# RISK BEHAVIORS IN UNIVERSITY STUDENTS: A STUDY ON THE INFLUENCE OF STRESS AND COPING STRATEGIES

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**Abstract**

The study examines the relationship between risk behaviors, stress, and coping strategies among Peruvian university students, highlighting the importance of these variables in their well-being. The sample consisted of 581 university students (ages 17 to 45). The instruments included: "Stress Scale for Transmissible Diseases", "Stress Coping Questionnaire", and an *ad hoc* questionnaire to assess risk behaviors. Results indicate that the most frequent risk behavior was not wearing a seatbelt (65%), followed by alcohol consumption (64.1%). Additionally, 25.7% reported high levels of stress, and the most used coping strategies were avoidance and seeking social support. Regression analysis shows that problem-focused coping and being employed are associated with a reduction in risk behaviors, whereas open emotional expression and being male increase the likelihood of engaging in such behaviors. In conclusion, the study underscores the need to implement specific interventions that promote effective coping strategies and reduce health risk factors.
KEY WORDS: *risk behaviors, stress, coping strategies, university students*.

**Resumen**

El estudio aborda la relación entre comportamientos de riesgo, estrés y estrategias de afrontamiento en universitarios peruanos, destacando la importancia de estas variables en su bienestar. La muestra consistió en 581 universitarios (17 a 45 años), los instrumentos incluyeron: "Escala de estrés ante enfermedades transmisibles", "Cuestionario de afrontamiento del estrés" y un cuestionario *ad hoc* para evaluar conductas de riesgo. Los resultados indican que, el comportamiento de riesgo más frecuente fue no usar cinturón de seguridad (65%), seguido del consumo de alcohol (64,1%), el 25,7% presenta niveles altos de estrés y las estrategias de afrontamiento más empleadas fueron evitación y búsqueda de apoyo social. El análisis de regresión muestra que la focalización en la solución de problemas y tener un empleo se asocian con una reducción en los comportamientos de riesgo, mientras que la expresión emocional abierta y ser hombre incrementan la probabilidad de estos comportamientos. En conclusión, se subraya la necesidad de implementar intervenciones específicas que promuevan

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estrategias de afrontamiento efectivas y reduzcan los factores de riesgo para su salud.

PALABRAS CLAVE: comportamientos de riesgo*, estrés, estrategias de afrontamiento, universitarios.*

## Introduction

Risk behaviors refer to everyday behaviors that, when performed, can lead to adverse or detrimental effects on individuals' physical and mental health (Oliveira et al., 2020). Understanding these behaviors is essential in mental health research, as it facilitates the development of preventive interventions aimed at reducing various morbidities, particularly in the university context (Eisenberg et al., 2013). This demographic group is at a critical stage for the formation of lifestyles, which will have a lasting impact on their future health and well-being (Flores-Paredes et al., 2023; Merced et al., 2022). Among the most common risk behaviors in university students are sedentary lifestyle, obesity, risky sexual behavior, and consumption of psychoactive substances (Barbosa et al., 2024; Belihu et al., 2024; Dai et al., 2024; Michelini et al., 2021; Rangel et al., 2017; Urday-Concha et al., 2019; Vélez et al., 2018).

These risk behaviors do not develop in isolation, but are influenced by psychological factors such as stress, which can act as a catalyst in the exacerbation of such behaviors (Jessor et al., 2016). From the perspective of the transactional model of stress, stress is defined as a dynamic interaction between the individual and their environment, where a discrepancy is perceived between the demands of the situation and the personal resources to cope with them (Lazarus, 1966; Lazarus & Folkman, 1984). This model highlights the importance of cognitive appraisal and coping strategies as essential mechanisms for stress management.

Stress, beyond its influence on everyday behaviors, has the potential to modify structural components of the personality, increasing the individual's vulnerability to adverse situations, which can lead to emotional disorders with psychological and physical consequences (Anicama et al., 2022; McEwen, 2007). Coping strategies, understood as behavioral and cognitive efforts aimed at managing both internal and external demands that generate stress, play a crucial role in mitigating psychological discomfort (Carver et al., 1989; Sandín & Chorot, 2003). The choice and effectiveness of these strategies largely depend on the nature of the stressor and the skills acquired by the individual to cope with stressful situations (Folkman & Moskowitz, 2004). Coping ability is assessed more rigorously when the individual faces situations of tension or stress (Frydenberg & Lewis, 1996), and if a person lacks these skills, they may develop psychopathological behaviors that prevent him or her from acting effectively in their daily life, increasing the risk of psychological disorders (Compas et al., 2014).

