



Received: 15 March, 2023
Accepted: 01 August, 2023
Published: 02 August, 2023

*Corresponding author: Marina del Rocío Ramírez Zhindón, Teacher, Psychology, Private Technical University of Loja, Ecuador, Tel: +593992850886; E-mail: mrramirez@utpl.edu.ec

ORCID: <https://orcid.org/0000-0002-9328-1707>

Copyright License: © 2023 Ramírez Zhindón MDR, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

<https://www.peertechzpublications.org>



Research Article

Prevalence of anxiety and depression in ecuadorian adolescents

Marina del Rocío Ramírez Zhindón*, Angel Ricardo Ramón Herrera and David Mauricio Ortega Jimenez

Private Technical University of Loja, Ecuador

Summary

Objective: To determine the prevalence and incidence of anxiety disorders and depression with loneliness in a sample of adolescents.

Material and methodology: Quantitative, correlational, cross-sectional study including 330 Ecuadorian adolescents selected by non-probabilistic purposive sampling. The Ad Hoc Questionnaire, the Depression, Anxiety, and Stress Scale (DASS-21), and the UCLA Loneliness Scale were used for data collection.

Results: Of the 330 adolescents, 65.5% were male, and the mean age was 16.8 years. Sixty, 60% are in their third year of high school and 39.4% are in their second year. Most of them live in the province of Pichincha 36.1%. In anxiety they present an average of 6.4 and in depression of 5.7; they have an average of 42 in loneliness. There is a positive correlation between anxiety, depression and loneliness. Finally, females have higher levels of depression.

Conclusion: Adolescents do not present anxiety or depression disorders, however, they present high levels of loneliness. There is a positive correlation between anxiety, depression, and loneliness, that is, the higher the levels of loneliness, the higher the probability that adolescents present anxiety or depression. Likewise, there is evidence of higher levels of depression in females.

Introduction

Adolescents constitute an important population group given the physical, cognitive and psychosocial changes that occur at this stage, therefore, it is a stage of significant developmental transitions, the same that comes with new opportunities, however, also with risks such as accidents, violence, family problems, delinquency, risky sexual behaviors, drug use, pregnancies [1,2], and mental disorders (impulse control and behavioral, developmental, depressive, personality, stress and anxiety disorders) [3-6]. In the adolescent development process, peer rejection and the belief in a bad social situation within the group influence feelings of loneliness [7].

For its part, anxiety is a physiological and innate reaction characterized by feelings of tension and thoughts of worry, generating nervousness, restlessness, muscle tension, cautious or avoidant behaviors, headaches, tremors, sweating, tachycardia, epigastric discomfort, vertigo, dry mouth [8,9], in

addition, high levels can decrease academic performance and professionalism [10]; added to this, it can become pathology and derive in mental health problems, such as low self-esteem and depression [11,12]. In other words, it is associated with a poor quality of life that affects overall health (physical, mental, social, and functional health) [13].

In addition, depression is a mood disorder of multifactorial origin, characterized by pathological sadness, feelings of unhappiness, negative perceptions about the future, helplessness in the face of life, and guilt, in addition, it may be accompanied by anxiety, generating physical, psychological and cognitive symptoms [8,14]. Likewise, it is related to high levels of distress [15], and suicidal ideation [16]. Similarly, it affects the ability to perform tasks, work, family, and social relationships, although, the greatest risk is suicide [17,18].

Coupled with the situation, anxiety, and depression are significantly correlated with socioeconomic status, gender, and



age in adolescence [19,20]. They have high comorbidity with substance abuse [21] with behavioral, neurodevelopmental, mood, and psychotic disorders; likewise, they are related to anti-academic behaviors, feelings of loneliness and reduced empathy and ethics, generating negative and lasting impact, leading to cognitive, behavioral and social conditions [10-12,22].

Similarly, anxiety and depression are a leading cause of illness and disability among adolescents, approximately 3.6% of adolescents aged 10 to 14 years and 4.6% aged 15 to 19 years suffer from some anxiety disorder; similarly, about 1.1% of adolescents aged 10 to 14 years and 2.8% aged 15 to 19 years suffer from depression; moreover, in the age group 15 to 29 years, suicide is the fourth leading cause of death [23,24]. However, depression and anxiety affect women more than men [3,10,25-30]. Finally, they are linked to elevated levels of loneliness, i.e., the higher the levels of loneliness the higher the levels of anxiety and depression [31].

