PSYCHOLOGICAL DISCOMFORT AND PHYSICAL ACTIVITY IN ADULTS OF PUERTO VALLARTA, MEXICO: LOCAL ANALYSIS 2021

MALESTAR PSICOLÓGICO Y ACTIVIDAD FÍSICA EN ADULTOS DE PUERTO VALLARTA, MÉXICO: ANÁLISIS LOCAL 2021

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ABSTRACT

Psychological discomfort are cognitive, emotional and behavioral manifestations of fast and short transit evolution. Objective: to analyze the prevalence of psychological discomfort in adults of Puerto Vallarta, Mexico and physical activity as a moderating factor of the discomfort. Method: Cross-sectional study with 678 cases. Kessler's K-10 psychological distress scale and WHO physical activity recommendations were used for this population group. We performed statistical analyses of sample characterization, prevalence frequencies and levels of psychological discomfort and physical activity, as well as analyzed the possible relationships between psychological discomfort and physical activity. Results: 46.1% of the population presented a high or very high level of psychological discomfort and 64.8% were active or very physically active, no correlation was found between psychological discomfort and physical activity. Conclusions: Physical activity can act as a moderating factor of psychological discomfort, in the case of this study no.

KEY WORDS: public health, mental health, health determinants.

RESUMEN

El malestar psicológico son manifestaciones cognitivas, emocionales y conductuales de tránsito breve y rápida evolución. Objetivo: analizar la prevalencia de malestar psicológico en adultos de Puerto Vallarta, México, y la actividad física como factor moderador del malestar. Método: estudio transversal con 678 casos. Se utilizó la escala de malestar psicológico K-10 de Kessler y las recomendaciones de actividad física de la OMS para este grupo poblacional. Se realizaron análisis estadísticos de caracterización de la muestra, frecuencias en la prevalencia y niveles de malestar psicológico y de actividad física, así como, se analizaron las posibles relaciones entre malestar psicológico y actividad física. Resultados: 46.1% de la población presenta un nivel alto o muy alto de malestar psicológico y 64.8% se ubicó como activa o muy activa físicamente, no se encontró correlación entre el malestar psicológico y actividad física. Conclusiones: La actividad física puede actuar como un factor moderador del malestar psicológico, en el caso de este estudio no.

PALABRAS CLAVE: salud pública, salud mental, determinantes de la salud.

INTRODUCCIÓN

Currently, mental health is one of the most relevant challenges for public health, the most recent reports show an increase in the prevalence of common mental disorders (4.5% of the total world population presents problems related to mental health), being considered common as they have a high prevalence in the population (1). Among the main representations of these mental health problems is psychological distress, which is understood as the level of stress, demoralization, discomfort and self-perceived uneasiness, which is produced by exposure to stressors for a variable time, which can generate alterations in the proper functioning of the body (2).

In relation to the prevalence of problems concerning mental health in Mexico, during 2017, the population over 12 years of age has referred feeling depressed (32.5%), studies conducted in the Mexican population highlight a higher prevalence of psychological distress in women (51. 6%), determining that they have a higher degree of vulnerability for their development, in relation to the higher prevalence of psychological disorders recorded compared to men, similarly in Argentina and Venezuela women and people over 60 years of age are reported as the population groups with the highest prevalence of psychological distress (3) (4) (5) (6).

Psychological distress is perceived as a clinical entity that refers to a set of cognitive, emotional and behavioral manifestations characterized by a short course and rapid evolution. It is a non-diagnostic construct, but of preventive value since it refers to the possible development or appearance of mental disorders or clinically significant symptomatology concentrated primarily in

depression, but encompassing symptoms such as anxiety, stress, anger, somatization, hopelessness and emotional exhaustion. Symptomatology of such discomfort may include lack of concentration, difficulty in memorizing and/or solving problems, poor study skills, poor productivity and lower academic performance, lack of autonomy, feelings of guilt, physical and emotional exhaustion, dissatisfaction, fear, insecurity, disorientation, sadness, tension, helplessness, restlessness, anguish, devaluation, and uncertainty, which are translated into a deterioration of normal functioning, presenting the most critical situations in people with emotional vulnerability, which can be expressed as psychosomatic disorders, restlessness, feeling of chest tightness, agitation, despair, loss of control, feelings of fear, loss of interest, dissatisfaction and alterations in the sleep pattern, which generates an affection in the functionality of performance in daily life (7) (2).

The causes that condition the appearance of psychological distress are multifactorial, some of them of a social nature, such as migration and living conditions, socioeconomic and labor aspects, education, social and family pressures and lack of social support. Similarly, it is noted that the main determinants of psychological distress in the population correspond to labor conditions, health services, dissatisfaction of basic needs and lack of social support. The sociocultural and economic factors of the context have a similar influence on its members, therefore, factors such as gender, age, marital status, socioeconomic level and environmental conditions affect in a similar way the mental state of people, favoring either their well-being or psychological discomfort (8) (7).