Therefore, it is essential to examine the interrelationship between risk behaviors, stress, and coping strategies in Peruvian university students. This approach will not only provide a more nuanced understanding of their

psychosocial realities, but will also allow the development of specific interventions aimed at promoting their health and well-being; given that Anicama (2024) has expressed that the ultimate goal of a clinical psychologist is to restore psychological well-being and alleviate their suffering.

## Method

*Participants*

The sample consisted of 581 university students from Lima, Peru, with ages ranging from 17 to 45 years, men and women. As an exclusion criterion, participants who received any type of biomedical or psychotherapeutic treatment for stress were considered. It should be noted that 60.25% of the sample is made up of women, 37.25% is between 21 and 23 years old, and 24.5% is between 18 and 20 years old. In addition, 62.50% of the participants study at a national university, while 37.5% do so at a private university.

*Instruments*

a) *Stress Scale for Transmissible Diseases* ("Escala de estrés ante enfermedades transmisibles", APA; Anicama et al., 2022). This scale aims to assess the different levels of stress related to the possibility of contracting communicable diseases, such as covid-19. A Likert-type measurement system is used that varies from "never" (0) to "always" (3). The instrument consists of 10 items and is divided into two factors: general stress and specific stress due to communicable diseases. The psychometric properties of the APA scale were analyzed in university students from Lima, where the confirmatory factor analysis (CFA) confirmed this bifactorial structure with 10 items, obtaining adequate fit indicators (SRMR= .0325, RMSEA= .0778, CFI= .949, TLI= .933). Regarding reliability, Cronbach's alpha and McDonald's omega indices showed values higher than .80 for both the total scale and the individual factors, indicating adequate internal consistency.

b) *Stress Coping Questionnaire* ("Cuestionario de afrontamiento del estrés", CAE; Sandín & Chorot, 2003). This questionnaire aims to provide a reliable instrument to estimate the coping styles used by Spanish university students to manage stress. It can be administered both individually and in groups. The questionnaire covers 7 dimensions: Problem-solving focused (PSF), Negative self-focus (NSF), Positive reappraisal (PRE), Overt emotional expression (OEE), Avoidance (EVT), Seeking social support (SSS) and Religion (RLG), with a total of 42 items. The rating system is of the Likert type, with five response options ranging from "never" (0) to "almost always" (4). The original psychometric properties of the CAE, identified by Sandín & Chorot (2003), revealed seven factors that explain 55.3% of the total variance. The internal consistency, assessed by Cronbach's alpha coefficient, showed high levels of reliability:

BAS= .92, RLG= .86, FSP= .85; EVY= .76, EEA= .74 and REP= .71 subscales also reached acceptable values, while AFN presented an alpha of .64, still within the limits of acceptable reliability. In the present study, the reliability of the CAE was assessed, obtaining a Cronbach's alpha coefficient of .940 for the total questionnaire. The reliability values for the subscales were: FSP= .873, AFN= .805, REP= .830, EEA= .790, EVT= .763, BAS= .908 and RLG= .903.

c) *Ad hoc* Questionnaire to assess risk behaviors in university students. This *ad hoc* questionnaire was designed to specifically assess risk behaviors in university students, based on the Risk Behavior Questionnaire in University Students ("Questionário de Comportamentos de Risco em Estudantes Universitários", QCREU; Santos, 2011). It was decided to develop our own instrument rather than adapting existing questionnaires, as the available tools were too extensive and did not meet the needs of the study. This personalized approach allows a more precise assessment of risk behaviors in the university context. The questionnaire consists of 19 items with 6 response alternatives in Likert format, which facilitates a detailed assessment. The internal consistency of the instrument, measured by Cronbach's coefficient, was .733.

*Procedure*

At the beginning of the application, informed consent was obtained, explaining that the questionnaire was anonymous and confidential. In addition, the objective of the study was communicated, as well as the duration of the scale administration, and the participants were urged to respond honestly and complete all the questions. Once the surveys were collected, a quality control process was carried out, in which the database was purged by eliminating incomplete surveys or those that showed a predetermined response pattern.

*Data analysis*

This With the database cleaned up, absolute frequencies and percentages were calculated to describe the distribution of risk behaviors, stress levels, and coping strategies in the studied population. To compare the differences in these variables between different groups (such as sex, employment status, and type of university), the nonparametric Mann-Whitney U test was applied. In addition, the Spearman's Rho correlation coefficient was used to examine the relationship between risk behaviors, stress, and coping strategies.

Finally, a multiple linear regression analysis using the stepwise method was performed to identify significant predictors of risk behaviors. Independent variables included coping strategies, sex, and employment status. The adjusted coefficient of determination (adjusted $R^2$) was calculated to assess the explanatory capacity of the model, and the standardized (Beta) and unstandardized coefficients were analyzed to determine the magnitude and direction of the influence of each variable.

