

## Calidad de vida y obesidad en el personal de enfermería de una institución de salud de segundo nivel de atención

*Quality of life and obesity in nursing staff of a second-level health institution of attention*

*Qualidade de vida e obesidade na equipe de enfermagem de uma instituição de saúde do segundo nível de atenção*

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## Resumen

El objetivo de este trabajo fue determinar la relación entre el estado de peso/obesidad y la calidad de vida en una muestra del personal de enfermería que labora en la Clínica Hospital del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (ISSSTE) Chilpancingo. Se trata de un estudio transversal, analítico, en el que participaron 109 enfermeras y enfermeros; se aplicó el Cuestionario de Salud SF-36. En el análisis de datos se calculó estadística descriptiva e inferencial y se contó con el consentimiento de la institución y de los participantes. Dentro de la muestra hubo 89.9 % mujeres y 10.1 % hombres. Y en relación con el estado de peso de los participantes, se identificó 38.5 % con sobrepeso, 19.5 % con obesidad grado I, 6.4 % con obesidad grado II y 35.8 % en su peso normal. Acerca de la calidad de vida de los participantes, el promedio del índice se encontró en 48.73 (DE = 7.31), correspondiente a características de una buena de calidad de vida. En cuanto a la relación de las variables entre calidad de vida y obesidad, fue positiva y estadísticamente significativa ( $X^2 = 16.59$   $p < .05$ ). Estos resultados muestran que existe una relación entre el estado de peso/obesidad y la calidad de vida del personal de enfermería. Asimismo, se recomienda diseñar estrategias para el estado de los participantes a partir de los resultados.

**Palabras clave:** calidad de vida, obesidad, salud, trabajadores de enfermería.

## Abstract

Objective: to determine the relationship between the state of weight / obesity and the quality of life in a sample of the nursing staff that works in the Hospital Clinic of the Institute of Security and Social Services of Workers of the State of Chilpancingo. Methodology: Cross-sectional, analytical study, 109 nurses participated, the SF-36 questionnaire was applied. In the data analysis, descriptive and inferential statistics were calculated and the consent of the institution and the participants was obtained. Results: 89.9% were women and 10.1% men, in relation to the weight status of the participants, 38.5% were identified as overweight, 19.5% Obesity Grade I, 6.4% Obesity Grade II and 35.8% in their normal weight. About the quality of life of the participants, the index average was found at 48.73 (SD = 7.31),

corresponding to good quality of life characteristics. Regarding the relationship of the variables between quality of life and obesity, it was positive and statistically significant ( $X^2 = 16.59$   $p < .05$ ). Conclusion: The results show that there is a relationship between the weight / obesity status and the quality of life of the nursing staff. It is recommended to design strategies for the weight status of the participants based on the results.

**Keywords:** quality of life, obesity, health, nursing workers.

### Resumo

O objetivo deste estudo foi determinar a relação entre o estado de peso / obesidade e qualidade de vida em uma amostra de enfermeiros que trabalham no Hospital do Instituto de Segurança e Serviços Sociais Clínica Estado Trabalhadores (ISSSTE) Chilpancingo . Trata-se de um estudo transversal, analítico, no qual participaram 109 enfermeiros; o SF-36 Health Questionnaire foi aplicado. Na análise dos dados, foram calculadas estatísticas descritivas e inferenciais e obtido o consentimento da instituição e dos participantes. Dentro da amostra, havia 89,9% de mulheres e 10,1% de homens. E em relação ao peso dos participantes, 38,5% foram identificados com sobrepeso, 19,5% com obesidade grau I, 6,4% com obesidade grau II e 35,8% com peso normal. Quanto à qualidade de vida dos participantes, a média do índice foi encontrada em 48,73 (DP = 7,31), correspondendo a características de uma boa qualidade de vida. Em relação à relação das variáveis entre qualidade de vida e obesidade, foi positiva e estatisticamente significativa ( $X^2 = 16,59$   $p < 0,05$ ). Esses resultados mostram que existe relação entre o peso / obesidade e a qualidade de vida da equipe de enfermagem. Da mesma forma, recomenda-se projetar estratégias para o status dos participantes com base nos resultados.

**Palavras-chave:** qualidade de vida, obesidade, saúde, trabalhadores de enfermagem.

**Fecha recepción:** Septiembre 2017 **Fecha aceptación:** Diciembre 2017

## Introduction

One of the metabolic factors that increases the risk for noncommunicable diseases (NCDs) is overweight and obesity, which, in terms of attributable death, are the second risk factor. NCDs are the cause of 40 million deaths a year in the world, 37.5% of which correspond to people between 30 and 69 years of age (World Health Organization [WHO], 2017).

