

## RESEARCH

## Analysis of attitudes and perceptions towards aging in nursing students in Zacatecas, Mexico


### Análisis de actitudes y percepciones hacia el envejecimiento en estudiantes de enfermería en Zacatecas, México

### Análise de atitudes e percepções sobre o envelhecimento em estudantes de enfermagem em Zacatecas, México

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## Summary

**Introduction:** The attitude is a predictor of behavior, therefore, having negative attitude and perception about old age can influence the care that university students could give when providing health services. **Objective:** Assess by gender the attitudes and perceptions towards female and male aging in students of nursing degree program in Zacatecas, Mexico. **Methodology:** Descriptive design with comparison according to gender in 262 undergraduate nursing students from a public university; students assigned to a subject related to care for the elderly and who voluntarily gave their consent to participate were considered. The Kogan Scale of Attitudes towards the Elderly and the Osgood Semantic Differential Questionnaire were applied. **Results:** 70.6% of the participants were female, with an average age of 21.4 years, SD =2.87, and 93.9% had a positive attitude towards the elderly. In female aging, women reflected more negative perceptions than men in the categories productive-unproductive, healthy-unhealthy, tolerant-intolerant, efficient-inefficient, treatable-intractable, active-inactive citizen, integrated-marginalized, trusting-mistrusting and valued-undervalued. Habitual coexistence and previous training represented a significant statistical difference regarding the perception of tolerance-intolerance, integration-marginalization and resiliency-fragility with  $p < .05$ . **Conclusions:** Most of the nursing students showed a positive attitude towards the elderly. When comparing by gender the aging type either in male or female participants, some understanding indicated a more negative appreciation on the part of women compared to men.

**Keywords:** Aging; Nursing students; Attitude; Gender stereotypes; Dependency-independence area DeCS).

## Resumen

**Introducción:** La actitud es un predictor de la conducta, por tanto, poseer actitudes y percepciones negativas sobre la vejez puede influir en la atención que los jóvenes universitarios brinden al dar un servicio de salud. **Objetivo:** Analizar por sexo las actitudes y las percepciones hacia el envejecimiento femenino y masculino en estudiantes de un programa de licenciatura en enfermería en Zacatecas, México. **Metodología:** Diseño descriptivo con comparación según sexo en 262 estudiantes de licenciatura en enfermería de una universidad pública, se consideró a estudiantes adscritos a una asignatura relacionada a la atención del adulto mayor y que dieran su consentimiento para la participación de forma voluntaria. Se aplicó la escala de actitudes hacia el adulto mayor de Kogan y el Cuestionario diferencial semántico de Osgood. **Resultados:** Los participantes fueron en su mayoría del género femenino con 70.6%, promedio de 21.4 años, DE=2.87. Un 93.9% tenía actitud positiva hacia el adulto mayor. En envejecimiento femenino, las mujeres reflejaron percepciones más negativas que los hombres en las categorías productiva-improductiva, saludable-enfermiza, tolerante-intolerante, eficiente-ineficiente, tratable-intratable, ciudadano activo-no activo, integrado-marginado, confiado-desconfiado y valorado-desvalorado. La convivencia habitual y la capacitación previa representaron diferencia estadística significativa al respecto de la percepción de tolerancia-intolerancia, integración-marginación y resistencia-fragilidad con  $p < .05$ . **Conclusiones:** La mayoría de los estudiantes de enfermería presentaron una actitud positiva hacia el adulto mayor. Al comparar por sexo el tipo de envejecimiento masculino y femenino, algunas percepciones denotaron una apreciación más negativa de parte de las mujeres con respecto a los hombres.



**Palabras clave:** Envejecimiento; Estudiantes de enfermería; Actitud; Estereotipos de género; Área de dependencia-independencia (DeCS).

### Abstrato

**Introdução:** A atitude é um preditor de comportamento, portanto, ter atitude e percepção negativa sobre a velhice pode influenciar no cuidado que os universitários poderiam dar ao prestar serviços de saúde.

