# Analysis Of The Covid-19 Prevention Culture: A Sociodemographic Approach In University Students

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## ABSTRACT

*In recent years, humanity has faced a pandemic caused by the SARS-CoV-2 virus, where the measures indicated by the world health organization (WHO) are necessary for the new social coexistence. The research had as objective; determine the relationship between the preventive culture of Covid-19 and the sociodemographic characteristics in university students of Tacna – 2021; with a quantitative descriptive-correlational approach. In the selection of the sample, stratified random sampling was applied, obtaining 629 students, who virtually developed the questionnaire "Sociodemographic Characteristics" 0.90 and the Likert-type questionnaire "Culture of Prevention" 0.93, obtaining excellent validity. and reliability of 0.97. Chi square was used for bivariate analysis. It is worth mentioning that the ethical principles of autonomy, beneficence, justice and non-maleficence were respected. Results; An adequate level of prevention culture prevails in the students and with respect to the sociodemographic characteristics that stand out are female sex, young life stage, type of SIS insurance, urban residence, economic income <750 soles and absence of work performance. Conclusion; There is a significant relationship between the preventive culture of university students and the following variables: sex p=0.000, health insurance p=0.01, economic income p=0.00, occupation p=0.00, type of housing p= 0.00, housing tenure p=0.000), means of transportation p=0.01, means of communication p=0.00, type of family 0.00, experience with a family member P=0.02, sociocultural influence p=0.01 and personality traits such as neurocyticism p=0.04, sensation seeking p=0.02, aggressiveness p=0.00.*

*Key words: population characteristics, disease prevention, health promotion, public health, communicable disease control.*

## INTRODUCTION

At the beginning of 2020, the WHO declared the SARS-CoV-2 pandemic. It was initially presented in the departm[1]ent of Hubei (China) as cases of atypical pneumonias, which seemed to be controlled.[1,2] However, it quickly spread to Spain, Italy and other countries, registering

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high numbers of infections and deaths that progressively increased, being influenced by biological, social, cultural and other factors.[3,4,5,6,7]

In Peru, a similar context was experienced to many countries in Eastern and Western Europe, infecting more than a million people, so the Peruvian health system collapsed, registering at the time the highest mortality rate worldwide. At the beginning, the population complied with some prevention measures, but after a few weeks the need to generate more income arose, so people began to leave in search of work, where some of the measures that had been carried out at the beginning were left aside.[8]

As the months went by, the World Health Organization showed that hand washing, social distancing, respiratory hygiene, use of masks and other measures are necessary for the prevention of covid-19. And that is where the need arises for the formation of a culture of prevention in the spread of COVID-19, as a mandatory and permanent practice that includes all the aforementioned measures, which allows through health promotion to reduce risks and comply with the provisions of the WHO. creating a commitment to prevention measures and their implementation on a constant basis, thus protecting the lives of other people.[9]

Throughout history, the population has made it clear that for the acquisition of habits and the formation of culture there is a certain rejection and resistance to change. That is why the rapid spread of COVID-19 was obtained as an outcome, despite the closure of borders carried out as a response to the health crisis in Eastern countries, the situation had already overflowed.[10]

Decision-making about people's health has varied according to their needs and sociodemographic characteristics such as age, sex, place of residence, number of people per household, family income, professional school, and popular beliefs. Through various reports at the national level, the reality of what Peru was going through was revealed, the most widespread case was the student of a public university in Lima, who had to go out to sell clothes to be able to pay for her family's expenses and at the same time attend the classes of her professional career. generating a risk by manipulating money, cell phones and not having the resources to wash their hands, in addition to failing to comply with social isolation.[11]

Faced with this context, the formation of a culture of prevention must be promoted, creating awareness and adopting as part of daily life the realization of behaviors and attitudes that prevent the transmission of COVID-19, learning to coexist in the new social coexistence. That is why it is proposed to determine the relationship between the culture of prevention and the sociodemographic characteristics of students of the Jorge Basadre Grohmann National University of Tacna.

Information is obtained on the culture of prevention that university students possess in the new social coexistence due to its fundamental role in reducing the spread of new cases of COVID-19. On the other hand, information is obtained on the sociodemographic characteristics of university students, including income, basic services, family environment, occupation, beliefs and attitudes that have had an impact on young people who belong to the university community, disfavoring the adoption of a culture of prevention that is ratified by the various media.

