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Healthy habits as predictors of mental health and psychological well-being in emerging adults

Hábitos saludables como predictores de la salud mental y el bienestar psicológico en adultos emergentes

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ABSTRACT:

Current empirical evidence highlights the influence of healthy habits on mental health and psychological well-being; However, their predictive role in Latin American university populations remains limited. This study aimed to analyze healthy habits as predictors of psychological well-being and mental health in emerging adult Ecuadorians. Data were obtained from the clinical records of clients at a psychotherapy center in Riobamba, Ecuador. The sample comprised 350 emerging adults (73.10 % women), aged 18–24 years (M = 20.4; SD = 2.1). A non-experimental, cross-sectional, predictive, and retrospective design was employed. Instruments included the Green Healthy Habits Survey, the Goldberg General Health Questionnaire (GHQ-28) for mental health, and Diener's Psychological Flourishing Scale for well-being. Multivariate binary logistic and multiple linear regression analyses were conducted using Jamovi 2.6.45. Healthy habits significantly predicted psychological well-being ($\beta = -11.62$; $p = .01$; $R^2 = 0.41$) and a lower likelihood of chronic mental health problems ($\beta = -0.70$; $p = .013$; $R^2McF = 0.31$). Social dysfunction ($\beta = -7.41$; $p < 0.001$) and depression ($\beta = -6.97$; $p < 0.001$) emerged as the strongest negative clinical predictors of

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well-being. In conclusion, healthy habits constitute a key determinant of psychological well-being and a protective factor against chronic psychological distress.

Keywords: Well-Being; Mental Health; Habits; Emerging Adults.

RESUMEN

La evidencia empírica actual destaca la influencia de los hábitos saludables en la salud mental y el bienestar psicológico; sin embargo, su papel predictivo en la población universitaria latinoamericana (cambiar por población de adultos emergentes ecuatorianos) sigue siendo limitado. El objetivo de este estudio fue analizar los hábitos saludables como predictores del bienestar psicológico y la salud mental en adultos emergentes ecuatorianos. Los datos se obtuvieron de los registros clínicos de los clientes de un centro de psicoterapia en Riobamba, Ecuador. La muestra estuvo compuesta por 350 adultos emergentes (73,10 % mujeres), de entre 18 y 24 años (M = 20,4; SD = 2,1). Se empleó un diseño no experimental, transversal, predictivo y retrospectivo. Los instrumentos utilizados fueron la Encuesta de Hábitos Saludables de Green, el Cuestionario General de Salud de Goldberg (GHQ-28) para la salud mental y la Escala de Florecimiento Psicológico de Diener para el bienestar. Se realizaron análisis logísticos binarios multivariantes y regresiones lineales múltiples utilizando Jamovi 2.6.45. Los hábitos saludables predijeron significativamente el bienestar psicológico ($\beta = -11,62$; $p = 0,01$; $R^2 = 0,41$) y una menor probabilidad de problemas crónicos de salud mental ($\beta = -0,70$; $p = 0,013$; $R^2McF = 0,31$). La disfunción social ($\beta = -7,41$; $p < 0,001$) y la depresión ($\beta = -6,97$; $p < 0,001$) se revelaron como los predictores clínicos negativos más fuertes del bienestar. En conclusión, los hábitos saludables constituyen un determinante clave del bienestar psicológico y un factor de protección contra el malestar psicológico crónico.

Palabras clave: bienestar; salud mental; hábitos; adultos emergentes.

INTRODUCTION

Mental health is a fundamental human right and an essential component of overall well-being. Its understanding transcends mere absence of mental illness or disorder, encompassing the capacity to cope with daily adversity and maintain optimal functioning across various aspects of life.(1) This state enables individuals to build resilience, make sound decisions, and establish healthy interpersonal relationships, thereby actively contributing to their community's well-being. However, recent studies warn of a worrying increase in mental health problems among emerging adults: approximately 50 % of this population experiences some emotional difficulty, with depression being one of the most prevalent, affecting 20 %.(2) This situation poses a global challenge in promoting mental health in this age group, especially in Latin American contexts where socioeconomic, academic, and personal vulnerabilities converge.

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In this sense, the transition from adolescence to adulthood represents a critical period that demands a complex adaptation process, both academic and psychosocial. This stage involves assimilating new learning methodologies, building interpersonal networks, and taking on greater responsibilities, which can generate emotional stress and affect academic performance.[3] Emerging adults often face high levels of stress and, in many cases, neglect essential aspects of self-care such as nutrition, rest, and physical activity. Furthermore, during the university socialization process, some young people adopt harmful habits related to alcohol or tobacco use,[4] which negatively impact their mental health and overall well-being.

In addition, several studies have shown that healthy habits are protective factors against the development of psychological disorders. Regular physical activity, a balanced diet, restful sleep, abstinence from psychoactive substances, and mindfulness practice are associated with better emotional regulation and greater psychological well-being.[5] These behaviors promote cognitive development, strengthen resilience, and facilitate emotional self-regulation in this population, thus fostering more satisfactory academic performance and a more emotionally balanced life.

Furthermore, psychological well-being has become a central theoretical construct within positive psychology. Ryff[6] defines it as a multidimensional state that integrates dimensions such as self-acceptance, autonomy, environmental mastery, positive relationships, life purpose, and personal growth. This model, subsequently validated in different cultural contexts,[7] conceives of well-being not only as the presence of positive emotions but also as a dynamic construct that enables coping with life's challenges and the development of human potential. In the context of emerging adulthood, this well-being is crucial, as this population faces substantial changes in their personal, family, and academic environments that directly impact their emotional stability and educational performance. Recent research indicates that reduced levels of psychological well-being are associated with higher rates of anxiety, depression, and academic dropout. [8,9]

Furthermore, the scientific literature shows a growing interest in analyzing the relationship between psychological well-being and healthy habits, understood as the optimal manifestation of human functioning. According to Diener,[10] psychological well-being (psychological flourishing) implies a balance between hedonic well-being—centered on the subjective experience of pleasure—and eudaimonic well-being—oriented toward self-actualization and a sense of purpose—constituting a state of holistic flourishing. In the context of emerging adulthood, these components interact with sociodemographic and behavioral variables, shaping students' capacity to achieve full development. However, in Ecuador, empirical research on the interaction between mental health, habits, and psychological well-being remains limited, even though WHO reports[1] indicate that at least 30 out of every 100 Ecuadorians suffer from some mental health problem.