The statistical program SPSS version 26 was used to perform the data analysis.

## Results

It is observed that the most frequent risk behavior among university students in Lima is not wearing a seat belt when traveling by car (65%), followed by drinking alcohol at least once a month (64.1%) and another risk behavior is the large amount of alcohol they consume in a short period of time (58.7%). Regarding behaviors associated with suicide during the last 6 months, 13.2% thought about or planned to commit suicide, 10.2% attempted suicide, and 3.2% were treated for an injury after attempting suicide (Table 1).

**Table 1**
Frequency of risk behaviors in the study population (*N*= 538)

| Risk behaviors | *n* | % |
|---|---|---|
| 1. Did not wear a seat belt when riding in a car driven by another person | 351 | 65.2 |
| 2. You traveled in a vehicle driven by someone who had been drinking alcohol | 131 | 24.3 |
| 3. You drove a vehicle after drinking alcohol | 30 | 5.5 |
| 4. You sent texts or emails while driving a vehicle | 50 | 9.3 |
| 5. You carried a weapon (firearm, switchblade, knife, etc.) | 33 | 6.1 |
| 6. You participated in a physical fight | 62 | 11.5 |
| 7. You thought about or planned suicide (last 6 months) | 71 | 13.2 |
| 8. You attempted suicide (last 6 months) | 55 | 10.2 |
| 9. You attempted suicide and suffered some injury requiring medical attention (last 6 months) | 17 | 3.2 |
| 10. You smoked cigarettes at least one day in the last month | 148 | 27.5 |
| 11. You have had alcoholic beverages at least one day in the last month | 345 | 64.1 |
| 12. On the days you drank, you consumed 6 or more alcoholic drinks in a couple of hours | 316 | 58.7 |
| 13. Have you ever smoked marijuana in your life? | 126 | 23.4 |
| 14. You smoked marijuana in the last 30 days | 40 | 7.4 |
| 15. Have you ever used some form of cocaine in your life? | 32 | 5.9 |
| 16. Have you ever used ecstasy in your life? | 16 | 3.0 |
| 17. Did you consume alcohol or drugs the last time you had sex? | 89 | 16.5 |
| 18. You didn't use a condom the last time you had sex. | 194 | 36.1 |
| 19. You did not use contraception the last time you had sex. | 118 | 21.9 |

Regarding stress, 35.9% showed medium levels of stress and 25.7%, high stress. The most commonly used coping strategies were avoidance (66.2%) and seeking social support (59.3%) and the least commonly used was negative self-focus (Table 2).

It is observed that men perform risky behaviors more frequently than women, but women show more stress than men. Regarding coping strategies, the only

strategy in which differences are evident is the so-called "religion", with women using it more regularly than men (Table 3).

**Table 2**
Stress levels and coping strategies (*N*= 538)

| Variables | Low level | | Intermediate level | | High level | |
|---|---|---|---|---|---|---|
| | *n* | % | *n* | % | *n* | % |
| Stress | 207 | 38.5 | 193 | 35.9 | 138 | 25.7 |
| Coping strategies | | | | | | |
| Problem-solving focus | 196 | 36.4 | 187 | 34.8 | 155 | 28.8 |
| Negative self-focus | 396 | 73.6 | 110 | 20.4 | 32 | 5.9 |
| Positive reappraisal | 178 | 33.1 | 215 | 40.0 | 145 | 27.0 |
| Overt emotional expression | 32 | 5.9 | 315 | 58.6 | 191 | 35.5 |
| Avoidance | 12 | 2.2 | 170 | 31.6 | 356 | 66.2 |
| Seeking social support | 44 | 8.2 | 175 | 32.5 | 319 | 59.3 |
| Religion | 170 | 31.6 | 223 | 41.4 | 145 | 27.0 |

**Table 3**
Comparison of variables by sex

| Variables | Sex | Average range | U | *p* |
|---|---|---|---|---|
| Risk behaviors | Women | 257.40 | 23185.00 | .003 |
| | Men | 301.89 | | |
| Stress | Women | 281.97 | 22897.500 | .002 |
| | Men | 234.05 | | |
| Problem-Solving Focus | Women | 271.91 | 26900.500 | .543 |
| | Men | 362.65 | | |
| Negative self-focus | Women | 270.76 | 27359.500 | .751 |
| | Men | 265.93 | | |
| Positive reappraisal | Women | 274.61 | 25825.500 | .197 |
| | Men | 254.97 | | |
| Overt emotional expression | Women | 275.69 | 25396.500 | .118 |
| | Men | 251.90 | | |
| Avoidance | Women | 266.61 | 26708.000 | .465 |
| | Men | 277.73 | | |
| Seeking social support | Women | 278.54 | 26708.000 | .465 |
| | Men | 243.81 | | |
| Religion | Women | 280.98 | 242630.000 | .023 |
| | Men | 236.85 | | |

It was found that university students who work engage in riskier behaviors than those who do not work. However, it was found that university students who do not work show greater stress than those who work. Regarding stress coping strategies, it was found that those who work use the "religion" strategy more frequently (Table 4).

