Resilience, self-Concept, and BMI: how these factors shape spanish adolescents' well-being

Resiliencia, autoconcepto e IMC: cómo estos factores moldean el bienestar de los adolescentes españoles

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Abstract

Introduction: Studies have shown that adolescents are a population at risk for episodes that diminish their mental well-being. Resilience is a key tool for coping with adversity, improving mental health, and is an important predictor of self-concept. In addition, one of the mental health problems in preadolescence is increasing body mass index.
Methods: For this reason, the aim of this article was to identify resilience relationships with dimensions of self-concept and body mass index. Preadolescents (N=446) reported resilience relationships with dimensions of self-concept and body mass index at ages 11 and 12. Validated questionnaires were administered to evaluate resilience (CD-RISC) and self-concept (AF-5). Data were analyzed using IBM SPSS 28.0 statistical software with parametric testing.
Result: There are positive associations between the level of resilience and the dimensions of self-concept. In addition, preadolescent girls have reported higher scores on both the academic self-concept and social self-concept dimensions as well as on the level of resilience. Conclusions: This research highlighted the importance of interventions and programmes that help students to strengthen their resilience and improve their self-concept.

Keywords

Body mass index; mental health; preadolescence; resilience; self-concept.

Resumen

Antecedentes. Los estudios han demostrado que los adolescentes son una población en riesgo de episodios que disminuyen su bienestar mental. La resiliencia es una herramienta clave para afrontar la adversidad, mejorar la salud mental y es un importante predictor del autoconcepto. Además, uno de los problemas de salud mental en la preadolescencia es el aumento del índice de masa corporal.
Métodos. Por esta razón, el objetivo de este artículo fue identificar las relaciones entre la resiliencia, las dimensiones del autoconcepto y el índice de masa corporal. Los preadolescentes (N=446) informaron sobre las relaciones entre la resiliencia, las dimensiones del autoconcepto y el índice de masa corporal a las edades de 11 y 12 años. Se administraron cuestionarios validados para evaluar la resiliencia (CD-RISC) y el autoconcepto (AF-5). Los datos fueron analizados utilizando el software estadístico IBM SPSS 28.0 con pruebas paramétricas. Resultados. Existen asociaciones positivas entre el nivel de resiliencia y las dimensiones del autoconcepto. Además, las niñas preadolescentes reportaron puntuaciones más altas tanto en las dimensiones de autoconcepto académico y social, como en el nivel de resiliencia. Conclusiones. Esta investigación destacó la importancia de las intervenciones y programas que ayudan a los estudiantes a fortalecer su resiliencia y mejorar su autoconcepto.

Palabras clave

Adolescencia; autoconcepto; índice de masa corporal; resiliencia; salud mental.

Introduction

Adolescence is a critical transitional period between childhood and adulthood, spanning from the ages of 11 to 21 years (Hagan et al., 2017). During this stage, numerous physical, social, sexual, emotional, and mental changes take place (Alderman et al., 2020), making it one of the most vulnerable phases of life (Sulistiowati et al., 2020). These profound changes often precipitate heightened levels of stress and anxiety, which can significantly impact mental health (Klaufus et al., 2022).

The World Health Organization (WHO) has identified mental health as a significant global issue during adolescence, with approximately 20% of children and adolescents experiencing mental disorders that adversely affect their personal and academic development (WHO, 2018). According to the National Library of Medicine (MedlinePlus, 2020), engaging in physical activity and developing coping skills are essential strategies for managing stress and improving mental health outcomes.

Adolescents who lack effective coping mechanisms are particularly vulnerable to emotional distress, anxiety, depression, and even suicidal ideation (Sulistiowati et al., 2020; Duong et al., 2020). Consequently, equipping young people with strategies to navigate challenges and build resilience is critical. Resilience, defined as a dynamic, multisystemic process of successful adaptation or recovery in the face of adversity, has emerged as a fundamental factor in promoting mental health (Chen and Bonanno, 2020; Mesman et al., 2021).

