me', 'I feel confident in using information from the

1 Ph.D. Candidate. School of Management and Medical Informatics, Shiraz University of Medical Sciences, Shiraz, Iran. Email: fkhademian90yahoo.com

2 M.Sc. Candidate. School of Management and Medical Informatics, Shiraz University of Medical Sciences, Shiraz, Iran. Email: mahsaroozrokh@yahoo.com

3 Assistant professor, School of Management and Medical Informatics, Shiraz University of Medical Sciences, Shiraz, Iran. Email: aslaniaz@sums.ac.ir

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Internet to make health decisions', and 'Searching for health-related information on the Internet will increase my knowledge in this field'. High eHealth literacy level is defined as above the total mean score and low eHealth literacy level is defined as lower than the total mean score. **Results.** In all, 386 college students participated in the study. The results showed that the mean score of eHealth literacy was 19.11 out of 28; 205 participants (54.4%) had low eHealth literacy. In addition, the students used the Internet to search for information regarding diseases symptoms (70%), physical illnesses (67.1%), existing treatments (65%), and diagnosis (63.1%). **Conclusion.** The results showed that participants in this study usually searched for illnesses, symptoms, and treatments after they got sick and paid little attention to other aspects related to integral health.

Descriptors: consumer health information; telemedicine; students, health occupation; health literacy; Internet.

Búsqueda de información de salud en línea y alfabetización en eSalud entre estudiantes universitarios. Un estudio de autorreporte

Resumen

Objetivo. Evaluar la búsqueda de información de salud en línea y el nivel de alfabetización en eSalud entre los estudiantes universitarios iraníes. **Métodos.** El estudio se realizó en cinco colegios de la Universidad de Ciencias Médicas de Shiraz, Irán, durante 2018. Los datos se recopilaron con la ayuda de un cuestionario realizado por los investigadores que consta de 7 afirmaciones con opciones de respuesta tipo Likert de 4 puntos, con un rango de puntaje de 7-28 puntos: 1. "Sé cómo usar Internet para responder mis preguntas sobre salud"; 2. "Creo que hay suficiente información sobre problemas relacionados con la salud en Internet"; 3. "Conozco el vocabulario utilizado en temas de salud en Internet"; 4. "Puedo distinguir en Internet los recursos de salud de alta calidad de los que son de baja calidad"; 5. "Sé cómo usar la información de salud que encuentro en Internet para ayudarme"; 6. "Me siento seguro al usar la información de Internet para decisiones de salud", y 7. "Buscar en Internet información relacionada con la salud aumentará mi conocimiento en este campo". Se estableció que se tenía alfabetización en eSalud alta si el puntaje estaba por encima de la media total y alfabetización en eSalud baja si este puntaje era inferior a la puntuación media. **Resultados.** 386 estudiantes universitarios participaron en el estudio. La puntuación media de alfabetización en eSalud fue de 19,11 de los 28 puntos máximos posibles. 205 participantes (54.4%) tenían baja alfabetización en eSalud. Además, los estudiantes utilizaron Internet para buscar información sobre síntomas de enfermedades (70%), enfermedades

físicas (67.1%), tratamientos existentes (65%) y diagnóstico (63.1%). **Conclusión.** Los resultados mostraron que los participantes de este estudio buscaban generalmente información en Internet acerca de enfermedades, síntomas y tratamientos después de enfermarse y prestaban poca atención a otros aspectos relacionados con la salud integral.

Descriptores: información de salud al consumidor; telemedicina; estudiantes del área de la salud; alfabetización en salud; Internet.

Pesquisa de informações on-line sobre saúde e alfabetização em eSaúde entre estudantes universitários. Um estudo de auto-relato

Resumo

Objetivo. Este estudo teve como objetivo avaliar a busca de informações sobre saúde on-line e o nível de alfabetização em eSaúde entre estudantes universitários iranianos. **Métodos.** O estudo foi realizado em cinco faculdades da Universidade de Ciências Médicas de Shiraz, Irã, durante 2018. Os dados foram coletados com a ajuda de um questionário conduzido pelos pesquisadores, composto por 7 declarações com opções de resposta tipo Likert de 4 pontos, com uma faixa de pontuação de 7-28 pontos. Essas perguntas foram: 'Eu sei como usar a Internet para responder às minhas perguntas sobre saúde', 'Eu acho que há informações suficientes sobre problemas relacionados à saúde na Internet', 'Eu conheço o vocabulário usado nas questões de saúde na Internet', 'Eu posso distinguir em Recursos de saúde de alta qualidade na Internet que são de baixa qualidade ',' Eu sei como usar as informações de saúde encontradas na Internet para me ajudar ',' Sinto-me seguro ao usar informações da Internet para decisões de saúde 'e' A busca de informações relacionadas à saúde na Internet aumentará meu conhecimento neste campo '. Foi estabelecido que havia alta alfabetização em eSaúde se a pontuação estivesse acima da média total e baixa literacia em eSaúde se essa pontuação fosse menor que a média. **Resultados.** 386 universitários participaram do estudo. A pontuação média em alfabetização em eSaúde foi 19,11 dos 28 pontos máximos possíveis. 205 participantes (54,4%) tinham baixa alfabetização em eSaúde. Além disso, os estudantes usaram a Internet para buscar informações sobre sintomas da doença (70%), doenças físicas (67,1%), tratamentos existentes (65%) e diagnóstico (63,1%). **Conclusão.** Os resultados mostraram que os participantes deste estudo geralmente buscavam informações na Internet sobre doenças, sintomas e tratamentos após adoecer e prestavam pouca atenção a outros aspectos relacionados à saúde integral.

Descritores: informação de saúde ao consumidor; telemedicina; estudantes de ciências da saúde; alfabetização em saúde; Internet.

Introduction

Internet is being used increasingly in the world and almost half of the world's populations are Internet users. The rate of Internet usage increased by 933.8% in the world from 2000 to 2017.[1] The increasing use of the Internet and mobile technology has made it possible to have access to information at any time and any place.[2] Indeed, people can stay in contact with each other anywhere in the world. In 2016, 88% of adults in the United States used the Internet, 99% of whom were between 18 and 29 years old.[3] Iran is ranked 13th in the world in terms of number of Internet users and about 70% of Iranians use the Internet.[1] People can have access to data and information via Internet in a secure, easy, cheap, and fast way.[4] Moreover, Internet is considered a main source for finding health information.[5]

In addition to having access to the Internet, special skills are needed for using and evaluating electronic recourses[6] because quality, reliability, and accuracy of health information resources are poor in some cases.[7,8] In other words, people may access inaccurate health information that is potentially dangerous if they do not have adequate skills. Thus, people should have enough skills to evaluate the information on the Internet. In fact, people should have a good level of eHealth literacy. eHealth literacy refers to "the ability of individuals to seek, find, understand, and appraise health information from electronic resources and apply such knowledge to addressing or solving a health problem".[9] The results of a study showed that many college students did not have enough eHealth literacy skills.[10] Poor usability of eHealth services can cause barriers against access to and use of on-line health information. Therefore, eHealth literacy skill tools have to be improved.[11] eHealth literacy results in good health behaviors and positive changes.[12,13]

The results of a review study indicated that the students did not have enough Internet literacy skills and had to acquire the necessary skills.[10] A similar study was conducted to assess on-line health literacy of nursing students in South Korea. In that study, most participants reported that the Internet was a useful source to make health-related decisions, but only a small number of them were able to distinguish between high-quality and low-quality sources.[5] Another study showed that 71% of the participants were eager to use the Internet to search for health-related issues. Meanwhile, more than half of the participants (52%) had a good Internet health literacy level. That study also revealed the importance of knowing the credible sources of information. Accordingly, the participants who had heard the name of MedlinePlus database had higher levels of Internet health literacy.[14] The results of another study showed that despite being aware of the Internet resources and searching the Internet, students had problems in evaluating these sources and distinguishing between high-quality and low-quality sources. In that study, the factors related to Internet health literacy included the type of university, type of stu-

dent admission, level of education, students' online skills, and their understanding of the importance and usefulness of the Internet. However, there was no significant association among eHealth literacy and age, gender, and frequency of Internet usage.[15] The results from another study showed that 53% of students tended to seek for health information on the Internet and 74% sought for health information on the Internet. Additionally, the most important challenge for the students was the accuracy of on-line information on the Internet.[16] Other studies demonstrated that students' average of actual Internet health literacy was significantly lower than their average perceived Internet literacy. In addition, students with higher education levels had higher levels of Internet health literacy compared to those with lower levels of education.[17]

Given that most people obtain the necessary health-related information from the Internet and it is difficult and even impossible to check all the information available on websites and weblogs, users themselves should have the ability to check the quality of the information. The present study sought to investigate eHealth literacy level among college students in Shiraz, Iran.

Methods

This cross-sectional, descriptive study was conducted in five colleges of the Shiraz University of Medical Sciences, Shiraz, Iran from April to May 2018. The inclusion criteria of the study were having an associate degree, BSc/MSc student, studying in one of the selected colleges at the time of data collection, and being willing to participate in the study. The individuals who did not fill out the questionnaire completely were excluded from the study.

The data were collected by a questionnaire devised by researchers based on the literature review. The face and content validity of the questionnaire was confirmed by the experts and its reliability was confirmed by a Cronbach's alpha of 0.78. It was a self-report tool that assessed the students' perceptions of their skills and knowledge within each measured domain. The main part of the questionnaire, i.e., eHealth literacy domain consisted of seven questions that were answered on a four-point Likert scale, from strongly disagree (score = 1) to strongly agree (score = 4). The total scores ranged from 7 to 28. Furthermore, the questionnaire included six supplementary parts including demographic characteristics, frequency of using the Internet for different items, use of electronic and non-electronic sources, factors affecting the evaluation of health websites, reasons for using the Internet, and evaluating the experience of using the Internet.