In this regard, loneliness is characterized by subjective feelings of lacking a social network of peers [32], and that, being categorized as a negative emotion can lead to different psychological disorders (depression, anxiety, stress) and behavioral problems [33-35]. In adolescence, loneliness is associated with high levels of depression, anxiety, and stress [31,36-38], and with risk of hospitalization for self-harm [39]. The aim of this study was to determine the prevalence and incidence of anxiety disorders and depression with loneliness in a sample of adolescents.

Methodology and material

A quantitative, correlational, cross-sectional study involving Ecuadorian adolescents. An Ad Hoc Questionnaire was used to collect sociodemographic data. Anxiety and depression levels were measured through the Depression, Anxiety, and Stress Scale (DASS-21)-Chilean version, with scores ranging from 0 to 21 points [40,41]. Finally, for loneliness, the UCLA Loneliness Scale - Spanish version was used, the score ranges from 20 to 80, where a higher score is related to a higher degree of loneliness [42,43].

Likewise, the research had ethical aspects, such as voluntary participation, confidentiality, informed consent and assent, and responsible and anonymous handling of data. For the selection of the sample, inclusion criteria were used: signing the informed consent and/or assent, age between 15 and 18 years, being enrolled in an educational institution and attending it in the morning; and exclusion criteria: not accepting participation in this study, age lower or higher than requested, not having signed the informed consent and/or assent, not having filled out the instrument in its entirety, not being in the institution (illness), being enrolled in the evening.

For the participant recruitment process, an invitation was sent through the educational institutions describing the objectives. Subsequently, with the authorization of the institutions, a meeting was held with the parents to explain the scope of the research and to request informed consent, and

then, it was socialized with the students and free and voluntary participation was required. The STROBE guidelines were not followed in this study, since the research protocol was used under the regulations established by the internal research committee and the Helsinki Declaration.

The sample was selected by non-probabilistic purposive accessibility-accidental sampling; that is, according to the objectives and characteristics of the research. It consisted of 330 adolescents, 216 (65.5%) were males and 114 (34.5%) were females, the mean age was 16.8 years. As for the year of education, 60.6% were in their third year of high school and 39.4% in their second year. Most of the participants live in the province of Pichincha 36.1%, followed by Guayas at 11.2%, and a lower percentage in other provinces.

Statistical analysis

The Statistical Package for Social Sciences (SPSS) version 24 was used for data analysis. A descriptive and correlational analysis was performed between the variables, which are represented as Mean \pm SD. In addition, means of central tendency and Pearson's correlation were used for bivariate statistics.

Results

Tables (1-5)

Table 1: Population by province.

Provincia	N	Porcent
Santo Domingo	27	8.2
Loja	8	2.4
Los Ríos	15	4.5
Orellana	14	4.2
Sucumbíos	16	4.8
Zamora Chinchipe	15	4.5
Pichincha	119	36.1
El Oro	10	3
Azuay	26	7.9
Cañar	14	4.2
Carchi	8	2.4
Esmeraldas	15	4.5
Guayas	37	11.2
Imbabura	6	1.8

Note: N = number of participants.

In terms of place of residence, the majority are located in the provinces of Pichincha 36.1%, Guayas 11.2%, Santo Domingo 8.2%, and Azuay 7.9%.

Table 2: Anxiety and depression in adolescents.

	N	Mínimum	Maximum	Mean	Standard deviation
Anxiety	330	0	20	6.4	4.9
Depresión	330	0	21	5.7	4.6

Note: N = number of participants

In adolescents, a mean of 6.4 (SD = 4.9) is evident in anxiety; in depression, the mean was 5.7 (SD = 4.6). That is, the means are below the normal threshold.

**Table 3:** Loneliness in adolescents.

	N	Mínimum	Maximum	Mean	Standard deviation
Loneliness	330	1	62	42	7.6

Note: N = number of participants

Regarding the perception of loneliness in adolescents, a mean of 42 (SD = 7.6) was found, with a maximum range of 62 and a minimum of 1.

Table 4: Correlation between depression, anxiety, and loneliness.

	Loneliness		
	r	p	n
Depresión	.204**	.000	330
Anxiety	.217**	.000	330

*. Correlation is significant at the 0.05 level (bilateral).

** Correlation is significant at the 0.01 level (bilateral).

Note: r = correlation; p = significance; n = number of participants.