Widely recognized as a key predictor of mental well-being (Chung et al., 2020), resilience involves assessing and addressing deficits while fostering strengths and potentials, particularly in the school context. It enables individuals to overcome personal and social adversities (Gil, 2010). Cultivating resilience during adolescence not only alleviates immediate mental health challenges but also provides long-term benefits; research shows that adults with higher resilience levels are less likely to develop psychopathology (Karatas and Tagay, 2021). Moreover, resilience has been shown to positively influence self-concept, a psychosocial construct that plays a protective role in mental health (Haktanir et al., 2021).

Self-concept, which reflects an individual's self-perception, is especially significant during adolescence, a period when this construct undergoes critical development (Sugimura, 2020). Adolescents with low self-concept levels are at greater risk of stigmatization, limited potential, and diminished mental well-being (Delgado-Floody et al., 2022; Fernández et al., 2024). Notably, self-concept is closely associated with resilience, further underscoring the interplay between these constructs in mitigating psychological distress.

Additionally, recent research has highlighted the role of physical health, particularly body mass index (BMI), in adolescent mental health (Azzopardi et al., 2019; Bjertnaes et al., 2020). Changes in BMI during adolescence have been linked to mental health issues, emphasizing the importance of addressing physical and psychological health concurrently.

Despite these challenges, adolescence presents a unique window of opportunity for interventions aimed at reducing risks, enhancing resources, and fostering a foundation for long-term personal and mental well-being (Sawyer et al., 2018). In this context, the present study seeks to explore the relationships between resilience, self-concept dimensions, and BMI in a sample of 446 adolescents aged 11 to 12 years. By investigating these constructs, the study aims to identify pathways to support adolescents' mental and psychological health.

Method

Participants

A non-experimental, descriptive and cross-sectional study was designed with 446 primary schoolchildren in the province of Granada, aged 11 and 12 years (11.57±0.63). The sample included 141 boys and 205 girls, selected using a convenience sampling technique. This approach was chosen due to the accessibility of participants within the educational center, aligning with the exploratory nature of the study. While convenience sampling has limitations in generalizability, it allowed for efficient data collection within the targeted demographic.

Procedure

The research procedure was carefully structured to ensure compliance with ethical standards and methodological rigor. Initial collaboration was secured by contacting an educational center in Granada with a formal letter prepared by the Department of Didactics of Musical, Plastic, and Corporal Expression at the University of Granada. This letter detailed the study's objectives, nature, and relevance.
Once permission was obtained, informed consent was collected from parents or legal guardians, guaranteeing the anonymous and confidential handling of all data. The study adhered to the ethical principles outlined in the Helsinki Declaration of 1975, as revised in 2013, and was approved by the Research Ethics Committee of the University of Granada (1230/CEIH/2022).
To ensure methodological clarity, data collection was conducted during school hours under the direct supervision of researchers. This ensured uniformity in administering the instruments and minimized potential errors or biases. Specific procedures for each instrument were standardized. For instance, participants self-reported their weight and height, which were verified and recorded by researchers to calculate BMI accurately.

Instrument

The ad hoc questionnaire was used to collect sociodemographic characteristics of the participating students, such as gender, age, weight, and height. BMI was calculated by dividing kilograms of weight by the square of height in meters (BMI = weight (kg) / [height (m)]2. This calculation was performed directly by the research team to ensure precision.

Resilience

Resilience data were collected using the Connor-Davidson Resilience Scale (CD-RISC), adapted to Spanish by García-Portilla et al. (2008). This instrument comprises 25 items, and responses are measured on a Likert scale, ranging from 0 indicating "never/not at all" to 4 which represents "always". Furthermore, there are five dimensions: control under pressure (items 10-12, 16, 17, 23-25), adaptability and support networks (items 6, 7, 14, 15, 18, 19, 20), control and purpose (items 1, 2, 4, 5, 8), and spirituality (items 13, 21, 22, 3, 9). The internal consistency of the CD-RISC in this study was $\alpha = 0.801$, comparable to the original reliability of $\alpha = 0.890$ reported by Connor and Davidson (2003).