However, significant gaps remain in the scientific literature. Most available studies employ cross-sectional designs, making it difficult to establish causal relationships and to analyze the evolution of well-being over

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time.[11] Furthermore, evidence is geographically concentrated in urban contexts, with limited representation of rural populations, ethnic minorities, and vulnerable youth.[12] These limitations reduce the possibility of formulating contextualized and equitable preventive strategies, especially in Latin America. Within this framework, the present research seeks to provide robust empirical evidence on the relationship between healthy habits, mental health, and psychological well-being in emerging Ecuadorian adults, analyzing the predictive role of lifestyle habits in the emergence of mental health problems and in shaping psychological well-being.

Finally, the results of this study aim to offer relevant theoretical, methodological, and practical contributions and to open new lines of research. Theoretically, they will contribute to consolidating explanatory models of well-being and flourishing in emerging adulthood. Methodologically, they will enable the generation of replicable, context-specific evidence in Ecuadorian emerging adult populations. In the applied sphere, they will provide input on the design of psychoeducational programs to promote healthy habits and prevent psychological distress, thereby strengthening the holistic development, resilience, and emotional sustainability of this population. And in the research sphere, they will help open new lines of inquiry into well-being, mental health, and healthy habits.

MATERIALS AND METHODS

This study adopted a quantitative approach, employing a non-experimental, cross-sectional, descriptive, correlational, and predictive retrospective design, according to the methodological classification proposed by Supo and Zacarías.[13] The study population consisted of 350 emerging Ecuadorian adults. The sample was selected using purposive non-probability sampling with a retrospective approach. For this purpose, the medical records and psychometric evaluation records of the clients treated at the Ananda Psychotherapeutic Clinic, Mental Health, located in the city of Riobamba (Ecuador), during the period between January 2023 and July 2025, were reviewed and analyzed.

The inclusion criteria were those medical records of patients who had completed the Goldberg General Health Questionnaire (GHQ-28), the Green Survey of Healthy Habits, and the Diener Psychological Flourishing Scale. Medical records with incomplete information or that did not correspond to the time period defined for the study were excluded from the analysis.

As mentioned previously, the Green Survey proposed by Pérez-López[14] was used to assess healthy lifestyle habits. This instrument includes items on the frequency of daily meals, fruit and water consumption, intake of soft drinks and sodas, fat consumption, consumption of processed foods, oral hygiene, physical activity practices, and sleep quality. The survey was developed by a group of experts in dental, nutritional, and medical health, each with at least 15 years of experience in their respective fields. The instrument's score ranges from -40 to +50 points, establishing six classification levels:

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- Level 3: between 41 and 50 points.
- Level 2: between 21 and 40 points.
- Level 1: between 0 and 20 points.
- Level -1: between -1 and -15 points.
- Level -2: between -16 and -30 points.
- Level -3: between -31 and -40 points.

Positive levels reflect greater practice of healthy habits, while negative levels indicate a lower incorporation of these habits into daily life.

For the mental health assessment, the abbreviated version of the Goldberg General Health Questionnaire (GHQ-28) was used.[15] This self-administered instrument consists of 28 items and can be administered in 10 minutes or less. The questionnaire was adapted into Spanish by Lobo et al.[16] validated in the Ecuadorian population by Moreta-Herrera et al.[17] and applied to both adolescents and adults. Its purpose is to assess general aspects of health and psychological functioning quickly. The GHQ-28 is structured into four subscales: (A) somatic symptoms, (B) insomnia and anxiety, (C) social dysfunction, and (D) severe depression. Each item has four response options, scored on a dichotomous scale: 0, 0, 1, 1. The selection of this instrument was guided by previous research in university populations, which has shown adequate internal consistency with Cronbach's alpha coefficients between 0.75 and 0.98.[17,18]

The Psychological Flourishing Scale by Diener et al.[19] was used to assess psychological well-being. This instrument consists of eight items that assess subjective psychological well-being, with response options on a seven-point Likert scale. The score ranges from 8 to 56 points, with higher scores indicating a greater level of flourishing psychological well-being and lower scores indicating a state of languishing. Graham and Eloff[20] consider that scores > 45 indicate greater flourishing, while scores < 32 indicate greater languishing. The choice of this instrument was based on its use in previous research with emerging adult populations, in which it has been reported to have high internal consistency (Cronbach's alpha = 0.94; 8,21).

Data tabulation was performed using Microsoft Excel spreadsheets, while statistical analysis was carried out using Jamovi software, version 2.6.45.[22] The questionnaires were administered during clinical interviews with the patients, both in person and virtually. Regarding ethical considerations, the ethical principles related to confidentiality and the proper handling of collected information were upheld, in accordance with the Declaration of Helsinki of the World Medical Association, including its update.[23]

Healthy lifestyle habits, mental health, and psychological well-being were evaluated using the question: Are healthy habits predictors of mental health and psychological well-being in emerging Ecuadorian adults?