**Table 4**
Comparison based on employment status

| Variables | Employment status | Average range | U | *p* |
|---|---|---|---|---|
| Risk behaviors | Working | 285.45 | 31050.500 | .008 |
| | Not working | 249.84 | | |
| Stress | Working | 255.39 | 31598.000 | .019 |
| | Not working | 286.89 | | |
| Problem-Solving Focus | Working | 267.60 | 35225.500 | .753 |
| | Not working | 271.84 | | |
| Negative self-focus | Working | 260.38 | 33081.000 | .130 |
| | Not working | 280.73 | | |
| Positive reappraisal | Working | 260.59 | 33142.500 | .139 |
| | Not working | 280.48 | | |
| Overt emotional expression | Working | 272.66 | 34850.500 | .600 |
| | Not working | 265.61 | | |
| Avoidance | Working | 263.50 | 34007.000 | .319 |
| | Not working | 276.89 | | |
| Seeking social support | Working | 269.11 | 35674.00 | .949 |
| | Not working | 269.98 | | |
| Religion | Working | 287.23 | 30523.000 | .003 |
| | Not working | 247.65 | | |

As it can be seen in Table 5, no differences were identified according to the type of university in risk behaviors or stress, but differences were identified in coping strategies, with the "Problem-Solving Focus" strategy being used more by university students from national study centers and the "religion" strategy being used more by university students from private study centers.

It is observed that risk behaviors and stress are not related. However, it is observed that risk behaviors are inversely and significantly related to the following coping strategies: Problem-Solving Focus and Positive reappraisal; in addition, they are positively and significantly related to the following strategies: Negative self-focus and Overt emotional expression. On the other hand, stress is positively and significantly related to the dimensions of the stress coping strategies: Negative self-focus, Positive reappraisal, Overt emotional expression, Avoidance, Seeking social support and Religion (Table 6).

The regression model shows that the coefficient of determination ($R^2$) is .104, indicating that approximately 10.4% of the variability in risk behaviors can be explained by the variables included in the model. The adjusted value (adjusted $R^2$) is .098, suggesting a slight correction when the number of predictors in the model is taken into account. The F value (4.720, *p*= .030) confirms that the overall model is statistically significant, although its predictive capacity is moderate (Table 7).

**Table 5**
Comparison based on the type of university

| Variables | Type of university | Average range | U | P |
|---|---|---|---|---|
| Risk behaviors | Private | 279.13 | 31483.000 | .074 |
| | Nacional | 254.81 | | |
| Stress | Private | 276.64 | 32292.000 | .187 |
| | Nacional | 258.61 | | |
| Problem-solving focus | Private | 255.07 | 29921.500 | .008 |
| | Nacional | 291.52 | | |
| Negative self-focus | Private | 272.21 | 33731.000 | .616 |
| | Nacional | 265.36 | | |
| Positive reappraisal | Private | 259.26 | 31285.500 | .059 |
| | Nacional | 285.12 | | |
| Overt emotional expression | Private | 277.24 | 32096.000 | .152 |
| | Nacional | 257.69 | | |
| Avoidance | Private | 263.52 | 32670.000 | .269 |
| | Nacional | 278.62 | | |
| Seeking social support | Private | 265.99 | 33471.000 | .517 |
| | Nacional | 274.86 | | |
| Religion | Private | 299.80 | 24766.000 | .001 |
| | Nacional | 223.27 | | |

**Table 6**
Correlation between the study variables

| Variables | Risk behaviors | | | Stress | | |
|---|---|---|---|---|---|---|
| | Rho | p | $R^2$ | Rho | P | $R^2$ |
| Stress | .024 | .581 | .0006 | 1 | | |
| Coping strategies | | | | | | |
| Problem-Solving Focus | -.153 | .001 | .0234 | -.005 | .899 | .0000 |
| Negative self-focus | .124 | .004 | .0154 | .484 | .001 | .2334 |
| Positive reappraisal | -.103 | .016 | .0106 | .105 | .014 | .0110 |
| Overt emotional expression | .171 | .001 | .0292 | .459 | .001 | .2107 |
| Avoidance | .031 | .468 | .0010 | .265 | .001 | .0702 |
| Seeking social support | -.056 | .191 | .0031 | .108 | .012 | .0117 |
| Religion | .043 | .323 | .0018 | .156 | .001 | .0243 |