Self-concept

To measure self-concept, the AF5 Self-Concept Questionnaire (García and Musitu, 2009) was utilized. This questionnaire consists of 30 items and employs a Likert scale with five response options, ranging from "never" (1) to "always" (5). The questionnaire assesses self-concept across five main domains: academic self-concept (ASC) with items 1, 6, 11, 16, 21, and 26, social self-concept (SSC) with items 2, 7, 12, 17, 22, and 27, family self-concept (FSC) with items 4, 9, 14, 19, 24, and 29, physical self-concept (PSC) with items 5, 10, 15, 20, 25, and 30, and emotional self-concept (ESC) with items 3, 8, 13, 18, 23, and 28. The AF5 demonstrated good reliability in this study, with a Cronbach's Alpha coefficient of $\alpha = 0.739$, aligning with García and Musitu's (2009) reported value of $\alpha = 0.815$.

Data analysis

Data were analyzed using SPSS statistical software version 25.0 (IBM, Chicago, IL, USA). All variables were tested for normality and homogeneity of variance using the Kolmogorov-Smirnov test. Descriptive inferential and correlational analyzes were performed to calculate means, standard deviations, standard error of estimate, coefficient of variation, and 95% confidence intervals. Additionally, as parametric tests, several one-way analysis of variance (ANOVA) were used to assess differences between resilience levels with BMI and self-concept dimensions. The magnitude of the differences (effect sizes; ES) was obtained using Cohen's d. Pearson's bivariate correlations were also performed between all selected variables.

Results

The results obtained in the present investigation show that 42.82% (n=191) were boys, while 57.18% (n=205) were girls. The mean age of the student population was 11.57±0.63.

The characteristics of the sample according to sex are presented in Table 1. Regarding the level of resilience (p=0.009), it is girls who have the best results (72.72±11.19 vs. 69.25±13.18). Furthermore, significant gender differences were found in the dimensions of self-concept, specifically for academic self-concept (p=0.037) and social self-concept (p=0.027). Girls reported better scores for academic self-concept (4.01±0.61 vs. 3.85±0.83) and social self-concept (3.70±0.42 vs. 3.60±0.46). In contrast, no statistically significant differences were found for emotional, family, and physical self-concept.

Table 1. Characteristics of study participants by sex (n=446)

Characteristics	All (N=446)	Boys (N=191)	Girls (N=255)	*p* value
	M ± SD	M ± SD	M ± SD	
Age (years)	11.57±0.63	11.58±0.67	11.57±0.61	0.932
Weight (kg)	40.84±7.22	42.31±7.41	39.83±6.93	0.002*
Height (m)	1.47±0.16	1.48±0.88	1.47±0.19	0.774
BMI (kg/m^2)	18.80±3.22	19.30±3.44	18.46±3.02	0.017*
Resilience (CD-RISC)	71.31±12.14	69.25±13.18	72.72±11.19	0.009*
Self-Concept score (AF-5)				
ASC	3.94±0.71	3.85±0.83	4.01±0.61	0.037*
SCS	3.66±0.44	3.60±0.46	3.70±0.42	0.027*
ESC	2.58±0.83	2.69±0.85	2.51±0.82	0.059
FSC	3.56±0.34	3.54±0.36	3.57±0.32	0.459
PSC	3.76±0.77	3.67±0.87	3.82±0.68	0.081

Note: BMI: body mass index; ASC: academic self-concept; SCS: social self-concept; ESC: emotional self-concept; FSC: familiar self-concept; PSC: physical self-concept family. *p< 0.05

Table 2 shows the different variables analysed: BMI and self-concept dimensions in relation to the levels of resilience of the participating students. There were no statistically significant differences in BMI or in the dimension of emotional self-concept. However, significant differences were found for the dimension of ASC (f = 3.562; p=0.000) between low and very high and high and very high levels of resilience. Statistically significant differences were also found for the SCS dimension (f=1.324), between low and high (p=0.034) and low and very high (p=0.003) levels of resilience. Similarly, differences were found for FSC (f=11.767) between low and very high resilience levels (p=0.016) and high and very high levels (p=0.000). Aditionally, significant differences were found for the CSP dimension (f=6.903) between the comparisons of the three resilience levels, between the low and high level (p=0.028) and between low and very high, as well as high and very high levels (p=0.000).

