

KNOWLEDGE THAT PROSTHETIC AND ORTHOTIC HEALTH TECHNICIANS HAVE ABOUT THE SEXUALITY OF WOMEN WHO HAVE UNDERGONE A MASTECTOMY

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ABSTRACT

BREAST CANCER HAS THE SECOND HIGHEST INCIDENCE RATE AMONG THE CUBAN FEMALE POPULATION. ITS MORBIDITY RATE HAS GROWN FASTER THAN ITS MORTALITY RATE, INDICATING A HIGHER SURVIVAL RATE IN PATIENTS SUFFERING FROM THIS DISEASE, MANY OF WHOM SHOW A POSITIVE EVOLUTION, HENCE THE NEED TO PAY SPECIAL ATTENTION TO IMPROVING THEIR QUALITY OF LIFE, PARTICULARLY ON ISSUES RELATED TO THEIR SEXUALITY. METHODOLOGY: A FACT-FINDING AND DESCRIPTIVE RESEARCH WAS CONDUCTED IN 2011 IN HAVANA WITH THE PURPOSE OF DETERMINING THE LEVEL OF KNOWLEDGE AND LEARNING NEEDS OF THE PROSTHETIC AND ORTHOTIC HEALTH TECHNICIANS REGARDING SPECIFIC TOPICS RELATED TO THE SEXUALITY OF WOMEN WHO HAVE UNDERGONE A MASTECTOMY. A QUESTIONNAIRE DRAWN TO THIS END AND VALIDATED BY SPECIALISTS AND EXPERTS OF BOTH THE NATIONAL CENTER OF ORTHOPEDIC TECHNOLOGY AND THE NATIONAL SEX EDUCATION CENTER WAS APPLIED. THE SAMPLE WAS MADE UP BY 50 SUCH TECHNICIANS, OUT OF WHICH 6 WERE PROFESSORS AND 44 WERE WORKING IN ORTHOPEDIC LABORATORIES IN HAVANA. FINDINGS: MOST OF THE PROFESSIONALS SHOWED A LOW GENERAL KNOWLEDGE INDEX ON THE TOPIC STUDIED IN ALL FIELDS OF KNOWLEDGE, ACCOUNTING FOR

81%. THE CONSCIOUS LACK OF KNOWLEDGE INDEX (CLKI) SHOWED SIMILAR RESULTS, ACCOUNTING FOR 40%. CONCLUSIONS: THE PROSTHETIC AND ORTHOTIC TECHNICIANS ANALYZED ARE RELATIVELY AWARE OF THEIR LACK OF KNOWLEDGE ON THE TOPIC, WITH AN AVERAGE IDC LOCATED IN MEAN VALUES. ONE FOURTH OF THE CASES STUDIED, HOWEVER, ARE NOT AWARE OF THIS LACK OF KNOWLEDGE.

KEY WORDS: GENDER, GENDER IDENTITY, KNOWLEDGE, SEXUALITY, WOMEN WHO HAVE UNDERGONE A MASTECTOMY

INTRODUCTION

Before the Revolution, training of health technicians in Cuba was done empirically in different educational levels. It wasn't till after the triumph of the Revolution that the planned and organized training of middle-level technicians began in 1989. That year, a major degree in health technology on an experimental basis at the Higher Institute of Medical Sciences in Havana started. It was a course for workers and initially it had six specialties. Due to shortage of human resources in the health sector, a crash course was designed in 2002 to train basic technicians in other specialties such as imaging, physical therapy and rehabilitation, transfusional medicine, and clinical lab, being these specialties the most urgently required for assisting the population. The students were graduated after a one-year course. Given its success, other specialties demanded their inclusion in this new modality and the course was expanded to a total of twenty-one specialties, including, for the first time, the specialty of prosthetics and orthotics (prosthesis, orthosis, and orthopedic bandages) (1).

It is essential for a prosthetic and orthotic health technician graduate to have knowledge of sexuality topics related to his/her profession, with a sound methodological, researchable, and psycho-pedagogical basis, taking into account that he/she will be assisting persons with physical and motor disabilities, and such care should be comprehensive, customized and tailored in accordance with the case and type of disability (2).

Among patients assisted in this specialty, it is common to find women who have had one of their mammary glands extirpated and feel themselves disabled, as if the surgery had also severed their sexuality (3).