Physical activity can act as a moderating factor, since the practice of exercise can lessen psychological distress and its effects on the population, in addition they point out that the relationship increases slightly as the age of the practitioners increases, particularly benefits associated with the practice of vigorous physical activity have been observed, these are reflected in the decrease of the probability of falling into a category of very high psychological distress, as well as benefits on self-perception, depression and maintenance of cognitive functions (9) (10) (10) (11) (12).

In a review of the literature in Web of Science 196 results were found for the search key Physical activity and psychological discomfort, the first studies date back to 1991 and have become more relevant (due to the number of publications) since 2010. The countries with the highest number of publications are the United States with 43, Australia with 16 and England with 15; no publications on the Mexican context were found. Several studies on psychological distress have been developed under the analysis of populations in unfavorable or specific situations, such as university students (5) (10) (11) (12) (2), health professionals (13) (14) (15), parents of children with diseases and disorders (16) (17), in relation to the COVID-19 pandemic (18) (19) (20), victims of armed conflicts (21), caregivers (22), environment of violence (8), migrants (23) (24), among other population groups with characteristics similar

to those described above; however, few studies have been found that analyze psychological distress in the general population.

The lack of studies in the Mexican context on psychological distress and physical activity as a moderating factor, lead to the need to carry out a study with these characteristics, in this case the adult population of Puerto Vallarta, Mexico is analyzed. The objective of this study is to analyze the prevalence of psychological distress in adults in Puerto Vallarta, Mexico and physical activity as a moderating factor of distress.

MATERIAL AND METHODS

This is a cross-sectional study, a statistical disaggregation of the research Prevalence of psychological distress in Mexican adults: national survey 2021. The analytical sample included 678 valid cases, composed of Mexican adults aged 18 to 59 years, all of them living in Puerto Vallarta, Mexico. Data retrieval was carried out from May 7 to December 5, 2021 through Google forms and distributed through social networks.

The survey integrates a series of validated instruments and theoretical supports; specifically for the study presented here, the Kessler K-10 psychological distress scale adapted to Spanish (25) was used; the scale presents response options to Likert-type questions, categorized on a five-level ordinal scale: always, almost always, sometimes, almost never and never. The answer "never" is assigned a value of 1 and the answer "always" a value of 5 points. The sum of the scores has a minimum of 10 and a maximum of 50. The instrument ranges have four levels: low (10-15), moderate (16-21), high (22-29) and very high (30-50). For the analysis of physical activity levels, the physical activity recommendations of the World Health Organization (WHO) for this population group were used (26), in which at least 150 minutes per week of moderate to vigorous physical activity performed during leisure time is recommended, so three categories were established: physically inactive those who perform <150 minutes per week of moderate to vigorous physical activity performed during leisure time, physically active those who perform ≥150 to <300 minutes per week of moderate to vigorous physical activity performed during leisure time, and very physically active those who perform ≥300 minutes per week of moderate to vigorous physical activity weekly. The sociodemographic characteristics included are sex, age, marital status, socioeconomic level, schooling, main activity (study, work, household management, unemployed, retired).

With regard to the statistical analyses, the sample was first characterized on the basis of sociodemographic data on sex, marital status, socioeconomic level, schooling and main economic activity; then, the frequencies in prevalence and levels of both psychological distress and physical activity were established, and finally, the possible relationships between psychological distress and physical activity were analyzed (Pearson correlation coefficient), as well as the possible relationships between psychological distress, physical activity and socioeconomic characteristics.

All study procedures adhered to current national and international ethical standards, to the Regulations of the General Health Law on Health Research in Mexico and to the Helsinki Declaration, made at the World Medical Assembly and its latest amendment (27) (28).

RESULTS

The characteristics of the sample analyzed show that the mean age is 29.5 years; with regard to marital status, 72.7% are married; 2.8% are in the low socioeconomic level, 28.7% in the medium-low level, 63.1% in the medium level, 5.1% in the medium-high level and 0.1% in the high level; with regard to schooling, 0.4% are in primary school, 2. Finally, regarding the economic activity of the people participating in the study, 2.3% reported that they were engaged in household management, 22.4% in studying, 39.8% in working, 14.3% in household management and working, and 21.1% in studying and working. See Table 1.

Table 1. Sample characterization.

Socio-demographic characteristics	%		
	Total n=678	Women n=370	Men n=285
Marital Status			
Married	27.2	22.4	35.4
Single	72.7	77.5	64.5
Socioeconomic level			
Low	2.8	2.4	3.1
Lower-middle	28.7	26.4	32.6
Medium	63.1	65.1	59.6
Medium-high	5.1	5.9	4.2
High	0.1	0	0.3
Schooling			
Primary	0.4	0.2	0.7
Secundary	2.3	2.1	2.4
High school	19.4	21.6	18.2
Bachelor's degree	66.8	65.4	67.3
Posgraduate	10.9	10.5	11.2
Economic activity			
Home management	2.3	3.5	1.0
Study	22.4	27.5	17.1
Work	39.8	27.5	52.6
Home management and work	14.3	21.3	5.9
Study and work	21.1	20.0	23.1

*23 people reported "prefer not to answer" with respect to the sex variable, which were included in the totals, due to the size of the subset, it was decided not to analyze it as an independent sample.