Table 2. Averages between levels of resilience and variables: BMI, physical activity, and self-concept dimensions

Variables	Levels of resilience								Test de Levene		Sig (bilateral)	ES (d)	95% CI
	Very low		Low		High		Very high						
	M	S. D	M	S. D	M	S. D	M	S. D	F	Sig			
BMI	-	-	19.65	2.77	18.97	3.28	18.44	3.16	0.190	0.827	1.000^a 0.436^b 0.420^c	0.211	[18.46; 19.14]
ASC	-	-	3.42	0.76	3.67	0.84	4.20	0.71	3.562	0.029	0.122^a 0.000^{bc}	0.211	[3.87; 4.02]
SCS	-	-	3.37	0.47	3.58	0.50	3.67	0.38	1.324	0.267	0.034^a 0.003^b 0.221^c	0.227	[3.61; 3.71]
ESC	-	-	3.04	1.23	2.73	0.77	2.55	0.84	2.676	0.070	1.000^{ab} 0.155^c	0.145	[2.50; 2.62]
FSC	-	-	3.37	0.40	3.48	0.40	3.67	0.25	11.767	0.000	0.654^a 0.016^b 0.001^c	0.235	[3.52; 3.60]
PSC	-	-	2.92	1.03	3.55	0.91	4.00	0.62	6.903	0.001	0.028^a 0.000^{bc}	0.221	[3.67; 3.84]

Note: BMI: body mass index; ASC: academic self-concept; SCS: social self-concept; ESC: emotional self-concept; FSC: familiar self-concept; PSC: physical self-concept. a=statistically significant differences between low and high levels of resilience; b=statistically significant differences between low and very high levels of resilience; c=statistically significant differences between high and very high levels of resilience.

Table 3 also shows the bivariate correlations between BMI, self-concept dimensions, and the total level of resilience. The data obtained show that there is a positive correlation between resilience and the dimensions of self-concept. The strongest positive correlations were found between resilience and PSC (r=0.389) and ASC (r=0.364), with positive correlations also found for SCS (r=0.223) and FSC (r=0.249). In contrast, a negative correlation was observed between resilience and ESC (r= -0.179).

Table 3. Bivariate correlations among variables.

	ASC	SCS	ESC	FSC	PSC	RSL
BMI	-0.101	-0.039	-0.098	-0.015	-0.029	-0.095
ASC		0.299*	-0.240*	0.194*	0.452*	0.364*
SCS			0.005	0.252**	0.363*	0.223*
ESC				-0.173**	-0.201*	-0.179*
FSC					0.261*	0.249*
PSC						0.389*

Note: BMI: body mass index; ASC: academic self-concept; SCS: social self-concept; ESC: emotional self-concept; FSC: familiar self-concept; PSC: physical self-concept. RSL: resilience.

Discussion

This study sought to investigate the relationships between resilience, dimensions of self-concept, and body mass index (BMI) in adolescents, building upon prior research in the field, including studies by Fuente-Figuerola et al. (2022) and Crump et al. (2016). By examining these constructs in a sample of adolescents, the study aimed to deepen our understanding of the interplay between psychological and physical health during a critical developmental stage.

Main Findings

The results revealed no statistically significant relationship between BMI and resilience, consistent with findings from Crump et al. (2016). However, a noteworthy relationship emerged between resilience and self-concept dimensions, confirming the hypothesis that self-concept is strongly associated with resilience in adolescents. This aligns with previous research, emphasizing the pivotal role of self-perception in coping with adversity (Fuente-Figuerola et al., 2022; Martins & Neto, 2016; Rodríguez-Fernández et al., 2015).

The Role of Self-Concept in Resilience Development

The findings underscore a robust link between self-concept and resilience, reinforcing the theory that adolescents with positive self-perception are better equipped to navigate challenges (Martínez et al., 2019). Resilient adolescents demonstrated greater self-trust and reduced self-doubt, which contribute to a constructive self-concept. Among the dimensions of self-concept, academic self-concept (ASC) showed the strongest positive association with resilience, consistent with Martínez et al. (2019). This suggests that higher resilience enables adolescents to better manage academic demands, reduce academic stress, and achieve greater satisfaction and success in their studies (Maynor et al., 2022).