As for the relationship between loneliness and depression, a significant correlation of $r(330) = .204, p = .000$ is evident; likewise with anxiety $r(330) = -.217, p = .000$.

Table 5: Gender differences in mental health.

Mental Health	Men (n = 216)	Women (n = 114)	t	p
	M ± SD // % (n)	M ± SD // % (n)		
Depresión	5.4 ± 4.5	5.9 ± 4.7	-1.14	0.015
Anxiety	5.7 ± 4.4	6.7 ± 4.9	-2.44	0.512

Note: n = number of participants; M = mean; SD = standard deviation; t = statistical value; p = significance.

When analyzing the relationship between gender and mental health, men had a mean stress score of 6.8 (SD = 4.3) and women 7.7 (SD = 4.9), finding statistically significant differences $t(-2.03) p = 0.042$. As for depression, men obtained a mean of 5.4 (SD = 4.5) and women 5.9 (SD = 4.7), showing significant differences $t(-1.14) p = 0.015$. However, in anxiety, men obtained a mean of 5.7 (SD = 4.4) and women 6.7 (SD = 4.9), indicating that there were no significant differences $t(-2.44) p = 0.512$.

Discussion

In adolescence, depression and anxiety are one of the main disorders that interfere with physical and mental development; likewise, loneliness, being a negative feeling, is associated with anxiety and depression; therefore, it is important to identify the relationship between these variables, in order to implement effective interventions; taking into account that suicide is one of the main causes of death in adolescence [23,24,31].

The mean for anxiety was 6.4 and for depression 5.7, which is below the normal threshold, that is, indicating absence of disorder, results similar to those found by Coker, et al. [44]; Ediz, et al. [45]; Fawzy and Hamed [46]; Gaibor-González and Moreta-Herrera [47]; Le, et al. [48], where the means for anxiety and depression fluctuate between 3 and 9, indicating absence of disorder. In itself, low scores are associated with good family relationship, since maintaining healthy family relationships are a protective factor against adversities [49]. In addition, adolescents with age-characteristic problems are able to find solutions to them because they possess adequate functioning in relationships with others and in internal attitudes such as mastery and personal growth [50,51].

Regarding the loneliness variable, a significant score of 42 is evident, that is, values above the normal mean, something similar occurs in the studies of Bajaj and Kaur [52]; Eriş and Barut [53]; Fauziyyah and Ampuni [54]; Gao, et al. [55]; Kilinç, et al. [56]; Kundu, et al. [37]; Mamun, et al. [57]; Varghese and Pistole [58] where the means are between 40 and 49. The period of adolescence presents continuous changes in roles, relationships, and social expectations that can sometimes give way to a negative or low perception of social support, which translates to feelings of loneliness [38,59].

Concerning the relationship between anxiety, depression, and perception of loneliness, there is a significant positive correlation, therefore, the higher the levels of loneliness, the higher the levels of anxiety and depression; that is, loneliness represents a predictor that can aggravate or induce symptoms of anxiety and/or depression [27,37]; Majd, et al. [59]; Matthews, et al. [60]; Moeller and Seehuus [61].

In relation to gender and mental health in adolescents, significant differences have been found, with females having higher depression scores, the same is true in the research of Bermudez [3]; Ediz, et al. [45]; Fawzy and Hamed [46]; Hamaideh [62]; Kumar and Akoijam (2017); Kumar, et al. [63]; Le, et al. [48]; Sandalia, et al. [64], where it is evident that women are the most affected. However, in the levels of anxiety, no significant differences were found between men and women, these results are in relation to those found by Cheung, et al. [65]; Damásio, et al. [66]; Fawaz and Samaha [67]; Sánchez-Aguilar, et al. [68]; Van Zyl, et al. [69]; Yadav, et al. [70].

Conclusion

65.5% are male, the mean age is 16.8, and most of them are living in the province of Pichincha. The students score below the normal threshold for anxiety and depression, which indicates the absence of these disorders, therefore, they have good mental health, however, they have a score of 42 in loneliness, that is, a high level. The correlation between anxiety, depression, and loneliness is positive, that is, the higher the levels of loneliness, the higher the levels of anxiety and depression. Finally, women had higher depression scores than men; however, no significant differences were found in the levels of anxiety.