Regarding the prevalence of psychological distress, 18.5% of the population reported a low level of distress, 35.2% a moderate level, 26.2% a

high level of distress and 19.9% a very high level of psychological distress, with women reporting a higher prevalence of psychological distress at high and very high levels. On the other hand, 46.0% of the population is reported as very physically active, 18.8 as active and 35.1 as physically inactive, men report lower levels of physical inactivity. See Table 2.

Table 2. Prevalence of psychological distress and level of physical activity.

Prevalence and level	%		
	Total n=678	Women n=370	Men n=285
Psychological distress			
Low	18.5	11.0	28.4
Moderate	35.2	32.7	40.0
High	26.2	31.6	18.5
Very high	19.9	24.5	12.9
Level of physical activity			
Very physically active	46.0	41.3	50.8
Physically active	18.8	18.1	19.2
Physically inactive	35.1	40.5	29.8

*23 people reported "prefer not to answer" with respect to the sex variable, which were included in the totals, due to the size of the subset, it was decided not to analyze it as an independent sample.

Regarding the results of the correlational analyses, a positive correlation, significant (0.05), but low (.080*) between the level of physical activity and the perception of economic level was identified; also, a negative correlation, significant (0.05) but low (-.093*) between the level of psychological distress and the level of studies, no correlation between physical activity and psychological distress is reported. See Table 3.

Table 3. Correlational analysis on physical activity, psychological distress and sociodemographic characteristics

	Perceived socioeconomic status	Education level	Level of physical activity	Psychological distress level
Perceived socioeconomic status	1			
Education level	-0.046	1		
Level of physical activity	0.080*	-0.011	1	
Psychological distress level	0.039	-0.093*	0.031	1

* The correlation is significant at the 0.05 level (bilateral).

DISCUSSION

The aim of the present study was to analyze the prevalence of psychological distress in the population studied. In addition, to examine the possible relationship between the practice of physical activity and psychological distress, as well as possible relationships with sociodemographic characteristics. In this regard, it was found that 46.1% of the population presented a high or very high level of psychological distress and 64.8% of the population was considered physically active or very active; on the other hand, no correlation was found between psychological distress and physical activity.

The population of Puerto Vallarta showed a higher prevalence of high levels of psychological distress (46.1%) compared to the population of Mexico City (31.6%) (29). Regarding the prevalence of the effect, the results obtained indicate higher levels of manifest psychological distress in women, results that coincide with previous studies, where a higher prevalence of psychological distress in women is highlighted (5) (6) (3). Regarding physical activity levels, the adult population of Puerto Vallarta reported being significantly more active (64.8%) than the national population (38.9%) (30). In addition, the results obtained reveal that, in relation to physical activity, the population with a higher level of studies is more active, being men those who present a higher level of physical activity in relation to women, the results are similar to those obtained in the Argentinean population, where it was determined that men tend to perform physical exercise more frequently than women (6).

No coincidence was identified with the results of other similar investigations in which physical activity showed a moderating effect on the level of psychological discomfort and other mental health affectations (6) (9) (31). Even the results are discrepant to those reported by the older adult population of Puerto Vallarta, in which physical activity was identified as a factor of reduction in the experience of psychological distress (32).

Similarly, it was found that the level of education may be a variable associated with psychological distress, since it was observed that the lower the educational level, the greater the psychological distress, and the higher the educational level, the lower the level of psychological distress in the population studied. This data coincides with other studies (Peruvian women) where higher levels of psychological distress are reported in women with basic education compared to women with university studies (7).

On the other hand, regarding the level of physical activity and the perception of socioeconomic level, the results showed that both variables have a positive relationship, that is, the higher the economic level, the higher the level of physical activity or, on the contrary, the lower the economic level, the lower the physical activity. Results that contrast with those reported in the Mexican population itself in 2016, where it is observed that within the Mexican population there are no differences with respect to physical activity levels in relation to socioeconomic level (33).

On the other hand, this analysis allows locating the prevalence of psychological distress in the adult population of the locality, which generates the conditions for future deeper and more thorough investigations, which allow identifying the type, frequency and intensity of physical activity that allows it to be a moderating factor of psychological distress.

LIMITATIONS AND FUTURE PATHS

The study has some limitations: on the one hand, the complications inherent to a non-probabilistic sample and the potential burden of subjectivity in the responses of the participants. On the other hand, the study measured exclusively the practice of physical activity performed during leisure time without considering the intensity of the same, this could be considered as a determinant for not identifying physical activity as a moderating factor of psychological distress in this case, this is based on the fact that other studies have identified a negative correlation between high intensity exercise and psychological distress, and also, better effects are observed in the older adult population.

It is intended to continue in the future with the analysis of psychological distress and physical activity as a moderating factor, both locally and in national research.

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