The Organization for Economic Cooperation and Development [OECD] (2017) reported that worldwide, 19.5% of adults are obese. In addition, the United States (38.2%), Mexico (32.4%), New Zealand (30.7%) and Hungary (30%) occupied the first places in this area. Specifically in Mexico, 71.28% prevalence of overweight and 37.5% of obesity were obtained, whose breakdown by gender is 37.5% women and 26.8% men.

The results of the National Survey of Health and Nutrition Midway 2016 [ENSANUT MC] (Ministry of Health, 2016) confirmed that in Mexico obesity and overweight are the main triggers of diabetes and hypertensive diseases. 1,716,985 people have died due to diabetes mellitus (823 100 cases), ischemia of the heart (699 064 cases), hypertensive diseases (182 856 cases) and obesity (11 965 cases).

For adults aged 20 years and over, the combined prevalence of overweight and obesity went from 71.2% in 2012 to 72.5% in 2016. By geographic area, it was similar: in urban areas 72.9% and rural 71.6%. In addition, the prevalences of both overweight and obesity were higher in females, as well as the prevalence of overweight was 4.5% higher in rural areas and the prevalence of obesity was 5.8% higher in urban areas (Secretaría de Salud, 2016).

In the state of Guerrero, the combined prevalence of overweight and obesity was 70% in women and 64% in men. Regarding the prevalence of obesity, it was 65% higher in women (33.6%) than in men (23.3%), while the prevalence of overweight was higher in men (40.7%) than in women (36.4%) (ENSANUT, Ministry of Health and National Institute of Public Health, 2012).

The prevalence of overweight and obesity in health personnel has been little studied in Mexico. Next, the results found in studies with related themes are described.

In a study conducted in Ensenada, Baja California, in which 107 nurses participated, 18% were identified in their study sample with overweight and 37% with obesity. Regarding the distribution by degree of obesity, 97% comprised grades I and II in similar percentage and 3% belonged to grade III (Fong, Zazueta, Fletes and Pérez, 2006).

On the other hand, Nieves, Hernández and Aguilar (2011) carried out a study in Guanajuato, where 85 health workers participated. As part of their results, they found 22% of the sample with overweight and 44% with obesity. By gender, it was greater in men, 33% with overweight and 41% with obesity, than in women, 17% with overweight and 45% with obesity. By working area, it was higher in the nursing staff, 21% with overweight and 53% with obesity.

In another study, conducted in Veracruz with 93 nurses, it was identified that among the staff observed, 25.8% were overweight and 45.2% were obese. Regarding the distribution by degree of obesity, 29% comprised grade II and 14% grade I. By gender was higher in women overweight, 29.9%, while 31.3% of men registered obesity grade II (Rosales, 2013).

Finally, Naguce, Ceballo and Álvarez (2015) conducted a study in Tabasco with 68 health workers, in which it was determined that 30% of these workers were overweight and obese. By gender, overweight was greater in women (43%) and in men, grade I obesity predominated (36%).

Regarding the quality of life related to health [HRQOL], Vinaccia and Quiceno (2012) include the definition of Patrick and Erickson (1998), who define it as the value assigned to the duration of life modified by social opportunity, the perception, functional status and deterioration caused by a disease, accident, treatment or health policy.

On the other hand, Shumaker and Naughton (1995) refer to it as the subjective evaluation of the influences of the current state of health, health care and the promotion of health on the individual's ability to achieve and maintain a global level of functioning that allows follow those activities that are important for him and that affect his general state of well-being in the dimensions of social, physical, cognitive, mobility, personal care and emotional well-being.

From the subjective point of view, Schwartzmann (2003) refers to HRQOL as the assessment made by a person, according to their own criteria, of the physical, emotional and

social state in which they are at a given time, as well as reflects the degree of satisfaction with a personal situation at the physiological level (general symptomatology, functional disability, analytical situation, sleep, sexual response), emotional (feelings of sadness, fear, insecurity, frustration) and social (work or school situation, social interactions in general, family relationships, friendships, economic level, participation in the community, leisure activities, among others).

In this regard, in the present study we worked with the dimensions proposed in the Health Questionnaire SF-36 (Alonso, Prieto and Antó, 1995), since they consider both physical and mental health. Within the proposed dimensions are: 1) physical function, defined as the degree to which lack of health limits the physical activities of daily life, such as personal care, walking, climbing stairs, catching or transporting loads, as well as make moderate and intense efforts; 2) physical role, specified as the degree to which lack of health interferes with work and other daily activities, resulting in a better performance than desired or limiting the type of activities that can be performed or the difficulty of them; 3) bodily pain, refers to the measure of intensity of the pain suffered and its effect on normal work and household activities; 4) general health, expressed as the personal assessment of the state of health, which includes the current situation and future prospects and resistance to illness; 5) vitality, described as the feeling of energy and vitality versus that of fatigue and discouragement; 6) social function, understood as the degree to which the physical or emotional problems derived from the lack of health interfere in the habitual social life; 7) emotional role, indicated as the degree to which emotional problems affect work and other daily activities, considering the reduction of time dedicated, decrease in performance and dedication to work, and 8) mental health, which refers to the assessment of general mental health, considering depression, anxiety, self-control and general well-being.