**Objetivo:** Analisar as atitudes e percepções sobre o envelhecimento feminino e masculino em estudantes de enfermagem em Zacatecas, México. **Metodologia:** Desenho descritivo com comparação por gênero em 262 estudantes de graduação em enfermagem de uma universidade pública; Foram considerados os alunos atribuídos a uma disciplina relacionada ao cuidado ao idoso e que voluntariamente deram seu consentimento para participar. Aplicou-se a Escala Kogan de Atitudes em relação ao Idoso e o Questionário Diferencial Semântico de Osgood. **Resultados:** 70,6% dos participantes eram do sexo feminino, com média de idade de 21.4 anos, DP=2.87 e 93.9% tinham uma atitude positiva em relação ao idoso. No envelhecimento feminino, as mulheres refletiram mais percepções negativas do que os homens nas categorias produtivo-improdutivo, saudável-doente, tolerante-intolerante, eficiente-ineficiente, tratável-intratável, cidadão ativo-inativo, integrado-marginalizado, confiante-desconfiado e valorizado-desvalorizado. A convivência habitual e o treinamento prévio representaram diferença estatística significativa quanto à percepção de tolerância-intolerância, integração-marginalização e força-fragilidade com  $p < .05$ . **Conclusões:** A maioria dos estudantes de enfermagem demonstrou uma atitude positiva em relação aos idosos. Ao comparar por gênero o tipo de envelhecimento tanto em participantes masculinos quanto femininos, alguns entendimentos indicaram uma valorização mais negativa por parte das mulheres em relação aos homens.

**Palavras-chave:** Envelhecimento; Estudantes de enfermagem; Atitude; Estereotipagem de gênero; Área de dependência-independência (DeCS).

### Introduction

Frequently, negative or avoidant attitudes and behaviors towards older people have been reported. The term ageism, in a broad sense, is considered a stereotype, prejudice or discrimination. These attitudes may be due to the experiences seen in other professionals and the type of preparation received during their university education <sup>(1-2)</sup>. Attitude is a positive or negative feeling of a social object, which can be a person or a fact. It is generally influenced by various causes that are related to past experiences, beliefs and relationships, accumulated throughout the life of each individual. According to social psychology, attitude is a predictor of behavior and in general negative attitudes are the ones that affect older adults the most <sup>(3)</sup>.



Negative attitudes can be reflected in mistreatment, gestures, rejection, poor communication, therapeutic restriction, discrimination, among other things, which results in distrust, rejection of treatment, depression, isolation, insecurity, low self-esteem, changes in schedule, prescription, dose, even believe more in the opinions of third parties and thus decrease the quality of life <sup>(3-4)</sup>. It could be that adequate preparation for the care and understanding of older adults represents an area of opportunity for the construction of positive attitudes towards aging <sup>(5)</sup>. The majority of university students in the health sciences area will be in contact or will work with older adults during their work life, which is why it is so important to enhance their skills, knowledge, aptitude and attitude in order to provide care and quality care <sup>(4)</sup>. Learning about care to the elderly is developed mainly through contact, coexistence and interaction of the people who are being cared for. For this it is necessary to have preparation, awareness and develop critical thinking <sup>(6)</sup>.

The prevalence of negative, generalized and projected images of old age reported in university students <sup>(7-9)</sup> could be affecting well-being perspectives of current and future older adults in a growing context of population aging and increased life expectancies. In addition to increasing the demand for health services at the three levels of care, the world's aging population requires trained personnel prepared to provide dignified, respectful, warm, and friendly treatment that is aimed at improving the life quality of the elderly <sup>(10)</sup>. In Mexico, only one approach to the study of attitudes and perceptions in women from Mexico City was found <sup>(11)</sup>. It still needs to be clarified if there are differences regarding male aging and female aging. In addition, it is interesting to know if the perception of female students is similar to the perception of male students. Given the lack of reports about attitudes towards the elderly in this group and considering the possible differences by gender regarding the perception of aging, it was proposed to assess by gender the attitudes and perceptions towards female and male aging in students of a nursing degree program in Zacatecas, Mexico.



## Methodology

Quantitative, descriptive approach, with comparison analysis according to the gender of the participants.

The study population was represented by 310 university students of the nursing degree program assigned to an elective training course for the professional care of the elderly during the January-June 2020 semester.

The entire population was called on without applying sampling techniques. Those who voluntarily agreed to participate in the study through authorization with informed consent were included. Participant data with incomplete data was removed. Personal data such as gender, age, marital status, habitual coexistence and characteristics of coexistence with older adults (knowledge or previous experience) are considered.

