REVISTA DE SANIDAD MILITAR
MÉXICO
ÓRGANO DE DIFUSIÓN DEL SERVICIO DE SANIDAD MILITAR
Y DEL COLEGIO NACIONAL DE MÉDICOS MILITARES

Artículo de investigación

Vol. 74 No. 5 Septiembre-Octubre 2020

INCIDENCE OF GENERALIZED ANXIETY DISORDER IN A HEALTH STAFF SAMPLE EVALUATED WITH A DIGITAL INSTRUMENT

INCIDENCIA DE TRASTORNO DE ANSIEDAD GENERALIZADA EN UNA MUESTRA DE PERSONAL DE SALUD EVALUADA MEDIANTE UN INSTRUMENTO DIGITAL

Adriana Martínez-Cuazitl M.D., Sc.D.,[1]

2LT Daniel Emanuel González-Meléndez M.D.,[2]
2LT Angélica Nava-Pedraza M.D.,[2]
2LT Daniel Gallegos-Díaz M.D.,[2]
2LT Abiel Adolfo Segura-Olivares M.D.,[2]
2LT Frida Paulina Partida-Zaragoza M.D.,[2]
2LT Oscar Eduardo Castro-Flores M.D.,[2]
2LT Juan Carlos Vega-Vargas M.D.,[2]
2LT Guadalupe Flores-Oviedo M.D.,[2]
2LT Marbella del Socorro Butrón-Candila M.D.,[2]
2LT Yolanda Guadalupe Damián-del Ángel M.D.,[2]
2LT Janeth Ramírez-Beltrán M.D.,[2]
MAJ Damián Pantoja-Villagómez M.D.,[1]
LTC Iván Noé Martínez-Salazar M.D., M.A., Ph.D.[1]

[1]Hospital Central Militar, Ciudad de México, México
[2]SEscuela Medico Militar, Ciudad de México, México

Corresponding author: Ivan Noe Martínez-Salazar. Periférico Blvrd Manuel Ávila Camacho S/N, Miguel Hidalgo, Ciudad de México, México C.P. 11200.
Email: drivanmartinez@icloud.com

ABSTRACT

This research was carried out in order to ascertain the incidence of Generalized Anxiety Disorder (GAD) in a health staff sample of the Mexican Army and Air Force by means of a digital instrument presenting the GADI scale. The data obtained were analyzed in SPSS v27, obtaining an incidence of 27.51%, this being higher than the prevalence reported for the general global (3 to 8%) and Mexican (3%) population, though similar to the prevalence of anxiety in military populations of Latin American countries: Ecuador (28.2%), Colombia (more than a third of the military personnel under 55 years of age) and Mexico (45.77% in a previous study).

Keywords: Generalized Anxiety Disorder (GAD); Generalized Anxiety Disorder Inventory (GADI); military population; healthcare personnel; digital applications; survey; qualitative approach; exploratory scope; Likert-type scale; cognitive symptoms; somatic symptoms; sleep disturbances; increased incidence of GAD.

RESUMEN

Esta investigación se llevó acabo con la intención de hallar la incidencia de Trastorno de Ansiedad Generalizada (TAG) en una muestra de personal de salud del Ejército y Fuerza Aérea Mexicanos por medio de un instrumento digital usando la escala Inventario de Trastorno de Ansiedad Generalizada (GADI). Los datos obtenidos fueron analizados mediante SPSS v27 y se obtuvo una incidencia del 27.51%; lo cual es mayor que la prevalencia reportada para la población general a nivel mundial (3-8%) y en México (3%), pero similar a la prevalencia de ansiedad en poblaciones militares de países latinoamericanos: Ecuador (28.2%), Colombia (más de una tercera parte del personal militar menor de 55 años) y México (45.77% en un estudio previo).

Palabras clave: Trastorno de Ansiedad Generalizada (TAG); Inventario de Trastorno de Ansiedad Generalizada (GADI); población militar; personal sanitario; aplicaciones digitales; encuesta; enfoque cualitativo; alcance exploratorio; escala de tipo Likert; síntomas cognitivos; síntomas somáticos; alteraciones del sueño; aumento en alta incidencia de TAG.

