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Original Research

The Impact of Sexism and Gender Stereotypes on the Legitimization of Women's Low Back Pain

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ABSTRACT

Background: Low back pain is the worldwide leading cause of disability and, even though women's pain experience is more severe, frequent, and enduring, female patients are often underdiagnosed and undertreated. Health professionals' gender stereotypes and social norms may underlie the downgrading of pain.

Aim: This pilot study aimed to examine the legitimation of low back pain by health professionals in relation to the sex of the patient as well as their gender awareness and the relationship between them.

Method: This study had a cross-sectional design. Eighty health professionals and students selected by convenience answered a 4-part online questionnaire. The eligibility criteria for participants were: aged >18 years, students in the last course of nursing/medicine or a physician/nurse, and Spanish-speaking. The questionnaire comprises: (1) a between-subjects virtual clinical low back pain case with four random versions (female/male patient and evidence/non-evidence of pathology); (2) the Spanish version of Nijmegen Gender Awareness Scale (S-NGAMS); (3) Ambivalent Sexism Inventory (ASI); and (4) Ambivalence toward Men Inventory (AMI).

Results: The total score of legitimation of low back pain correlated negatively with gender role ideology and sexism scales (when the virtual patient was female), as well as the subscales of willingness to offer support and credibility.

Conclusions: Both sexism and gender role ideology could undermine the legitimation of low back pain, the willingness to offer support, and credibility only in female patients. The results showed a possible gender bias in low back pain assessment in health professionals. Low gender sensitivity and high sexism must be treated as modifiable risk factors for health inequities in pain care.

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According to the World Health Organization (WHO, 2021a) health equity includes the absence of unfair and avoidable or remediable differences in health between socially, economically, demographically, or geographically defined population groups. Despite this, in recent decades, several studies have highlighted gender bias in health care in general, and specifically in pain management (Earp et al., 2019; Samulowitz et al., 2018; Schäfer et al., 2016).

Pain is considered by the International Association for the Study of Pain (IASP) "an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage" (International Association for the Stufy of Pain IASP, 2021). There is a broad classification of pain, as proposed by Cole (2002) which classifies it by anatomic location, body system, duration, severity, frequency, and etiology. Among all types of pain, low back pain (LBP) is the worldwide leading cause of disability (WHO, 2021b) and it is associated with a high affectation of physical function, daily activities, health-related quality of life, work, social, and family relationships, as well as high costs to the health care system (Dueñas et al., 2016). In this regard, 19% of Europeans suffer chronic pain (Breivik et al., 2006) and specifically,

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back pain is the second most prevalent chronic disease in Spain (Ministry of Health, Consumer Affairs, & Social, 2018). Furthermore, 23.5% of women and 15.8% of men aged >15 years suffer LBP in this country (Ministry of Health, Consumer Affairs, & Social, 2018).

Several investigations observed that although pain experience is more severe, frequent, and enduring in women (Bartley & Fillingim, 2013; Gallach et al., 2020) pain is under-treated and underdiagnosed in female patients (Bernardes & Lima, 2011; Lillrank, 2003; Mogil, 2016; Schäfer et al., 2016; Siddiqui et al., 2015). According to the review by Samulowitz et al. (2018), women with chronic pain reported feeling mistrusted and psychologized. Women also, received less pain relief, less pain medication with opioids, and more antidepressants.

Therefore, the legitimation of pain by health professionals is crucial in the management of such suffering, being the legitimation of pain defined as the recognition and value placed on the pain that a person suffers. The lack of legitimation of pain leads to the undertreatment of that pain and perpetuates the condition, influencing the quality of life of those who suffer from it (Lillrank, 2003; Toye et al., 2017). Social norms could influence the legitimation of pain in health professionals (Bernardes & Lima, 2011; García Dauder, 2019; Velasco, 2009), leading to sexist stereotypes and low gender awareness, especially when the pain is not accompanied by diagnostic evidence (Bernardes & Lima, 2011; Siddiqui et al., 2015). The legitimation of pain in men may be associated with stereotypes of strength and less seeking help, while in women it may be associated with weakness, instability, and greater demand for health care, so that pain in women is related to psychogenic causes and classified as less urgent (Samulowitz et al., 2018).

Although there are studies that have evaluated gender bias and the legitimation of pain in health professionals (Bernardes & Lima, 2011; Daugherty et al., 2017; Salgado et al., 2002; Verdonk et al., 2009), we have not found any that have done so jointly. Therefore, the purposes of this pilot study were to examine the health professionals' legitimation of LBP depending on the sex of the patient and to analyze the relationship between such legitimation, gender awareness, and ambivalent sexism levels.