Family and Social Self-Concept as Pillars of Resilience

Resilience levels also correlated positively with social and family self-concept, aligning with the findings of Ramírez-Granizo et al. (2020), who proposed that adolescents with higher resilience scores tend to report higher levels of social and family self-concept. This relationship may reflect the pivotal role family and friends play in adolescent development, serving as essential sources of emotional support during this stage (Chulakarn & Chaimongkol, 2021; Krauss et al., 2020).

In contrast, the emotional dimension of self-concept was negatively associated with resilience. These results align with those of Chen et al. (2021), who noted that children with less emotional control tend to display lower resilience levels (Ashori & Aghaziarati, 2022). This finding underscores the importance of fostering emotional regulation as part of resilience-building strategies in adolescence.

Gender Differences in Resilience and Self-Concept

Gender differences were observed in resilience levels, with adolescent girls showing higher resilience than boys, a result supported by studies such as Adak and Sarkar (2021). However, research by Valero-Moreno et al. (2022) presents contrasting findings, where boys reported higher resilience scores. These discrepancies may reflect differences in the sociodemographic characteristics of the samples, as well as the varying ways males and females respond to life stressors. Research suggests that men may generally experience lower stress impact, possibly coping with difficulties in a more gradual manner that stabilizes mental health over time (Kneavel, 2020). As resilience often increases with age among women, early resilience-building interventions could prove especially beneficial for adolescent girls.

Additionally, gender differences were observed in self-concept dimensions, particularly in academic and social self-concept, with girls reporting higher scores in both areas. This aligns with findings from Herrera et al. (2019) and González et al. (2020), especially in academic self-concept (ASC). Although there is no strong evidence suggesting boys consistently outperform girls in these self-concept dimensions, studies such as that by Baltasar et al. (2016) found no statistically significant gender differences in academic self-concept. Boys tend to attribute academic success to innate ability, while girls often credit effort and perseverance (Inglés et al., 2012). The social self-concept (SCS) scores were also higher among girls, consistent with Ramírez-Granizo et al. (2020), even if the differences were not statistically significant. This may be explained by the socialization of girls to value interpersonal harmony and develop strong social skills, fostering a greater sense of social acceptance and peer support (Chaplin, 2015; Hameed et al., 2019).

Implications for Practice and Policy

The findings underscore the importance of integrating resilience-building strategies into adolescent development programs, particularly those aimed at enhancing self-concept dimensions such as family and social support. Educational policies should prioritize fostering family and peer networks, which are instrumental in resilience development. Moreover, resilience-focused interventions would benefit from adopting gender-sensitive approaches to address the unique needs of boys and girls, helping adolescents develop strong self-concepts and effectively manage stressors as they transition into adulthood.

Study Limitations and Future Directions

While this study offers valuable insights, several limitations warrant consideration. The sample size, though robust, may limit the generalizability of the findings. Additionally, as a descriptive cross-sectional study, it does not establish causal relationships, necessitating caution when interpreting the results. Future research should employ longitudinal designs to explore how resilience and self-concept evolve over time, providing a more comprehensive understanding of these constructs in adolescent development.

Conclusions

This study highlights the critical importance of promoting mental health during adolescence through targeted interventions and programs that foster resilience and self-concept development. The findings underscore the strong, positive associations between resilience levels and various dimensions of self-concept, reinforcing their interconnected role in adolescent well-being. Notably, adolescent girls reported higher levels of academic self-concept, social self-concept, and resilience, pointing to potential gender-specific considerations in designing support programs.

By focusing on strengthening resilience and self-concept, these initiatives can empower adolescents to develop the knowledge, skills, attitudes, and habits necessary for lifelong well-being. Such efforts have the potential to shape individuals who are socially engaged, emotionally balanced, and self-sufficient, providing a robust foundation for success and active participation in society as they transition into adulthood.