Given that the central purpose of the research was hypothesis testing, the procedures corresponding to statistical significance analysis were followed. First, a two-tailed hypothesis was formulated. The null

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hypothesis (H_0) stated that healthy lifestyle habits do not significantly predict health or psychological well-being in emerging Ecuadorian adults, whereas the alternative hypothesis (H_1) posited that they do. Second, the significance level was defined and set at 5 % ($\alpha = 0.05$). Third, the corresponding test statistics were selected. In this case, Spearman's rank correlation coefficient was applied to assess the association between variables that did not meet the normality assumption; multiple linear regression and multivariate binary logistic regression were used for predictive analyses; and the Mann-Whitney U and Chi-square tests were used for group comparisons. Finally, the decision criterion was determined: if the p-value was less than 0.05, the null hypothesis was rejected and the researcher's hypothesis was accepted.

RESULTS

The results in Table 1 present the sociodemographic characteristics of the participating population:

Table 1. Characterization variables

CHARACTERIZATION VARIABLES	N	%
AGE		
18 - 20	197	56.29
21 - 25	140	40.00
26 - 30	13	3.71
SEX		
Man	94	26.9
Women	256	73.1
PROVINCE OF ORIGIN		
Azuay	2	0.57
Bolivar	28	8.00
Chimborazo	195	55.7
Cotopaxi	32	9.14
Gold	3	0.86
Emeralds	6	1.71
Francisco de Orellana	2	0.57
Guayas	1	0.29
Imbabura	2	0.57
Loja	8	2.29
The Rivers	3	0.86
Manabí	3	0.86
Morona Santiago	4	1.14
Napo	5	1.43
Pastaza	2	0.57
Pichincha	12	3.43
Saint Helena	1	0.29
Santo Domingo	7	2.00
Sucumbíos	3	0.86
Tungurahua	30	8.57
Zamora Chinchipe	1	0.29
Total	350	100

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Table 2 presents the frequency distributions of the variables included in the study, including healthy habits and dimensions of mental health such as somatic symptoms, anxiety-insomnia, social dysfunction, depression, as well as the presence of chronic cases of mental disorders.

	Frequencies	% of Total	% Cumulative
HEALTHY HABITS (α = 0.71)			
Level 3	5	1.40	1.4
Level 2	90	25.70	27.1
Level 1	222	63.40	90.6
Level -1	27	7.70	98.3
Level -2	5	1.40	99.7
Level -3	1	0.30	100.0
SOMATIC SYMPTOMS (α = 0.80)			
No Case	320	91.40	91.40
Case	30	8.60	100.0
ANXIETY – INSOMNIA (α = 0.87)			
No Case	289	82.60	82.60
Case	61	17.40	100.0
SOCIAL DYSFUNCTION (α = 0.83)			
No Case	319	91.10	91.10
Case	31	8.90	100.0
DEPRESSION (α = 0.88)			
No Case	321	91.70	91.70
Case	29	8.30	100.0
CHRONIC CASES OF MENTAL HEALTH (α = 0.94)			
No Case	61	17.40	17.40
Case	289	82.60	100.0

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Frequency analysis reveals distinct distributions across the study variables. Regarding healthy habits (α = 0.71), the majority of participants (63.40 %) were at Level 1, while only 1.4% reached Level 3, indicating moderate-to-low adherence in the sample. As for clinical symptoms assessed using the GHQ-28, a low prevalence was observed in the Somatic Symptoms subscale (8.30 %, α = 0.88). The anxiety-insomnia subscale showed a moderately higher frequency (17.40 %, α = 0.87). Contrary to this pattern, the chronic mental health condition variable (α = 0.94) showed a high prevalence, with 82.60 % of the sample classified as cases, indicating the presence of persistent psychological distress in most participants despite low scores on the specific subscales. All instruments demonstrated adequate internal consistency, with Cronbach's alphas> 0.70.

Table three presents the descriptive statistics for the study variables, highlighting psychological well-being, with a mean of 46.40 (minimum = 8, maximum = 56), indicating greater flourishing among the participating emerging adults. The scale showed an α of 0.94.

Table 3. Descriptive Statistics of the Study Variables.

	Psychological well-being	Healthy habits	Somatic symptoms	Anxiety - insomnia	Social dysfunction	Depression	Chronic mental health cases
N	350	350	350	350	350	350	350
Average	46.4	4.17	1.09	1.17	1.09	1.08	1.83
Median	48.0	4.00	1.00	1.00	1.00	1.00	2.00
Standard deviation	8.77	0.67	0.28	0.38	0.29	0.28	0.38
Variance	77.0	0.45	0.08	0.14	0.08	0.08	0.14
IQR	11.0	1.00	0.00	0.00	0.00	0.00	0.00
Minimum	8	1	1	1	1	1	1
Maximum	56	6	2	2	2	2	2

The descriptive analysis of the study variables revealed that the mean psychological well-being score was 46.40 (SD = 8.77), with a range from 8 to 56. In contrast, the GHQ-28 subscales, which assess clinical symptoms, presented notably low means, close to the minimum point of the scale: somatic symptoms (M = 1.09, SD = 0.28), anxiety-insomnia (M = 1.17, SD = 0.380), social dysfunction (M = 1.09, SD = 0.29), and depression (M = 1.08, SD = 0.28). This trend is confirmed by the medians (Md = 1.00) and interquartile ranges (IQR = 0.00) for these dimensions, indicating a marked positive skewness and a concentration of responses in the absence of symptoms category. Healthy habits, meanwhile, had a mean of 4.17 (SD = 0.67) on a scale of 1 to 6, indicating moderately positive adherence. The dichotomous variable "chronic mental health conditions" had a mean of 1.83 (SD = 0.38), suggesting that most of the sample fell into this category.

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Overall, the descriptive data indicate a sample with a high level of psychological well-being (mostly thriving individuals), a very low prevalence of general clinical symptoms, and a moderate level of healthy habits.