Methods

Participants and Design

This study had a cross-sectional design. Eighty health professionals and students were selected by convenience. Being aware that the sample size is limited, the data analysis section would take into consideration not only statistical significance values, but also effect sizes. For the present study, the eligibility criteria for participants were: to be over 18 years of age; to be students of the last course of nursing/medicine or to be a physician/nurse; and to be Spanish-speaking. The participants of the study were recruited by sending them an e-mail offering to participate in the study. Those who consented to participate in the study received a new email with the questionnaire to be filled in. Specifically, 66.25% of the participants were nurses, 17.5% were studying nursing, while the other 16.25% were physicians. The average age of the sample was 31.10 (standard deviation [SD] = 10.06), with ages between 20 and 63. Most of the sample had Spanish nationality (96.3%) and 83.8% resided in the province of Guipuzcoa (Basque Country). Table 1 shows participants' demographic characteristics.

Table 1
Participant Demographic Characteristics

	MD	SD	N (total = 80)	%	Range
Age (years)	31.6	10.06			20-63
20-40			67	84.7	
41-63			12	14	
DK/NA			1	1.3	
Gender					
Female			71	88.8	
Male			9	11.2	
Country of birth					
Spain			77	96.2	
Colombia			2	2.4	
Peru			1	1.4	
Profession					
Nursing			67	83.7	
Medicine			13	16.3	
Years of profession	7.60	7.83			0-34
≤10			62	77.5	
11-19			10	12.5	
≥20			8	10	

MD = mean deviation; SD = standard deviation; DK = Doné know; NA = Not available.

Procedure

An e-mail and/or mobile phone link was sent to access the online questionnaire to those people who gave their consent to participate in the study. Respondents filled a socio-demographic data questionnaire, clinical case-related questions, and sexism and gender awareness scales. This research has been approved by the Ethics Committee for research with human beings of the University of Basque Country (CEISH UPV/EHU; M10_2019_139) and the Clinical Research Ethics Committee of the Basque Country (CEIm; PI2019152).

Instruments

Legitimation of pain based on a clinical case

A virtual clinical case of a patient with chronic LBP was created ad hoc based on the original study by Bernardes & Lima, (2011) (Appendix 1). Four different versions were created according to sex (woman/man) and evidence of pathology (with herniated disc/without evidence of pathology). Each participant answered to one of the following cases: *case 1*: Man with chronic LBP, without a diagnosis of evidence of pathology; *case 2*: Woman with chronic LBP, without a diagnosis of evidence of pathology; *case 3:* Man with chronic LBP and a diagnosis of evidence of pathology (herniated disc); *case 4:* Woman with chronic LBP and a diagnosis of evidence of pathology (herniated disc). The choice of clinical case was random for each participant. After reading the clinical case, the participants proceeded to answer 16 items using a Likert scale ranging from 1 (nothing) to 7 (exaggerated). The items corresponded to the following subscales: (1) psychological attributions to the pain (e.g., To what extent do you believe this patient's pain is caused by psychological factors?); (2) disability (e.g., To what extent do you believe this pain interferes with this man's professional life?); (3) willingness to offer support (e.g., To what extent would you be willing to help this patient ambulate?); and (4) credibility of the pain (e.g., To what extent do you feel the pain reported by this patient is credible?). All factors showed an adequate internal reliability (psychological attributions to the pain $\alpha = 0.77$; disability $\alpha = 0.78$; willingness to offer support $\alpha = 0.87$; and credibility of the pain $\alpha = 0.76$).

Gender awareness in health professionals

According to a study currently under review (J. Aliri et al., unpublished data, August 2021) the Spanish adaptation of the Nijmegen Gender Awareness in Medicine Scale (S-NGAMS) was used to assess gender awareness in health professionals. This scale is composed of three subscales: gender sensitivity (GS), gender role

Table 2
Correlations Between Legitimation of LBP and Subscales of the Spanish Version of Nijmegen Gender Awareness Scale (S-NGAMS) and Ambivalent Sexism Scales (ASI, AMI)

