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Contents of the Sexual and Reproductive Health subject in the undergraduate nursing curricula of Spanish universities, a cross sectional study

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Abstract: Background: It is very important that nurses receive adequate training in Sexual and Reproductive Health (SRH). In this study, the contents of the SRH subject in the undergraduate nursing curricula of 77 Spanish universities were examined in order to determine what SRH training nursing students are receiving. Methods: The contents of the SRH subject of all the curricula that were available online were reviewed. The distribution of the contents (topics) in the two areas (reproductive health and sexual health) was analyzed, and the prevalence of each topic was established. It was also determined whether there were differences in topics between public (n=52) and private universities (n=25). Results: The training of nursing students focuses mainly on the area of Reproductive Health (15 topics). Most of the topics of this area had a prevalence greater than 50%. Although the area of Sexual Health had 14 topics, most of these topics had a low prevalence (<20%), especially in private universities. Conclusions: It was found that there is considerable variation in the distribution and prevalence of SRH topics between universities. The contents of the area of Reproductive Health are usually prevalent in most of the curricula, however the contents of the area of Sexual Health are very limited in most of the universities. An organizational effort is required to determine and standardize the contents of SRH that nursing students should receive in Spain to avoid inequalities in their training.

Keywords: Reproductive Health; Sexual Health; Women's Health; Nursing Curriculum; Nursing Education; Undergraduate Education

1. Introduction

Nurses are in a unique position to address the sexual and reproductive health (SRH) needs of women at all stages of life. They usually interact with women based on scheduled tasks, such as cancer screening programs, gynecological concerns or problems, or problems related to pregnancy, childbirth, or postpartum. However, in order to adequately care for all women, it is important that nurses, during their undergraduate training, receive basic SRH contents that allow them to acquire sufficient knowledge[1].

Cappiello, Coplon and Carpenter, in a review of the literature, examine the extent to which United States undergraduate nursing curricula include SRH contents. The authors conclude that the SRH content taught are essential, mainly due to time constraints. These essential contents were: (1) Nursing care in pregnancy and prenatal health, childbirth and postpartum care, (2) Family or women's health in the context of motherhood and parenting, and (3) Disease prevention or health maintenance in the mother-child dyad and in the pregnancy process. However, although they consider that this training could be improved

by expanding the time to impart more contents; they indicate that these essential contents are sufficient to acquire adequate knowledge and thus be able to provide adequate care to the women. In addition, they point out that complex clinical problems in SRH are usually addressed in postgraduate or specialized training (midwives)[2].

McLemore and Levi have also studied SRH subject content in United States undergraduate nursing curricula. They also consider that, although the contents currently taught are basic, they guarantee the provision of comprehensive SRH care to all women and their families at all stages of life. These basic contents were: (1) Nursing care for disease prevention and risk reduction for women throughout life, (2) Women's health or family health in the context of preconception and normal and high-risk pregnancies, (3) Crisis situations related to women's health and pregnancy, and (4) Sociocultural, economic, political or ethical factors that affect the provision of health services[3].

More recently, Simmonds et al. have identified that although SRH content in undergraduate nursing curricula in the United States is correct to care for women properly; other essential SRH content, such as the sexual and gender minorities, should be incorporated to ensure that nurses are well trained to meet the SRH needs of all people. The contents they presented were: (1) Healthcare and human sexuality beyond the focus on reproduction, (2) Care options (for example, counseling about pregnancy options), (3) Reproductive rights, options and alternatives during pregnancy, including term management, abortion, fertility control, contraceptives or the like, (4) Postpartum contraception, (5) Professional ethics, (6) Public health and global health, and (7) Quality and safety[4].

At the European level, the contents of the SRH subject in undergraduate nursing curricula have traditionally been structured in two large areas: (1) Reproductive Health, which includes, on the one hand, topics on the care of women during their pregnancy, childbirth and postpartum, and on the other hand topics that focus on the treatment and diagnosis of diseases and conditions that affect the physical and emotional well-being of women; and (2) Sexual Health, which includes topics that focus on sexuality and sexual relationships[5-7]. In other contexts, such as China[8], Ethiopia[9] or Argentina[10], the SRH contents of nursing curricula are mainly focused on reproductive health.