Table 4. Correlations, healthy habits, psychological well-being, and mental health

	Healthy habits	Psychological well-being	Somatic symptoms	Anxiety - insomnia	Social dysfunction	Depression	Chronic mental health cases
Healthy habits	—						
Psychological well-being	0.25***	—					
Somatic symptoms	-0.03	-0.27***	—				
Anxiety - insomnia	-0.03	-0.27***	0.42***	—			
Social dysfunction	-0.04	-0.34***	0.44***	0.44***	—		
Depression	-0.13*	-0.36***	0.43***	0.44***	0.49***	—	
Chronic mental health cases	-0.23***	-0.43***	0.14**	0.21***	0.14**	0.14**	—

Note. * p < .05, ** p < .01, *** p < .001

Spearman's rank correlation analysis (Table 4) revealed significant associations among the study variables. Psychological well-being showed a moderate positive correlation with healthy habits ($\rho = 0.26$, $p < .001$) and significant negative correlations with all dimensions of mental health cases (somatic, anxiety-insomnia, social dysfunction, and depression), particularly with chronic mental health cases ($\rho = -0.43$, $p < .001$). Furthermore, healthy habits correlated negatively with depression ($\rho = -0.13$, $p < .05$) and more strongly with chronic mental health cases ($\rho = -0.23$, $p < .001$). Robust positive correlations were observed between the different dimensions of the GHQ-28, highlighting the relationship between social dysfunction and depression ($\rho = 0.49$, $p < .001$), and between anxiety/insomnia and somatic symptoms ($\rho = 0.42$, $p < .001$). The results indicate that greater psychological well-being and the practice of healthy habits are associated with less clinical symptomatology. At the same time, the different dimensions of mental health problems tend to coexist.

Table 5 presents the multiple linear regression model with psychological well-being as the dependent variable.

Table 5. Multiple linear regression model.

Preacher	β (95% CI)	EE	t	p
Constant[a]	49.96	3.16	15.79	<.001
Healthy habits (level -2)	-11.62	4.41	-2.64	.009
Somatic symptoms (case)	-1.64	1.61	-1.02	0.31
Anxiety – insomnia (case)	-0.45	1.16	-0.38	0.70
Social dysfunction (case)	-7.41	1.60	-4.63	<.001
Depression (case)	-6.97	1.64	-4.24	<.001
Chronic mental health cases (case)	-5.61	1.02	-5.52	<.001

Note: β = Unstandardized coefficient; SE = Standard error; 95 % CI = 95 % confidence intervals.
Reference categories: Healthy habits Level 3, absence of mental health symptoms.

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In the multiple linear regression model, the influence of healthy habits and various mental health indicators on psychological well-being (psychological flourishing) was examined. The model proved significant, explaining 41 % of the variance in well-being ($R = 0.64$; $R^2 = 0.41$). The results show that a very low level of healthy habits (Levels -2 and -3) is correlated with a significant decrease in psychological well-being ($\beta = -11.62$, $p = .009$). Similarly, the presence of social dysfunction ($\beta = -7.41$, $p < 0.001$), depression ($\beta = -6.97$, $p < 0.001$), and chronic mental health conditions ($\beta = -5.61$, $p < .001$) significantly and negatively predicted psychological well-being. In contrast, somatic symptoms ($\beta = –1.64$, $p = 0.31$) and anxiety-insomnia ($\beta = –0.44$, $p = 0.70$) did not show a significant association. These results indicate that the most significant factors in reducing psychological well-being are deficits in health habits and, particularly, social dysfunction, depression, and the presence of chronic mental health conditions.

Table 6. Binomial logistic regression predicting mental health

Preacher	**β**	**EE**	**Z**	***p***
Psychological blossoming	-0.24	0.04	-5.52	<0.001
Healthy habits	-0.70	0.28	-2.47	0.013
Sex (female vs male)	0.73	0.39	1.90	0.058
Age (categories)	—	—	ns	ns
Province (categories)	—	—	ns	ns

Note: β = Unstandardized coefficient; SE = Standard error; ns = not significant.

Reference categories: male, age group 23-24 years, Chimborazo province.

The multivariate logistic regression model showed a good fit ($R^2McF = 0.31$), explaining 31.1 % of the variance in the presence of mental health problems. The results indicate that a higher level of psychological well-being significantly predicts a lower probability of experiencing mental health problems ($\beta = –0.24$, $p < 0.001$), while lower levels of healthy habits were significantly associated with a higher risk of mental health problems ($\beta = –0.70$, $p = 0.013$). In contrast, sex ($p = 0.058$), age group ($p > 0.22$), and province of origin ($p > 0.99$) did not show statistically significant effects on the dependent variable. These results demonstrate the predictive role of psychological well-being and healthy habits in the prevention of mental health problems, while sociodemographic variables do not contribute relevant predictive value in this model.

Table 7. Comparisons of groups by gender in variables of mental health, psychological well-being, and healthy habits.

c		**Statistical**	**gl / Z**	**p**	**Size of effect**
Healthy habits	Mann-Whitney U	11973	Z = –0.09	0.93	r = 0.005
Somatic symptoms	χ^2	1.61	1	0.21	φ = 0.07
Anxiety-insomnia	χ^2	0.26	1	0.61	φ = 0.03
Social dysfunction	χ^2	0.28	1	0.78	φ = 0.03
Depression	χ^2	1.97	1	0.16	φ = 0.08
Chronic mental health cases	χ^2	2.15	1	0.14	φ = 0.09
Psychological well-being	Mann-Whitney U	11316	Z = –0.85	0.39	r = 0.046

Note. H_a: There are significant differences between the groups by gender

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As shown in Table 7, a variety of analyses were performed to assess whether there were statistically significant differences between men and women in the study variables. The results indicate no significant differences between the gender groups in any of the variables analyzed (all p-values > 0.05). The effect sizes, calculated as Rosenthal's r for the Mann-Whitney test and φ (phi) for the Chi-square test, were consistently small ($r < 0.05$, $\varphi < 0.10$), indicating that, in addition to not being statistically significant, the observed differences lack substantial practical relevance.