The researcher provided the list of five colleges of the university, including nursing, management and medical informatics, health and nutrition, rehabilitation, and paramedical schools. Considering the content of courses and the possibility of higher eHealth literacy level of dentistry, medicine, and pharmacy students compared to other students, they were excluded and those from other five colleges were invited to participate in the study. The number of participants from each college was determined based on its total number of students. After obtaining approval from the university administration, the researcher visited each college on random days and invited the students who were available and gave them a brief explanation about the study objectives and procedures. After that, the students who were willing to participate in the study signed the informed consent and filled out the questionnaires. Overall, 402 students completed the questionnaires.

The study data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 16. Descriptive statistics was used to describe variables. Spearman's correlation test was used to assess the relationship between age and eHealth literacy. Additionally, to compare eHealth literacy mean scores based on type of college, education level (i.e., associate degree, BSc, MSc), living condition (i.e., alone, with family, in dormitory), and frequency of computer and laptop use per week (i.e., 1-2 hours, 3-4 hours, 5-6 hours, more

than 6 hours), Kruskal-Wallis test was used. To compare eHealth literacy scores based on sex, marital status, and type of residence, the Mann-Whitney test was used.

Ethics approval and consent to participate. This study was approved by the Ethics Committee of the Shiraz University of Medical Sciences (code: 1397.067). Data collection was started after obtaining a formal authorization from the University's Ethics Committee. Participation in this study was entirely voluntary. Besides, the students were reassured about the confidentiality of their information. In other words, the participants were identified by using a unique identification code.

Results

A total of 402 students completed the questionnaires, but those with more than 10% missing items were put aside. After all, 16 questionnaires were excluded and 386 cases were analyzed [School of Nursing and Midwifery (31.4%, *n*=121), School of Management and Medical Informatics (22.3%, n=86), School of Health and Nutrition (18.7%, *n*=72), School of Rehabilitation (16.9%, *n*=65), and Paramedical School (10.6%, *n*=41)]. The mean age of the participants was 22.25 (SD=2.48) years. In addition, most of the participants were female (94%), BSc students (89.3%), single (83.9%), and urban residents (86.8%). Besides, most of the students lived in dormitories (69.1%). Moreover, nearly half of the students (51.8%) used the computer for 1-2 hours daily. Moreover, the students mostly used the Internet in dormitories (81.3%), home (39%), university (15.5%), and coffee shops and public places (3.6%). The first priority of the students about the question "Who requires the health-related information?" was as follows: myself (82.1%), family (75.6%), and friends and colleagues (30.3%).

The result showed that the mean score of eHealth literacy was 19.11(SD=2.96) out of 28. Based on the previous studies (3.17) the level of eHealth literacy was measured according to the total mean score. Thus, scores above the total mean score (i.e., >19) were considered high eHealth literacy level and scores equal to mean score and lower than it (i.e., ≤19) were considered low eHealth literacy level. Accordingly, most participants' eHealth literacy level was low (54.4%, *n*=205). The students' eHealth literacy scores have been presented in Table 1. As the table depicts, the participants gained low scores in recognizing high-quality from poor-quality information and trusting the information found on the Internet and using it to make decisions.

Table 1. eHealth literacy among the students

eHealth statements	Strongly disagree *n* (%)	Disagree *n* (%)	Agree *n* (%)	Strongly agree *n* (%)	Item Mean (SD)
I know how to use the Internet to answer my questions about health.	8 (2.1)	60 (15.5)	251 (65.0)	67 (17.4)	2.98 (0.64)
I think there is enough information about health-related issues on the Internet.	14 (3.6)	90 (23.4)	243 (63.1)	38 (9.9)	2.79 (0.66)
I know the vocabulary used in health issues on the Internet.	15 (3.9)	151 (39.2)	200 (51.9)	19 (4.9)	2.58 (0.64)
I can tell high-quality health resources from low-quality health resources on the Internet.	21 (5.5)	148 (38.3)	186 (48.3)	30 (7.8)	2.58 (0.71)
I know how to use the health information I find on the Internet to help me.	10 (2.6)	90 (23.4)	262 (68.1)	23 (6)	2.77 (0.58)
I feel confident in using information from the Internet to make health decisions.	26 (6.8)	171 (44.8)	172 (45)	13 (3.4)	2.45 (0.67)
Searching for health-related information on the Internet will increase my knowledge in this field.	15 (3.9)	30 (7.8)	290 (75.1)	50 (13)	2.97 (0.60)

The students' answers to the question "How many times have you used the Internet for the following items over the past six months?" are shown in Table 2. Accordingly, 70% of the students stated that they used the Internet to search for information about disease symptoms (every day, 1-2 times a month). Additionally, 79.2% of the participants reported that they did not use (never, rarely) the Internet to contact physicians or other healthcare providers.

Table 2. The rate of internet use among the students over the past six months

Questions	Every day *n* (%)	1 time per week *n* (%)	1 to 2 times a month *n* (%)	Rarely *n* (%)	Never *n* (%)
Information related to physical illness	37 (9.6)	109 (28.2)	113 (29.3)	108 (28)	19 (4.9)
Information on mental health, depression, and stress	13 (3.4)	54 (14)	98 (25.4)	149 (38.6)	72 (18.7)
Prevention	21 (5.5)	72 (18.8)	106 (27.7)	135 (35.3)	48 (12.6)
Diagnosis	24 (6.3)	79 (20.7)	135 (35.3)	111 (29.1)	33 (8.6)
More information on the symptoms of the disease	35 (9.3)	80 (21.2)	149 (39.5)	89 (23.6)	24 (6.4)
Information on the results of medical tests	20 (5.3)	52 (13.8)	103 (27.2)	150 (39.7)	53 (14)
Information on existing treatments	27 (7)	78 (20.3)	145 (37.7)	111 (28.8)	24 (6.2)
Side effects of medications or treatments	26 (6.8)	64 (16.8)	146 (38.3)	109 (28.6)	36 (9.4)
Operational care information (bathing, first aid, etc.)	18 (4.8)	41 (10.9)	105 (27.9)	151 (40.2)	61 (16.2)
Information about lifestyle (nutrition, exercise, dietary habits, physical activity, smoking, alcohol consumption, etc.)	32 (8.3)	73 (19)	122 (31.8)	116 (30.2)	41 (10.7)
Information about caring for an elderly person	6 (1.6)	17 (4.5)	41 (10.8)	142 (37.4)	174 (45.8)
News related to health policies, such as insurance costs, medications, visits, and more	11 (2.9)	25 (6.6)	51 (13.5)	144 (38)	148 (39.1)
Information related to a physician, hospital, nursing home, home care center, or other care providers	10 (2.6)	24 (6.3)	71 (18.5)	149 (38.8)	130 (33.9)
How to adapt to the disease	9 (2.3)	25 (6.5)	92 (24)	150 (39.1)	108 (281.)
Emotional support in dealing with a health issue	14 (3.7)	26 (6.9)	87 (23)	132 (34.8)	120 (31.7)
To collaborate with other patients through social networks	8 (2.1)	21 (5.5)	53 (13.8)	134 (35)	167 (43.6)
To contact a physician or other healthcare providers, by E-mail, etc.)	11 (2.9)	17 (4.5)	51 (13.4)	119 (31.2)	183 (48)
For general studying of health or diseases without a specific purpose	22 (5.7)	48 (12.4)	106 (27.5)	124 (32.1)	86 (22.3)

The results related to responses to the question "In which sources do you find health-related information?" are presented, thus: 70.9%, search engines like Google and Yahoo; 26.3%, mobile apps; 24.2%, on-line social networks; 18.3%, blogs and related specialized websites; 16.4, websites from official health organizations, such as the Ministry of Health and WHO; and 9.6%, Internet magazines and newspapers.

In order to determine whether the students made necessary assessments when using Internet resources, some questions were asked, as shown in Table 3. Accordingly, updated information, being approved by a physician, protection of users' personal information, and presence of healthcare professionals were among the most important factors. However, being recommended by a friend or family member was not very important for most students.

Table 3. The participants' perspective on the criteria for evaluating health websites

Questions	Not important *n* (%)	A little important *n* (%)	Somewhat important *n* (%)	Important *n* (%)	Very important *n* (%)
Protecting users' personal information	17 (4.4)	24 (6.2)	46 (11.9)	117 (30.3)	182 (47.2)
Information in my language	9 (2.3)	18 (4.7)	56 (14.5)	157 (40.7)	146 (37.8)
Updated information	3 (0.8)	11 (2.9)	24 (6.3)	86 (22.5)	259 (67.6)
Interaction (such as answering / chat / chat services)	17 (4.5)	28 (7.4)	99 (26.1)	123 (32.4)	113 (29.7)
The presence of healthcare professionals	9 (2.4)	24 (6.3)	48 (12.7)	116 (30.6)	182 (28)
Clarity of site officials and sponsors	49 (12.8)	47 (12.3)	106 (27.7)	81 (21.2)	99 (25.9)
The proper design of the site	13 (4.7)	61 (15.9)	113 (29.5)	109 (28.5)	82 (21.4)
Link to other sites	28 (7.3)	59 (15.4)	116 (30.2)	114 (29.7)	67 (17.4)
Specialized resources	7 (1.8)	19 (5)	57 (14.9)	144 (37.6)	156 (49.7)
Approved by a physician	11 (2.9)	23 (6)	56 (14.5)	104 (27)	191 (49.6)
Recommended by a friend or family member	49 (12.8)	95 (24.7)	131 (34.1)	66 (17.2)	43 (11.2)

In this study, the relationship between eHealth literacy scores and different variables was examined. The findings of the Spearman correlation test did not show any statistically significant correlation between eHealth literacy score and age (r=0.07, p=0.17). Furthermore, the results of the Mann-Whitney test showed no statistically significant difference between the mean score of eHealth literacy and sex (p=0.17), marital status (p=0.66), and type of residence (p=0.08). Additionally, the result of the Kruskal-Wallis test showed no statistically significant difference between eHealth literacy scores and type of college (p=0.30), education level (p=0.39), living condition (p=0.13), and frequency of computer and laptop use per week (p=0.32).