In the case of Spain, a southern European country, to be a nurse it is necessary to obtain a nursing degree from an official university. This means passing a four-year curriculum, with a total of 240 ECTS (European Credits Transfer System). Nursing curricula include various subjects, such as Sexual and Reproductive Health. All university curricula are approved by the Ministry of Education and Vocational Training and are periodically reviewed by a specialized ministerial agency (ANECA)[11]. These reviews are carried out by a minimum group of six recognized university professors who are experts in different areas. This group of experts determines if the contents included in the subjects of each curriculum are adequate to achieve the nursing competencies. To carry out this task, the group of experts does not have a detailed program of the contents that each subject of the curricula must include, but rather they decide whether the contents of each subject are appropriate or not based on their knowledge and experiences (expert consensus)[12,13]. In practice this means that universities have a certain autonomy to design and implement the contents of the subjects in the curriculum. The teachers of each subject first decide what content to include, and then the experts review and approve them. Sometimes experts may request to add or remove some content before being approved. However, since the contents of the subjects are not officially defined, there may be differences in the contents between the approved and revised curricula. Teachers may prefer to include or develop some topics more than others in their subjects.

Another factor that can affect the contents is that the subjects of the nursing curricula do not have the same number of credits in all universities. For example, the SRH subject at the University of Valencia has a study load of 4.5 ECTS[14], and the same subject at the Autonomous University of Barcelona has a load of 6 ECTS[15]. This can also cause some curricula to include more or less content in a subject than others.

Given the manifest importance of receiving adequate essential content in SRH during undergraduate nursing studies to acquire basic knowledge and thus be able to adequately care for women and given the ignorance of the exact contents that are taught in the SRH subject in Spanish universities; in this study, the contents of the SRH subject of the undergraduate nursing curricula were examined.

2. Materials and Methods

Settings

In Spain, according to data from the Ministry of Universities, in 2020 there were 80 official nursing curricula in force, 55 from public universities and 25 from private universities[16].

Each Spanish university has a public document that includes all the "teaching guides" of the subjects that include the undergraduate nursing curriculum[11,17]. These teaching guides include the contents (topics) that will be taught in each subject during undergraduate training.

Design and sample

A descriptive cross-sectional study was designed. All the teaching guides of the SRH subject of the undergraduate nursing curricula that were available online were included. This study did not require ethical committee approval because it did not involve human participants.

Data collection

In the first place, the websites of all the Spanish universities that taught undergraduate nursing studies during the 2020/21 academic year were accessed, and the type of university (public or private) was determined. In the second place, the nursing curricula of these universities were searched, and the year of publication of each one was determined. Next, the teaching guide for the SRH subject of each curriculum was located. Finally, the contents section of each teaching guide was revised.

The contents of the teaching guides (topics) were classified into two areas: Reproductive Health and Sexual Health. Likewise, the following information was also extracted from the teaching guides: number of ECTS (European Credit Transfer System) of the SRH subject, number of hours of face-to-face interaction, the year in which the SRH contents are taught (first, second, third or fourth), sex of the head teacher of the subject (male or female) and the profession of the head teacher (nurse, midwife or doctor).

Data analysis

All analyzes were derived from quantifying the frequency of appearance (prevalence) of the Sexual and Reproductive Health contents in the teaching guides. Likewise, inferential analyzes (test χ^2) were carried out to determine if there were differences in the contents between public and private universities respectively. The level of significance was set at 0,05. All analyzes were carried out with SPSS version 23.

3. Results

A total of 77 (96.3%) curricula were included, 52 (65%) from public universities and 25 (31.3%) from private universities. Three curricula were excluded because the teaching guides of the SRH subject were not available online. Most of the curricula were approved between 2016 and 2020 (32, 41.6%), followed by those approved between 2011 and 2015 (29, 37.7%) and finally between 2005 and 2010 (16, 20.8%).

Regarding the teaching guides of the Sexual and Reproductive Health subject included in the nursing curricula, it was found that they are taught mainly in the third year (45, 58.4%) and second year (29, 37.7%). The head teacher of the SRH subject in most cases is a woman (63, 81.8%). Likewise, most of the head teachers were nurses (41, 53.2%), or midwives (30, 39.0%). A low percentage of head teachers were doctors (6, 7.8%). Sexual

and Reproductive Health subject had a load of 6 ECTS credits in 47 (61%) universities, and a median of 36 hours of face-to-face master class (min. 3 – max. 120).