Statistical significance ritual for hypothesis testing

In accordance with the established inferential protocol for hypothesis testing, the statistical significance procedure was operationalized. Initially, the null hypothesis (H_0) and the alternative hypothesis (H_1) were formulated as two-tailed. H_0 postulated that healthy lifestyle habits do not significantly predict mental health or psychological well-being in the study population, while H_1 maintained that this predictive relationship is statistically significant. The significance level (α) was set a priori at 0.05. For verification, two test statistics were selected: a multiple linear regression model, with psychological well-being as the criterion variable, and a multivariate binary logistic regression model, with the dichotomous variable of chronic mental health cases as the dependent variable. The decision criterion stipulated that if the p-value associated with the coefficients for healthy habits in both models was less than $\alpha = 0.05$, H_0 would be rejected in favor of H_1.

The results of the multiple linear regression model revealed that very low levels of healthy habits constituted a statistically significant negative predictor of psychological well-being ($\beta = -11.62$, $p = 0.009$). Simultaneously, the logistic regression model indicated that healthy habits were significantly associated with a lower probability of experiencing mental health problems ($\beta = -0.701$, $p = 0.013$). Since the p-values obtained for the main predictor in both models (0.009 and 0.013) are below the established significance level ($\alpha = 0.05$), the null hypothesis (H_0) is rejected, and the researcher's hypothesis (H_1) is accepted. Consequently, it is concluded that there is statistically significant evidence to support the claim that healthy lifestyle habits positively predict psychological well-being and negatively predict the presence of mental health problems in the sample of emerging Ecuadorian adults.

DISCUSSION

The central objective of the study was to investigate and analyze healthy lifestyle habits as predictors of mental health and psychological well-being among emerging Ecuadorian adults.

The results of this study reveal a multifaceted, sometimes paradoxical perspective on psychological well-being and mental health among a sample of 350 emerging Ecuadorian adults. The sociodemographic characteristics show a predominantly young sample (56.29 % between 18 and 20 years old), a female majority (73.1 %), and a concentration mainly in the province of Chimborazo (55.7 %), a contextual factor that must be considered in understanding the findings.

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A central and seemingly contradictory finding is the coexistence of high psychological well-being (M=46.4 on a scale up to 56) with a high prevalence of chronic mental health conditions (82.6 %). The nature of the instruments used can explain this discrepancy. The Psychological Well-Being Scale (Psychological Flourishing) assesses positive dimensions such as purpose in life and positive relationships.[19] At the same time, the chronic mental health condition indicator likely captures persistent, low-intensity psychological distress that is not necessarily disabling but is nonetheless chronic. This suggests that emerging adults can feel functional and possess positive psychological resources (flourishing) despite experiencing persistent subclinical stress or distress, a phenomenon observed in life cycles such as that of the study population, as they are primarily immersed in highly demanding academic environments such as university studies.[24, 25, 26] On the other hand, the notably low scores on the specific subscales of the GHQ-28 (a dichotomous variable indicating the presence or absence of symptoms) had means of 1.00 and interquartile ranges of 0, indicating low levels of acute clinical symptomatology. This reinforces the idea that the distress reported in the chronic mental health cases variable is of a different nature: more diffuse, less acute, but widespread; in other words, they are symptoms of very low intensity but of long duration.

Spearman's rank correlation analysis provides insight into the relationship between the variables. The moderate positive correlation between healthy habits and psychological well-being ($\rho = 0.254$) aligns with the scientific literature, which establishes that behaviors such as physical activity, a balanced diet, and adequate sleep are cornerstones of optimal psychological functioning.[27,28,29,30] Likewise, the robust negative correlations between well-being and all dimensions of symptomatology, especially in chronic cases ($\rho = -0.427$), point to the bidimensional nature of mental health, where the presence of well-being is not merely the absence of distress, but rather both constructs are interrelated.[31,32] The strong correlations between the GHQ-28 subscales, such as between anxiety-insomnia and somatic symptoms ($\rho = 0.424$), reflect the high comorbidity of psychological symptoms. This finding is consistent across higher education student populations.[33]

Regression models allow for a deeper understanding of the predictability of these variables. In this case, the linear regression model explains a substantial 41 % of the variance in psychological well-being. It is revealing that, controlling for other variables, healthy habits at very low levels are a powerful negative predictor ($\beta = -11.62$), even stronger than some clinical variables. This underscores the fundamental role of lifestyle as a modifiable determinant of well-being in this study population.[34,35] Among the clinical dimensions, social dysfunction and depression were the strongest negative predictors, while somatic symptoms and anxiety/insomnia were not significant. This indicates that in this population, difficulty performing social roles and depressive states (which may include anhedonia and hopelessness) have a more profound impact on the capacity for psychological well-being (flourishing) than anxiety or somatic symptoms in isolation.[36,37]

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Additionally, the multivariate logistic regression model confirms the protective role of psychological well-being and healthy habits against mental health problems. The fact that sociodemographic variables such as sex, age, or province of origin were not significant predictors is a noteworthy finding. This indicates that the risk of mental health problems in this sample is more determined by modifiable psychological and behavioral factors than by fixed demographic characteristics, which is encouraging for the design of universal interventions aimed at working with emerging adults from the province or elsewhere.[38,39] The non-significant role of sex is also noteworthy, which is particularly interesting given that the literature often reports higher prevalences of internalization in women.[40,41] The consistency of these findings was reinforced by a complementary analysis using the nonparametric Mann-Whitney U test and Pearson's chi-squared test, which also showed no significant differences between sexes across all variables evaluated. The effect sizes in these analyses ($r < 0.05$ for Mann-Whitney U tests and $\varphi < 0.10$ for Chi-square tests) confirm the limited practical relevance of the observed differences.[40]