References

- Güemes-Hidalgo M, González-Fierro M, Hidalgo M. (2017) Development during adolescence. Physical, psychological and social aspects. *Comprehensive Pediatrics*. 21(4): 233–244. https://www.pediatrintegral.es/wpcontent/uploads/2017/06/Pediatria-Integral-XXI-4_WEB.pdf#page=8.
- Papalia D, Martorell G. *Human development*. McGraw-Hill. 2020.
- Bermúdez V. Anxiety, depression, stress and self-esteem in adolescence. relationship, implications and consequences in private education. *Cuestiones Pedagógicas*. 2018; (26): 37-52. <http://dx.doi.org/10.12795/CP.2017.i26.03>.
- Fariña R, Caballero D, Morán F, Silvero J, Suárez R, Weberhofer J, Arce A. Epidemiology of mental disorders in children and adolescents: a study from the Department of Child and Adolescent Psychiatry of the Hospital de Clínicas, National University of Asunción, Paraguay. *Clinical and Social Medicine*. 2017;



- 1(3): 192-200. <https://medicinaclinicaysocial.org/index.php/MCS/article/view/36>.
5. Olivari C, Mellado C. Recognition of mental health disorders in adolescent students in Chile: a descriptive study. *Medwave*. 2019 Apr 26;19(3):e7617. Spanish, English. doi: 10.5867/medwave.2019.03.7617. PMID: 31158123.
 6. Ren Y, Ji B. Correlation Between Perceived Social Support and Loneliness Among Chinese Adolescents: Mediating Effects of Psychological Capital. *Psychiatr Danub*. 2019 Dec;31(4):421-428. doi: 10.24869/psyd.2019.421. PMID: 31698398.
 7. Gallardo LO, Martín-Albo J, Barrasa A. What Leads to Loneliness? An Integrative Model of Social, Motivational, and Emotional Approaches in Adolescents. *J Res Adolesc*. 2018 Dec;28(4):839-857. doi: 10.1111/jora.12369. Epub 2018 Jan 9. PMID: 29315958.
 8. Ferri F. *Ferri's Clinical Advisor 2020 E-Book: 5 Books in 1*. 2020; Elsevier. <https://books.google.com.ec/books?id=YxWbDwAAQBAJ&printsec=frontcover&hl=es#v=onepage&q&f=false>.
 9. Moreno P. Learning from anxiety: the wisdom of emotions. Desclée de Brouwer. <https://elibro.net/es/ereader/bibliotecaupl/127699?page=43>.
 10. Macauley K, Plummer L, Bemis C, Brock G, Larson C, Spangler J. Prevalence and predictors of anxiety in healthcare professions students. *Health Professions Education*. 2018; 4(3): 176-185. <https://doi.org/10.1016/j.hpe.2018.01.001>.
 11. Bhatia M, Goyal A. Anxiety disorders in children and adolescents: Need for early detection. *Journal of postgraduate medicine*. 2018; 64(2): 75-76. https://doi.org/10.4103/jpgm.JPGM_65_18.
 12. Mohammadi MR, Ahmadi N, Yazdi FR, Khaleghi A, Mostafavi SA, et al. Prevalence, comorbidity and predictors of anxiety disorders among children and adolescents. *Asian J Psychiatr*. 2020 Oct;53:102059. doi: 10.1016/j.ajp.2020.102059. Epub 2020 May 16. PMID: 32512529.
 13. Raknes S, Pallesen S, Himle JA, Bjaastad JF, Wergeland GJ, Hoffart A, Dyregrov K, Håland ÅT, Haugland BSM. Quality of life in anxious adolescents. *Child Adolesc Psychiatry Ment Health*. 2017 Jul 20;11:33. doi: 10.1186/s13034-017-0173-4. PMID: 28814971; PMCID: PMC5517841.
 14. Tena E, Chávez K. *Depression: manual of group intervention in social skills*.
 15. The modern handbook. 2018. <https://elibro.net/es/ereader/bibliotecaupl/39791?page=97>.
 16. American Psychological Association (2017) *Overcoming depression. How psychologists help people with depressive disorders*. <https://www.apa.org/centrodeapoyo/trastornos-depresivos>.
 17. Tabares, A., Núñez, C., Osorio, M., & Aguirre, A. (2020). Suicidal Risk and Ideation and its Relationship with Impulsivity and Depression in School Adolescents. *Iberoamerican Journal of Diagnosis and Assessment - and Psychological Assessment*. 1(54): 147-163. <https://doi.org/10.21865/RIDEP54.1.12>.
 18. Chang EC, Chang OD, Lucas AG, Li M, Beavan CB, Eisner RS, McManamon BM, Rodríguez NS, Katamanin OM, Bourke EC, de la Fuente A, Cardeñoso O, Wu K, Yu EA, Jeglic EL, Hirsch JK. Depression, Loneliness, and Suicide Risk among Latino College Students: A Test of a Psychosocial Interaction Model. *Soc Work*. 2019 Jan 1;64(1):51-60. doi: 10.1093/sw/swy052. PMID: 30395325.