Female patient	S-NGAMS GS	S-NGAMS GRI-patient	S-ASI HS	S-ASI BS	S-ASI Total	S-AMI HS	S-AMI BS	S-AMI Total
LBP legitimation (total score)	−0.01	−0.37 [a]	−0.29	−0.34	−0.38[a]	−0.26	−0.59[c]	−0.40 [a]
Psychological attributions	−0.10	−0.05	−0.27	−0.20	0.15	0.09	−0.24	−0.01
Disability	−0.23	−0.21	−0.18	−0.20	0.26	−0.27	−0.42 [a]	−0.31
Willingness to offer support	−0.04	−0.38 [a]	−0.37 [a]	−0.37 [a]	−0.44 [a]	-0.24	-0.63[b]	-0.41 [a]
Credibility	0.28	−0.46[b]	−0.09	−0.37 [a]	−0.27	−0.41 [a]	−0.28	−0.41 [a]
Male patient	S-NGAMS GS	S-NGAMS GRI-patient	S-ASI HS	S-ASI BS	S-ASI Total	S-AMI HS	S-AMI BS	S-AMI Total
LPB legitimation (total score)	0.17	−0.25	−0.23	−0.05	−0.12	0.04	−0.05	0.03
Psychological attributions	0.01	−0.11	−0.13	−0.07	−0.06	−0.13	−0.12	−0.10
Disability	−0.01	−0.25	−0.15	−0.12	−0.09	−0.07	−0.11	−0.11
Willingness to offer support	0.06	−0.16	−0.13	0.01	−0.06	−0.13	−0.06	−0.12
Credibility	0.26	−0.26	−0.17	−0.04	−0.07	0.22	0.01	0.18

Correlations are shown at the top when the clinical case is a female patient, at the bottom when the case is a male patient.
[a] $p < .05$.
[b] $p < .01$.
[c] $p < .001$.LBP = low back pain; S-ASI = short form of Ambivalent Sexism Inventory; S-AMI = short form of Ambivalent Sexism toward Men Inventory; GS = gender sensitivity; GRI-patient = gender role ideology towards patient; HS = hostile sexism; BS = benevolent sexism.

ideology towards patients (GRI-patient), and gender role ideology towards doctors (GRI-doctors). First, GS is a 14-item scale that assesses health care professional attitudes towards gender concerns in health care (e.g., for effective treatment, physicians should address gender differences in etiology and consequences of disease); higher scores in this subscale mean higher gender sensitivity. Second, GRI-patient is an 11-item measure assessing gender stereotypical thinking about patients (e.g., male patients better understand the approach of physicians than female patients); higher scores in this subscale mean that health professionals have a more stereotypical thinking. GRI-doctors subscale was excluded from this study aimed to analyze the gender ideology based on the sex of the patients. Each measure of gender awareness was based on a five-point Likert scale response ranging from (1) totally disagree to (5) totally agree. Both factors showed an excellent internal reliability (GS $\alpha = 0.80$; and GRI-patients $\alpha = 0.89$).

Sexism in health professionals

The Ambivalent Sexism Inventory (ASI) and the Ambivalence Sexism Toward Men Inventory (AMI) assess sexism ambivalence towards women and men respectively, attending to hostile and benevolent sexism (Glick & Fiske, 1996, 1999). The reduced versions of the S-ASI (12 items: e.g., women trying to gain power by controlling men) and S-AMI (12 items: e.g., men behave like children when they are sick) were used (Rodríguez et al., 2009). Half of the items of the ASI assess hostile sexism towards women (HS) and the other half, benevolent sexism towards women (BS); and in the same vein, half of the items assess hostility towards men (HM) and the other half benevolence towards men (BM). Each measure of ambivalent sexism was based on a five-point Likert scale response ranging from (1) totally disagree to (5) totally agree. Higher values in all the scales and subscales indicate more sexism. The psychometric properties of the Spanish adaptations of those short versions were adequate (Rodriguez et al., 2009). In the present study, the following indices of internal consistency were observed: HS $\alpha = .88$, BS $\alpha = .80$, ASI $\alpha = .83$, HM $\alpha = .84$, BM $\alpha = .73$, and AMI $\alpha = .76$.

Analyses

Spearman correlations were used to examine the relationships between the LBP legitimation, gender awareness subscales, and the ambivalent sexism scales. Secondly, we conducted a multivariate analysis of variance to examine the differences in scores between four clinical cases. All analyses were performed using SPSS version 26. Pairwise deletion was used to handle missing data.

Results

Correlations Among Gender Awareness, Ambivalent Sexism, and Legitimation of Low Back Pain

The correlations among LBP legitimation, S-NGAMS subscales, S-ASI, and S-AMI scales are presented in Table 2. These correlations were only significant when the patient sex was female. In the clinical case, when the patient was a woman, legitimation of LBP was negatively correlated with GRI-patient and sexism scales; that is, professionals with higher levels of LBP legitimation had lower scores in both GRI-patient and ambivalent sexism scales. Concretely, willingness to offer support and credibility subscales were the ones that showed the highest negative correlations with GRI-patient and ambivalent sexism scales. No relation was found between LBP legitimation and sexism or gender role ideology when the patient of the clinical case was male.

Analysis of Variance of the Clinical Cases

Table 3 shows the average scores and the standard deviations obtained for each clinical case. The average scores for the subscale of psychological attributions ranged from 18.25-19.00; for disability produced from 18.69-19.88; for willingness to offer support from 18.94-19.94; and for credibility from 18.38-19.65. The multivariate analysis of variance does not show significant differences between these groups in any of the variables ($F(4, 12) = 0.16$; $p > .05$).