The Kogan scale of attitudes towards the elderly was applied, developed based on the theoretical paradigm "quasi-minority perspective of the elderly" <sup>(12)</sup>, based on the premise that older adults share similarities and differences with other minority groups that often face prejudice and discrimination based on stereotypical characteristics. It consists of 34 statements, 17 in a positive way and 17 in a negative way. It has a Likert-type response option that ranges from strongly disagree to strongly agree in six response options. The minimum score is 34 and the maximum 204, where the higher the score, the more positive is the perception towards the elderly. For the evaluation, the negative items must be recoded to be quantified inversely and three categories are considered based on the score per participant: negative attitude if the sum is <103, neutral = 104, and positive attitude >104. The questionnaire has shown an internal consistency of 0.66 to 0.83. The language validation has been carried out in Spanish and used in the Spanish population, demonstrating satisfactory reliability with Cronbach's alpha of 0.82 <sup>(3)</sup>. Acceptable values of reliability ( $\alpha$  = .70 to .75) and validity with the Kaiser Meyer-Olkin coefficient = .705 were obtained in this sample.

Additionally, Osgood's semantic differential questionnaire was used; it measures the perception towards aging <sup>(13)</sup> and considers that the concept of older adults adopts a connotative meaning of visual and verbal stimuli from bipolar adjectives that go from positive to negative opinion and other questions that go from negative to positive. It consists of 16 adjectives with a minimum score of one considered less favorable at



0% and a maximum of 7 considered favorable at 100%. The instrument has been used in the Mexican population, showing a reliability of 0.83 <sup>(4)</sup>. In this sample, reliability and validity were good for both types of aging (female aging  $\alpha=.82$ , KMO=.827, male  $\alpha=.84$ , KMO=.853). The participants were asked to answer the questionnaire twice, first to assess the perception towards male aging and then towards female aging. The project was registered with the Research Coordination of the School of Sports Organization (REPRIN-FOD-61), and permission was obtained from the University authorities. Subsequently, students were invited to participate by sending a digital survey through institutional and personal mail, which included informed consent at the beginning; if the student wished to participate he voluntarily gave his consent and continued to fill out the form, which included data card, Kogan scale and Osgood Semantic Differential Questionnaire. The data was processed with the statistical package Statistical Product and Service Solutions (SPSS) version 21.0 with descriptive statistics through mean, standard deviation and inferential statistics tests with data distribution analysis and Mann-Whitney U test. The alpha value considered was .05.

## Results

A total of 262 students participated, with an average age of 21.4 years (SD=2.87), 70.6% female. 87.4% reported being single and 89.3% said they lived with their family, while 5.3% lived by themselves. 54% had never been in a formal training course related to the care for the elderly population and 72.9% lived regularly with an older adult (father or mother).

It was considered that 93.9% of the sample had a positive attitude towards the elderly (score >105); the remaining 6.1% was classified as having a negative attitude. No differences were seen according to gender (Table 1).



Table 1. Results of the evaluation of attitudes towards the elderly of the total sample and by gender (n=262)

Participants	Attitudes	Average	SD	Minimum	Maximum
All (n=262)	Positive	62.5	8.9	37.0	98.0
	Negative	67.1	9.3	24.0	90.0
	Sum	123.7	13.9	45.0	161.0
Women (n=185)	Positive	62.4	7.9	42.0	86.0
	Negative	67.9	8.5	36.0	90.0
	Sum	124.5	10.9	89.0	159.0
Men (n=77)	Positive	62.7	10.8	37.0	98.0
	Negative	65.5	10.9	24.0	90.0
	Sum	121.8	19.3	45.0	161.0

Source: Own development  
Sum range= 34-204.

Table 2 shows the scores reported for each of the categories of the Oswood differential semantic perceptions questionnaire. In relation to female aging, on average, women scored higher values that reflected more negative perceptions than men regarding the categories productive-unproductive, healthy-unhealthy, tolerant-intolerant, efficient-inefficient, agreeable-disagreeable, and active-inactive, integrated-marginalized, trusting-distrusting and valued-undervalued citizen.