These results, taken together, point to a scenario where emerging adults, despite reporting positive well-being, are generally dealing with chronic, low-intensity psychological distress. This alerts society in general, and higher education institutions in particular, to the need to implement health promotion programs that go beyond crisis intervention. Interventions could focus on: 1) promoting healthy habits through psychoeducation and environmental changes, such as spaces for physical activity, the availability of healthy food, among others, and 2) enhancing psychological well-being and social skills through workshops based on positive psychology and cognitive behavioral therapy, which have proven effective in reducing depression and improving social functioning in this population.[43]

CONCLUSIONS

Regarding the predictive power of healthy habits, hypothesis testing using multiple linear regression and binary logistic regression models allows us to reject the null hypothesis and conclude that healthy habits constitute a statistically significant factor in both psychological well-being (flourishing) and mental health in emerging Ecuadorian adults. The linear regression model, which explains 41 % of the variance in psychological well-being ($R^2 = 0.41$), identifies severe deficits in healthy habits as a powerful negative determinant ($\beta = –11.62$, $p = 0.009$), independent of the influence of clinical symptoms. Concurrently, the logistic regression model ($R^2McF = 0.311$) confirms that lower adherence to these habits is significantly associated with a higher probability of belonging to the chronic mental health category ($\beta = –0.70$, $p = 0.013$). These findings empirically establish the role of lifestyles as an essential modulating factor in the mental health continuum (health-illness) in this population.

Regarding the structure of mental health and its implications, the psychometric profile of the sample, characterized by a high prevalence of chronic distress (82.60 %) coexisting with considerably high mean scores for psychological well-being and low levels of acute symptoms on the GHQ-28, points to a distinct

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clinical phenotype in this cohort. This pattern, along with the regression results that identify social dysfunction ($\beta = -7.41$, $p < 0.001$) and depression ($\beta = -6.97$, $p < 0.001$) as the most robust clinical predictors of well-being—even above anxiety-insomnia and somatic symptoms—indicates that the impact on psychosocial functioning is more decisive than internalized acute symptoms. It was concluded that in emerging adult populations, mental health should be conceptualized using a two-dimensional approach that separately assesses psychological flourishing and persistent subclinical distress, the latter being particularly sensitive to deficits in healthy habits and effective social functioning.

STUDY LIMITATIONS

The use of medical records as a data source constitutes a significant methodological limitation. The available information may vary in quality, completeness, and level of detail, depending on the professionals who recorded it in heterogeneous clinical contexts. Furthermore, there was no control over the conditions under which the psychometric instruments were administered or over the presence of additional contextual variables that could influence the results. Since the sample was drawn from consultations before psychotherapy, the findings are not generalizable to the entire emerging adult population. Finally, the retrospective and cross-sectional nature of the design prevents the establishment of causal relationships, limiting inferences to predictive associations between the variables analyzed.

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Contribution statement:

Sridam David Arévalo-Lara: Review and analysis of medical records, Materials and Methods, results, and discussion

Evelyn Mishel Cuenca Yupa: Review and analysis of medical records, Introduction, and conclusions.

Bianca Paula Dávalos Calero: Review and analysis of medical records, Introduction and bibliographic references.

David Xavier Paz-Pacheco: Review and analysis of medical records, Introduction, review of regulations, and abstract.

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BIBLIOGRAPHIC REFERENCES

1. World Health Organization (WHO). Salud mental [Internet]. 2025 [cited 5 Oct 2025]. Available on: https://www.who.int/es/news-room/fact-sheets/detail/mental-health-strengthening-our-response.

2. UNESCO. Nuevo informe: apoyando la salud mental de los estudiantes de educación superior Instituto Internacional para la Educación Superior en América Latina y el Caribe [Internet]. 2024 [cited 5 Oct 2025]. Available on: https://www.iesalc.unesco.org//es/articles/nuevo-informe-apoyando-la-salud-mental-de-los-estudiantes-de-educacion-superior.

3. Fasanando-Puyo T. Revisión sistemática del proceso de adaptación a la vida universitaria [Internet]. Rev Científica Episteme Tekne. 2025 [cited 2025 Nov 9];4(1):e778. Available on: https://doi.org/10.51252/rceyt.v4i1.778.

4. Sánchez Padilla M, Álvarez Chávez A, Flores Cerón T, Arias Rico J, Saucedo García M. El reto del estudiante universitario ante su adaptación y autocuidado como estrategia para disminuir problemas crónicos degenerativos. Educ Salud Bol Científico Inst Cienc Salud Univ Autónoma Estado Hidalgo [Internet]. 2014 [cited 9 Nov 2025];2(4). Available on: https://doi.org/10.29057/icsa.v2i4.754.

5. American Psychiatric Association [APA]. Estilo de vida para apoyar la salud mental [Internet]. 2025 [cited 5 Oct 2025]. Available on: https://www.psychiatry.org:443/patients-families/la-salud-mental/estilo-de-vida-para-apoyar-la-salud-mental.

6. Ryff CD. Happiness is everything, or is it? Explorations on the meaning of psychological well-being [Internet]. J Pers Soc Psychol. 1989 [cited 9 Nov 2025];57(6):1069–81. Available on: https://doi.org/10.1037/0022-3514.57.6.1069.

7. Freire C, Ferradás MDM, Núñez JC, Valle A. Estructura factorial de las Escalas de Bienestar Psicológico de Ryff en estudiantes universitarios [Internet]. Eur J Educ Psychol. 2017 [cited 9 Nov 2025];10(1): 1–8. Available on: https://doi.org/10.1016/j.ejeps.2016.10.001.

8. Arévalo-Lara S, Lotufo NG, Yerbabuena MV, Villafuerte AM. Florecimiento psicológico y salud mental en estudiantes de educación superior de Riobamba [Internet]. Medisur. 2025 [cited 9 Nov 2025];23(0):e52917. Available on: https://medisur.sld.cu/index.php/medisur/article/view/52917.