When analyzing the concept and the dimensions of the HRQoL it is perceived that it is a holistic phenomenon, that is, in the case of presenting a deficit of one of the dimensions, its totality is affected. That is why diseases have an impact on HRQoL. A couple of these is precisely overweight and obesity. This is also documented by the literature, which mentions that obesity reduces quality and life expectancy by constituting a risk factor for many chronic diseases (Fregoso, 2017).

Following this same line, in a study that was conducted with 542 workers in the health field, and whose objective was to know HRQoL as a measure of their health status, physical function (88.7) and emotional role (87.8) were identified as the dimensions that showed higher values, while those that showed the lowest results were vitality (66.1) and general health (70). By gender, women presented lower values than men, with these differences being more significant in the mental sphere (49 vs. 53.6,  $p < 0.001$ ) (Burgos et al., 2012).

In another study conducted on 256 students of the last year of the nursing course, women were identified significantly lower scores than men in the areas of functional capacity, pain, vitality, social, emotional and mental health (Souza, Paro, Pinto, Silva, 2012).

And finally, in a study that was applied to 45 medical residents, deterioration in physical capacity, psychological function and emotional function was identified (Prieto, Rodríguez, Jiménez and Guerrero, 2013).

Therefore, the objective of this research was to determine the relationship between weight / obesity status and quality of life in a sample of nurses working in the Hospital Clinic of the Institute of Security and Social Services of State Workers (ISSSTE) Chilpancingo.

## **Methodology**

It was chosen because it was a correlational study (Grove, Gray and Burns, 2016). The universe was made up of nurses from the ISSSTE Hospital Clinic in Chilpancingo, Guerrero (N = 238). The type of sampling was census and the sample size was finally formed by 109 participants, men and women of indistinct age, who agreed to participate in it. To collect the sociodemographic data, a cedula was used where the following fields were included: age, gender, marital status, area and work shift and weight and height variables were integrated.

To measure the weight and height, a scale with a calibrated statistic was used, the weight in kilograms was quantified and the height was measured in meters. To identify the weight status, the Quetelet index ( $BMI = \text{weight} \div [\text{size}]^2$ ) was first calculated and the index was subsequently classified according to the criteria of the Official Mexican Standard for the

management of obesity: normal (BMI) from 18.5 to 24.9), overweight (BMI from 25 to 26.9), obesity (BMI of 27 and above).

To evaluate the quality of life variable, the SF-36 Health Questionnaire was used in its Spanish version (Alonso et al., 1995), consisting of 36 items, which assess the positive and negative health states in the eight dimensions already mentioned: physical function (10 reagents), physical role (4 reagents), body pain (2 reagents), general health (5 reagents), vitality (4 reagents), social function (2 reagents), emotional role (3 reagents) and mental health (5 items). The response to the reagents is Likert type and dichotomous, the average time to answer was 30 minutes. An example of a question is: During the last 4 weeks, did you have to reduce the time dedicated to work or your daily activities, because of your physical health? The SF-36 Health Questionnaire, in its Spanish version, has acceptable validity for the authors: it has been used in the Mexican population.

Prior to the data collection, the protocol was approved by the postgraduate research committee of the Faculty of Nursing of the Autonomous University of Querétaro, later authorization was requested at the institution where the study was conducted and the informed consent was obtained. participants.

However, for the collection of data, each of the services was visited in turn, where nurses and nurses were asked to participate in the study. To this end, the purpose of the study was explained and the informed consent was read, and those who accepted proceeded to answer the ID and the quality of life questionnaire.

Within the ethical aspects, the study adhered to the general provisions of the Regulation of the General Health Law in the field of health research in its 2014 reform. In the analysis of the information, a database was generated in the statistical program for the social sciences, namely, version 17 of the SPSS. We proceeded to obtain the frequencies, proportions and percentages for the categorical variables; and for the numerical variables, measures of location, central tendency and variability were calculated. In addition, the Kolmogorov-Smirnov goodness-of-fit test was performed with Lilliefors correction to test the hypothesis of normality in the distribution of continuous variables. For the hypotheses, an index was constructed and a hypothesis test was performed with chi-square test.



## Results

Of the 109 participants, 89.9% were women and 10.1% men. The age of the population was from 20 to 59 years (mean = 39.57, SD = 10.5). Regarding marital status, 46.8% said they were married and 39.4% were single. Regarding the work area, 33.9% was found in the area of internal medicine, 20.2% in outpatient clinic, 19.3% in adult emergencies, 11% operating room and the rest of staff located in gynecology (7.3%), pediatrics (4.6%) and pediatric emergency department (4.6%).