Table 3
Means and Standard Deviations for Total LBP Legitimation Scores and Their Subscales

	Case 1		Case 2		Case 3		Case 4	
	M	SD	M	SD	M	SD	M	SD
LBP legitimation	74.63	12.73	77	8.98	76.87	11.02	76.71	19.30
Psychological attributions	18.63	4.32	19.00	4.08	18.25	4.20	18.59	2.65
Disability	18.69	4.66	19.23	3.04	19.67	3.29	19.88	3.46
Willingness to offer support	18.94	4.91	19.41	2.89	19.67	3.41	19.94	3.33
Credibility	18.38	5.24	19.36	1.94	19.29	3.46	19.65	4.21

Range of theoretical scores in legitimation of LBP 16-112; Psychological attributions 4-28; Disability 4-28; Willingness to offer support 4-28; and Credibility 3-21. Case 1: man without a diagnosis of evidence of pathology, Case 2: woman without a diagnosis of evidence of pathology, Case 3: man with a diagnosis of evidence of pathology, and Case 4: woman with a diagnosis of evidence of pathology.
M = mean; SD = standard deviation; LBP = low back pain.

Discussion

This pilot study was aimed to examine the legitimation of LBP in health professionals of both sexes and to study its association with gender awareness and ambivalent sexism. The correlation analysis showed significant relationships of the LBP legitimation with sexism and gender role ideology in women. More specifically, results indicate that both sexism and gender role ideology toward patients could undermine the willingness to offer support and credibility only in female patients. In this sense, Bernardes & Lima (2011) found that nurses perceived women patients' pain as less credible, disabling, and less severe in the absence of evidence of pathology. Probably because of the small sample size within the four clinical case groups, we have not found any significant difference depending on the presence or absence of herniated disc.

Interestingly, both sexism towards women and men were shown to be detrimental to the legitimation of LBP in female patients, but not in males. The notion that sexism towards men does not affect credibility nor willingness to offer support to men but can impair health a professional's attitude towards women may be understood considering social mandates. On the one hand, socially established masculinity mandates include authority and domination, protective stereotypes when considering the plausibility of a suffering man (García Dauder, 2019). On the other hand, in the collective imaginary women are considered providers and not recipients of health care, while men are considered to need a more proactive care from health professionals (Soto-Gordoa et al., 2019). In addition, women stereotypes of hysterical, complaining, and not waiting to get better, as well as the belief that women can tolerate more pain than men as a result of women's biological role in childbirth could be related to the negative association between sexist stereotypes and pain legitimation we found in females (Hoffmann & Tarzian, 2001; Samulowitz et al., 2018). Indeed, Samulowitz et al. (2018) address a tendency in health professionals to lessen the legitimation of pain in women, due to mistrust and the inclination to ascribe psychological attributions to them.

Clinical Implications

More than ever, the importance of the role of nursing in pain management is undisputed (Mahfudh, 2011). The new legal framework in Spain regulated by the 1308/2018 Royal Decree broadens the competencies of nurses concerning the prescription of drugs subject to medical prescription. Furthermore, nurses are responsible for assessing the patient's pain, administering analgesia on demand, and they may increase the dose as needed (Royal Decree, 2018). Despite national and international political efforts to introduce a gender perspective in health care and the protocols and guidelines established for the care of pain in patients, this research indicates that bias is still present in our health system and nurses. The gender bias in pain attention results in several consequences like inequality in health care, increase in health care costs, and the perpetuation of the suffering of the patients (Dueñas et al., 2016).

Given the extensive research on gender bias in health care, it would be interesting for institutions and members of the health care system to reflect on it, understanding this gender bias as an area of improvement for the different members of the health care system. The first step for equity in pain attention or other health problems attention is to try to recognize and address the effects of unintentional gender bias in their practices. Therefore, it is necessary to train and sensitize health professionals on gender and health in order to detect biases and restructure these mental habits. In addition, the analysis of data in relation to the health status of the population may be of interest to detect possible gender biases in health care.

As a limitation, it must be taken into account that the data obtained correspond to a specific population, mostly White and belonging to a health system based on the National Health System, so it cannot be extrapolated to other populations. In addition, our sample was small and most of them were women and nurses. For future research, it could be interesting to analyze the same variables in a wider sample, taking into account the professionalś gender and their profession.

Conclusions

Low gender sensitivity and high sexism influence the low back pain assessment in health professionals. Promoting equity in pain care by addressing gender bias as a modifiable risk factor, as well as in the education and protocol development could decrease gender inequalities.

Declaration of Competing Interest

The authors have no conflicts of interest to report.

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Supplementary materials

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