INTRODUCTION

Anxiety disorders are some of the most frequent mental illnesses in the world, with a lifetime prevalence for the general population from 13.6 to 28.8%, and a prevalence from 5.56 to 19.3% over the last 12 months.(1) Mexico is one of the countries with the highest prevalence of anxiety disorders, since 14.3% of the citizens experiences them, being the most common mental illness in the country. Out of these disorders, 50% occurred before the age of 25.(2) One of the most common anxiety disorders is Generalized Anxiety Disorder (GAD), which is one of the main mental disorders that lead to work disability and low quality of life for patients who suffer from it.(3) The annual worldwide prevalence of this disorder ranges between 3 and 8%,(4) in Mexico it is 3% for the general population.(5) Owing to the high workload and stress the military population undergoes, this disorder is even more frequent in these populations around the world. In Ecuador, a frequency for anxiety of 28.2% was found in military intelligence soldiers;(6) in Mexico, 45.77% for graduate students from the Military Graduate School of Health;(7) while in Colombia, more than a third of the soldiers under the age of 55 has reported feelings of anxiety.(8) According to DSM-5, the following criteria are needed for the diagnosis of TAG:

1. It is difficult for the individual to control worry.
2. Anxiety and worry are associated with three (or more) of the following six symptoms and at least some symptoms have been present for more days than they have been absent over the last six months (NB: in children only one item is required):
   a. Restlessness or feelings of being trapped or on edge
   b. Easily fatigued
   c. Difficulty concentrating or going blank
   d. Irritability
   e. Muscle tension
   f. Sleeping problems (difficulty falling asleep or sleep continuously, or else restless and unsatisfactory sleep).
3. Anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
4. Alterations cannot be attributed to the physiological effects of a substance or to another medical condition.
5. The disturbance is not better explained by another mental disorder.(9)

In recent years, a new scale has been implemented to measure the presence of symptoms and the severity of GAD: the Generalized Anxiety Disorder Inventory. It is a self-applied instrument composed of 22 items, with a global score that ranges from 0 to 88 points,(10) with a score of $\alpha = 0.93$.(11) Being a self-applied instrument, it may be answered on digital applications. Various articles have studied and demonstrated the advantages of using digital applications to assess mental health as they are easy to access, interesting for the users and require low financial investment.(12) One study showed that 67% of psychiatric patients in a Boston clinic was interested in using digital applications to monitor their disease.(13) In like manner, other studies concluded that the use of digital applications to assess mental health has the potential to reduce depression, anxiety and stress,(14,15) as well as possible future care preventing the aggravation of symptoms.(16) Apps and mobile devices may serve as conduits for timely interventions anytime and virtually anywhere.(17)

Based on the foregoing, this article focuses on the evaluation of the incidence of GAD in a health staff sample of the Central Military Hospital in Mexico City through a digital instrument presented over Survey Monkey®.

MATERIAL AND METHODS

The study has a theoretical scientific orientation; it has a qualitative approach and an exploratory scope; it has a non-experimental, temporally transversal, descriptive survey type design. A total of 1517 individuals of legal age working in the health care area of the Military Central Hospital of Mexico, both civilian and military with different schooling levels, were asked to carry out the survey after providing their digital consent. Out these individuals, 95 did not answer the survey, so the study universe was 1421 people (4 undergraduate interns, 9 general practitioners, 32 resident physicians, 199 specialist doctors, 486 general nurses, 116 specialist nurses, 246 civilians, 217 cleaning/kitchen staff and 208 administrative personnel).

Inclusion criteria:
- Every person has to work at the Military Central Hospital
- To be of legal age

Exclusion criteria:
- None

GADI was applied through the Survey Monkey ® digital platform to assess GAD in the entire study universe; this instrument consisted of 22 items to be answered on a Likert-type scale from 0 to 4, with a global score range from 0 to 88, which measure 3 GAD factors, namely: cognitive, somatic and sleep disturbance symptoms. The results of the survey were collected in an Excel® spreadsheet, obtaining the global score for each user and then analyzed in SPSS v27, Statistical Package for Social Sciences; through an analysis of frequencies and percentiles, GAD incidence was calculated. Respondents who fell in the 75th percentile were considered at risk of experiencing GAD, on the basis of the work carried out by Tamsin Wright on the validation of GADI at the University of Bristol.(17)

RESULTS

The following results were obtained after the application of the GADI scale through Survey Monkey®: as previously mentioned, the sample comprised 1421 people, the average age was 30-39 years (42.1%), with a majority participation of women (64.7%), as compared to men (35.3%).