Table 2. Description of the perceptions towards male and female aging by gender (n=262)

Perception	Male aging					Female aging				
	Men (n=77)		Women (n=185)		p	Men (n=77)		Women (n=185)		p
	Average	SD	Average	SD		Average	SD	Average	SD	
Independent-Dependent	4.2	1.5	3.8	1.5		4.1	1.6	4.4	1.3	
Productive-Unproductive	3.6	1.3	3.3	1.3		3.6	1.5	3.5	1.3	
Healthy-Unhealthy	4.3	1.3	3.8	1.4		4.3	1.3	3.9	1.2	
Tolerant-Intolerant	4.1	1.4	3.9	1.3	*	3.4	1.3	3.4	1.3	*
Efficient-Inefficient	3.6	1.2	3.3	1.1		3.5	1.3	3.3	1.1	
Resilient-Fragile	3.9	1.4	3.7	1.5	*	4.40	1.6	4.5	1.4	*
Agreeable-Disagreeable	4.6	1.5	4.3	1.3		4.9	1.3	4.6	1.2	
Active-Passive citizen	3.8	1.4	3.7	1.3	*	4.3	1.2	4.2	1.42	*
Protected-Unprotected	3.8	1.5	3.3	1.2	*	3.6	1.6	3.2	1.3	*

continue...



Table 2 continue...

Sexually Active-Sexually Inactive	5.0	1.5	4.9	1.6		5.79	1.47	5.5	1.5
Skillful-Clumsy	3.5	1.3	3.3	1.2		3.25	1.22	3.4	1.2
Integrated-Marginalized	3.7	1.3	3.4	1.4		3.51	1.32	3.3	1.3
Trusting-Distrusting	4.2	1.6	3.7	1.4		4.12	1.5	3.6	1.4
Non-conflicting-Conflicting*	3.8	1.4	4.0	1.3	*	3.3	1.4	3.5	1.3
Sociable-Shy	3.5	1.4	3.5	1.5		3.3	1.3	3.3	1.5
Valued-Undervalued	3.5	1.5	3.4	1.4		3.5	1.7	3.3	1.6

Source: Own development

The scores by type of aging (female or male) were reviewed and it was identified that seven perceptions presented a difference of statistical significance ( $p < .05$ ) when comparing the results according to gender, (Table 3).

Table 3. Differences by gender in the Osgood differential perception score by type of aging.

Type of aging/Perception	Mann-Whitney U	Z	P
Feminine			
Agreeable-Disagreeable	6002.000	-2.075	.038
Sexually Active-Sexually Inactive	6030.500	-2.042	.041
Confident-Distrustful	5753.000	-2.505	.012
Male			
Healthy-Unhealthy	5795.000	-2.448	.014
Efficient-Inefficient	6057.500	-1.972	.049
Protected-Unprotected*	5393.000	-3.182	.001
Trusting-Distrusting	5813.500	-2.395	.017

Source: Own development

\* In these categories the original order of the scale has been reversed for uniformity in the presentation of results.

In comparative analysis about the background of knowledge about gerontology or previous formal training, differences were found in three perceptions. The healthy-unhealthy perception presented differences for both female and male aging, with lower values between those who reported previous training versus those who did not (120.4 vs. 140.8 and 120.6 vs. 140.6,  $p = .03$ ). The other two perceptions that represented differences were tolerant-intolerant and integrated-marginalized in reference to female aging with lower values in those who reported previous training (117.2 vs. 143.5 and 119.5 vs. 141.5,  $p = .02$ ).





When reviewing the differences between those who reported regular cohabitation with an older adult and those who did not, the perception of female aging in terms of resistant-fragile stood out with a lower score reported by those who lived with older adults (125.1 vs. 148.6,  $p=.02$ ). In addition, in relation to male aging, differences were highlighted in the perception of sexually active-inactive with a higher score among those who lived with older adults (138.0 vs. 113.9,  $p=.02$ ).

## Discussion

The purpose of this study was to analyze by gender the attitudes and perceptions towards female and male aging in students of a nursing degree program. More than two-thirds of the participants were women, similar to what was found in studies carried out with nursing students, which reported that gender in the nursing career is female <sup>(14-15)</sup>. The results of the present investigation show that the majority of the study subjects showed a positive attitude towards aging, a behavior similar to publications made in other countries <sup>(8,9,16)</sup>; however, this finding differs from that of Medina-Fernandez <sup>(15)</sup> who found that just over a quarter of its population showed an acceptable disposition towards aging, where it is justified that the higher the degree of career, the attitude becomes more positive. In this research, the results on having a positive attitude towards aging may be due to habitual coexistence with an older adult, whether they are parents or grandparents <sup>(16)</sup>. In comparative analysis there is evidence <sup>(16)</sup> of differences that suggest the usefulness of prior training on gerontology in order to have a more positive view of the healthy-unhealthy, tolerant-intolerant and integrated-marginalized perceptions, in addition, regular coexistence with older adults also seems exert a positive influence on the perception of healthy-unhealthy.