## MATERIALS AND METHODS

The research approach exposes a quantitative perspective. For this reason, tangible figures were collected that allowed an analysis to be carried out on the culture of prevention in the spread of COVID-19 and the sociodemographic characteristics of university students. According to the qualities of the study carried out, it is descriptive, correlational and cross-sectional.

On the other hand, the population is represented by 8,582 students from the different professional schools of the Jorge Basadre Grohmann National University in Tacna, Peru where they carry out their academic-professional training. Of these, students with the following qualities were selected through the inclusion criteria: Registered in the 2021-2 Academic System and accepted informed consent, however, students who were not registered in the 2021-

2 Academic System and those who refused to participate in the study were excluded. Likewise, a stratified random sampling was used, where the 34 professional careers were considered as strata.

To evaluate the research variables, the "sociodemographic characteristics" questionnaire and a Likert scale "preventive culture" were applied, which were developed by the Research Seedbeds of the Professional School of Nursing.

The first instrument, "Sociodemographic Characteristics", consists of Part I Demographic Characteristics and Part II Sociocultural Characteristics. On the other hand, in the second instrument considered as the Likert scale "Culture of prevention", it is made up of four parts: Part I: Students' knowledge about covid-19, part II: risk factors for covid-19, part III: attitudes towards Covid-19 and Part IV: negative attitudes of students towards covid-19

Therefore, an inadequate prevention culture was established as an assessment scale: 0 - 59 points, regularly adequate prevention culture: 60 - 119 points and adequate prevention culture: 120 - 185 points

The instruments applied in the research were submitted to the evaluation of 7 experts in the area of public health according to criteria of language, objectivity, relevance, coherence and content, registering for the instrument of "sociodemographic characteristics" an excellent validity (0.93), in the same way the instrument of "preventive culture" presented excellent validity (0.90) and for the reliability of the instruments, The pilot test was used in 21 students from a national university in southern Peru, coordinating with the teachers. When the Cronbach test was applied, a value of 0.977 was recorded for the "preventive culture" instrument. And with respect to the "sociodemographic characteristics" instrument, a value of 0.906 was obtained.

In the data analysis, information was transferred to a database to later perform the coding of each variable. Next, the SPSS version 25 program was executed, where descriptive and inferential statistics were obtained. For the bivariate analysis, the chi-square statistical formula was used.

Regarding ethical considerations, the corresponding authorization was requested from the different professional schools of the University for the execution of the research, and informed consent was also presented to the study participants, who agreed voluntarily.

**RESULTS**

Table 1 shows the level of knowledge and practices on preventive measures on COVID-19; 61.8% of the 629 university students were at the regular level, 38.2% at the low level, while 76.9% at the adequate level and 5.7% at the inadequate level of the 629 university students were at the preventive culture.

Board 1 Level of knowledge and practices on preventive measures and preventive culture in university students against covid-19 (N = 629)

| Level of knowledge | f | % |
|---|---|---|
| High Level | 0 | 0,0 |
| Regular Level | 389 | 61,8 |
| Low Level | 240 | 38,2 |
| **Level of preventive culture** | **f** | **%** |
| Appropriate level | 484 | 76,9 |
| Level regularly | 109 | 17,3 |
| Inadequate level | 36 | 5,7 |
| Total | 629 | 100,0 |

Board 2 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (N = 629).