The frequencies of the results from the GADI scale are shown in

Figure 1. Of the 1421 results, the one with the highest frequency was 0 points (46.65%). Using a percentile analysis, the results yielded a 25th percentile on score 0; a median on score 1; and a 75th percentile from 4 points onwards. Therefore, 391 people were at risk of suffering GAD, the incidence of which was 27.51%. The results of this analysis are shown in Figure 2.

The results produced an arithmetic mean of 4 with a standard deviation of ± 8.31, plus a standard error of the sample value of 0.22; that is to say, our results indicate a more accurate estimation of the mean of the population, our confidence interval is high, and the results are more reliable.

Figure 1. Bar graph showing the frequencies of the global scores obtained by the 1421 respondents in GADI.

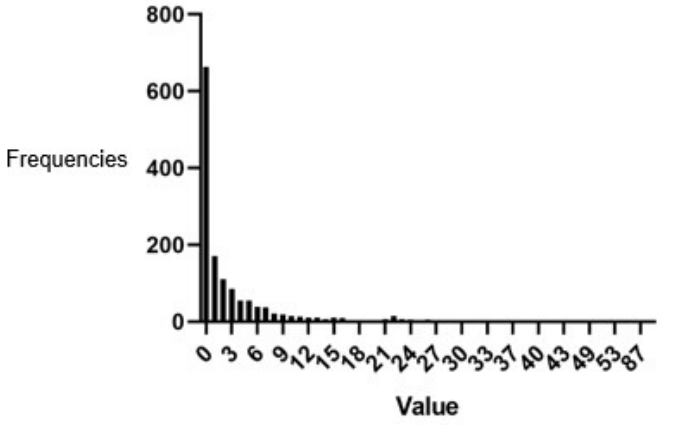
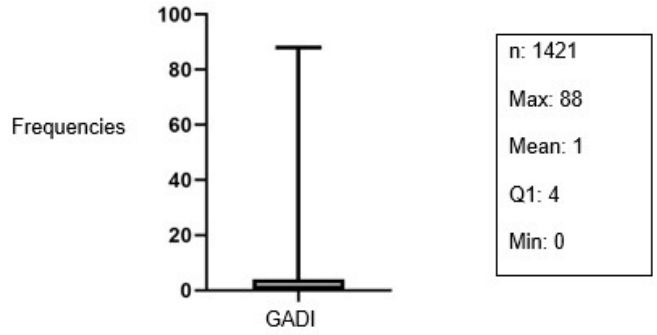


Figure 2. Box-and-whisker plot showing the percentiles of the GADI scale.



DISCUSSION

Regarding the incidence of GAD reported in our study (27.51%), the results were as expected, since it is higher than that reported in the literature for the general population; an annual global prevalence from 3 to 8%, while in Mexico it is 3%.(1,4) However, it is lower than the prevalence of anxiety in various military populations in Latin America, for instance: 28.2% in Ecuador,(5) more than a third in Colombia,(7) and 45.77% in previous reports for Mexico.(6)

The reason to carry out this study is because the workload in the military institution has been increasing in recent years, for example, the Ministry of National Defense is currently participating in a number of civilian tasks.(18)

In conclusion, the incidence of GAD in this sample of personnel working in the Armed Institute is greater than that reported for the general global population and for Mexico, while it is very similar between military populations in Latin America. It is important to take these data into account, as they could be affecting the quality of life and mental health of military personnel, probably decreasing their efficiency in the missions appointed by the High Command.

ACKNOWLEDGMENTS

This research was developed as a project of "Research line on Mental Health of the Mexican Army and Air Force", funded by program "A022 investigación y desarrollo militar en coordinación con universidades públicas, instituciones públicas de educación superior y/o demás centros públicos de investigación superior" [A002 military research and development in coordination with public universities, public higher education institutions and/or public advanced research centers].