 19. Morales C. Depression: A challenge for the whole society that we must talk about. *Cuban Journal of Public Health*. 2017; 43(2): 136-138. <https://www.scielosp.org/article/rcsp/2017.v43n2/136-138/#>.
 20. González S, Pineda A, Gaxiola J. Adolescent depression: risk factors and social support as a protective factor. *Psychology University*. 2018; 17: 1-11. <https://doi.org/10.11144/Javeriana.upsy17-3.daf>.
 21. Moeini B, Bashirian S, Soltanian AR, Ghaleiha A, Taheri M. Prevalence of depression and its associated sociodemographic factors among Iranian female adolescents in secondary schools. *BMC Psychol*. 2019 Apr 24;7(1):25. doi: 10.1186/s40359-019-0298-8. PMID: 31014389; PMCID: PMC6480819.
 22. Syed A, Ali SS, Khan M. Frequency of depression, anxiety and stress among the undergraduate physiotherapy students. *Pak J Med Sci*. 2018 Mar-Apr;34(2):468-471. doi: 10.12669/pjms.342.12298. PMID: 29805428; PMCID: PMC5954399.
 23. Organización Mundial de la Salud. *Salud mental del adolescente*. 2021. <https://www.who.int/es/news-room/fact-sheets/detail/adolescent-mental-health>.
 24. Organización Mundial de la Salud. *Depresión*. 2023. <https://www.who.int/es/news-room/fact-sheets/detail/depression>.
 25. Barrera-Herrera A, Neira-Cofré M, Raipán-Gómez P, Riquelme-Lobos P, Escobar B. Apoyo social percibido y factores sociodemográficos en relación con los síntomas de ansiedad, depresión y estrés en universitarios chilenos. *Revista de Psicopatología y Psicología Clínica*. 2019; 24(2):105-115. <https://doi.org/10.5944/rppc.23676>.
 26. Caqueo-Úrizar A, Mena-Chamorro P, Flores J, Narea M, Irrázaval M. Problemas de regulación emocional y salud mental en adolescentes del norte de Chile. *Terapia Psicológica*. 2020; 38(2):203-222. <http://www.teps.cl/index.php/teps/article/view/296/335>.
 27. Dziejcz B, Sarwa P, Kobos E, Sienkiewicz Z, Idzik A, Wysokiński M, Fidecki W. Loneliness and Depression among Polish High-School Students. *Int J Environ Res Public Health*. 2021 Feb 10;18(4):1706. doi: 10.3390/ijerph18041706. PMID: 33578868; PMCID: PMC7916597.
 28. García D, Soler M, Cobo R. Bienestar psicológico en adolescentes: relaciones con autoestima, autoeficacia, malestar psicológico y síntomas depresivos. *Revista de Orientación Educativa*. 2019; 33(63):22-43. <http://www.roe.cl/index.php/roe/article/view/4>.
 29. Gao W, Ping S, Liu X. Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China. *J Affect Disord*. 2020 Feb 15;263:292-300. doi: 10.1016/j.jad.2019.11.121. Epub 2019 Dec 4. PMID: 31818792.
 30. Van Droogenbroeck F, Spruyt B, Keppens G. Gender differences in mental health problems among adolescents and the role of social support: results from the Belgian health interview surveys 2008 and 2013. *BMC Psychiatry*. 2018 Jan 10;18(1):6. doi: 10.1186/s12888-018-1591-4. PMID: 29320999; PMCID: PMC5763832.
 31. Richardson T, Elliott P, Roberts R. Relationship between loneliness and mental health in students. *Journal of Public Mental Health*. 2017; 16(2):48-54. <https://doi.org/10.1108/JPMH-03-2016-0013>.
 32. Leigh-Hunt N, Baguley D, Bash K, Turner V, Turnbull S, Valtorta N, Caan W. An overview of systematic reviews on the public health consequences of social isolation and loneliness. *Public Health*. 2017 Nov;152:157-171. doi: 10.1016/j.puhe.2017.07.035. Epub 2017 Sep 12. PMID: 28915435.
 33. Bayat N, Fokkema T, Mujakovic S, Ruiters AC. Contextual correlates of loneliness in adolescents. *Children and Youth Services Review*. 2021; 127:106083. <https://doi.org/10.1016/j.childyouth.2021.106083>.
 34. Klein E, Zenger M, Tibubos A, Ernts M, Reiner I, Schmalbach B, Brähler E, Beutel M. Loneliness and its relation to mental health in the general population: Validation and norm values of a brief measure. *Journal of Affective Disorders Reports*. 2021; 4:100120. <https://doi.org/10.1016/j.jadr.2021.100120>.
 35. Yanguas J, Pinazo-Henandis S, Tarazona-Santabalbina FJ. The complexity of loneliness. *Acta Biomed*. 2018 Jun 7;89(2):302-314. doi: 10.23750/abm.v89i2.7404. PMID: 29957768; PMCID: PMC6179015.