| Sociodemographic characteristics | Preventive culture | | | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Inadequate | | Regularly | | Adequate | | | | |
| **Sex** | f | % | f | % | f | % | f | % | |
| Male | 29 | 4,6 | 60 | 9,5 | 186 | 29,6 | 275 | 43,7 | 0,000 |
| Female | 7 | 1,1 | 49 | 7,8 | 298 | 47,4 | 354 | 56,3 | |
| **Life Stage** | f | % | f | % | f | % | f | % | |
| Adolescent | 3 | 0,5 | 12 | 1,9 | 41 | 6,5 | 56 | 8,9 | |
| Young | 33 | 5,2 | 96 | 15,3 | 431 | 68,5 | 560 | 89,0 | 0,859 |
| Adult | 0 | 0,0 | 1 | 0,2 | 11 | 1,7 | 12 | 1,9 | |
| Older Adult | 0 | 0,0 | 0 | 0,0 | 1 | 0,2 | 1 | 0,2 | |
| **Area of Residence** | f | % | f | % | f | % | f | % | |
| Urban | 32 | 5,1 | 104 | 16,5 | 445 | 70,7 | 581 | 92,4 | 0,337 |
| Rural | 4 | 0,6 | 5 | 0,8 | 39 | 6,2 | 48 | 7,6 | |
| **Health Insurance** | f | % | f | % | f | % | f | % | |
| EsSalud | 4 | 0,6 | 12 | 1,9 | 48 | 7,6 | 64 | 10,2 | |
| SIS | 32 | 5,1 | 83 | 13,2 | 319 | 50,7 | 434 | 69,0 | 0,006 |
| Doesn't have insurance | 0 | 0,0 | 11 | 1,7 | 104 | 16,5 | 115 | 18,3 | |
| Other | 0 | 0,0 | 3 | 0,5 | 13 | 2,1 | 16 | 2,5 | |
| **Economic Income** | f | % | f | % | f | % | f | % | |
| <750 soles | 4 | 0,6 | 44 | 7,0 | 319 | 50,7 | 367 | 58,3 | |
| 751-1500 soles | 13 | 2,1 | 42 | 6,7 | 98 | 15,6 | 153 | 24,3 | 0,000 |
| 1501-2500 soles | 16 | 2,6 | 22 | 3,5 | 54 | 8,6 | 92 | 14,6 | |
| >2500 soles | 3 | 0,5 | 1 | 0,2 | 13 | 2,1 | 17 | 2,7 | |

Table 2 shows that 56.3% were female and 43.7% male in relation to the sex of the students surveyed

Board 3 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (N = 629)

| Sociodemographic Characteristics | Preventive culture | | | Total | P-Value |
|---|---|---|---|---|---|
| | Inadequate | Regularly | Adequate | | |

| Occupation | f | % | f | % | f | % | f | % | |
|---|---|---|---|---|---|---|---|---|---|
| Domestic Worker | 2 | 0,3 | 13 | 2,1 | 40 | 6,4 | 55 | 8,7 | |
| Stable Work | 2 | 0,3 | 5 | 0,8 | 10 | 1,6 | 17 | 2,7 | 0,000 |
| Temporary employment | 21 | 3,3 | 34 | 5,4 | 125 | 19,9 | 180 | 28,6 | |
| Doesn't work | 11 | 1,7 | 57 | 9,1 | 309 | 49,1 | 377 | 59,9 | |
| **Type of Housing** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| Detached House | 25 | 4,0 | 84 | 13,4 | 405 | 54,4 | 514 | 81,7 | |
| Department | 10 | 1,6 | 19 | 3,0 | 24 | 3,8 | 53 | 8,4 | |
| Housing in Quinta | 1 | 0,2 | 0 | 0,0 | 4 | 0,6 | 5 | 0,8 | |
| Dwelling in Tenement House | 0 | 0,0 | 4 | 0,6 | 22 | 3,5 | 26 | 4,1 | 0,000 |
| Hut | 0 | 0,0 | 0 | 0,0 | 12 | 1,9 | 12 | 1,9 | |
| Makeshift Housing | 0 | 0,0 | 1 | 0,2 | 16 | 2,5 | 17 | 2,7 | |
| Premises Not intended | 0 | 0,0 | 1 | 0,2 | 1 | 0,2 | 2 | 0,3 | |
| **Housing Tenure Regime** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| Own | 14 | 2,2 | 69 | 11,0 | 316 | 50,2 | 399 | 63,4 | |
| Rented | 22 | 3,5 | 33 | 5,2 | 101 | 16,1 | 156 | 24,8 | 0,000 |
| Other Type | 0 | 0,0 | 7 | 1,1 | 67 | 10,7 | 74 | 11,8 | |

In reference to the type of housing, 81.7% of those surveyed own an independent house, while 63.4% own the household regime. The type of water supply is within the dwelling represented by 90.0%. The bus is the most used means of transport by students, with 81.7%

In addition, 53.1% of the people surveyed reported that the Internet is the means of communication they prefer to acquire information. On the other hand, the single marital status represents 98.1% of university students, the nuclear family type predominates with 57.9% and the Catholic religion stood out with 87.3%. On the other hand, Neuroticism predominated with 65%. And finally, in relation to beliefs, customs and attitudes about health in the face of covid-19, a regular level was identified with 94.3%.