Breast cancer has the second highest incidence and mortality rate in the Cuban female population after the trachea, bronchus, and lung cancer. Like in developed countries, its morbidity rate has grown faster than the mortality rate, indicating a higher survival rate in patients suffering from this disease, many of which have a positive evolution (4). Hence, special attention must be paid to improving their quality of life, particularly regarding sexuality-related problems. Certain cultural, social, physiological, and psychological aspects can change the evolution of the sexual function during and after the treatment.

Mastectomy and chemotherapy can produce several changes in these patients, despite the fact that in the last decades diagnostic and surgical techniques and therapies have been introduced, increasing the life expectancy of the patients. The incidence of these diseases has increased significantly and in many countries it has become a serious health problem and one of the main causes of disability and death (5).

In any case, timely intervention with an adequate sexual education, orientation, rehabilitation and treatment will minimize the impact of cancer on sexuality and improve the quality of life of these women (6).

METHODS

A fact-finding and descriptive research was conducted in 2011 in Havana with the purpose of determining the level of knowledge and learning needs of the prosthetic and orthotic health technicians regarding specific topics related to the sexuality of women who have undergone a mastectomy. The sample was made up by 50 subjects who volunteered for the study and with informed consent. During the first state, we verified the level of knowledge of specific topics related to sexuality in the abovementioned risk group, by applying a questionnaire designed and validated for such purpose and estimating the general knowledge index (GKI) and the conscious lack of knowledge index (CLKI) (7-11). Based on these general evaluations we were able to determine the degree of knowledge on five specific fields of knowledge (sexual identity and orientation, sexual dysfunction, self-image and self-esteem, sexual and reproductive health, affective support and sexuality in women who had undergone a mastectomy) in accordance with basic analysis focal points such as technical and professional experience, place of work, number of years after graduation, and teaching and occupational category. The results are expressed in absolute figures through percentages (12).

RESULTS

As shown in Table 1, distribution by age group was quite homogenous, except for those over 50 years old, where it significantly drops (8%). The 25-29 years old group showed a slight numeric superiority accounting for 22%. This highlights the fact that our prosthetic and orthotic technicians are classified in the young-adult and mature-adult categories, a positive sign for the development of the profession. The average age of the professionals studied was 38.44 years. Regarding distribution by sex, 54% were female and 46% were male.

TABLE 1. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, BY AGE GROUP AND SEX

Age Group	Male	Female	Total	Percentage
25-29	5	6	11	22
30-34	3	5	8	16
35-39	3	6	9	18
40-44	3	6	9	18
45-49	6	3	9	18
50+	3	1	4	8
Total	23	27	50	100

In this study, none of the prosthetic and orthotic technicians were included in the 90%-100% GKI classification, as shown in Table 2 at the end of this article. Most of them (41 subjects) attained a low GKI (i.e., 0 to 69%); 8% attained a GKI between 70% and 79%, and only 10% was included in the 80%-89% classification (i.e., a good GKI). This reveals the fact that 82% of prosthetic and orthotic technician graduates are not well trained on the topics evaluated, and this would hinder their possibilities for an effective intervention in any situation requiring their orientation in this regard. Findings identified a problem that calls for an urgent solution.

Irrespective of their years of experience, the prosthetic and orthotic technicians studied attained a low GKI, except for those over 25 years old. Fifty percent was

classified in that category and the other 50% in the 70% to 79% category (see Table 3 at the end of this article). Scientific updating and postgraduate studies must be a permanent task for any professional. The findings show that sexual education topics—even those specifically related to their specialty—are not a priority within the curriculum and though other health teaching centers offer courses on this topic, technicians do not feel the need to enhance their knowledge on these topics.