9. Arévalo-Lara S, Freire Palacios V. Salud mental en la educación superior en el período de post-pandemia de COVID-19. Anatomía Digital [Internet]. 2023 [cited 2025 Nov 9]; 6(4.3):229–53. Available on: https://doi.org/10.33262/anatomiadigital.v6i4.3.2803.

ISSN-impreso 1390-7581
ISSN-digital 2661-6742

10. Diener E, editor. The Science of Well-Being [Internet]. Dordrecht: Springer Netherlands; 2009 [cited 2025 Oct 5]. (Social Indicators Research Series; vol. 37). Available on: http://link.springer.com/10.1007/978-90-481-2350-6.

11. Rockwell DM, Kimel SY. A systematic review of first-generation college students' mental health. J Am Coll Health [Internet]. 2025 [cited 2025 9 Nov 2025];73(2):519–31. Available on: https://doi.org/10.1080/07448481.2023.2225633.

12. Cuenca NER, Bravo LMR, Riva MEML, Suyo-Vega JA. Salud mental en adolescentes universitarios latinoamericanos: revisión sistemática [Internet]. Arch Venez Farmacol Ter. 2020;39(6):689–95 [cited 9 Nov 2025]. Available on: https://www.redalyc.org/journal/559/55965387003/html.

13. Supo J, Zacarías H. Metodología de la investigación científica: para las ciencias de la salud y las ciencias sociales [Internet]. Arequipa: Bioestadístico; 2020 [cited 9 Nov 2025]. 338 p. Available on: https://books.google.com.ec/books?id=WruXzQEACAAJ.

14. Pérez-López IJ, Rivera García E, Delgado-Fernández M. Mejora de hábitos de vida saludables en alumnos universitarios mediante una propuesta de gamificación. Nutr Hosp [Internet]. 2017 [cited 9 Nov 2025];34(4). Available on: https://doi.org/10.20960/nh.669.

15. Goldberg D, Williams P. General Health Questionnaire (GHQ) [Internet]. Swindon, Wiltshire (UK): NFER-Nelson; 2000 [cited 9 Nov 2025]. Available on: https://bsw.ugent.be/VVGP/structuurfiche_GHQ.pdf.

16. Lobo A, Pérez-Echeverría MJ, Artal J. Validity of the scaled version of the General Health Questionnaire (GHQ-28) in a Spanish population. Psychol Med [Internet]. 1986 [cited 9 Nov 2025];16(1):135–40. Available on: https://doi.org/10.1017/S0033291700002579.

17. Moreta-Herrera R, Zambrano-Estrella J, Sánchez-Vélez H, Naranjo-Vaca S. Salud mental en universitarios del Ecuador: síntomas relevantes, diferencias por género y prevalencia de casos. Pensam Psicológico [Internet]. 2021 [cited 9 Nov 2025];19:1–12. Available on: https://doi.org/10.11144/Javerianacali.PPSI19.smue.

18. Pérez-Chipantiza PX, Noroña-Salcedo DR, Vega-Falcón V. Repercusión del SARS-CoV-2 en la salud mental y el bienestar psicológico del personal del Centro de Salud Huambaló 2020. Rev Sci [Internet]. 2021 [cited 9 Nov 2025];6(19):243–62. Available on: https://doi.org/10.29394/Scientific.issn.2542-2987.2021.6.19.12.243-262.

ISSN-impreso 1390-7581
ISSN-digital 2661-6742

19. Diener E, Wirtz D, Tov W, Kim-Prieto C, Choi D won, Oishi S, et al. New Well-being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings. Soc Indic Res. 2010; 97(2): 143-56. Available on: http://link.springer.com/10.1007/978-90-481-2350-6.

20. Graham MA, Eloff I. Comparing mental health, wellbeing and flourishing in undergraduate students pre- and during the COVID-19 pandemic. Int J Environ Res Public Health [Internet]. 2022 [cited 9 Nov 2025];19(12):7438. Available on: https://doi.org/10.3390/ijerph19127438.

21. Arévalo-Lara SD, Freire VFP. Funcionamiento familiar, salud mental y florecimiento psicológico en estudiantes de educación superior. Polo del Conocimiento [Internet]. 2025 [cited 9 Nov 2025];10(3): 1334–58. Available on: https://doi.org/10.23857/pc.v10i3.9128.

22. The jamovi project. jamovi. (Version 2.6) [Computer Software]. [Internet]. 2024 [cited 5 Oct 2025]. Available on: https://www.jamovi.org/.

23. WMA - The World Medical Association-Declaración de Helsinki de la AMM – Principios éticos para las investigaciones médicas con participantes humanos [Internet]. [cited 5 Oct 2025]. Available on: https://www.wma.net/es/policies-post/declaracion-de-helsinki-de-la-amm-principios-eticos-para-las-investigaciones-medicas-en-seres-humanos/.

24. Keyes CLM. The mental health continuum: from languishing to flourishing in life. J Health Soc Behav [Internet]. 2002 [cited 9 Nov 2025];43(2):207–22. Available on: https://doi.org/10.2307/3090197.

25. Liu C, Lin P, Xiong Z. Self-compassion and psychological flourishing among college students: the mediating role of hope and the moderating role of emotion regulation. Behav Sci (Basel) [Internet]. 2024 [cited 9 Nov 2025];14(12):1149. Available on: https://doi.org/10.3390/bs14121149.

26. Concerto C, Rodolico A, La Rosa VL, Aiello B, Martinez M, Stuto S, et al. Flourishing or languishing? Predictors of positive mental health in medical students during the COVID-19 pandemic. Int J Environ Res Public Health [Internet]. 2022 [cited 9 Nov 2025];19(23):15814. Available on: https://doi.org/10.3390/ijerph192315814.