**Table 7**
Multiple regression model

| R | R² | Adjusted R² | Typical error | General test of the model | | | |
|---|---|---|---|---|---|---|---|
| | | | | F | df1 | df2 | P |
| .323 | .104 | .098 | 12558 | 4.720 | 1 | 533 | .030 |

In the final analysis, the standardized and non-standardized coefficients presented in Table 8 allow us to observe the magnitude and direction of the

influence of each variable on risk behaviors in university students. The Problem-solving focus (PSF) strategy showed a negative and significant coefficient (B= -.128, $p<$ .001), which suggests that greater use of this strategy is associated with a reduction in risk behaviors. This indicates that those students who tend to focus on problem solving are less likely to engage in risky behaviors. On the contrary, the Overt emotional expression (OEE) strategy presented a positive and significant coefficient (B= .152, $p<$ .001), which implies that greater use of this strategy increases the probability of engaging in risk behaviors. This suggests that those who openly express their emotions may be more likely to adopt less regulated behaviors. Furthermore, sex turned out to be a determining factor, since the associated coefficient (B= .994, $p<$ .001) indicates that men have a greater predisposition to engage in risky behaviors compared to women. Finally, employment status was also significantly associated with risky behaviors, presenting a negative coefficient (B= -.523, $p=$ .030). This suggests that students who are employed tend to engage in less risky behaviors than those who are not employed.

**Table 8**
Multi-conditional logistic regression coefficients for Risk behaviors

| Model | Non-standardized coefficients | | Standardized coefficients | $t$ | $p$ | 95% CI for $B$ | |
|---|---|---|---|---|---|---|---|
| | $B$ | SE | β | | | Lower | Higher |
| (Constant) | 4.236 | .630 | | 6.725 | .000 | 2.998 | 5.473 |
| Problem-solving focus strategy | -.128 | .025 | -.219 | -5.188 | .000 | -.176 | -.079 |
| Overt emotional expression strategy | .152 | .029 | .220 | 5.192 | .000 | .094 | .209 |
| Sex | .994 | .273 | .150 | 3.640 | .000 | .458 | 1.531 |
| Working condition | -.523 | .241 | -.089 | -2.173 | .030 | -.995 | -.050 |

## Discussion

University life is considered an impactful process in human development, since it involves making decisions and evaluating how one sees oneself in the present and in the future. Therefore, gathering the necessary skills will be essential to continue the process of growth and maturity. However, when a young university student presents deficits in terms of their abilities, they will be exposed to difficulties not only at an academic level, but also at a social level, causing discomfort and directly affecting their personal growth.

The results obtained reveal a high prevalence of risk behaviors among university students in Lima, highlighting that 65% of respondents report not using seat belts when traveling by car. This finding is consistent with previous studies

that suggest an underestimation of the risks associated with driving among young people (Eisenberg et al., 2013). In addition, 64.1% consume alcoholic beverages at least once a month, and 58.7% report excessive alcohol consumption in short periods. These consumption patterns indicate a worrying trend towards substance abuse, a behavior that has been associated with a series of negative consequences both physical and mental (Barbosa et al., 2024). Regarding suicidal behaviors, 13.2% of students reported having considered or planned suicide in the last six months, 10.2% attempted suicide, and 3.2% required medical attention after an attempt. These data underscore the severity of mental health problems in this demographic group, which requires urgent attention for the implementation of effective preventive interventions (Flores-Paredes et al., 2023).

It was also found that 35.9% of university students showed medium levels of stress and 25.7%, high levels of stress, results that coincide with the data found by Anicama et al. (2022) in university students from Lima; among male students, 22.9% presented high levels and 28% of women showed high levels. Likewise, Barraza (2020) reported high levels of stress in the Mexican population during the pandemic. These findings also approximate the data of Ozamiz-Etxebarria et al. (2020), who found moderate levels of stress in the Spanish population, and those of Rodríguez-Hidalgo et al. (2020), who identified stress levels higher than those considered normal. However, it is important to consider that these similarities may be influenced by the particular context of each country, and do not necessarily reflect a global trend.

The analysis of coping strategies reveals that avoidance is the most commonly used (66.2%), followed by seeking social support (59.3%). These results indicate that, when faced with stressful situations, students tend to avoid direct confrontation with the problem, which could make their discomfort constant. Avoidance, as a coping strategy, has been linked to negative mental health outcomes, including increased levels of anxiety and depression (Compas et al., 2014).