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References

Agnieszka, L., Tomaszek, K. y Bosacki, S. (2020). Empathy, Gratitude, and Resilience – Does Gender Make a Difference? *Anales de Psicología, 36*(3), 521-532. https://doi.org/10.6018/analesps.391541

Alderman, E.M., Breuner, C. y Grubb, L. (2020). Unique needs of adolescent. *Pediatric, 144*(6), e20193150. http://dx.doi.org/10.1542/peds.2019-3150

Ashori, M. y Aghaziarati, A. (2022). The relationships among social-emotional assets and resilience, empathy and behavioral problems in deaf and hard of hearing children. *Current Psychology*. https://doi.org/10.1007/s12144-022-03152-5

Azzopardi, P. S., Hearps, S., Francis, K. L., Kennedy, E. C., Mokdad, A. H., Kassebaum, N. J., … Patton, G. C. (2019). Progress in adolescent health and wellbeing: tracking 12 headline indicators for 195 countries and territories, 1990-2016. *Lancet (London, England)*, *393*(10176), 1101–1118. https://doi.org/10.1016/S0140-6736(18)32427-9

Baltasar, D.M., Sánchez, S., y Barona, E. (2016). Autoconcepto académico: modalidades de escolarización, repeticiones de curso y sexo. *Campo Abierto, 35*(2), 69-82. https://dialnet.unirioja.es/descarga/articulo/6036933.pdf

Bjertnaes, A. A., Fossum, I. N., Oma, I., Bakken, K. S., Arne, T., y Holten-Andersen, M. N. (2020). A Cross-Sectional Study of the Relationship Between Mental Health Problems and Overweight and Obesity in Adolescents. *Frontiers in public health*, *8*(335), 1-8. https://doi.org/10.3389/fpubh.2020.00334

Chaplin, T. (2015). Género y expresión emocional: una perspectiva contextual del desarrollo. *Revisión emocional*, *7* (1), 14–21. https://doi.org/10.1177/1754073914544408

Chen, H., Hong, Q., Xu, J., Liu, F., Wen, Y. y Gu, X. (2021). Resilience Coping in Preschool Children: The Role of Emotional Ability, Age, and Gender. *International Journal of Environmental Research and Public Health, 18*(9), 1-21. https://doi.org/10.3390/ijerph18095027

Chen, S. & Bonano, G. A. (2020). Psychological adjustment during the global outbreak of COVID-19: A resilience perspective. Psychol Trauma:-Theory, Res, Prac and Policy. 2020, 12; 51–54. https://psycnet.apa.org/doi/10.1037/tra0000685

Chulakarn, N., y Chaimongkol, N. (2021). Factors affecting resilience among early adolescents living in homes for children: A model testing. *Children and Youth Services Review, 120*, 105737. https://doi.org/10.1016/j.childyouth.2020.105737

Chung, J.O.K., Lam K.K.W, Ho, K.Y., Cheung, A.T., Ho, L.L.K., Gibson F., y Li, W.H.C. (2020). Relationship among resilience, self-esteem, and depressive symptoms in Chinese adolescents. *Journal of Health Psychology, 25*(13-14), 2396-2405. https://doi.org/10.1177/1359105318800159

Connor, K.M. y Davidson, J.R. (2003). Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety, 18*(2), 76-82. https://doi.org/10.1002/da.10113

Crump, C., Sundquist, J., Winkleby, M. A., y Sundquist, K. (2016). Stress resilience and subsequent risk of type 2 diabetes in 1.5 million young men. *Diabetologia*, *59*(4), 728–733. https://doi.org/10.1007/s00125-015-3846-7

Delgado-Floody, P., Soto-García, D., Camaño-Navarrete, F., Carter-Thuillier, B. y Guzmán-Guzmán, I.P. (2022). Negative Physical Self-Concept Is Associated to Low Cardiorespiratory Fitness, Negative Lifestyle and Poor Mental Health in Chilean Schoolchildren. *Nutrients*, *14(*13), 1-15. https://doi.org/10.3390/nu14132771