The conscious lack of knowledge index (CLKI) in the prosthetic and orthotic technicians studied (see Table 4 at the end of this article) ranged between 0.0% and 68.75%, with a 24.37% average, that is, a mean CLKI average. This points out to the fact that these professionals have a certain degree of awareness—though not very high—regarding their lack of knowledge on the subject matter of this paper. Still, the fact that 24 professionals were classified as having a low to medium CLKI, is a matter of concern, as they are not aware of their lack of knowledge and may convey misguided criteria on the topic considering them as correct, with the resulting adverse effect in their professional performance related to this issue. We may infer that this lack of awareness can have a direct or indirect impact on the low GKI levels found, given the fact that if they are not aware of their lack of knowledge they would see no need to enhance their knowledge by taking courses on these subjects or studying by themselves (please note that only one of the prosthetic and orthotic technician has taken courses on the topic). Institutions most highly affected were the orthopedic lab of the “Julio Díaz” Hospital and the “Carlos J. Finlay” Military Hospital. Those more aware of their lack of knowledge are working at FATESA and the Galiano Laboratory, while 50% of those working in ORTOP-RALCA industry and Cuba RDA show an indistinctive behavior.

When comparing the IDC with the GKI of technicians interviewed (see Table 5 at the end of this article), 8 prosthetic and orthotic technicians with low GKI (accounting for 16%) and 18 with regular GKI (accounting for 36%) attained high CLKI. The rest of the technicians surveyed showed low classifications in both indexes.

Most of the individuals studied got low GKI values (see Table 6 at the end of this article) in all fields of knowledge. In this regard, the fields of knowledge in which they showed higher lack of knowledge were: sexual dysfunction in women who underwent a mastectomy (46, accounting for 92%), sexual identity and orientation in women who had undergone a mastectomy (43, accounting for 86%), and sexual and reproductive health (35, accounting for 70%). The field where they showed greater knowledge was affective support and sexuality in women who had undergone a mastectomy, where 48% of the cases showed a high GKI, though it should be noticed that it does not reach 50%.

When analyzing the CLKI of the specialists in each field of knowledge (see Table 7 at the end of this article), the field of knowledge related to “affective support and sexuality in women who have undergone a mastectomy” was the one in which the highest percentage of the technicians had a low CLKI, i.e., it is the field in which there is less awareness by the professionals of their lack of knowledge. Sexual dysfunction is the field of knowledge in which these technicians are more aware of their lack of knowledge, with 33 cases accounting for 66%.

Within the field of sexuality, sexual dysfunction is a specialized area and thus, it is easier for the individual to be aware of his/her lack of knowledge, because as it is considered a topic to be known and managed by specialists (meaning sexual therapeutics and similar health personnel) admitting his/her poor knowledge on the subject, would hurt less his/her professional self-image.

It calls our attention and should be a matter of concern that all the subjects studied in the CLKI classification attained low classifications regarding several of the fields of knowledge studied, reflecting the extent to which these professionals are convinced of their knowledge. This can attempt against the appropriateness, education and quality of the information on sexuality provided to a patient who requested it. If incorrect, it could lead to other problems, given the authority a health professional has in such matters. Therefore, it is urgent to take action in order to reverse this situation and make these prosthetic and orthotic technicians aware of their mistaken criteria on these topics.

In the questionnaire applied, the surveyed professionals expressed their view on the need for, usefulness of, and interest in having information on the subject matter of this paper, as well as their assessment regarding whether or not they have enough knowledge of these topics to carry out their educational work (see Table 8). In this regard, 74% (37 cases) considered information on the sexuality of women who have undergone a mastectomy relevant; 80% (40 cases) considered it useful to perform their work; 96% of the sample asserted their interest in acquiring such information to be able to do their educational work as professionals. In this regard, most of them (36 cases accounting for 72%) were of the view that their knowledge on sexuality is not enough to perform as prosthetic and orthotic technicians, against a 24% who considered otherwise.

TABLE 8. OPINION OF THE PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED ABOUT THE NEED FOR, USEFULNESS OF, SUFFICIENCY AND INTEREST IN ACQUIRING KNOWLEDGE ON THE SEXUALITY OF WOMEN WHO HAVE UNDERGONE A MASTECTOMY

Opinions	Number	Percentage
Information need on the topic	37	74%
Usefulness of such knowledge for their work	40	80%
Insufficient knowledge for conduct their profession	36	72%
Interest in having information for educational work	48	96%

DISCUSSION

Chapter III of the Regulation of Post-Graduate Education of the Republic of Cuba defines professional upgrading as:

The training process by which higher education center graduates have of the possibility of acquiring, expanding, and improving in a systematic and continuous manner the knowledge as well as the specialized and basic skills required for him/her to perform his professional duties more efficiently, as well as for his/her general culture [13].