Board 4 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (N = 629)

| Sociodemographic Characteristics | Preventive culture | | | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Inadequate | | Regularly | | Adequate | | | | |
| **Type of Water Supply** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| Public Network within Housing | 34 | 5,4 | 104 | 16,5 | 428 | 68,0 | 566 | 90,0 | |
| Public Out-of-Home Network | 1 | 0,2 | 2 | 0,3 | 9 | 1,4 | 12 | 1,9 | |
| Pylon for Public Use | 0 | 0,0 | 2 | 0,3 | 24 | 3,8 | 26 | 4,1 | 0,278 |
| Underground Shaft | 0 | 0,0 | 1 | 0,2 | 4 | 0,6 | 5 | 0,8 | |
| Tanker | 0 | 0,0 | 0 | 0,0 | 7 | 1,1 | 7 | 1,1 | |
| Rio | 1 | 0,2 | 0 | 0,0 | 2 | 0,3 | 3 | 0,5 | |
| Other | 0 | 0,0 | 0 | 0,0 | 10 | 1,6 | 10 | 1,6 | |

| Means of Transportation | f | % | f | % | f | % | f | % | |
|---|---|---|---|---|---|---|---|---|---|
| Bus | 23 | 3,7 | 86 | 13,7 | 405 | 64,4 | 514 | 81,7 | |
| Bicycle | 9 | 1,4 | 11 | 1,7 | 34 | 5,4 | 54 | 8,6 | 0,010 |
| Hike | 4 | 0,6 | 12 | 1,9 | 41 | 6,5 | 57 | 9,1 | |
| Motorbike | 0 | 0,0 | 0 | 0,0 | 4 | 0,6 | 4 | 0,6 | |

Board 5 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (629)

| Sociodemographic Characteristics | Preventive culture | | | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Inadequate | | Regularly | | Adequate | | | | |
| **Media** | f | % | f | % | f | % | f | % | |
| Radio | 2 | 0,3 | 11 | 1,7 | 28 | 4,5 | 41 | 6,5 | |
| Television | 20 | 3,2 | 32 | 5,1 | 98 | 15,6 | 150 | 23,8 | 0,000 |
| Telephone | 8 | 1,3 | 12 | 1,9 | 84 | 13,4 | 104 | 16,5 | |
| Internet | 6 | 1,0 | 54 | 8,6 | 274 | 43,6 | 334 | 53,1 | |
| **Marital status** | f | % | f | % | f | % | f | % | |
| Single | 36 | 5,7 | 107 | 17,0 | 474 | 75,4 | 617 | 98,1 | |
| Married | 0 | 0,0 | 1 | 0,2 | 5 | 0,8 | 6 | 1,0 | 0,985 |
| Cohabitant | 0 | 0,0 | 1 | 0,2 | 4 | 0,6 | 5 | 0,8 | |
| Divorced | 0 | 0,0 | 0 | 0,0 | 1 | 0,2 | 1 | 0,2 | |
| **Family Type** | f | % | f | % | f | % | f | % | |
| Nuclear | 11 | 1,7 | 60 | 9,5 | 293 | 46,6 | 364 | 57,9 | |
| Single-parent | 22 | 3,5 | 36 | 5,7 | 132 | 21,0 | 190 | 30,2 | 0,003 |
| Extensive | 2 | 0,3 | 9 | 1,4 | 32 | 5,1 | 43 | 6,8 | |
| Composed | 1 | 0,2 | 4 | 0,6 | 27 | 4,3 | 32 | 5,1 | |
| **Children** | f | % | f | % | f | % | f | % | |
| Yes | 3 | 0,5 | 4 | 0,6 | 24 | 3,8 | 31 | 4,9 | 0,533 |
| No | 33 | 5,2 | 105 | 16,7 | 460 | 73,1 | 598 | 95,1 | |
| **He lives with his family** | f | % | f | % | f | % | f | % | |
| Yes | 27 | 4,3 | 93 | 14,8 | 435 | 69,2 | 555 | 88,2 | 0,016 |
| No | 9 | 1,4 | 15 | 2,5 | 49 | 7,8 | 74 | 11,8 | |