Gender comparisons show that men are more inclined to engage in risky behaviors than women, while women report higher levels of stress. This could be related to differences in social expectations and ways of coping with stress between genders (Cassaretto et al., 2003). Regarding the stress response, a significant difference was found between men and women, being greater in men. This finding contrasts with studies carried out in other geographical contexts, such as Salman et al. (2020) in Pakistan, Sundarasen et al. (2020) in Malaysia and Liyanage et al. (2021) in Asia and Europe, where stress has been observed to be higher in women. The discrepancy may be due to contextual and cultural differences that affect how stress is experienced and reported in different populations. Furthermore, women tend to turn more to religion as a coping strategy, which could be a way to seek comfort in high-pressure contexts (Cochella, 2018).

The results also indicate that working students engage in more risky behaviors but experience less stress than those who do not work. This finding could suggest

that employment provides structure and purpose that mitigate stress, albeit at the cost of greater exposure to risky situations (Jessor et al., 2016).

In relation to the type of university, no significant differences were found in stress levels or in the frequency of risky behaviors between students from private and public universities. However, students from national universities seem to be more oriented to solve problems directly, while those from private universities more frequently resort to religion as a coping strategy. This finding is supported by that proposed by Lazarus & Folkman (1984), who point out that cultural or socioeconomic differences intervene in the way in which people face difficulties.

The analysis of the relationship between risk behaviors, stress, and coping strategies reveals several significant connections that can be interpreted in light of previous studies. In this study, it is observed that risk behaviors are not significantly related to stress, which differs from what has been found in previous research; this lack of relationship can be partly explained by contextual and cultural differences between the samples studied; for example, the research by Barraza (2020) in Mexico and Ozamiz-Etxebarria et al. (2020) in Spain show that stress during the pandemic was a significant problem, while, in the current sample, the relationship between stress and risk behaviors is not manifest. This discrepancy may be due to variations in the socioeconomic and cultural context that affect the way stress and risk behaviors manifest in different populations.

In terms of coping strategies, risky behaviors are inversely related to strategies such as "Problem-Solving Focus" and "Positive reappraisal", this inverse relationship may be aligned with the findings of Salman et al. (2020) in Pakistan, who found that problem-focused coping strategies are less likely to be associated with risky behaviors. On the other hand, the positive association of risky behaviors with "Negative self-focus" and "Overt emotional expression" suggests that these strategies, which are less adaptive, might be related to greater engagement in risky behaviors, this is in line with the findings of Sundarasen et al. (2020) in Malaysia, who identified negative self-focus as a risk factor. Therefore, it is indicated that planning, a problem-focused strategy, was one of the most effective in reducing the incidence of risk behaviors. Meanwhile, seeking social support, whether emotional or instrumental, also proved to be a key strategy to mitigate risk behaviors, by providing students with a safety net and emotional resources to face challenges. In contrast, avoidance and denial coping strategies, characterized by a passive or escape approach to problems, were associated with an increase in risky behaviors.

Regarding stress, the observation that it is significantly correlated with multiple coping strategies, including both adaptive and maladaptive ones, is consistent with Liyanage et al. (2021) research in Asia and Europe. These authors found that stress can influence the selection of diverse coping strategies, which is supported by the wide range of stress-related strategies in this study.

Multiple regression analysis suggests that coping strategies, gender, and employment status are significant predictors of risk behaviors. In particular, problem-solving focus and open emotional expression are significantly related to a

lower and higher likelihood of risk behaviors, respectively. This result highlights the importance of promoting more adaptive coping strategies among students to reduce the incidence of these behaviors (Sandín & Chorot, 2003).

This study highlights the need to develop intervention programs that not only address risk behaviors, but also teach students more effective coping strategies to manage stress, which could significantly reduce the prevalence of these behaviors. It is also crucial that these interventions consider gender differences and students' working conditions to be truly effective.

It is worth noting that, among the limitations of the study is the cross-sectional design, which prevents establishing causal relationships between the variables. In addition, the sample was composed only of students from a university in Lima, which limits the generalization of the results to other student populations in different geographical and cultural contexts. It is also important to consider the possible self-report bias, since the data were obtained through self-reported questionnaires, which could have influenced the accuracy of the responses due to social desirability.

## References

Anicama, J. (2024, June 26). *Integrando las estrategias de intervención conductual cognitiva: De la primera a la tercera generación en los trastornos emocionales* [Integrating cognitive-behavioral intervention strategies: From first to third generation approaches in emotional disorders] [Conference session]. IX Congreso Regional de la Sociedad Interamericana de Psicología, Arequipa, Perú.