36. Diehl K, Jansen C, Ishchanova K, Hilger-Kolb J. Loneliness at Universities: Determinants of Emotional and Social Loneliness among Students. *Int J Environ Res Public Health*. 2018 Aug 29;15(9):1865. doi: 10.3390/ijerph15091865. PMID: 30158447; PMCID: PMC6163695.
37. Kundu S, Bakchi J, Al Banna MH, Sayeed A, Hasan MT, Abid MT, Ghosh S, Sarker N, Islam Khan MS. Depressive symptoms associated with loneliness and physical activities among graduate university students in Bangladesh: findings from a cross-sectional pilot study. *Heliyon*. 2021 Mar 8;7(3):e06401. doi: 10.1016/j.heliyon.2021.e06401. PMID: 33748473; PMCID: PMC7969900.
38. Matthews T, Danese A, Caspi A, Fisher HL, Goldman-Mellor S, Kopa A, Moffitt TE, Odgers CL, Arseneault L. Lonely young adults in modern Britain: findings from an epidemiological cohort study. *Psychol Med*. 2019 Jan;49(2):268-277. doi: 10.1017/S0033291718000788. Epub 2018 Apr 24. PMID: 29684289; PMCID: PMC6076992.
39. Shaw RJ, Cullen B, Graham N, Lyall DM, Mackay D, Okolie C, Pearsall R, Ward J, John A, Smith DJ. Living alone, loneliness and lack of emotional support as predictors of suicide and self-harm: A nine-year follow up of the UK Biobank cohort. *J Affect Disord*. 2021 Jan 15;279:316-323. doi: 10.1016/j.jad.2020.10.026. Epub 2020 Oct 14. PMID: 33096330; PMCID: PMC7758739.
40. Antúnez Z, Vinet E. Escalas de depresión, ansiedad y estrés (DASS – 21): Validación de la Versión Abreviada en Estudiantes Universitarios Chilenos. *Terapia Psicológica*. 2012; 3:49-55. <https://www.scielo.cl/pdf/terpsicol/v30n3/art05.pdf>.
41. Lovibond PF, Lovibond SH. The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behav Res Ther*. 1995 Mar;33(3):335-43. doi: 10.1016/0005-7967(94)00075-u. PMID: 7726811.
42. Russell D, Peplau LA, Cutrona CE. The revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. *J Pers Soc Psychol*. 1980 Sep;39(3):472-80. doi: 10.1037//0022-3514.39.3.472. PMID: 7431205.
43. Vázquez A, García Bóveda R. Ruls: Escala de soledad UCLA revisada. Fiabilidad y validez de una versión española. *Journal of Health Psychology*. 1994; 6(1):45-54. <https://core.ac.uk/reader/237118800>.
44. Coker A, Coker O, Sanni D. Psychometric Properties of the 21-item Depression Anxiety Stress Scale (DASS-21). *African Research Review*. 2018; 12(2):135-142. <http://dx.doi.org/10.4314/afrrrev.v12i2.13>.
45. Ediz B, Ozcakar A, Bilgel N. Depression and anxiety among medical students: Examining scores of the Beck depression and anxiety inventory and the depression anxiety and stress scale with student characteristics. *Cogent Psychology*. 2017; 4(1):1283829. <https://doi.org/10.1080/23311908.2017.1283829>.
46. Fawzy M, Hamed SA. Prevalence of psychological stress, depression and anxiety among medical students in Egypt. *Psychiatry Res*. 2017 Sep;255:186-194. doi: 10.1016/j.psychres.2017.05.027. Epub 2017 May 17. PMID: 28575777.
47. Gaibor-González I, Moreta-Herrera R. Optimismo disposicional, ansiedad, depresión y estrés en una muestra del Ecuador. Análisis inter-género y de predicción. *Actualidades en Psicología*. 2020; 34(129):17-31. <http://dx.doi.org/10.15517/ap.v34i129.35148>.
48. Le MTH, Tran TD, Holton S, Nguyen HT, Wolfe R, Fisher J. Reliability, convergent validity and factor structure of the DASS-21 in a sample of Vietnamese adolescents. *PLoS One*. 2017 Jul 19;12(7):e0180557. doi: 10.1371/journal.pone.0180557. PMID: 28723909; PMCID: PMC5516980.
49. González S, Gaxiola J, Valenzuela E. Apoyo social y resiliencia: predictores de bienestar psicológico en adolescentes con suceso de vida estresante. *Psicología y Salud*. 2018; 28(2):167-176. <https://doi.org/10.25009/ps.v28i2.2553>.