Regarding the weight status of the participants, 38.5% were identified as overweight, 19.5% with obesity grade I, 6.4% with obesity grade II and 35.8% in their normal weight. When analyzing by age groups, overweight (8.3%) and obesity grade I (5.5%) were in the group of 41 to 45 years and obesity grade II (1.8%) was found in the group of 36 to 50 years old.

About the quality of life of the participants, table 1 shows the average of the index of the 109 participants, which was found in 48.73 (SD = 7.31), which indicates good characteristics of quality of life (see table 2).

**Tabla 1.** Índice de calidad de vida: datos numéricos

Variable	Valor mínimo	Valor máximo	Media	Mediana	DE
Calidad de vida	21.43	67.86	48.73	48.21	7.31

*n* = 109

Fuente: Elaboración propia

**Tabla 2.** Datos categóricos de calidad de vida

Variable	<i>f</i>	%
Calidad de vida		
Regular	1	9
Buena	70	64.2
Muy Buena	38	34.9

*n*=109

Fuente: Elaboración propia

Regarding weight status, Table 3 shows that 38.5% of participants were found in an overweight index, while 19.3% and 25.7% in some degree of obesity.

**Tabla 3.** Datos categóricos del estado de peso

Variable	<i>f</i>	%
Estado de peso		
Normal	39	35.8
Sobrepeso	42	38.5
Obesidad grado I	21	19.3
Obesidad grado II	7	6.4
		<i>n</i> = 109

Fuente: Elaboración propia

Regarding the relationship between quality of life and obesity, table 4 shows a statistically significant relationship between the variables ( $X^2 = 16.59$ ;  $p < .05$ ).

**Tabla 4.** Relación entre calidad de vida y obesidad

Estado de peso	Calidad de vida		
	Regular	Buena	Muy buena
Normal	-	24	15
Sobrepeso	-	27	15
Obesidad grado I	-	16	5
Obesidad grado II	1	3	3
$X^2 = 16.59$ ; $p < .05$			

Fuente: Elaboración propia

## Discussion

The study allowed to determine the quality of life and its relationship with the level of obesity in the nursing staff that works in the Hospital Clinic ISSSTE Chilpancingo.

The result of overweight (38.50%) and obesity (25.9%) obtained is below the national prevalence (71.28% overweight and 37.5% obesity) (OECD, 2017). On the other hand, the combined prevalence of overweight and obesity in this study (64.4%) was similar to that found at the state level (70%) (ENSANUT, Ministry of Health and National Institute of Public Health, 2012). When contrasting the results of this research with previous studies, a similar result was found with Naguce et al. (2015), who also found a prevalence of overweight and obesity in 30% of the participants. However, it was different from what was found by Rosales (2013) and Nieves et al. (2011), who reported that 71% and 66% of the participants presented overweight and obesity, respectively. Regarding the quality of life, in this study the participants obtained good and very good characteristics, results that were different from what was exposed by Souza et al. (2012) and Prieto et al. (2013), who found deterioration in the quality of life of their respondents.

In terms of quality of life and obesity, a statistically significant relationship is evident, similar to other studies, namely, that of Vinaccia, Quiceno and Remor, (2012) and that of Salazar, Martínez, Torres, Aranda and López (2016). ). According to the results obtained, obesity does not affect the perception of quality of life of the people who participated in this research.

## Conclusions

The results show that there is a relationship between the weight / obesity status and the quality of life of the nursing staff. Most of the participants showed good and very good characteristics of quality of life independent of their weight status, so it is presumed that this does not affect that in the respondents.

The results provide evidence that allows to design strategies for the weight status of the participants, where the individual development of healthy eating habits and of an adequate physical activity in the workers is promoted and that contributes to the adoption of

a healthy lifestyle in any scope of development of the person. This will have a positive impact both on their quality of life and on the prevention of diseases of great health and socioeconomic impact, such as cardiovascular and metabolic diseases, among others, always within health professionals.

Due to its characteristics, the workplace is a particularly suitable environment, where activities can be carried out to favor the improvement of lifestyles and facilitators of the adoption of healthy habits. The objectives that should be considered are the following:

1. Awareness and dissemination of the importance of the existence of healthy habits related to nutrition and healthy physical activity in the workplace.
2. Sensitize the occupational risk prevention services and health professionals of the institution regarding their role as educators on healthy eating and physical activity for workers.
3. Promote a balanced diet and the practice of healthy physical activity from the workplace.
4. To optimize and support the health promotion activities that are being developed in companies, especially those related to healthy eating and physical activity.
5. Involve social agents to promote conditions that favor healthy eating and physical activity in the workplace.

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