Contents in Sexual and Reproductive Health

In the Reproductive Health area, 15 topics were found (Table 1). The most prevalent topic of this area was “Pregnancy”, which was present in 65 teaching guides (84.4%), while the topic with the lowest prevalence was “Women's Health Services Administration” which was included in only 3 teaching guides (3.9%). Statistically significant differences were found between public and private universities for the topics “Health Problems During Pregnancy” ($\chi^2=16.347$, $p=0.038$), “Delivery” ($\chi^2=18.622$, $p=0.017$), “Complications in Labor and Delivery” ($\chi^2=25.057$, $p=0.002$), “Health Problems in the Puerperium” ($\chi^2=17.249$, $p=0.028$) and “Women's Health Education and Research” ($\chi^2=15.890$, $p=0.044$).

Table 1. Contents of the teaching guides of the Sexual and Reproductive Health subject in the undergraduate nursing curricula of the Spanish Universities

	Total Universities (N = 77)		Public Universities (n = 52)		Private Universities (n = 25)		Test χ^2	p
	n	%	n	%	n	%		
Reproductive Health								
1. Human reproduction	61	79.2	42	80.8	19	76.0	28.235	0.703
2. Human prenatal development	50	64.9	35	67.3	15	60.0	17.347	0.578
3. Pregnancy	65	84.4	45	86.5	20	80.0	15.896	0.635
4. Health problems during pregnancy	64	83.1	45	86.5	19	76.0	16.347	0.038
5. Delivery	61	79.2	39	75.0	22	88.0	18.622	0.017
6. Complications in labor and delivery	54	70.1	33	63.5	21	84.0	25.057	0.002
7. Puerperium and lactation	65	84.4	45	86.5	20	80.0	27.129	0.638
8. Health problems in the puerperium	49	63.6	35	67.3	14	56.0	17.249	0.028
9. Women's reproductive health care	58	75.3	38	73.1	20	80.0	9.695	0.060
10. Care for women with reproductive health problems	51	66.2	34	65.4	17	68.0	29.791	0.728
11. Epidemiology and demography in reproductive health	9	11.7	6	11.5	3	12.0	33.153	0.942
12. Socio-anthropological aspects in reproductive health	10	13.0	8	15.4	2	8.0	16.249	0.558
13. Women's Health Education and Research	30	39.0	22	42.3	8	32.0	15.890	0.044
14. Legislation and Ethics	5	6.5	4	7.7	1	4.0	17.546	0.715
15. Women's Health Services Administration	3	3.9	2	3.8	1	4.0	44.813	0.953
Sexual Health								
1. General concepts	38	49.4	26	50.0	12	48.0	20.108	0.780
2. Socio-anthropology of sexuality	13	16.9	11	21.2	2	8.0	31.440	0.012
3. Components of sexuality	14	18.2	12	23.1	2	8.0	35.952	0.003
4. Sexual psychophysiology	17	22.1	14	26.9	3	12.0	32.874	0.008
5. Sexuality in puberty and adolescence	21	27.3	13	25.0	8	32.0	15.622	0.584
6. Sexuality in adulthood	12	15.6	8	15.4	4	16.0	56.542	0.925
7. Sexuality in pregnancy and the puerperium	12	15.6	9	17.3	3	12.0	16.745	0.681
8. Sexuality in the climacteric	18	23.4	11	21.2	7	28.0	26.820	0.062
9. Sexual dysfunctions	18	23.4	12	23.1	6	24.0	27.425	0.910
10. Health and sexual behavior problems	21	27.3	14	26.9	7	28.0	29.810	0.808
11. Drugs and sexual behavior	6	7.8	3	5.8	3	12.0	16.562	0.666
12. Sex education	26	33.8	20	38.5	6	24.0	20.279	0.009
13. Sex and power	11	14.3	7	13.5	4	16.0	18.929	0.759

	Total Universities (N = 77)		Public Universities (n = 52)		Private Universities (n = 25)		Test χ^2	p
	n	%	n	%	n	%		
14. Approach to sexuality in clinical practice	8	10.4	5	9.6	3	12.0	31.499	0.761

The contents of each topic (subtopics) of the Reproductive Health area are presented, due to their length, in an attached document (Appendix A). The most frequent subtopics were: Anatomy of the Female Reproductive Organs (60, 77.9%), Physiology of the Female Reproductive System (61, 79.2%), Pregnancy (65, 84.4%), Bleeding Problems (63, 81.8%), Hypertensive states (64, 83.1%), Infectious Problems (60, 77.9%), Labor and Delivery (61, 79.2%), Puerperium (65, 84.4%), and Climacteric and Menopause (58, 75.3%).