50. García D, Hernández-Lalinde J, Espinosa-Castro JF, Soler M. Salud mental en la adolescencia montevideana: una mirada desde el bienestar psicológico. *Archivos Venezolanos de Farmacología y Terapéutica*. 2020; 39(2):182-190. <https://biblat.unam.mx/hevila/Archivosvenezolanosdefarmacologiayterapeutica/2020/vol39/no2/7.pdf>
51. Toribio L, González-Arratia López-Fuentes N, Van Barneveld H, Gil M. Salud mental positiva en adolescentes mexicanos: diferencias por sexo. *Revista Costarricense de Psicología*. 2018; 37(2):131-143. <http://dx.doi.org/10.22544/rcps.v37i02.03>.
52. Bajaj S, Kaur G. Study of gender difference in loneliness among adolescents. *Journal of Exercise Science & Physiotherapy*. 2019; 15(2):9-14. <https://doi.org/10.18376/jesp/2019/v15/i2/153522>.
53. Eris H, Barut S. The effect of the feeling of loneliness on burnout levels in university. *Journal of Theoretical Educational Science*. 2020; 13(2):369-383. <http://dx.doi.org/10.30831/akukeg.606671>.
54. Fauziyyah A, Ampuni S. Depression tendencies, social skills, and loneliness among college students in Yogyakarta. *Jurnal Psikologi*. 2018; 45(2):98-106. <https://doi.org/10.22146/jpsi.36324>.
55. Gao F, Guo Z, Tian Y, Si Y, Wang P. Relationship Between Shyness and Generalized Pathological Internet Use Among Chinese School Students: The Serial Mediating Roles of Loneliness, Depression, and Self-Esteem. *Front Psychol*. 2018 Oct 29;9:1822. doi: 10.3389/fpsyg.2018.01822. PMID: 30420818; PMCID: PMC6215833.
56. Kılınc G, Aylaz R, Güneş G, Harmancı P. The relationship between depression and loneliness levels of the students at the faculty of health sciences and the factors affecting them. *Perspect Psychiatr Care*. 2020 Apr;56(2):431-438. doi: 10.1111/ppc.12452. Epub 2019 Nov 13. PMID: 31721230.
57. Mamun MA, Hossain MS, Moonajilin MS, Masud MT, Misti JM, Griffiths MD. Does loneliness, self-esteem and psychological distress correlate with problematic internet use? A Bangladeshi survey study. *Asia Pac Psychiatry*. 2020 Jun;12(2):e12386. doi: 10.1111/appy.12386. Epub 2020 Apr 3. Erratum in: *Asia Pac Psychiatry*. 2020 Dec;12(4):e12426. PMID: 32243089.
58. Varghese M, Pistole C. College student cyberbullying: self-esteem, depression, loneliness, and attachment. *Journal of College Counseling*. 2017; 20(1):7-21. <https://doi.org/10.1002/jocc.12055>.
59. Loredó M. Satisfacción familiar y relación con el afrontamiento de soledad en adolescentes 11 a 15 años. *Enseñanza e Investigación en Psicología*. 2019; 1(1):19-28. <https://www.revistacneip.org/index.php/cneip/article/view/16/14>.
60. Majd Ara E, Talepasand S, Rezaei AM. A Structural Model of Depression Based on Interpersonal Relationships: The Mediating Role of Coping Strategies and Loneliness. *Noro Psikiyatr Ars*. 2017 Jun;54(2):125-130. doi: 10.5152/npa.2017.12711. Epub 2017 Jun 1. PMID: 28680309; PMCID: PMC5491661.
61. Moeller RW, Seehuus M. Loneliness as a mediator for college students' social skills and experiences of depression and anxiety. *J Adolesc*. 2019 Jun;73:1-13. doi: 10.1016/j.adolescence.2019.03.006. Epub 2019 Mar 29. PMID: 30933717; PMCID: PMC6534439.
62. Hamaideh SH. Alexithymia among Jordanian university students: Its prevalence and correlates with depression, anxiety, stress, and demographics. *Perspect Psychiatr Care*. 2018 Apr;54(2):274-280. doi: 10.1111/ppc.12234. Epub 2017 Jul 20. PMID: 28726284.
63. Kumar B, Shah MAA, Kumari R, Kumar A, Kumar J, Tahir A. Depression, Anxiety, and Stress Among Final-year Medical Students. *Cureus*. 2019 Mar 16;11(3):e4257. doi: 10.7759/cureus.4257. PMID: 31139516; PMCID: PMC6519980.
64. Sandal RK, Goel NK, Sharma MK, Bakshi RK, Singh N, Kumar D. Prevalence of Depression, Anxiety and Stress among school going adolescent in Chandigarh. *J Family Med Prim Care*. 2017 Apr-Jun;6(2):405-410. doi: 10.4103/2249-4863.219988. PMID: 29302555; PMCID: PMC5749094.