The next part of the questionnaire was about the "reasons for using the Internet from the students' point of view", and the results state that the majority of the participants (95.8%) either agreed or strongly agreed with easy access to information. Also, more than half of the participants (90.7%) agreed and strongly agreed with access to extensive information from various sources. Other reasons included quick access to information (94.3%), the possibility of studying various and shameful topics privately (69.5%), cheaper Internet information than the cost of physician's visit (72.5%), advice from a physician or other healthcare providers, such as nurses, midwives, and radiologists (43.3%), and being recommended by a friend or family member (43.5%).

Most of the students were opposed to the high cost of searching the Internet (77.4%), inaccessibility of information in their language (65.5%), and inability to find what they looked for (75.6%). On the other hand, they believed that the information they searched for was helpful (91.6%) and easy to understand (90.1%). The majority of the participants (90.1%) reported that they were much or very much likely to use the Internet the next time they needed health information. Also, 95.8%

of the students stated that the Internet was a good tool to improve knowledge about health-related issues. Furthermore, 89.1% of the participants reported that they were generally satisfied with the information they found on the Internet.

Discussion

The study results showed that the mean score of eHealth literacy was 19.06 out of 28. Indeed, the students used the Internet as a good source to search for health-related information. Based on the results, most of the participants used the Internet to search for information on disease symptoms, physical illnesses, existing treatments, and diagnosis, respectively. In Most cases, they believed that they knew how to use the health information they found on the Internet. These results are supported by another study on young Italians, which indicated that 60% of males and 65% of females used the Internet for health-related purposes.[18] In the present study, the participants were asked about their perspective on evaluating health sites on the Internet. These questions were then matched with Health Summit Working Group's (HSWG) criteria. The results demonstrated that some criteria, including protecting users' personal information, existence of information in their language, updated information, presence of healthcare professionals, and being approved by a physician, were important for the students.

In this study, most participants' eHealth literacy level was low (54.4%). Similar to this finding, the health literacy of Iranian medical and other health sciences university students was low.[19] However, Tubaishat *et al*.,[15] reported that 51.1% of university students in South Korea had high eHealth literacy. The different findings may be related to the difference between target populations of these two studies. In the present study, the participants were from different fields in a public university, whereas in the study by Tubaishat *et al*.[15] only nursing students in public and private universities had participated. Another study using effective educational strategy recommended improving nursing students' learning outcomes and self-efficacy or belief on their ability to succeed in achieving learning goals.[20] Therefore, applying effective strategies to improve health-related university students' eHealth literacy is suggested.

In the current study, 47.9% of the participants did not search the net for prevention-related information. Besides, most of the participants rarely or never searched the Internet for information on mental health, depression, and stress, emotional support in dealing with a health issue, taking care of an elderly person and news related to health policies, such as insurance costs, medications, and visits. These results reflect a disease-centered perspective vs. health-centered perspective among Iranian health-related university students. In addition, their searches were mostly focused on physical illnesses and other aspects of health, especially mental health, is underestimated. In addition, they paid little attention to community-based aspects of health. These findings indicate that they need to learn about the more comprehensive perspective of health and healthcare issues in which all aspects of health, particularly mental health, are emphasized. Additionally, they need to learn about the importance of community-based issues of healthcare, such as prevention, policies, costs etc. In this regard, mobile-based applications, such as mental health apps, may be used to improve their knowledge and attitudes about these important issues.[21]

The participants also rarely or never searched for ways to adapt to diseases, collaboration with other patients through social networks, and contact with a physician or other healthcare providers. These results agree with those in the study by Bhandari *et al.*[22] in the United States. They found that a small proportion of the participants (4%) communicated with physicians through e-mail. These findings indicate that there are barriers in applying some kinds of telemedicine, such as communicating with physicians and other

healthcare providers through e-mail. These barriers may be different from subjective obstacles to the lack of technical infrastructures.

In the current study, most of the respondents reported using search engines, like Google and Yahoo, for surfing the net, which is consistent with another study.[23] Findings showed that about half of the students could not distinguish high-quality from low-quality health resources on the Internet, and did not feel confident in using the information obtained from the Internet to make health decisions. Similarly, Rathnayake *et al.*[10] found that only 17.03% of their respondents were confident to use on-line health information to make health decisions and 41.1% of them had the ability to distinguish between high- and low-quality health resources on the Internet. These measurements were, respectively, obtained as 28.6% and 21.6% in the research by Tenant *et al*.[24]

Although the current study's participants used the Internet as a good source in most participants, it did not lead to decision-making in about half of them. It seems that they sought information for educational purposes rather than for decision making. Moreover, 43.1% of the on-line resources that students searched were not understandable to them and they could not understand the vocabulary used in these resources. Thus, readily available and validated tools are recommended to be designed to assess the readability of written materials to create understandable materials for the target population.

Strengths and limitations. This study had strengths, such as the large sample size and that of conducting the study on students from five different colleges. On the other hand, it had some limitations. Firstly, given that simple random sampling could not be used, the days of the week were randomized. Secondly, the study data were collected by using questionnaire and self-report data could be affected by the students' subjectivity.

Conclusion. The study results showed the pattern of search among Iranian students who usually searched for illnesses, symptoms, and treatments after they got sick. Thus, health policymakers are required to design patient-centered health websites in a language that is understandable to the community. Additionally, the content must be written in a way that helps people make decisions about their illnesses. It is also necessary to plan seriously for increasing the eHealth literacy level of the community, especially students. In addition, it is essential to clearly explain the indicators of trusting the Internet content to users. This study revealed the similarities of health literacy among different countries regardless of their development level, which implies the generalizability of the results.

Overall, the study findings provided useful information for decision-makers to provide more efficient educational programs. Given the opportunities that the Internet has provided for better education, it is suggested that students' Internet literacy skills should be improved. In addition, eHealth literacy skills are recommended to be embedded into the students' curricula.

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Nursing Student Experiences of Caring for Burned Patient: From Fearfulness to Normalization

Original article

Fahimeh Alsadat Hosseini[1]
Marzieh Momennasab[2]

UNIVERSIDAD DE ANTIOQUIA
1803

Nursing Student Experiences of Caring for Burned Patient: From Fearfulness to Normalization

Abstract

Objective. To describe the care experiences of students in burn units. **Methods.** Qualitative research of the phenomenological descriptive type which was conducted with the participation of eight senior nursing students in Shiraz College of Nursing and Midwifery, Iran. The method used for gathering data about Student experiences in Care Services for Burn Cases was the individual semi-structured interview. The Colaizzi method was used for analysing and interpreting the data. **Results.** Three main themes emerged: *the attractive but stressful experience*, *trying to adjust* and *metamorphosis in attitude*. Taking care of burned patients led to metamorphosis and adaptation to the requirements of burn care due to the students' improved attitudes, awareness and potentials. This finally turned the stressful nature of taking care of a burn patient into an attractive experience for them. **Conclusion.** Students with

1 Nurse, Ph.D. Department of Medical-Surgical Nursing, Faculty of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran. Email: fhosseini23@yahoo.com

2 Ph.D. of Nursing. Associate Professor, Department of Medical-Surgical Nursing, Faculty of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran. Email: momennasab@sums.ac.ir. Corresponding author

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little clinical experience of stressful working situations in burn units faced different challenges. Due to the specific nature of taking care of burned patients, the clinical experiences of nursing students who offer these services are unique.

Descriptors: qualitative research; attitude; students, nursing; nursing care; burn units; education, nursing.

Experiencias de los estudiantes de enfermería sobre el cuidado de pacientes quemados: del miedo a la normalización

Resumen

Objetivo. Describir las experiencias de atención de los estudiantes en las unidades de quemados. **Métodos.** Investigación cualitativa del tipo descriptivo fenomenológico que se realizó con la participación de ocho estudiantes senior de enfermería en el *Shiraz College of Nursing and Midwifery* en Irán. El método utilizado para reunir datos sobre las experiencias de los estudiantes en los servicios de atención de pacientes quemados fue la entrevista individual semiestructurada. El método Colaizzi se utilizó para analizar e interpretar los datos. **Resultados.** Emergieron tres temas principales: *la experiencia atractiva pero estresante*, *tratando de adaptarse,* y *la metamorfosis en actitud*. El cuidado a los pacientes quemados condujo a la metamorfosis y a la adaptación a los requerimientos del cuidado de las quemaduras, debido a que los estudiantes mejoraron las actitudes, mostraron mayor conciencia y desarrollaron potencialidades. Esto finalmente convirtió la naturaleza estresante de cuidar a un paciente quemado en una experiencia atractiva para ellos. **Conclusión.** Los estudiantes con poca experiencia clínica de situaciones laborales estresantes pueden enfrentar diversos desafíos en las unidades de quemados. Debido a la

naturaleza específica del cuidado de este tipo de pacientes, las experiencias clínicas son únicas para los estudiantes de enfermería.

Descriptores: investigación cualitativa; actitud; estudiantes de enfermería; atención de enfermería; unidades de quemados; educación en enfermería.