The theme of sexuality differs from the previous narrative. In this sample, the participants who reported regular coexistence with older adults presented a more negative perception in this regard than those who do not have this type of coexistence. This is consistent with some research that refers to negative attitudes of young generations towards sexuality in old age <sup>(17-19)</sup>. According to Cremona et al. <sup>(19)</sup> the prejudiced view of sexuality in old age may be the result of social and political control of sexual expression that prevents



living sexuality with satisfaction, tranquility and freedom. It is considered that education can favor openness towards considering sexual activity as one more aspect of the expression of fullness that can be enjoyed in different ways during aging.

Although in a low proportion, there are students who showed negative attitudes and stereotypes towards the older adult population; these negative attitudes towards older adults in students have been attributed to a lack of knowledge and sensitivity for the care of older adults <sup>(4,20-21)</sup>. Moreover, it is argued that in students and health professionals, attitudes towards aging change to be more positive as coexistence with older people increases <sup>(15)</sup>, in particular the study by McCarthy <sup>(22)</sup> mentions that students of medicine changed the perception from positive to negative when doing internship rotations in the geriatrics department. Given the study population, which will exercise a profession in constant contact with individuals at all stages of life, this finding is something that should be considered to carry out actions where said attitude is modified, since it can be reflected in inadequate care and treatment <sup>(3-4)</sup>. In times of pandemic, finding negative attitudes in future health professionals is worrying, since older adults are considered a highly vulnerable population to the spread of Covid-19 and many of them require hospital care provided directly by nursing staff <sup>(23)</sup>.

Cultivating positive attitudes in students in the health area is an area of opportunity for university educational programs. It could be considered to carry out interventions that build positive attitudes towards the care of older adults <sup>(5)</sup>, under different theories such as constructivist or role plays <sup>(14,24)</sup> where they create optimistic experiences that increase empathy and positive attitudes in young people with a low attitude. Despite the fact that, in the studies quoted, the subjects showed positive attitudes from the baseline measurements, participation in interventions managed to increase the positive attitude after the intervention and even two months after the intervention. Therefore, similar interventions could have an impact on those students who reflected negative attitudes, to prepare more aware nursing professionals, capable of treating and caring for older adults <sup>(10)</sup>.



Regarding the perceptions towards female and male aging, the comparison analysis showed that it was the female students who perceived more negative aspects than male students, a result that was not expected to be found because women are characterized by being more understanding, motherly, tolerant and provide greater care service <sup>(4)</sup>. This aspect should be analyzed in future studies, because it is still an information in which there are no consistency in the various studies, Yang reported that the comparison by gender in terms of the perception of aging did not show significant differences <sup>(25)</sup>; additionally, Ruiz showed that women reported fewer negative attitudes than men <sup>(26)</sup>. The results of this work are limited to the characteristics of the study sample, due to the cross-sectional descriptive design it is not possible to identify the influence of factors such as progress in academic training and work experience with respect to attitudes towards aging. Negative attitudes are related to various factors such as cultural and religious; likewise, aging is associated with suffering more pathologies, physical limitations, loss of senses, among other negative characteristics <sup>(4)</sup>. Based on this argument, in this study, women perceived male aging more negatively than female aging, in this regard more studies are suggested to identify not only the perceptions and attitudes towards aging, but also the reasons for these perceptions in order to have an informed basis regarding the root of the problem. Interventions that seek to change perceptions, attitudes and stereotypes can be more effective if they are designed considering the motivations that give rise to stereotypes.

## Conclusions

The majority of the participants were women, in terms of attitudes towards aging, most of the participants showed positive attitudes. These data are relevant because the main objective of the nursing profession is to provide care in all stages of life. The positive attitude towards aging, when this stage is considered as one that has more negative stereotypes, indicates that care for this age group has to be of good quality. Regarding sexuality, greater negativity was observed in those students who live with an older adult. No statistically significant difference was observed between male versus female students regarding attitude



towards aging. Regarding female and male aging, male students showed more positive attitudes than female students.

## Conflict of interests

The authors stated that they do not have any type of conflict of interests in relation to the article.

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