65. Cheung DK, Tam DKY, Tsang MH, Zhang DLW, Lit DSW. Depression, anxiety and stress in different subgroups of first-year university students from 4-year cohort data. *J Affect Disord.* 2020 Sep 1;274:305-314. doi: 10.1016/j.jad.2020.05.041. Epub 2020 May 22. PMID: 32469820.

66. Moutinho IL, Maddalena NC, Roland RK, Lucchetti AL, Tibiriçá SH, Ezequiel OD, Lucchetti G. Depression, stress and anxiety in medical students: A cross-sectional comparison between students from different semesters. *Rev Assoc Med Bras (1992).* 2017 Jan 1;63(1):21-28. doi: 10.1590/1806-9282.63.01.21. PMID: 28225885.

67. Fawaz M, Samaha A. E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. *Nurs Forum.* 2021 Jan;56(1):52-57. doi: 10.1111/nuf.12521. Epub 2020 Oct 30. PMID: 33125744.

68. Sánchez-Aguilar A, Andrade-Palos P, Gómez-Maqueo M. Esquemas desadaptativos tempranos y ansiedad en escolares de México. *Revista de Psicología Clínica con Niños y Adolescentes.* 2019; 6(2):15-21. <https://doi.org/10.21134/rpcna.2019.06.2.2>.

69. Van Zyl PM, Joubert G, Bowen E, Du Plooy F, Francis C, Jadhunandan S, Metz L. Depression, anxiety, stress and substance use in medical students. *African Journal of Health Professions Education.* 2017; 9(2):67-72. <https://doi.org/10.7196/AJHPE.2017.v9i2.705>.

70. Yadav G, Kumar A, Chauhan N, Bodat S. Prevalence of depression, anxiety, and stress among school going adolescents in Delhi: a cross-sectional study. *International Journal of Community Medicine and Public Health.* 2019; 6(12):5021-5026. <http://dx.doi.org/10.18203/2394-6040.ijcmph20195177>.

Discover a bigger Impact and Visibility of your article publication with Peertechz Publications

Highlights

- ❖ Signatory publisher of ORCID
- ❖ Signatory Publisher of DORA (San Francisco Declaration on Research Assessment)
- ❖ Articles archived in worlds' renowned service providers such as Portico, CNKI, AGRIS, TDNet, Base (Bielefeld University Library), CrossRef, Scilit, J-Gate etc.
- ❖ Journals indexed in ICMJE, SHERPA/ROMEO, Google Scholar etc.
- ❖ OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting)
- ❖ Dedicated Editorial Board for every journal
- ❖ Accurate and rapid peer-review process
- ❖ Increased citations of published articles through promotions
- ❖ Reduced timeline for article publication

Submit your articles and experience a new surge in publication services (<https://www.peertechz.com/submission>).

Peertechz journals wishes everlasting success in your every endeavours.