Experiências de estudantes de enfermagem sobre o cuidado de pacientes queimados: do medo da normalização

Resumo

Objetivo. Descreva as experiências de atenção do aluno em unidades de queimados. **Métodos.** Pesquisa qualitativa, do tipo descritivo fenomenológico, realizada com a participação de oito estudantes seniores de enfermagem da Faculdade de Enfermagem e Obstetrícia Shiraz, no Irã. O método utilizado para coletar dados sobre as experiências dos estudantes nos serviços de queimados foi a entrevista individual semiestruturada. O método Colaizzi foi utilizado para analisar e interpretar os dados. **Resultados.** Surgiram três temas principais: a experiência atraente, porém estressante, tentando se adaptar e a metamorfose na atitude. Cuidar de pacientes queimados levou à metamorfose e adaptação às exigências do cuidado com queimaduras, porque os alunos melhoraram atitudes, mostraram maior consciência e desenvolveram potencialidades. Isso finalmente transformou a natureza estressante de cuidar de um paciente queimado em uma experiência atraente para eles. **Conclusão.** Alunos com pouca experiência clínica em situações estressantes de trabalho podem enfrentar vários desafios em unidades de queima. Devido à natureza específica do atendimento a esses pacientes, as experiências clínicas são únicas para os estudantes de enfermagem.

Descritores: pesquisa qualitativa; atitude; estudantes de enfermagem; cuidados de enfermagem; unidades de queimados; educação em enfermagem.

Introduction

Nurses, as key members of burn care teams, are responsible for designing a care plan based on patient needs, which change during the treatment process and the different phases of convalescence.[1] However, providing care services in burn units is challenging; it affects the nurses' perceptions and creates unforgettable experiences that are not recognizable in other units.[2] The nurses' first encounter with burned patients and burn units in Iran happens during their training period. The quality of the nursing education is closely related to the quality of the students' clinical experiences. If students experience any pressure in educational settings, their learning may suffer.[3] Despite the incontrovertible role of clinical experiences in the acquisition of knowledge and skill, many nursing students consider them as stress-causing factors and clinical settings, like burn units, are stressful work settings.[4]

Although there have been some efforts to describe the needs and experiences of nursing students, these studies mainly focus on general aspects, like problems in clinical teaching, the characteristics of an efficient clinical instructor, teaching strategies or the setting influences, in the form of quantitative research.[5-7] There are not enough researches specifically done on nursing student experiences in providing care services in the stressful burn unit. Since clinical education is a primary part of the nursing educational system, curriculum designers must make an attempt to provide suitable conditions for students so that they can acquire necessary skills peacefully, particularly with regard to burn care challenges for care service providers and their influences on students' educational, psychological, and professional dimensions.[2] Therefore, investigating and evaluating clinical experiences of nursing students in providing care services for burned patients has a significant role in improving the quality of nursing education and care of burn injuries and conducting qualitative research based on nursing student experiences ; also, perceptions of taking care of patients can help the instructors and curriculum designers to offer efficient opportunities for learning. Hence, the present study was conducted with the purpose of describing the nursing students' experiences in the burn unit.

Methods

Design. Since one of the most important ways of identifying the students' clinical experiences is using the phenomenological method,[8] and that burns caring experiences and their dimensions in students are not investigated yet, then to create a thorough and deep perception of nursing student experiences

when facing burned patients and deal with taking care of them, descriptive phenomenological method was used.

Participants and setting. This phenomenological study was performed on nursing students of Shiraz College of Nursing and Midwifery as a subset of Shiraz University of Medical Sciences in Iran. The inclusion criteria were being a senior nursing student who has done an internship in burn unit, unemployment in the clinical setting, being willing to participate in the present work, and being able to describe their experiences. Sampling was done purposefully. In Iran's common nursing educational curriculum, the burn unit internship, course lasts for 12 days, during which students spend one week in the burn unit and another week in the burn emergency unit taking care of burned patients. In the internship course, each instructor teaches a group of between seven and eight students. In the present study, sampling was done purposefully among students with rich and copious insights. Therefore, in this study, eight undergraduate nursing students who had passed between one and four weeks of their burn unit internship course in different groups were selected purposefully. Each participant declared their consent and willingness to participate in this study. The setting was Shiraz College of Nursing and Midwifery.

Data collection. The data were collected from January to August 2018. The data collection method used for this study was that of interviewing every participant individually that was done by the main researcher; for this purpose, eight in-depth and semi-structured interviews were performed. Interviews were held in a private place and arranged according to the participant's will. In the beginning, the interviews were less structured and the interviewer started with one or two main questions and continued the interview based on the interviewee's responses. The beginning of the interview was focused on the following main questions: 'What is burn care in your view?', 'What was your feelings and thoughts during the internship?'and, 'What was the experience of learning of care for burned patients?' The questions that followed were based on the interviewees' responses to these questions. Where necessary, follow-up questions were used to increase the clarity of information. The approximate duration of the interviews was about 45 to 60 minutes. The interviews were recorded after obtaining permission from the students. Each interview was listened to several times immediately after it was over, and was subsequently transcribed. They were also analysed after being performed; accordingly, the next interview was then planned. These interviews continued until data saturation was reached. Saturation is achieved when a new category does not appear and the categories reach saturation in terms of their features and dimensions.[8]

Data analysis. The phenomenological analysis starts with bracketing the researcher's subjectivity which refers to clarifying preconception throughout the study. This process is described as Epoché,[9] and it refers to setting aside the researcher's prejudgments and predispositions towards the phenomenon. For this purpose, the researchers wrote a complete description of the phenomenon and before starting the data analysis, they read their subjectivity statement, including the description of their own experience with the phenomena. To analyse the data, Colaizzi's[8] seven stage method of data analysis was used, which consisted of reading participant descriptions, referring to protocols and extracting important phrases, forming meaning and concept for each phrase, categorizing the concepts based on topics, compiling the findings into one comprehensive description and finally returning the results to the participants. All stages of the data analysis were reviewed by the researchers' team.

Study rigour. To ensure trustworthiness of the study, Guba and Lincoln's[10] criteria were utilized. Dedicating sufficient time to data gathering, revision of the interview transcriptions by the participants, getting help by means of feedback from two colleagues familiar with qualitative research methods and from two experienced instructors from the undergraduate teaching level, plus the

use of a negative case analysis, revision by external members and supervisors, a teamwork attitude, and researcher experience as an instructor in the field of nursing student training in the burn units and her trend to improve students' clinical experiences and learning besides improving the quality of care for burn patients, all contributed to the enhanced credibility of the findings. Furthermore, independent analyses conducted by each member of the research team and team analyses improved the credibility of the research. Also, detailed descriptions of the study were used to validate dependability and conformability. In addition, including precise instances and quotes from the participants was used for assuring the transferability of the findings.

Ethical considerations. After receiving permission from the ethics committee located in the research centre of Shiraz University of Medical Sciences (No. 14432), the individuals meeting the intended criteria to enter the study were identified, and after they had been presented with oral and written details, informed consent was obtained. The participants were assured about the confidentiality of the interviews and the presentation their interview data anonymously. The researcher gave the participants the chance of revoking their cooperation by providing their phone number and e-mail address in any phase of the project. They were also reassured that their withdrawal would not have any negative consequences for their education.

Results

The participants of this study consisted of eight senior nursing students. The majority of them were female (62.5%) and single (75%). The mean (with standard deviation) participant age was 24. The demographic characteristics of the participants are presented in Table 1.

Table 1. The demographic characteristics of the participants

Participants	Gender	Age (year)	Marital status	Student working experience in burn unit
P1	Female	22	Single	No
P2	Female	23	Single	No
P3	Female	22	Single	No
P4	Female	24	Single	No
P5	Female	24	Married	No
P6	Male	23	Single	No
P7	Male	32	Married	No
P8	Male	22	Single	No

The findings were organized in three main themes of "the attractive but stressful experience", "trying to adjust", and "metamorphosis in attitude", together with 9 subthemes. In Table 2, all the main themes and subthemes are presented.

Table 2. The extracted themes from the participants' experiences of giving care services to burned patients

Main themes	Subthemes
The attractive but stressful experience	The stress feeling The tendency to learn new and specialized skills
Trying to adjust	Positivity Empathizing with patients Considering professional principles Getting involved in taking care of patients under the instructor's supervision
Metamorphosis in attitude	Fearfulness and negative attitudes before becoming involving in the care Gradual change of attitude Normalization

The attractive but stressful experience

The participants not only did not have a good feeling about giving care services to burned patients and were not willing to take care of them, but also believed that as a nurse they need to know how to take care of burned patients and acquire the requisite skills. In addition, the students experienced activities which were completely new to them and they did not have the opportunity of performing similar kinds of care services in the other units. The main theme of *the attractive but stressful experience* consists of the two subthemes *the stress feeling*, and *The tendency to learn new and specialized skills.*

The stress feeling. Many of the participants considered giving care services to burned patients a tough and stressful job. *When I enter the burn unit and I want to face a burned patient, I feel really scared let alone taking care of him, it is really stressful*. (P. 2) The reasons they mentioned were the tough nature of taking care of burned patients and the psychological effects that the patients' conditions had on them. *I was really stressed out of taking care of burned patients because they are already in a bad condition so when we try to provide care services, such as a burning shower and debridement for them, they experience an acute pain*. (P. 3). Individual features of the participants and the stressful setting of the burn unit were also important factors influencing their stress feelings: *It's really difficult for me to debride a burned patient, because he/she is in a lot of pain and I don't like to see them suffering…I'm an emotional person, I feel stress when I watch burn wounds*. (P. 8).

The tendency to learn new and specialized skills. Despite the tough nature of providing care services for burned patients and the psychological impact it has on nurses, the participants believed that this type of care service was somehow attractive to them. What made the internship in the burn unit attractive was the novelty of the learning, skills and experiences the interns acquired: *Generally, seeing it for the first time was attractive, it's tough but attractive*. (P. 7) *It was a completely different experience…. very different, it was new, therefore, I tended to learn and do burn care.* (P. 2) The individual characteristics of the students are definitely influential in this regard:

Well, I think it depends on the student. For instance, I have a friend who says when I see that, I feel nausea, but I'm not like that. I like to provide care services for burned patients, dress them or do things like that, because it's so interesting for me. (P. 1).