In the Sexual Health area, 14 topics were found (Table 1). The most prevalent topic of this area was "General Concepts", which was present in 38 teaching guides (49.4%), while the topic with the lowest prevalence was "Drugs and sexual behavior" which was included in 6 teaching guides (7.8%). Statistically significant differences were found between public and private universities for the topics "Socio-Anthropology of Sexuality" ($\chi^2=31.440$, $p=0.012$), "Components of Sexuality" ($\chi^2=35.952$, $p=0.003$), "Sexual Psychophysiology" ($\chi^2=32.874$, $p=0.008$), and "Sex Education" ($\chi^2=20.279$, $p=0.009$).

4. Discussion

In this study, all the contents (topics) of the teaching guides of the Sexual and Reproductive Health subject of the undergraduate nursing curricula of Spanish universities are compiled and their frequency is shown. The findings show that the contents focus on basic SRH topics.

Most of the fifteen Reproductive Health topics present a medium-high prevalence. These results are consistent with those of other previous studies[2,4]. This basic coverage of knowledge has been considered sufficient for the development of adequate competencies in this area[18]. However, the 14 topics of Sexual Health are not very prevalent, that is, they are taught in few universities. This low prevalence of content in most curricula does not seem to be adequate for acquiring basic knowledge that allows students to develop good competencies in sexual health[19,20]. The most common barriers described to justify this low inclusion of Sexual Health topics have been the perception that they are not a curricular priority, time constraints, religious affiliation of the university, faculty beliefs, and / or the lack of qualification or comfort of teachers[4].

Currently, the gaps in Sexual Health education in Spain are very similar to those described in 2016 by Aaberg for the USA. This author identified that the content of sexuality was very poor, nonspecific, and limited to general topics: anatomy and physiology; conception; contraception; normal sexual function; sexual dysfunction; sexually transmitted infections[21]. Exceptionally, some teaching guides present topics such as: disease processes, medications, and treatments that affect male and female health or sexual activity; take a sexual history; and address students' feelings, values, and attitudes toward sexuality. However, no study guide includes, for example, LGBTQ sexual health topics as recommended[4].

Currently, the legislation for the development of undergraduate nursing curricula in Spain does not establish guidelines for the contents, it is the universities and the professors who decide these contents[12]. This can generate differences in the content between the curricula, which can cause inequalities in the training that students receive depending on the university in which they study. In general, the contents of SHR are considered specialized knowledge[13]. Most teachers decide these contents basically thinking about which ones will benefit the students the most[2]. Therefore, it is necessary to urgently address

the SRH training of undergraduate nursing students in Spain to ensure that all students receive a homogeneous basic content in SRH that adequately covers their academic and clinical needs. This is not about offering a set number of topics, but about ensuring that some core content is taught to all students. It is about seeking a certain equity in the content and above all avoiding deficit situations[22]. Likewise, knowing the contents that are currently being studied is essential to carry out a process of improving training in this field. This research can be an important tool for professors and universities to review the curricula and reflect on the content they teach in Sexual and Reproductive Health subject. This research can serve as the basis for an update of the teaching guides.

The main limitation of this research is the possibility that some teaching guides have not published all the contents or have presented them in a very general way without specifying them. Perhaps, we have underestimated the scope of the SRH content taught in nursing education. However, examining the SRH teaching guides of Spanish universities has made it possible to map what content is taught, and which are the most frequent. In addition, in this study, only the teaching guides for the SRH subject were reviewed. It is possible that other subjects of the curricula include some SRH content. For example, the Geriatrics subject may include topics on sexual health at this stage of life[17].

Authors should discuss the results and how they can be interpreted from the perspective of previous studies and of the working hypotheses. The findings and their implications should be discussed in the broadest context possible. Future research directions may also be highlighted.

5. Conclusions

The contents of SRH in nursing curricula are basic and limited. There is considerable variation in the amount and thematic content among universities. The training focuses primarily on reproductive health. Training in sexual health is the least developed. It is necessary to carry out a curricular review and agree on the content of SRH so that it covers the basic knowledge that nurses need.

Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1, Figure S1: title, Table S1: title, Video S1: title.

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Appendix A:

Subtopics of the area of Reproductive Health References.