Reports by other authors point out that the path towards university excellence requires the improvement of the educational-teaching process, which has the objective of training professionals capable of solving problems in a creative manner in their working centers, in other words, capable of improving the quality of life of the individual to whom they provide their services and contributing to society's human development (14, 15). It is therefore essential that those who master prosthetic and orthotic health technology acquire knowledge of sexuality issues required by their profession, with a

sound methodological, researchable, and psycho-pedagogical basis, taking into consideration that they will be assisting people with physical and motor impairments and that the care they provide must be of a comprehensive and customized nature, tailored to the needs of each case and type of disability (16).

According to the research conducted by the Doctor in Sciences José Julián del Castillo, though there are rehabilitation services in Cuba, most of them lack sustained procedures for paying attention to the sexuality of the disabled (17).

The findings of studies conducted in Cuba indicate that certain myths and stereotypes about the sexuality of the disabled still prevail: People immediately associate disability with conditions for sexual practices; persons suffering from a disorder have problems with enjoying sex as it is. They believe persons suffering from a disorder cannot enjoy sex as this is determined by a sexual practice culminating in an orgasm; disabled persons cannot attract "normal" individuals; they should be concerned with more important problems in their lives and forget about their sexual needs (18).

Studies reviewed show that cancer has a negative psychological impact on patients who have undergone a mastectomy and on their couple relation. Hence, even if no organ intervening in the sexual response is affected, they can still suffer from a diminished sexual desire, loss of sexual attraction, disorders in body image and lower self-esteem (19, 20).

In the consulted bibliography there is no previous study of the degree of knowledge that prosthetic and orthotic technicians have about the sexuality of women who have undergone a mastectomy, nor identifying their learning needs in this regard. Likewise, there are no postgraduate courses for this specialty dealing with these topics.

Similar findings show that the foregoing leads us to state that there is little or no knowledge of the sexuality of women who have undergone a mastectomy in students and graduates, therefore there is a need to train graduates and develop curriculum in accordance with the guidelines in the regulations for postgraduate studies in the Republic of Cuba, Ministerial Resolution 6/96.

To conclude, the study shows that the degree of knowledge of the sexuality of women who have undergone a mastectomy in prosthetic and orthotic health technology graduates is insufficient, as most of them attained a poor general knowledge index (GKI) on the topic studied, irrespective of their years of professional and work experience and occupational or teaching category and the institution where they work. The conscious lack of knowledge index (CLKI) in the specific fields of knowledge studied was also poor. In general, there is a relative awareness of their lack of knowledge, classified as an average in mean values. However, it is a matter of concern that one fourth of the cases studied are not aware of this lack of knowledge. The learning needs identified were related to the topics of sexual identity and orientation, self-image and self-esteem, sexual and reproductive health, sexual dysfunction and psycho-affective, family, and partner support. A postgraduate professional upgrading program is proposed, dealing with the sexuality of women who have undergone a mastectomy in order to broaden such knowledge among professionals and decision-makers in the field of prosthetic and orthotic services as well as in medical higher education centers to raise awareness and foster learning solutions on woman sexuality in the future.

TABLE 2. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, ACCORDING TO THE GENERAL KNOWLEDGE INDEX (GKI) AND THE INSTITUTIONS WHERE THEY WORK

Institutions	GKI classification	Total
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	0,0-69,9%		70-79,9%		80-89,9%		90-100%		Qty.	%
	Qty.	%	Qty.	%	Qty.	%	Qty.	%		
FATESA	6	12	0	0.0	0	0.0	0	0.0	6	12
Cuba-RDA Laboratory	17	34	2	4	3	6	0	0.0	22	44
RALCA Industry	9	18	1	2	2	4	0	0.0	12	24
Dr. Carlos J. Finlay Laboratory	3	6	0	0.0	0	0.0	0	0.0	3	6
Galiano Laboratory	3	6	0	0.0	0	0.0	0	0.0	3	6
Julio Díaz Laboratory	3	6	1	2	0	0.0	0	0.0	4	8
Total	41	82	4	8	5	10	0	0.0	50	100

TABLE 3. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, ACCORDING TO THE GENERAL KNOWLEDGE INDEX (GKI) AND THE NUMBER OF YEARS OF TECHNICAL AND WORKING EXPERIENCE