Trying to adjust

Since taking care of burned patients was difficult and stressful for students in the beginning, many of the participants mentioned cases that expressed their effort to reach a level of adjustment when talking about their experiences of providing care services for burned patients. The subthemes of *positivity* toward providing care services, empathizing with patients, *considering professional principles,* and getting involved in taking care of patients under the instructor's supervision all show their effort to reach a state of adjustment.

Positivity. One strategy that students use to adapt to the stress of working in the burn unit is thinking positively and looking for positive aspects of the experience. *However, we learn a couple of care services that can be applicable at home or somewhere else.* (P. 8) the students felt the significance of learning how to take care of burned patients, finding it useful in their personal life: *Unlike many illnesses and physical problems, everyone, may have experienced himself or his relatives, burn events, in a low or high levels, therefore, it is necessary to know the care services for burned patients.* (P. 7) Also, the participants perceived that teaching patients was so enjoyable: *Well, the act of teaching the patient itself is very enjoyable for me, because I know they don't know some points that are very basic and then I explain these to them, I really like this job*. (P. 1)

Empathizing with patients. Another strategy that students use to adjust is being empathetic with patients. The horrible appearance of the patients and other physical, psychological, and financial problems imposed on them all make the students feel empathic and perform care services empathetically; hence, they do their best to provide care services and instruction for these patients regardless of their own personal will: *I said to myself [that] the most important thing is just helping this patient. I have to disregard some tough scenes to be able to provide the necessary services. Anyway, we are nurses and we have to be ready for everything. I tried to think less about trivial matters.* (P. 3) *As a nurse, I tried to pay more attention and sympathize with burned patients due to their physical and psychological conditions.* (P. 4)

Considering professional principles. The students participating in the present study felt the need for theoretical and practical learning about burns. This is perhaps because of the applied nature of burn teaching in their daily life and also their professional performance. Despite the tough nature of the internship in the burn unit, the participants found the internship course essential in improving their skills and adding to their knowledge. It was also good for meeting the expectations of others by whom they wish to be seen as qualified to provide health services: *For a nurse, being experienced in all units is necessary, and [the] burn unit is not an exception; then we go to work… the community expects us to have the related information about the healthcare services we provide for burned patents.* (P. 8) *I think it's good, it was a useful internship. I really learnt a lot in the burn unit; [the lessons] were all applicable.* (P. 2) Also, due to the professional responsibility that students felt for these patients and also considering their special condition, students tried to overcome their negative feelings to provide care services. *When I think about the main goal of nursing, I can overcome my fears and do my best to take care of the patients.* (P. 3). *It is not right that because of unpleasant appearance of burned patients, we neglect our care duties for them*. (P. 4)

Getting involved in taking care of patients under the instructor's supervision. The students felt the necessity of performing caring tasks during the internship course and felt their professional responsibilities to the patients. The students took

care of burned patients under their instructor's supervision and support, regardless of their internal feelings about the process. The instructor's peace, dominance, and involvement in providing care service tasks made the students see her as an idol. This helped them to adjust and become more involved in their jobs. *Our instructor is really good…very much. She faces them very indifferently so as to encourage us to act like her in a way that leads us all to peacefulness. She simply gets into action and moves us into the task. When we are working with her, she's a great source of motivation*. (P. 2)

Metamorphosis in attitude

Before starting the burn unit internship, there was a negative view about taking care of burned patients among students, but as the time passed, and in accordance with the increase in their care experiences, a change occurred in their feelings and attitudes. Being in a care-giving situation gradually changed the participants' attitudes and led to a change in their feelings, and a decrease in the fear and hatred they had towards taking care of burned patients. Time also helped to normalize the job for them. This main theme included three subthemes: *Fearfulness and negative attitudes before becoming involving in the care, gradual change of attitude*, and *normalization*.

Fearfulness and negative attitudes before becoming involving in the care. There is a negative mentality about taking care of burned patients in many students before they begin their internship in the burn unit. One important factor for this fear is the nature of burn injuries; another can be the senior students' stressful experiences in the burn unit. Because of this negative attitude, many of the participants were very fearful about taking care of burned patients. Before the beginning of clinical burn course, I was very scared. I thought it would be too stressful to see burned patients and take care of them. (P. 3) Other guys who came for [the] internship said that it's tough. (P. 1) Well… burned patients have [a] horrible appearance, we have this fear unconsciously. (P. 5)

Gradual change of attitude. After students were settled into giving care services that accounted for the burned patients' situations and once they had experienced this kind of caring, they experienced both an increase in their knowledge and skills in this regard and a gradual decrease in their fear; therefore, their attitude improved comprehensively. As I took care of various burned patients, my attitude about burn care changed. (Male, aged 22) Then, I felt it got easier and it wasn't that much hard, maybe because I was in that setting. (P. 2) when I got involved in caring of patients in this clinical course, over time, my views about the course and burn nursing changed dramatically. (P. 1)

Normalization. After spending a certain amount of time in giving care services in the burn unit, the students' fear and stress diminished, their attitudes changed, their knowledge and skills improved, and because of their persistence in practising the job, the students gained a level of normalization with respect to their feelings about giving care services to burned patients. It gets normal, I mean when you see them, you feel a little less emotional, but you still have that bad feeling…but that's no problem, because it gets normal. Anyway, when you see a burned patient several times, you get used to it. (P. 6)

The more, time passed from the burn care, the less I got stressful than before. (P. 8)

Discussion

Owing to the particular condition of burned patients, taking care of them is considered a unique and different experience for nursing students. Although it is clear that this kind of experience can be effective in promoting learning and designing the educational curriculum for students, it is also necessary to study their experiences in this regard closely. In studying the experiences of nursing students in burn care units, the findings are presented in the form of three main themes and 9 subthemes: *the attractive but stressful experience*

(Including the subthemes of the stress feeling, and the tendency to learn new and specialized skills), *trying to adjust* (Including the subthemes of positivity, empathizing with patients, considering professional principles, and getting involved in taking care of patients under the instructor's supervision) and *metamorphosis in attitude* (Including the subthemes of fearfulness and negative attitudes before becoming involving in the care, gradual change of attitude, and normalization). Taking care of burned patients led to metamorphosis and adaptation to the requirements of burn care due to the students' improved attitudes, awareness and potentials. This finally turned the stressful nature of taking care of a burned patient into an attractive experience for them.

One of the main themes identified according to the participants' descriptions of burn care was that it was *the attractive but stressful experience*. The participants of the current study experienced stress feelings in taking care of burned patients; this feeling was affected by individual and environmental factors, and also by the tough nature of burn care. Nevertheless, they were aware of the significance of learning this kind of caring. On the other hand, not having any similar experience worked as an important motivating factor that made taking care of burned patients attractive to them, even as it was a stressful job. Both the act of taking care of patients with severe burn injuries and the experience of the burn unit conditions themselves are considered seriously stressful and emotional factors. Bayuo[2] believes that nursing in the burn unit is a serious challenge because of the physical and emotional demands imposed on nurses by patients. Nursing students, as well, face various emotional and cognitive challenges as soon as they enter the burn units. They even have negative presuppositions before entering the unit, because of the experiences that their peers have talked about which can have a negative impact on the learning of related topics.[11] Nonetheless, the participants of the present study described this unpleasant experience as being attractive. Bayuo,[2] in their study, described this experience as one filled with distress and unpleasant feelings. Likewise, according to the results of another study, taking care of burned patients, because of the participants' need and their demands in both individual and professional dimensions, was mentioned as an attractive, particular field.[12] It seems that encountering new cases as well as comprehending the necessity of learning how to take care of burned patients during the burn unit internship with the purpose of meeting professional expectations made this internship course attractive despite the stress feelings and challenges of taking care of these patients. In the participants' views, individual traits and emotions were the influencing factors in this experience. However, in order to increase the tendency of students to take care of burned patients and improve their learning, there is a need to reduce students' stress by removing their concerns and also preparing them for pre-internship. In the study by Kornhaber,[13] it was shown that emotional strength and feeling detachment are basic elements in facilitating the process of accepting the patient's condition and following the procedures of giving care services to burned patients.

Another theme extracted from the student interviews with respect to burn patient care was *trying to adjust*. The experiences of this study's participants revealed their effort to utilize different adaptive strategies to reach an adjustment level in taking care of burned patients. Clinical settings, like burn units, are stressful work settings.[4] The Stress during this course can lead to several negative outcomes, such as poor academic performance,[3] increased burnout levels,[14] and reduced personal well-being.[15,16] All these factors are crucial to the achievement of the goal of training, which is to prepare competent nurses.[17] Because nursing students are not able to stay away these stressors in clinical setting, it is essential for students to cope with them.[18] With regard to the significance of learning burn care, and considering their professional commitments on one hand, and also empathizing with patients and comprehending their needs on the other hand, students tried to take care of these patients under their instructor's supervision, thus coming to a positive attitude about the care they provided. This has been

pointed out in other studies as well.[12,19] Consistent with the findings of the present study, and according to other research, nurses working in burn units benefit from different strategies for mitigating their stress and dealing with the challenges they encounter in taking care of burned patients, namely maintaining a positive attitude and getting involved in the care process,[20, 21] being a pragmatic and committed nurse in the burn unit,[13] putting himself/herself in the place of patient and their family, showing empathy and compassion,[13,21] and supporting the leadership.[22,23] It seems that adaptation to the stress management challenges of burned patients is a prerequisite for the basic learning of burn care and participation in the care process of these patients. In this regard, step-by-step support of students prior to and during different phases of the internship, in addition to exploiting various adjustment sources like personnel cooperation, creating a supportive environment and counselling, can have a significant role in helping the students to pass these adaptive phases and reach the desired compatibility.