Anicama, J., Ignacio, F., Pizarro, R., Pineda, C., Aguirre, M., Vallenas, F., Talla, K., & Bruno, B. (2022). Propiedades psicométricas de la "Escala de estrés ante enfermedades transmisibles" en tiempos de covid-19 [Psychometric properties of the Stress Scale for Transmissible Diseases in times of Covid-19]. *Behavioral Psychology/Psicología Conductual, 30*(2), 549-563. doi: 10.51668/bp.8322213s

Ato, M., López, J., & Benavente, A. (2013). Un sistema de clasificación de los diseños de investigación en psicología [A classification system for research designs in psychology]. *Anales de Psicología, 29*(3), 1028-1059. doi: 10.6018/analesps.29.3.178511

Barbosa, B. C. R., de Deus Mendonça, R., Machado, E. L., & Meireles, A. L. (2024). Co-occurrence of obesogenic behaviors and their implications for mental health during the covid-19 pandemic: a study with university students. *BMC Public Health, 24*. doi: 10.1186/s12889-024-19031-6

Barraza, A. (2020). *El estrés de pandemia (covid-19) en población mexicana* [Pandemic stress (covid-19) in the Mexican population]. Centro de Estudios Clínica e Investigación Psicoanalítica S.C

Belihu, W. B., Amogne, M. D., Herder, T., Sundewall, J., & Agardh, A. (2024). Risky sexual behavior and associated factors among university students in Ethiopia: A cross-sectional national survey. *BMC Public Health, 24*. doi: 10.1186/s12889-024-19213-2

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267-283. doi: 10.1037/0022-3514.56.2.267

Cassaretto, M., Chau, C., Oblitas, H., & Valdéz, N. (2003). Estrés y afrontamiento en estudiantes de psicología [Stress and Coping in Psychology Students]. *Revista de Psicología*, *21*(2), 363-392. doi: 10.18800/psico.200302.006

Cochella, G. (2018). *Respuesta al estrés y estilos de afrontamiento en estudiantes de primer ciclo de una universidad de Lima metropolitana* [Stress response and coping styles in first-year students at a university in metropolitan Lima] [Tesis de pregrado, Universidad San Martin de Porres]. Repositorio de la Universidad San Martin de Porres. https://hdl.handle.net/20.500.12727/3695

Compas, B. E., Jaser, S. S., Dunbar, J. P., Watson, K. H., Bettis, A. H., Gruhn, M. A., & Williams, E. K. (2014). Coping and emotion regulation from childhood to early adulthood: Points of convergence and divergence. *Australian Journal of Psychology, 66*(2), 71-81. doi: 10.1111/ajpy.12043

Dai, Y., Li, Y., Zhou, D., & Zhang, J. (2024). Analysis of risky sexual behaviors among male college students who were sexually active in Sichuan, China: A cross-sectional survey. *AIDS Research and Therapy, 2*(46). doi: 10.1186/s12981-024-00636-1

Eisenberg, D., Hunt, J., & Speer, N. (2013). Mental health in american colleges and universities: Variation across student subgroups and across campuses. *Journal of Nervous and Mental Disease, 201*(1), 60-67. doi: 10.1097/NMD.0b013e31827ab077

Flores-Paredes, A., Pino, Y., Yupanqui, E., Yupanqui, A., Mamani, S., Coila-Pancca, D., Atencio, L., Manzaneda, M., & Lavalle, A. (2023). Estilos de vida y el índice de masa corporal en estudiantes universitarios [Lifestyles and body mass index in university students]. *Retos, 50,* 950-957. doi: 10.47197/retos.v50.99499

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745-774. doi: 10.1146/annurev.psych.55.090902.141456

Frydenberg, E., & Lewis, R. (1996). A replication study of the structure of the Adolescent Coping Scale: Multiple forms and applications of a self-reported inventory in a counsellingand research context. *European Journal of Psychological Assessment, 12*(3), 224-235.

Hernández, R., Fernández, C., & Baptista, P (2014). *Metodología de la investigación* [Research methodology]. McGraw-Hill.

Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F. M., & Turbin, M. S. (2016). Teoría de la conducta problemática y dinámica de la protección y el riesgo [Theory of problematic behavior and the dynamics of protection and risk]. In R. Jessor (Ed.), *Los orígenes y el desarrollo de la teoría de la conducta problemática. Fomento del desarrollo responsable de los adolescentes* (pp. 131-153). Springer.

Lazarus, R. S. (1966). *Psychological stress and the coping process.* McGraw-Hill.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer.