Duong, K.NK., Le Bao, T.N., Lan Nguyen, P.T., Vo Van, T., Lam, T., Gia, A.P…Vo van, B. (2020). Psychological Impacts of COVID-19 During the First Nationwide Lockdown in Vietnam: Web-Based, Cross-Sectional Survey Study. *JMIR formative research*, *4*(12), 1-10. https://doi.org/10.2196/24776

Fernández, M., Hernández, F., Rodríguez, A., & Pérez, S. (2024). Asociación del acoso escolar y el autoconcepto físico en la transición de primaria a secundaria *Retos, 52*, 178–184. https://doi.org/10.47197/retos.v52.101130

Fuente-Figuerola, V., Sánchez-Villena, A. y Longo, J.P. (2022). Resilience and self-concept in fostered peruvian adolescent. *Revista de Psicología, 11*(2), 11-20. https://www.researchgate.net/publication/358783496_Resilience_and_Self-Concept_in_Fostered_Peruvian_Adolescents#fullTextFileContent

García, F. y Musitu, G. (2009). AF5: Autoconcepto Forma 5 [AF5: Self-concept form 5] (3nd ed.): Tea.

Gil, G.E. (2010). La resiliencia: conceptos y modelos aplicables al entorno escolar. *El guiniguada, 19*(2), 27-42. https://ojsspdc.ulpgc.es/ojs/index.php/ElGuiniguada/article/view/421

González, J.O., Morón-Vera, J.A, González-Becerra, V.H., Abundis, A. y Macias-Espinoza, F. (2020). Academic self-efficacy, academic social support, school well-being and its relation with academic performance in university students. *Psicumex, 10*(2), 95-113. http://dx.doi.org/10.36793/psicumex.v10i2.353

Graves, B. S., Hall, M. E., Dias-Karch, C., Haischer, M. H., y Apter, C. (2021). Gender differences in perceived stress and coping among college students. *PloS one*, *16*(8), 1-12. https://doi.org/10.1371/journal.pone.0255634

Hagan, J.F., Shaw, J.S. y Duncan, P.M., eds. (2017). *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, American Academy of Pediatrics.

Haktanir, A., Watson, J. C., Ermis, H., Karaman, M. A., Freeman, P., Kuraman, A., … Streeter, A. (2021). Resilience, academic self-concept, and college adjustment among first-year students. *Journal of College Student Retention:Research, Theory & Practice, 23*(1), 161–178. https://doi.org/10.1177/1521025118810666

Hameed, R., Riaz, A., y Muhammad, A. (2019). Relationship of gender differences with social support, emotional behavioral problems and self-esteem in adolescents. *Journal of psychiatry and behavioural sciences 2*(1), 1-6. https://meddocsonline.org/journal-of-psychiatry-and-behavioral-sciences/relationship-of-gender-differences-with-social-support-emotional-behavioral-problems-and-self-esteem-in-adolescents.pdf

Herrera, L., Al-Lal, M., y Mohamed, L. (2019). Academic Achievement, Self-Concept, Personality and Emotional Intelligence in Primary Education. Analysis by Gender and Cultural Group. *Frontiers in Psychology, 10*(30), 1-13. https://doi.org/10.3389/fpsyg.2019.03075

Karataş, Z. y Tagay, Ö. (2021). The relationships between resilience of the adults affected by the covid pandemic in Turkey and Covid-19 fear, meaning in life, life satisfaction, intolerance of uncertainty and hope. *Personality and Individual Differences*, 172(110592), 1-7. https://doi.org/10.1016/j.paid.2020.110592

Kidd, S. y Shahar, G. (2008). Resilience in homeless youth: The key role of self-esteem. *American Journal of Orthopsychiatry, 78*(2), 163-172. doi: http://dx.doi.org/10.1037/0002-9432.78.2.163.