The third extracted theme from the findings of this study was *metamorphosis in attitude*. Before they started their internship and burn care course, students had a kind of fear about providing care services in the burn unit because of what they had heard from other students; yet, by getting involved in care services in the burn unit, their attitude changed considerably and they came to a sense of normalization. In the study conducted by Kornhaber,[13] all the participants experienced apprehension in taking care of burned patients. Apparently, some part of the students' first apprehension was due to their partial knowledge of burn care and of what they would be expected to do in the burn units. Therefore, after experiencing real care situations and gaining experience and skill in taking care of burned patients under their instructor's supervision, and once they could visualize a realistic picture of the conditions in the burn unit, their attitudes improved and their fears faded away. It is probable that the students' experiences and reflections increased over the course of spending time in burn units and, in practice, their attitudes also improved. The emotional reactions they showed in this field decreased noticeably. It seems that taking short-term measures in order to familiarize students with different aspects of burn care and eliminating ambiguity concerning intern duties before starting the internship course can comprehensively reduce the levels of apprehension and stress, and ultimately lead to sufficient preparation to ensure a positive experience learning burn care for students.

Finally, it should be mentioned that nursing students, despite their preliminary noticeable fears in providing care services for burned patients, knowing that by necessity they will encounter novel care situations and desiring to attain new knowledge in this discipline, try to adjust to the circumstances of the burn unit, which ultimately results in a metamorphosis as their knowledge increases and their attitudes change. They attempt to make this adjustment notwithstanding the fact that it is a stressful experience; Nursing students are trying to care for burned patients under training and supervision of their clinical instructors. They take whatever pleasure there is to be had in the process of learning new requirements. Endeavouring to create a supportive environment before and during the internship course and encouraging positive attitudes in students while meeting their individual needs can be effective in decreasing the students' stress feelings and improving their learning.

The strength of this study is the presentation of a comprehensive drawing of nursing students' experiences in a stressful clinical setting of burn using a phenomenological qualitative method. This can lead to providing strategies to improve this experience and learning of the students' and patients' care in the burn units. Choosing participants from a teaching centre was one of the limitations of this study, a practice which led to less variety in the sample. Data gathering for this study was also performed through interviewing every participant individually, while using other data gathering methods, like observation, could lead to richer re-

sults for the qualitative research aspect. Conducting qualitative research on the students in other universities and burn centres as well as utilizing other methods for doing qualitative research could increase the credibility of the findings and help make them generalizable.

Conclusion

The findings of this phenomenological study showed that the real experiences of nursing students in taking care of burned patients were unique because of the traumatic nature of burn injuries in terms of both physical and emotional aspects. Based on this study, students, despite their preliminary apprehensions, tried to adapt to the stresses and challenges of providing burn care. In the course of the training path, improving their attitudes and increasing their knowledge and professional abilities resulted in a metamorphosis and an adjustment to the process of taking care of burned patients. Consequently, in spite of the stressful nature of the burn unit experience, it became more attractive for students. Educational and nursing officials and curriculum designers need to investigate the findings of this study and create a suitable educational setting with the purpose of helping the students benefit from this internship course, students' better learning in this internship course, improving the students' caring experiences and increasing the quality of care services provided for burned patients. In addition, in this regard, they must support the students emotionally, psychologically, and educationally before and during their internship course.

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Burden and Gender inequalities around Informal Care

Giuliana F. Cascella Carbó[1]
Rosa García-Orellán[2]

Review

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Burden and Gender inequalities around Informal Care

Abstract

This work comes from the interest and need to understand the problems arising from the activity of caring for dependent people, in the world and particularly in the European region. Altogether, it seeks to understand the consequences of informal care on the caregiver adding to the debate a gender perspective. Through a multidisciplinary bibliographic review, the current care crisis becomes clear. The demographic and socio-cultural changes in recent years are causing dependency to increase dramatically, while putting at risk the availability of informal caregivers. Several studies have shown that women are the ones on whom the burden of care mainly falls. Therefore, under the gender perspective, it becomes clear that the consequences of caregiver burden increase gender inequalities worldwide. The study analyzes the current situation and underlines the need to promote alternatives and opportunities so that care is shared and does not fall only on the female gender. Solutions need to

1 Nurse, Servicio Navarro de Salud, Pamplona, Spain. MSc. Email: giuliana.cascella@gmail.com

2 Nurse. Anthropologist. PhD. Professor, Universidad Pública de Navarra, Pamplona, Spain. Email: rosa.garcia@unavarra.es

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be included in public and community health interventions and policies, and to this respect, nurses play an important role in changing the care paradigm.

Descriptors: patient care, caregivers, gender and health, gender inequalities, gender perspective.

Sobrecarga y desigualdades de género en el cuidado informal

Resumen

Este trabajo nace del interés y la necesidad de entender la problemática del cuidado informal en el mundo y en particular en Europa. Además, busca entender las consecuencias del cuidado informal sobre la persona cuidadora desde una perspectiva de género. A partir de una amplia revisión bibliográfica multidisciplinar, se pone de manifiesto la actual crisis de los cuidados. Los cambios demográficos y socio-culturales de los últimos años hacen que aumente cada vez más la dependencia. Esto conlleva una mayor necesidad de cuidado. Es evidente que la mayoría de cuidadores son mujeres y además que las consecuencias del cuidado aumentan las desigualdades de género en nuestra sociedad. Este trabajo destaca la necesidad de promover alternativas y nuevas oportunidades para que el cuidado se comparta y no recaiga sólo sobre una persona, principalmente en la mujer. Las respuestas a estas necesidades deben incluirse en las políticas e intervenciones en el ámbito sanitario y en este contexto las enfermeras juegan un rol crucial para promover estos cambios.

Descriptores: atención al paciente, cuidadores, género y salud, inequidad de género, perspectiva de género.

Sobrecarga e desigualdades de gênero nos cuidados informais

Resumo

Este trabalho decorre do interesse e da necessidade de entender o problema dos cuidados informais globalmente e, em particular, na Europa. Além disso, busca entender as consequências do cuidado informal sobre o cuidador na perspectiva de gênero. Através de uma extensa revisão bibliográfica multidisciplinar, a atual crise de atendimento é revelada. As mudanças demográficas e socioculturais dos últimos anos aumentam a dependência cada vez mais. Isso leva a uma maior necessidade de cuidados. Vimos que a maioria dos cuidadores são mulheres e também que as consequências do cuidado aumentam as desigualdades de gênero em nossa sociedade. Este trabalho destaca a necessidade de promover alternativas e novas oportunidades de compartilhamento de cuidados e não apenas de uma pessoa. As respostas a essas necessidades devem ser incluídas nas políticas e intervenções em saúde e, nesse contexto, os enfermeiros desempenham um papel crucial na promoção dessas mudanças.

Descritores: assistência ao paciente, cuidadores, gênero e saúde, iniquidade de gênero, perspectiva de gênero.

Introduction

One of the biggest challenges for modern societies is the aging population, which together with the rise in life expectancy and the increase of chronic diseases, leads to a considerable growth of dependency worldwide.[1] Human beings are born without the capacity to survive in the absence of the care of another person and this characterizes the intrinsic fragility of all.[2] Care is necessary especially during vulnerable periods of life, like childhood, illness, disability and senility.[3,4] The act of care has mitigated this fragility through human history and it has traditionally been covered within the family setting by women.[5] However, socio-political changes such as the transformations in the family structure[6,7] and the increased participation of women in the public sphere including the labor market,[8] have disturbed the capacity of families to provide the care needed by its elder or disable members.

We are therefore witnessing a growing "care crisis",[9,10] where it becomes urgent to face the challenges that arise when talking about the needs of the disable and elder. It is in this context of "care crisis" where the debate on informal care gains importance[11] and it becomes urgent to include a gender perspective to analyze the situation.[12] Aging population, illness, disability, and dependency are increasing globally and 80-90% of care needed is provided domestically by informal careers.[11,12] Thus, health systems depend upon informal care[5] as they cannot fully cover the care services needed. However, the capacity of informal caregivers to provide for such care is being undermined.

Along with social transformations, the consequences of informal care on the caregiver itself are also to be considered. Several studies indicate that informal care is delivered in most cases by a single person.[13–15] This circumstance makes the burden of caring so high that informal careers can suffer extreme physical and psychological consequences resulting from the lack of support in the caring duties, affecting negatively on their health and quality of life.[16,17] All these factors contribute to destabilizing the family solidarity upon which the current care system is based[18,19] and undermine the availability of informal care for present and future generations.

Nowadays it is widely recognized that the figure of the informal caregiver is crucial for the wellbeing of people with dependency. Along with this awareness, the literature on informal care has grown significantly in the last four decades.[20] However, the mainstream approach has considered the caregiver instrumentally, as a tool to obtain the main goal, improving the health of the dependent person.[21] Only more recently, new approaches have started to focus on the caregiver not only as a provider but also as a client of care[21] and to consider the family as a whole, instead of focusing only on the caregiver.[22] Also, attention has been given to the economic and time costs of informal care to raise awareness on how these factors impact health systems.[23–25] Fi-

nally, gender inequality in informal care is emerging as a novel subject of investigation.[8] This article underlines the importance of the gender perspective in studies regarding informal care and supports the notion that considering gender inequalities is necessary to fully understand the care crisis and design policies and interventions aimed at promoting the sustainability of informal care.