Years of experience	GKI classification								Total Qty.	%
	0,0-69.9%		70-79.9%		80-89.9%		90-100%			
	Qty.	%	Qty.	%	Qty.	%	Qty.	%		
5 or less	11	22	1	2	1	2	0	0,0	13	26
From 6 to 10	10	20	1	2	0	0,0	0	0,0	11	22
From 11 to 15	4	8	0	0,0	0	0,0	0	0,0	4	8
From 16 to 20	9	18	0	0,0	1	2	0	0,0	9	18
From 21 to 25	6	12	1	2	1	2	0	0,0	8	16
Over 25	1	2	1	2	2	4	0	0,0	5	10
Total	41	82	4	8	5	10	0	0,0	50	100

TABLE 4. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, ACCORDING TO THE CONSCIOUS LACK OF KNOWLEDGE INDEX (CLKI) AND THE INSTITUTIONS WHERE THEY WORK

Institutions	CLKI classification								Total Qty.	%
	0,0-69.9%		70-79.9%		80-89.9%		90-100%			
	Qty.	%	Qty.	%	Qty.	%	Qty.	%		
FATESA	0	0.0	0	0.0	3	6	3	6	6	12
Cuba-RDA Laboratory	2	4	10	20	8	16	2	4	22	44
RALCA Industry	2	4	5	10	3	6	2	4	12	24
Dr. Carlos J. Finlay	0	0.0	2	4	1	2	0	0.00	3	6

Laboratory										
Galiano Laboratory	0	0.0	0	0,0	2	4	1	2	3	6
Julio Díaz Laboratory	0	0.0	3	6	1	2	0	0,0	4	8
Total	4	8	20	40	18	36	8	16	50	100

TABLE 5. DISTRIBUTION OF THE CONSCIOUS LACK OF KNOWLEDGE INDEX (CLKI) ACCORDING TO THE GENERAL KNOWLEDGE INDEX (GKI) OF THE PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED

GKI	CLKI classification								Total Qty. %	
	0,0%		0,1-19.9%		20-39.9%		40% and over			
	Qty.	%	Qty.	%	Qty.	%	Qty.	%		
0.0-69.9%	2	4	13	26	18	36	8	16	41	82
70-79.9%	1	2	3	6	0	0.0	0	0.0	4	8
80-89.9%	1	2	4	8	0	0.0	0	0.0	5	10
90-100%	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	4	8	20	40	18	36	8	16	50	100

TABLE 6. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, ACCORDING TO GENERAL KNOWLEDGE INDEX AND FIELDS OF KNOWLEDGE ON SEXUALITY OF WOMEN WHO HAVE UNDERGONE A MASTECTOMY

Field of knowledge	GKI classification								Total Qty. %	
	0.0-69.9%		70-79.9%		80-89.9%		90-100%			
	Qty.	%	Qty.	%	Qty.	%	Qty.	%		
Sexual dysfunction in women who have undergone a mastectomy	46	92	1	2	0	0.0	3	6	50	100
Self-image and self-esteem	24	48	17	34	0	0.0	9	18	50	100
Sexual and reproductive health in women who have undergone a mastectomy	35	70	0	0.0	0	0.0	15	30	50	100
Affective support and sexuality in women who have undergone a mastectomy	26	52	0	0.0	0	0.0	24	48	50	100
Sexual identity and	43	86	0	0.0	0	0.0	7	14	50	100

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TABLE 7. DISTRIBUTION OF PROSTHETIC AND ORTHOTIC TECHNICIANS STUDIED, ACCORDING TO THE CONSCIOUS LACK OF KNOWLEDGE INDEX AND FIELDS OF KNOWLEDGE ON SEXUALITY OF WOMEN WHO HAVE UNDERGONE A MASTECTOMY

Field of knowledge	CLKI classification						Total	
	0,0-19.9%		20-39.9%		40% and over		Qty.	%
	Qty.	%	Qty.	%	Qty.	%		
Sexual dysfunction in women who have undergone a mastectomy	10	20	7	14	33	66	50	100
Self-image and self-esteem	34	68	11	22	5	10	50	100
Sexual and reproductive health in women who have undergone a mastectomy	26	52	0	0.0	24	48	50	100
Affective support and sexuality in women who have undergone a mastectomy	39	78	10	20	1	2	50	100
Sexual identity and orientation	25	50	19	38	6	12	50	100

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