1. Levi, A.J. Sexual and reproductive health in nursing education. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2017, 46, e147-e148, DOI <https://doi.org/10.1016/j.jogn.2017.04.003>.
2. Cappiello, J.; Coplon, L.; Carpenter, H. Systematic review of sexual and reproductive health care content in nursing curricula. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2017, 46, e157-e167, DOI <https://doi.org/10.1016/j.jogn.2017.04.132>.
3. McLemore, M.R.; Levi, A.J. Expanding access to sexual and reproductive health services through nursing education. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2017, 46, e149-e156, DOI <https://doi.org/10.1016/j.jogn.2017.02.004>.
4. Simmonds, K.; Cappiello, J.; Hoyt, A. Sexual and reproductive health content in nurse practitioner transition to practice training programs. *Contraception: X* 2019, 1, 100005, DOI <https://doi.org/10.1016/j.conx.2019.100005>.
5. Athanasopoulou, M.; Kouta, C. Education on Sexual and Reproductive Health Within the Context of European Policy: A Literature Review. *The Scientific Journal of the Hellenic Regulatory Body of Nurses* 2019, 2, 49-52 Available online: http://journal-ene.gr/wp-content/uploads/2010/11/Tomos02_teyxos02-aggl-dragged4.pdf.
6. Klemetti, R.; Raussi-Lehto, E. Promote, prevent, influence: The action programme for the promotion of sexual and reproductive health in 2014-2020. *National Institute for Health and Welfare* 2018, 1-174.
7. González-Hernando, C.; Carbonero-Martín, M.Á.; Lara-Ortega, F.; Martín-Villamor, P. "Learning to learn" in Nursing Higher Education. *Investigación y Educación en Enfermería* 2013, 31, 473-479 Available online: <http://www.scielo.org.co/pdf/iee/v31n3/v31n3a16.pdf>.
8. Ma, X.; Yang, Y.; Chow, K.M.; Zang, Y. Chinese adolescents' sexual and reproductive health education: A quasi-experimental study. *Public Health Nursing* 2021, Online ahead of print, DOI <https://doi.org/10.1111/phn.12914>.
9. Boti, N.; Hussien, S.; Shegaze, M.; Shibiru, S.; Abebe, S.; Godana, W.; Zerhun, E.; Desalegn, N.; Gebretsadik, W.; Temtime, Z. Process evaluation of curriculum based sexual and reproductive health education among first year students in arba minch university: qualitative study. *Ethiopian Journal of Reproductive Health* 2019, 11, 10 Available online: <http://ejrh.org/index.php/ejrh/article/download/308/98/>.
10. Provenzano-Castro, B.; Oizerovich, S.; Stray-Pedersen, B. Health care students at an Argentinean school of medicine: are they well prepared to provide quality sexual and reproductive health services? *The European Journal of Contraception & Reproductive Health Care* 2017, 22, 233-241, DOI <https://doi.org/10.1080/13625187.2017.1323079>.
11. VERIFICA: verification of official education in Spain. (Accessed on Jan 14, 2021).
12. State Official Newsletter Order CIN 2134/2008 of July 3, which establishes the requirements for the verification of official titles that enable the exercise of the profession of Nurse. 2008.
13. State Official Newsletter Royal Decree 1393/2007, of October 29, which establishes the organization of official university education. *Boletín Oficial del Estado* 2007.
14. Degree in Nursing. (Accessed on Aug 09, 2021).
15. UAB Bachelor's Degree in Nursing. (Accessed on Aug 09, 2021).
16. What to Study and Where in University. (Accessed on Mar 11, 2021).
17. University of Valencia Application form for verification of official Bachelor's degrees: Graduated or graduated in Nursing from the University of Valencia. University of Valencia 2010.
18. Morisi, T.L. 70 years of the Occupational Outlook Handbook. *Monthly Labor Review* 2019, 1-16.
19. Mecugni, D.; Gradellini, C.; Caldeira, E.; Aaberg, V.; Dias, H.; Gómez-Cantarino, S.; Frias, A.; Barros, M.; Sousa, L.; Sim-Sim, M. Sexual Competence in Higher Education: Global Perspective in a Multicentric Project in the Nursing Degree, Healthcare, Multidisciplinary Digital Publishing Institute: 2021, , pp. 166.
20. Ünal Toprak, F.; Turan, Z. The effect of sexual health courses on the level of nursing students' sexual/reproductive health knowledge and sexual myths beliefs in Turkey: A pretest-posttest control group design. *Perspect Psychiatr Care* 2021, 57, 667-674, DOI <https://doi.org/10.1111/ppc.12593>.
21. Aaberg, V. The state of sexuality education in baccalaureate nursing programs. *Nurse Educ Today* 2016, 44, 14-19, DOI <https://doi.org/10.1016/j.nedt.2016.05.009>.
22. US Department of Health and Human Services; Health Resources and Services Administration; Office of Women's Health Women's health curricula: Final report on expert panel recommendations for interprofessional collaboration across the health professions. American Association of Colleges of Nursing 2013.