In the traditional care model, women take the biggest share of unpaid care work, being women around 80% of informal caregivers worldwide,[14] with similar numbers in Europe.[9,12,15,26] The unequal distribution of care and domestic responsibilities between women and men reinforce the persistent gender inequalities in the family and working spheres.[9] It is important to consider the issue of informal care from a gender perspective, to identify sustainable and accurate responses.[8,27]

The care crisis is a problem of Public Health and a relevant challenge for the XXI century nursing.[8,28] As WHO states in its World Report on Ageing and Health,[11] the challenge of the demographic transition to older populations is not taken seriously and "care and support for caregivers…is not a priority focus of government action on aging".[11, p18] Therefore, professional and skilled caregivers, the nurses, have to quickly adapt to the social transformations to be able to provide appropriate answers to the problem. Care and support for informal caregivers and their families have to be the prior objective of both, governmental action and the nursing profession. For community nursing this challenge could be an opportunity to get stronger, improve its competencies and focus on the needs of patients, families and the community, to ultimately support other agents of care as informal caregivers.[29]

This work aims to comprehensively review the literature on informal care, caregiver burden and its relationship with gender inequalities in the fields of nursing, health, cultural and gender studies. It aims to highlight the importance of including a gender perspective in the debate about informal care to fully understand the situation and be able to give appropriate responses.

Methods

Bibliographic review on informal care, starting from the global and focusing on the regional reality of Europe and Spain. Databases: Web of Science, PubMed, Cuiden, and Dialnet. The searches used the following searching criteria: 1) Keywords: "informal care", "caregiving burden", "dependency", "family caregiver", and in Spanish "cuidado informal", "cuidadores informales", "dependencia", "mujeres", "genero", "sobrecarga del cuidador" "síndrome del cuidador". 2) Publication date range: 2000-2019, however, some fonts older than 2000 were included for their relevance. 3) Languages: Spanish, English.

To follow a multidisciplinary perspective, articles from various disciplines were analyzed and included: health science, especially gerontology and nursing, sociology, anthropology, gender studies, cultural geography, cultural studies.

Articles excluded: studies about informal care in specific pathologies, studies analyzing the situation of informal care outside the geographical areas of interest. Qualitative studies were revised to understand the social and cultural aspects of informal care and to include the gender perspective. Quantitative research studies were also included to understand the characteristics of informal caregivers and the impact on their health.

Epidemiological and statistical data were consulted to understand the local situation of dependency, aging, and informal caregivers.

Results

Gender and Care

"To care is currently a very important verb, and contemporary societies […] assign it as a natural condition to the female gender; in this way, it is the women who take care of other's vital needs:

children, family, ill people, grandparents, grandchildren."[30, p 119] But is care intrinsically feminine? Why informal caregivers are mainly women? Is it cultural? Caring seems to be a predominantly women's activity and its study seems to require an analysis rooted in the gender order.[4] But is caring something feminine by nature? The social organization of care activities and the place they occupy in today's society are the product of a long historical process that began to take shape during the transition to liberal capitalism.[31, 32]

In western societies, impregnated with Christian values, women have traditionally dedicated themselves to the family and the reproductive sphere, while men have had a greater participation in the productive and public sphere. The responsibility of care in general, dependency, childhood, old age, home care, etc., has been restricted to the private or domestic space, the reproductive sphere assigned to women.[30,32] In recent years, a gender perspective has been introduced in the study of care. Including this perspective, care ceases to be attributed to the universe of the feminine, in an "essentialist or naturalistic way",[44, p45] becoming the "social and historical conditions of such naturalization" (*Ibid*). In this context, Carol Gilligan's work is fundamentally important, since in her *Ethics of Care,*[34] she insists that the fact that care is "feminine" is part of a social construction and learning throughout our lives, since childhood, of a specific ethic. In addition to social and historical construction, there is also an emotional component of care related to the fact that the act of caring is often satisfactory. It is not yet clear if this emotional element is what makes women to care the most, generating debate in the fields of ethics and moral philosophy.[4]

Besides the philosophical debate, the literature in informal care tell us that today it is women who take the most responsibility in the care for dependency in the world.[26,35,36] Despite the sociocultural changes of the last 30 years that led to a greater participation of women in the labor market, and a slight increase in the participation of men in the domestic work, including childcare,[8] there are still major gender inequalities both in the field of reproductive work, in terms of care, home, children and dependents, and in the field of productive work.[37] The fact that care has been, and continues to be considered a matter of the feminine sphere, reinforces gender stereotypes about the roles of men and women in the society.[7]

Informal Care and the Care Crisis

Globally, the population is getting older,[11] and this phenomenon is no longer affecting only high-income countries, but it is also a reality in low- and middle-income ones.[38] As a result, the global population aged 60 years or older is increasing significantly. Predictions suggest that by 2050 the percentage of elders, aged over 60, will reach 30% of the population in Europe, North America, China, Chile, and other largely populated countries.[11] This global phenomenon is caused by the reduction of mortality around the world together with an increase in life expectancy and falling fertility rates.[11] Moreover, this increase in life expectancy often associates with more dependency throughout those added years,[39,40] as chronic diseases and multimorbidity grow.[11] Indeed, conditions such as heart disease, dementia, chronic respiratory disorder, stroke, diabetes, and some musculoskeletal conditions are the major causes of disability for people aged over 60 and are all increasing globally.[38] It is estimated that worldwide there are 349 million people care-dependent, defined as the condition when individuals are no longer able to undertake basic daily living tasks alone.[38] As the number of care-dependent people grows, the need for informal care providers also increases.

Informal care is defined as the type of unpaid care of people with different grades of dependency, normally, but not always, provided by family members.[1,7,11,29] This kind of care accounts for 80-90% of dependency care [12,29] and it is usually done at home. The availability of informal caregivers is at risk worldwide and the care crisis takes its characteristics in each region and even in each country. In the European region, the situ-

ation of informal care has both advantages and disadvantages compared to other regions of the world.[13] On one side we find that the majority of the countries in the region are considered as "high or middle-high income", following the WHO classification.[11,38] This translates to better coverage of health systems, a bigger range of public services allocated to help dependency and in general a greater development of the Welfare State.[5] On the downside, we have the demographic trends and socio-cultural changes occurring in the family structures.[15,41] The aging of the population and the growing demand for health and social services for dependent people put at risk the sustainability of the European Welfare State since the state is usually the main provider of such services.[15] Health spending grows faster than the Gross Domestic Product (GDP),[13] another reason to recognize, support and strengthen informal care as a fundamental part in the present and future of the care needs of the European population (*Ibid*.).

Europe has today the eldest population of the world, and it is estimated that by 2050 more than 30% of its population will be over 60 years old.[11] This alone is a big challenge for European societies. Besides, social and demographic changes have modified the family structures. While in rural areas the traditional family survives, in which many generations live together and family members take care of each other, in the urban areas, where most of the European population lives, the situation is very different.[13] In the cities, family units are getting smaller, family members disaggregate and spaces are limited for the cohabitation of several generations. Besides, we are witnessing a 'verticalization' of the family, i.e. the increasing life expectancy allows more generations to coexist longer increasing vertical family relationships (children-parents-grandparents).[18] All the reasons mentioned suggest that the elder of tomorrow will need more care and that families will be unable to provide it.[13] Though not everything is negative, the verticalization of the family also brings new opportunities for exchange and intergenerational solidarity.[18]

Social changes make it more difficult for old and dependent people to stay in their homes due to the lack of family support. However, it has been shown that home and community are the ideal places for the life and care of the elder and significantly improve their health and quality of life.[1,42] Not only is home and community-based care preferable over institutionalized care because of its benefits for health and quality of life,[11,42] but it is also preferred by the older people and their families.[12,14] Today the proportion of informal and formal care varies from country to country, influenced not only by social policies and the state's degree of responsibility for long-term care of dependency, but also by family structures, levels of intergenerational assistance, and cultural norms about care.[13] The proportion of informal caregivers in the different European states is between 20% and 44% of the entire population.[15] For intensive caregivers, defined as those persons that dedicate more than 11 hours per week to informal care, the percentage varies between 4% and 11%.[13,15]

In general, in the countries of northern Europe, formal home care has developed considerably in recent years, this for several reasons. For instance, in such countries, socio-cultural changes have been faster, higher income levels and greater economic capacity are present both in health systems and in the population, altogether allowing for a greater share of formal and informal paid care.[15] Therefore, formal care covers a large part of home and community assistance, although informal care of family and friends continues to cover most of the psychological and emotional needs of dependent people.[13] Conversely, in countries in southern and eastern Europe, informal care covers the largest proportion of assistance, both physical and psycho-affective.[13]

Contrary to what one might think, the proportion of informal caregivers in northern Europe is higher than in countries of southern and eastern Europe.[15] In these countries, compared to northern Europe, the proportion of intensive caregivers is higher.[15,41] This means that more people

dedicate more than 11 hours per week to informal care duties and suggests that in those countries where the State does not support assistance and leaves the care responsibility to the families, there are fewer people willing to do it and those that end up doing it, do it with a greater intensity.[15] This is a key point when talking about "caregiver burden" and gender inequalities.

Women between 45 and 60 years old are the main informal care providers in all European countries.[12] If we consider intensive caregivers, there are also women the majority, with a higher percentage in southern countries.[30] Moreover, in the European region, the social changes previously mentioned, are further accentuated. For instance, women's participation in the labor market has risen considerably.[15,30] In countries where strong policies to encourage the participation of women in the labor market are in act, the implications for the availability and provision of informal care are enormous.[13]

The Impact of Caregiving with a Gender Perspective

The literature on caregiver burden is extensive. It has been decades since the problem has been identified. It is well known that caregivers suffer a physical, psychological and emotional burden. They are not only responsible for medication, hygiene, and food administration, but provide also emotional support and, on many occasions, are responsible for taking important decisions for the person cared for.[43] Caring for dependents means an important dedication of energy and time. According to some studies, 95% of caregivers of people 65 and older refer to dedicate 6 to 7 days a week to care activities, and 38.9% refer to dedicate at least 16 hours a day to care.[29] Besides, considering that the degree of disability usually increases over time, the time needed to care growths accordingly, leading to a gradual loss of independence of the caregiver, which ends up paralyzing or postponing their life project.[43] The negative impact on the quality of life of the caregiver is enormous and it affects various spheres, such as health, relationships, self-care, and economy.