Klaufus, L., Verlinden, E., van der Wal, M., Cujipers, P., Chinapaw, M. y Smit, F. (2022). Adolescent anxiety and depression: burden of disease study in 53,894 secondary school pupils in the Netherlands. *BMC Psychiatry, 22*(225), 1-12. https://doi.org/10.1186/s12888-022-03868-5

Kneavel, M. (2020). Relationship between gender, stress, and quality of social support. *Psychological Reports, 124*(4), 1-15. https://doi.org/10.1177/0033294120939844

Krauss, S., Orth, U., y Robins, R.W. (2020). Family environment and self-esteem development: A longitudinal study from age 10 to 16. *Journal of personality and social psychology, 119*(2), 457-478. https://doi.org/10.1037/pspp0000263

Martins, M.H.V. y Neto, V.C. (2016). Resilience and self-concept of competence in institutionalized and non-institutionalized Young people. *Revista Psicología, 30*(2), 61-76. https://doi.org/10.17575/rpsicol.v30i2.1122

Maynor, L. Gálvez-Peralta, M., Barrickman, A., Hanif, A. y Baugh, G. (2022). Perceived stress, academic self-concept, and coping mechanism among pharmacy students following a curricular revisión. *Current in Pharmacy Teaching and Learnign, 14*(2), 159-165. https://doi.org/10.1016/j.cptl.2021.11.013

MedlinePlus (2020). *How to Improve Mental Health. National Library of Medicine.* https://medlineplus.gov/howtoimprovementalhealth.html

Mesman, E., Vreeker, A., y Hillegers, M. (2021). Resilience and mental health in children and adoleESCnts: an update of the recent literature and future directions. *Current Opinion in Psychiatry, 34*(6), 586-592. https://doi.org/10.1097/YCO.0000000000000741

National Academies of Sciences, Engineering, and Medicine et al. (2019). *The Promise of AdoleESCnce: Realizing Opportunity for All Youth*. The National Academies Press. https://doi.org/10.17226/25388.

Nguyen Thi Khanh, H., Nguyen Thanh, L., Pham Quoc, T., Pham Viet, C., Duong Minh, D. y Le Thi Kim, A. (2020). Suicidal behaviors and depression "among adolescents in Hanoi, Vietnam: A multilevel

analysis of data from the Youth Risk Behavior Survey 2019. *Health psychology open, 7*(2), 1-11. https://doi.org/10.1177/205510292095471

Ramírez-Granizo, I.A., Sánchez-Zafra, M., Zurita-Ortega, F., Puertas-Molero, P., González-Valero, G. & author. (2020). Multidimensional self-concept depending on levels of resilience and the motivational climate directed towards sport in schoolchildren. *International Journal of Environmental Research and Public Health, 17*(2), 534. https://doi.org/10.3390/ijerph17020534

Sawyer, S. M., Azzopardi, P. S., Wickremarathne, D., y Patton, G. C. (2018). The age of adolescence. *The Lancet. Child & adolescent health, 2*(3), 223–228. https://doi.org/10.1016/S2352-4642(18)30022-1

Sugimura, K. (2020). Adolescent identy development in Japan. *Children Development Perspective, 14,* 71-77. https://doi.org/10.1111/cdep.12359

Sulistiowati, N.M.D., Keliat, B.D. y Besral, I.I. (2020). Mental health and related factors among adolescents. *Enfermería Clínica, 30*(S7), 111-116. https://doi.org/10.1016/j.enfcli.2020.07.023.

Valero-Moreno, S., Lacomba-Trejo, L., Coello, M.F., Herrera, J.S., Cchocho, A.X., Samper, P., …Montoya-Castilla, I. (2022). Impacto emocional y resiliencia en adolescentes de España y Ecuador durante la COVID-19: estudio transcultural. *Revista de Psicología Clínica con Niños y Adolescentes, 9*(1): 29-36. doi: https://doi.org/10.21134/rpcna.2022.09.1.3

World Health Organization (2018). *Mental health. Child and adolescent mental health*. http://www.who.int/mental_health/maternal-child/child_adoleESCnt/en/ Accesed July 26, 2023.

Yoleri, S. (2020). Factors Affecting Level of Children Resilience and Teachers' Opinions about Resilience. *International Journal of Assessment Tools in Education, 7*(3), 361-378. https://doi.org/10.21449/ijate.780247

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