Conflict of Interest:
None

Funding source:
None

REFERENCES

1. López de la Parra M del PM, Mendieta Cabrera D, Muñoz Suarez MA, Díaz Anzaldúa A, Cortés Sotres JF. Calidad de vida y discapacidad en el trastorno de ansiedad generalizada. Salud mental. 2014;37(6):509–16.
2. Senado de la República. Coordinación de Comunicación Social, Senado de la República. 2017. Available from: http://comunicacion.senado.gob.mx/ el link de la referencia está roto
3. Bados López A. Trastorno de Ansiedad Generalizada. España: Universidad de Barcelona; 2005.
4. Boletín de la ANMM. El trastorno de ansiedad generalizada. Revista de la Facultad de Medicina (México). 2013;56(4):53–
5. Moreno-Moreno DSM. Prevalencia de depresión en los aspirantes a soldados de Inteligencia Militar. Rev Fac Cien Med (Quito). 2008;33(2):24–8.
6. Vásquez CV, Ríos JRM. Prevalencia de estrés, ansiedad y depresión en estudiantes de postgrado. Rev Neurol Neurocir Psiquiat. 2017;42(1–4):7–12.
7. Chimunja Chicue L, Fuentes Alban SC, Ruiz Urbano EM, Castrillón Paz H. Enfermedad mental y factores asociados en oficiales del Ejército Nacional de Colombia en conflicto armado. Index de Enfermería. 2018;27(4):211–5.
8. Asociación Americana de Psiquiatría. Guía de consulta de los criterios diagnósticos del DSM 5. 5th ed. Washington, D.C: Asociación Americana de Psiquiatría; 2013.
9. Argyropoulos S, Ploubidis G, Wright T, Palm M, Hood S, Nash J, et al. Development and validation of the Generalized Anxiety Disorder Inventory (GADI). J Psychopharmacol. 2007;21(2):145–52. doi: 10.1177/0269881107069944
10. Henderson LC, Antony MM, Koerner N. Psychometric properties of the Generalized Anxiety Disorder Inventory in a Canadian sample. J Psychopharmacol. 2014;28(5):440–8. doi: 10.1177/0269881114525672
11. Arenas-Castañeda PE, Aroca Bisquert F, Martinez-Nicolas I, Castillo Espíndola LA, Barahona I, Maya-Hernández C, et al. Universal mental health screening with a focus on suicidal behaviour using smartphones in a Mexican rural community: protocol for the SMART-SCREEN population-based survey. BMJ Open. 2020;10(7):e035041. doi: 10.1136/bmjopen-2019-035041
12. Torous J, Chan SR, Yee-Marie Tan S, Behrens J, Mathew I, Conrad EJ, et al. Patient Smartphone Ownership and Interest in Mobile Apps to Monitor Symptoms of Mental Health Conditions: A Survey in Four Geographically Distinct Psychiatric Clinics. JMIR Ment Health. 2014;1(1):e5. doi: 10.2196/mental.4004
13. Donker T, Petrie K, Proudfoot J, Clarke J, Birch M-R, Christensen H. Smartphones for smarter delivery of mental health programs: a systematic review. J Med Internet Res. 2013;15(11):e247. doi: 10.2196/jmir.2791
14. Kauer SD, Reid SC, Crooke AHD, Khor A, Hearps SJC, Jorm AF, et al. Self-monitoring Using Mobile Phones in the Early Stages of Adolescent Depression: Randomized Controlled Trial. J Med Internet Res. 2012;14(3). doi: 10.2196/jmir.1858
15. Morris ME, Kathawala Q, Leen TK, Gorenstein EE, Guilak F, Labhard M, et al. Mobile therapy: case study evaluations of a cell phone application for emotional self-awareness. J Med Internet Res. 2010;12(2):e10. doi: 10.2196/jmir.1371
16. Proudfoot J. The future is in our hands: the role of mobile phones in the prevention and management of mental disorders. Aust N Z J Psychiatry. 2013;47(2):111–3. doi: 10.1177/0004867412471441
17. Wright T. The development and validation of the Generalised Anxiety Disorder Inventory. Londres: University of Bristol; 2001. 277 p.
18. Ortíz A. AMLO da 13 tareas civiles a militares. El Universal. Edición Nación. 2020; Available from: https://www.eluniversal.com.mx/nacion/amlo-da-13-tareas-civiles-militares.