Knowing that the majority of caregivers are women,[44] it can be affirmed that they are those who suffer most of the consequences and the burden of informal care.[8,45] It is interestingly to note that not only women caregivers are more, but they also suffer the burden differently than men. In fact, by comparing women and men caregivers, it has been reported that women are those that suffer the worst consequences of the care burden[46] in all the spheres: health, economic and personal relations, including self-care and family. This, also in part due to existing gaps between the two genders.[28]

In terms of health, the impact of care overload on one's physical and mental health is enormous: in a study conducted in 2008 in Spain, 32.7% of caregivers reported fatigue, 27.5% reported that their health had deteriorated and 18.1% felt depressed.[18] Among the most common physical complaints are fatigue, musculoskeletal pain, stress, insomnia and headaches (*Ibid.*).

It is known that women's health differs from that of men.[45] While life expectancy is higher in women, health surveys have identified more chronic problems and worst perceived health for them.[45,47] Regarding caregivers, it has been observed that women are more affected by the burden of care than men.[26] In several surveys, women declared more fatigue and physical conditions, as well as depression; also, many of them reported having to take medications to handle the overload situation.[18] This is in part because tasks performed by women are often different from those performed by men caregivers. For instance, male children caregivers usually dedicate more to tasks such as making arrangements, while caring daughters are more concerned about hygiene and daily living activities.[48]

Dependent care not only affects physical health but also the psycho-affective sphere. Data vary

according to reports, for example, around 50% of caregivers refer that caring has caused them mood swings, even altering their personality, 77% of whom consider these changes as "considerable alterations".[43] Among the symptoms referred to as psycho-affective alterations, there are frustration and helplessness (73%), anxiety (61.5%), depression or sadness (57.5%), loneliness (35%), guilt (30.5%) and irritability or anger (60%).[43] Here also women seem to be more affected than men; commitment and emotional involvement are usually greater in women caregivers,[18] which leads to greater health problems in the psycho-affective sphere.

Another area in which the caregiver is severely affected is the sphere of family life, self-care, and leisure time. Regarding family, the burden of informal care negatively affects social relationships and creates family tensions. It breaks family solidarity, which could be ultimately lost. It has also been reported that many caregivers devote more time to the care of the dependent person than to the care of their children, while in terms of self-care and leisure time, according to a survey on informal care in Spain, 61% of caregivers report having had to reduce their leisure time, 27% do not have time to take care of themselves and 17% do not have time to take care of other people.[18] The negative consequences of caring are worsened by gender differences in the sphere of personal life. In general, women practice less physical exercise, sleep fewer hours and enjoy less leisure time than men, commonly because of the care responsibilities they usually have in the family environment.[49] If we add to these differences the care of a dependent relative, the gap accentuates even more. Besides, it has been observed that women and male caregivers receive different support from the family, with, once again, women receiving less family support, while male caregivers receive more collaboration.[35]

In addition to the consequences on health, time and family relationships, in the area of professional and paid work-life, known as the *productive sphere,*[37] there are also important effects. Among the economic consequences are: not being able to work outside the home, having had to leave work or to reduce working hours, having problems at work due to difficulties in meeting schedules or not being able to go to work in emergencies.[18] Moreover, it has been estimated that people who are dedicated to care have fewer opportunities to find work, a higher risk of leaving their studies, more chances of having to reduce their working hours or having to ask for unpaid leave to care, are ultimately are more likely to stop working and to retire earlier.[24]

All this is often not taken into account in studies about the caregiver's burden, although the economic aspect is of fundamental importance since it accentuates health, socioeconomic and gender inequalities.[50] In the case of women, being an informal caregiver sums up to existing gender inequalities in wages and opportunities.[8] It is clear then that women caregivers are more affected than men in their professional careers, in their income and, as a consequence, also in their tax and retirement rights.[7,18,51] Although the employment rate among women has increased progressively in recent years, it is still more frequent for women to reduce their workday or leave their work to devote themselves to care for dependent family members,[18] as with childhood care. For example, in 2011 in Spain, 93% of the total leave permits for informal care of children and dependent relatives were requested by women.[52] The increased participation of women in the labor market has not been accompanied by an equitable distribution of reproductive work and domestic labor. More frequently women are therefore affected by the "double day" consequences, where they cover the responsibilities of their paid work keeping the responsibilities of the domestic chores.[33] If we add to this, the care of a family member, the burden becomes an unsustainable "triple burden".

Having said that, it can be argued that the unequal distribution and burden of informal care between genders is based on, and at the same time

increases gender inequalities in health and ultimately in society. There are several important reasons to address gender inequalities in health. For instance, gender inequalities together with socioeconomic status are the major causes of inequalities in health, including those related to the availability and use of health resources and services.[53] More interestingly, evidence suggests that by incorporating a gender perspective in health policies, plans and programs, health inequalities can be reduced and the effectiveness and efficiency of health services improved.[54]

Some studies have identified gender biases in health care that usually impair women in areas such as diagnostic, therapeutic effort and health research.[55–57] It has also been observed that in Primary Care, women are asked less about their lifestyle than men, which limits the equal benefit of the scope of health prevention and promotion activities that are carried out daily in health centers.[47] Studies have shown that the perceptions of health professionals towards care have a big impact on how they take care of the caregiver. Sometimes those precocious and attitudes result in interventions that are potentially negative for gender equity; an example is the conservative attitude that gives the family the main responsibility for caring and some sexist stereotypes that give women more abilities to do it.[58] Interventions to address dependency related problems, such as the caregiving burden, should take into account gender inequalities.[48] Several studies emphasize that it is necessary to develop interventions and strategies that do not reinforce gender roles in informal care, but rather encourage better and greater distribution of care tasks among more people, men and women.[35] Among those interventions, it becomes necessary to train health professionals on gender equity, as a tool to reduce gender gaps in informal care to improve the quality of life of informal caregivers and people cared to.[58] Unfortunately, addressing gender inequalities in health in plans, programs, and interventions, has not been so common[5,29,37] and more research is needed on the subject.

Thus, to address the care crisis, collectivization of care is necessary through collaboration between state institutions, the market, civil society, and families, to build complementary and beneficial relationships for all parties.[59] Finally, it is worth mentioning that the role of men in care is also changing. In Latin America and in other regions where migratory trends have changed family structures, women have had to migrate in search of paid work, so men have had to take care of children and dependent family members, changing traditional roles of women in care.[60] Several studies show how this has affected men, who, when women in the family are not present or available, assume the role of informal caregivers, breaking gender stereotypes and also changing their perception of themselves.[26,61,62] From this new trend, new masculinities emerge[32] which reminds us that family roles and gender identities are not immutable or universal but change and adapt to new needs.[60]

Discussion

After reviewing the bibliography on the issue of informal care, we have come to know the status of the issue of informal care both globally and in the European region. Likewise, we have seen that the care crisis[33] is a growing problem worldwide and that this can cause the pillars of the welfare system to collapse if this crisis is not properly addressed.[63] All of the foregoing underlines and supports the hypothesis that, in today's society, vulnerability and dependency can no longer be considered as exceptional situations in people's lives, but rather are intimate characteristic of the human condition inherent in the existence of anyone.[4] That is why informal care is a central issue for the health of the population and as the aforementioned socio-demographic changes are taking place, it is becoming increasingly urgent to address this problem in health and social welfare public policies.[5]

We face two different but intimately related issues: informal care and gender inequalities in health. The evidence shows that one of the keys to dealing with the aging of societies and dependency care is the creation of primary care programs that include community services and support for families and caregivers.[38] But this cannot be possible if a gender perspective is not taken into account, since, as we have detected in the revised bibliography, the burden of care falls mostly on women and this triggers gender inequalities in health to grow. Gender inequalities in health add up to other gender inequalities present in our society.

If we consider that the way care is delivered is a social and historical construction,[34] and the current care model is in crisis, deconstruct the existing patterns of care is necessary to reconstruct a new model in which care is no longer delivered by a single person, a women, but it is shared by all family members with the support of institutions and the civil society. A better distribution of care responsibilities between women and men becomes every day more urgent and necessary.[9] Nurses, especially community nurses, are the health professionals that are closer to informal caregivers and include them in community intervention programs, individual assessment as well as prevention and health education. The scientific literature in the nursing field on informal care has focused on health problems affecting the caregivers and interventions centered on promoting self-care to avoid caregiver overload.[29] As the literature revised suggest, this is no longer sufficient to address the current care crisis. The practice of nursing care could contribute enormously to the sustainability of the care system.[64] In other to achieve this, a gender perspective should be included in both, theoretical analysis and professional practice. Including a gender perspective in nursing professional practice could help eradicate gender inequalities in health,[28] and the ambit of informal care is a great opportunity to make this.

The conclusion of this review is that the care crisis is a global problem that is reflected in the local realities. The system of informal care based on the almost exclusive participation of women, with all the negative consequences that this entails, is unsustainable. Including a gender perspective in the development of intervention plans to help caregivers improve their quality of life is desirable and necessary. Breaking with the socially designated roles of women in care can be the change that allows a different balance in the work of caring, which could improve the quality of life of dependent people, caregivers and their families throughout society.

Primary Care, and in particular community nursing, from its privileged position of closeness to people and the community, can be the engine of the change of the traditional model of care, for this, it is necessary to include the gender perspective in nurse practice and especially in analysis and interventions aimed at caregiver care. To address the crisis of care, collectivization of care is necessary through collaboration between state institutions, the market, civil society, and families.

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