27. Oswald F, Campbell J, Williamson C, Richards J, Kelly P. A scoping review of the relationship between running and mental health. Int J Environ Res Public Health [Internet]. 2020 [cited 9 Nov 2025];17(21):8059. Available on: https://doi.org/10.3390/ijerph17218059.

28. Walsh R. Lifestyle and mental health. Am Psychol [Internet]. 2011 [cited 9 Nov 2025];66(7):579-92. Available on: https://doi.org/10.1037/a0021769.

ISSN-impreso 1390-7581
ISSN-digital 2661-6742

29. Wang X, Wu Y, Shi X, Chen Y, Xu Y, Xu H, Ma Y, Zang S. Associations of lifestyle with mental health and well-being in Chinese adults: a nationwide study. Front Nutr [Internet]. 2023 [cited 9 Nov 2025];10:1198796. Available on: https://doi.org/10.3389/fnut.2023.1198796.

30. White RL, Bennie JA, Buman MP, Arundell L, McEachan RRC, Montroy J, et al. Physical activity and mental health: a systematic review and best-evidence synthesis of mediation and moderation studies. Int J Behav Nutr Phys Act [Internet]. 2024 [cited 9 Nov 2025];21(1):134. Available on: https://doi.org/10.1186/s12966-024-01653-0.

31. Keyes CLM. Mental illness and/or mental health? Investigating axioms of the complete state model of health. J Consult Clin Psychol [Internet]. 2005 [cited 9 Nov 2025];73(3):539–48. Available on: https://doi.org/10.1037/0022-006X.73.3.539.

32. Hu G, Qin H, Su B, Bao Y, Liang Z, Wang Y. Composite healthy lifestyle, socioeconomic deprivation, and mental well-being during the COVID-19 pandemic: a prospective analysis. Mol Psychiatry [Internet]. 2024 [cited 9 Nov 2025];29(2):439–48. Available on: https://doi.org/10.1038/s41380-023-02338-y.

33. Pinargote EI, Caicedo LC. La ansiedad y su relación en el rendimiento académico de los estudiantes de la carrera de Psicología de la Universidad Técnica de Manabí. Espirales Rev Multidiscip Investigación Científica [Internet]. 2019 [cited 9 Nov 2025]; 3(28). Available on: https://www.redalyc.org/journal/5732/573263327006/html.

34. Firth J, Gangwisch JE, Borsini A, Wootton RE, Mayer EA. Food and mood: how do diet and nutrition affect mental wellbeing? BMJ [Internet]. 2020 [cited 9 Nov 2025];369:m2382. Available on: https://doi.org/10.1136/bmj.m2382.

35. Makary MKT, Elmorsy EA, Dessoki HH, Khalil DM, Radwan RSA. The impact of lifestyle factors on the mental health of individuals working and studying at the American University of Sharjah (AUS). Ment Health Soc Incl [Internet]. 2025 [cited 9 Nov 2025];29(3). Available on: https://doi.org/10.1108/MHSI-05-2025-0139.

36. Lukat J, Margraf J, Lutz R, van der Veld WM, Becker ES. Psychometric properties of the Positive Mental Health Scale (PMH-scale). BMC Psychol [Internet]. 2016 [cited 9 Nov 2025];4(1):8. Available on: https://doi.org/10.1186/s40359-016-0111-x.

37. Castillo-Díaz MA, Martínez MC, Periañez CAH, Sauceda-Acosta D. Psychological distress, health-promoting lifestyle and sociodemographic factors in Honduran university students: a structural equation model. Health Promot Int [Internet]. 2024 [cited 9 Nov 2025];39(4):e082. Available on: https://doi.org/10.1093/heapro/daae082.

ISSN-impreso 1390-7581
ISSN-digital 2661-6742

38. Conley CS, Shapiro JB, Kirsch AC, Durlak JA. A meta-analysis of indicated mental health prevention programs for at-risk higher education students. J Couns Psychol [Internet]. 2017 [cited 9 Nov 2025];64(2):121-40. Available on: https://doi.org/10.1037/cou0000190.

39. Turner M. Supporting a mentally healthy place of study: Examining protective factors that help students counter study-related stressors and contribute to their well-being and academic success [Internet]. Scand J Psychol. 2024 [cited 9 Nov 2025];65(4). Available on: doi: https://doi.org/10.1111/sjop.13027.

40. Altemus M, Sarvaiya N, Epperson CN. Sex differences in anxiety and depression: clinicāl perspectives. Front Neuroendocrinol [Internet]. 2014 [cited 9 Nov 2025];35(3):320-330. Available on: https://doi.org/10.1016/j.yfrne.2014.05.004.

41. Arévalo-Lara SD, Vega-Falcon V. Comparación de la salud mental de estudiantes de un instituto superior tecnológico durante la COVID-19. Psicol UNEMI [Internet]. 2022 Jan 4 [cited 9 Nov 2025]; 6(10):96-111. Available on: https://doi.org/10.29076/issn.2602-8379vol6iss10.2022pp96-111p.

42. Isbell LM, Chimowitz H, Huff NR, Liu G, Kimball E, Boudreaux E. A Qualitative Study of Emergency Physicians' and Nurses' Experiences Caring for Patients With Psychiatric Conditions and/or Substance Use Disorders. Ann Emerg Med [Internet]. 2023 Jun [cited 9 Nov 2025];81(6): 715-727. Available on: https://doi.org/10.1016/j.annemergmed.2022.10.014.

43. Hendriks T, Schotanus-Dijkstra M, Hassankhan A, De Jong J, Bohlmeijer E. The Efficacy of Multi-component Positive Psychology Interventions: A Systematic Review and Meta-analysis of Randomized Controlled Trials. J Happiness Stud [Internet]. 2020 [cited 9 Nov 2025]; 21(1):357-390. Available on: https://doi.org/10.1007/s10902-019-00082-1.

ISSN-impreso 1390-7581
ISSN-digital 2661-6742