Liyanage, S., Saqib, K., Khan, A. F., Thobani, T. R., Tang, W. C., Chiarot, C. B., AlShurman, B. A., & Butt, Z. A. (2021). Prevalence of anxiety in university students during the covid-19 pandemic: A systematic review. *International Journal of Environmental Research and Public Health*, *19*(1). doi: 10.3390/ijerph19010062

McEwen, B. S. (2007). Physiology and neurobiology of stress and adaptation: Central role of the brain. *Physiological Reviews, 87*(3), 873-904. doi: 10.1152/physrev.00041.2006

Merced, S., Coll, J., & Velázquez, A. (2022). Formación de hábitos y estilos de vida saludables en estudiantes universitarios: una estrategia de intervención [Formation of habits and healthy lifestyles in university students: An intervention strategy]. *Podium. Revista de Ciencia y Tecnología en la Cultura Física, 17*(2), 740-757.

Michelini, Y., Rivarola, G., & Pilatti, A. (2021). Conductas sexuales de riesgo en una muestra de estudiantes universitarios argentinos: Relación con consumo de sustancias, inicio sexual temprano e impulsividad rasgo [Risky sexual behaviors in a sample of argentine university students: Relationship with substance use, early sexual initiation, and trait impulsivity]. *Suma Psicológica, 28*(2), 120-127. doi: 10.14349/sumapsi.2021.v28.n2.7

Oliveira, E. S., Silva, A. F. R., Silva, K. C. B., Moura, T. V. C., Araújo, A. L., & Silva, A. R. V. (2020). Stress and health risk behaviors among university students. *Revista Brasileira de Enfermagem, 73*(1). doi: 10.1590/0034-7167-2018-0035

Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Niveles de estrés, ansiedad y depresión en la primera fase del brote del covid-19 en una muestra recogida en el norte de España [Levels of stress, anxiety, and depression in the first phase of the covid-19 outbreak in a sample collected from northern Spain]. *Cadernos De Saúde Pública*, *36*(4), e00054020. doi: 10.1590/0102-311X00054020

Rangel, L. G., Gamboa, E. M., & Murillo, A. L. (2017). Prevalencia de factores de riesgo comportamentales modificables asociados a enfermedades no transmisibles en estudiantes universitarios latinoamericanos: Una revisión sistemática [Prevalence of modifiable behavioral risk factors associated with non-communicable diseases in Latin American university students: A systematic review]. *Nutrición Hospitalaria*, *34*(5), 1185-1197. doi: 10.20960/nh.1057

Rodríguez-Hidalgo, A. J., Pantaleón, Y., Dios, I., & Falla, D. (2020). Fear of covid-19, stress, and anxiety in university undergraduate students: A predictive model for depression. *Frontiers in Psychology*, *11*, 591797. doi: 10.3389/fpsyg.2020.591797

Salman, M., Asif, N., & Mustafa, Z.U. (2020). Impacto psicológico de covid-19 en estudiantes universitarios pakistaníes y cómo lo están enfrentando [Psychological impact of covid-19 on Pakistani university students and how they are coping]. *MedRxiv: The preprint server for health sciences.* doi: 10.1101/2020.05.21.20108647

Sandín, B., & Chorot, P. (2003). Cuestionario de Afrontamiento del Estrés (CAE): Desarrollo y validación preliminar [Stress Coping Questionnaire (CAE): Development and preliminary validation]. *Revista de Psicopatología y Psicología Clínica, 8*, 39-52.

Santos L. (2011). *Saúde mental e comportamentos de risco em estudantes universitários* [Mental Health and Risk Behaviors in University Students] [Tesis doctoral, Universidade de Aveiro]. Repositorio de la Universidade de Aveiro. https://ria.ua.pt/handle/10773/6738

Sundarasen, S., China, K., Kamaludin, K., Nurunnabi, M., Baloch, G., Khoshaim, H., Hossain, S., & Sukayt, A. (2020). Psychological impact of covid-19 and lockdown among university students in Malaysia: Implications and policy recommendations.

*International Journal of Environmental Research and Public Health, 17*(17), 6206. doi: 10.3390/ijerph17176206.

Urday-Concha, F., Gonzáles-Vera, C., Peñalva, L. J., Pantigoso, E. L., Cruz, S. H., & Pinto-Oppe, L. (2019). Percepción de riesgos y consumo de drogas en estudiantes universitarios de enfermería, Arequipa, Perú [Perception of Risks and Drug Use Among Nursing Students in Arequipa, Peru]. *Enfermería Actual de Costa Rica, 36.* doi: 10.15517/revenf.v0i36.33416

Vélez C., Hoyos, M., Pico, M., Jaramillo, Á., & Escobar, M. (2018). Comportamientos de riesgo en estudiantes universitarios: la ruta para enfocar acciones educativas desde los currículos [Risk Behaviors in University Students: A Pathway to Focus Educational Actions from the Curricula]. *Revista Latinoamericana de Estudios Educativos, 15*(1), 130-153.