Board 6 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (629)

| Sociodemographic Characteristics | Preventive Culture | | | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Inadequate | | Regularly | | Adequate | | | | |
| **Religion** | f | % | f | % | f | % | f | % | |
| Catholic | 32 | 5,1 | 91 | 14,5 | 426 | 67,7 | 549 | 87,3 | |
| Evangelical | 1 | 0,2 | 7 | 1,1 | 21 | 3,3 | 29 | 4,6 | 0,143 |
| Mormon | 0 | 0,0 | 2 | 0,3 | 10 | 1,6 | 12 | 1,9 | |

| | f | % | f | % | f | % | f | % | |
|---|---|---|---|---|---|---|---|---|---|
| Jehovah's Witness | 1 | 0,2 | 1 | 0,2 | 0 | 0,0 | 2 | 0,3 | |
| Adventist | 2 | 0,3 | 8 | 1,3 | 27 | 4,3 | 37 | 5,9 | |
| **Sociocultural Influence** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 0 | 0,0 | 2 | 0,3 | 23 | 1,0 | 25 | 4,0 | |
| Middle | 33 | 5,2 | 105 | 16,7 | 455 | 72,3 | 593 | 94,3 | 0,011 |
| Low | 3 | 0,5 | 2 | 0,3 | 6 | 3,7 | 11 | 1,7 | |
| **Personality Neurocytism** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 12 | 1,9 | 48 | 7,6 | 145 | 23,1 | 205 | 32,6 | |
| Middle | 24 | 3,8 | 60 | 9,5 | 325 | 51,7 | 409 | 65,0 | 0,044 |
| Low | 0 | 0,0 | 1 | 0,2 | 14 | 2,2 | 15 | 2,4 | |
| **Sensation Seeking** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 15 | 2,4 | 54 | 8,6 | 165 | 26,2 | 234 | 37,2 | |
| Middle | 21 | 3,3 | 50 | 7,9 | 299 | 47,5 | 370 | 58,8 | 0,023 |
| Low | 0 | 0,0 | 5 | 0,8 | 20 | 3,2 | 25 | 4,0 | |

Board 7 Relationship between sociodemographic characteristics and level of preventive culture in students of the Jorge Basadre Grohmann National University, 2021 (629)

| Sociodemographic Characteristics | Preventive Culture | | | | | | Total | | P-Value |
|---|---|---|---|---|---|---|---|---|---|
| | Inadequate | | Regularly | | Adequate | | | | |
| **Aggressiveness** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 3 | 0,5 | 7 | 1,1 | 28 | 4,5 | 38 | 6,0 | |
| Middle | 30 | 4,8 | 91 | 14,5 | 283 | 45,0 | 404 | 64,2 | 0,00 |
| Low | 3 | 0,5 | 11 | 1,7 | 173 | 27,5 | 187 | 29,7 | |
| **Extroversion** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 15 | 2,4 | 53 | 8,4 | 222 | 35,3 | 290 | 46,1 | |
| Middle | 21 | 3,3 | 55 | 8,7 | 253 | 40,2 | 329 | 52,3 | 0,784 |
| Low | 0 | 0,0 | 1 | 0,2 | 9 | 1,4 | 10 | 1,6 | |
| **Activity** | **f** | **%** | **f** | **%** | **f** | **%** | **f** | **%** | |
| High | 17 | 2,7 | 58 | 9,2 | 193 | 30,7 | 268 | 1,7 | |
| Middle | 19 | 3,0 | 49 | 7,8 | 282 | 44,8 | 350 | 55,6 | 0,113 |
| Low | 0 | 0,0 | 2 | 0,3 | 9 | 1,4 | 11 | 1,7 | |

Among the significant sociodemographic characteristics, it was identified that the students with a high level of preventive culture are: female (47.4%), have SIS type health insurance (50.7%), economic income less than 750 soles (<750 soles), do not work (49.1%), have an independent house (54.4%), own home (50.2%), that the bus is used as a means of transport (64.4%), using the Internet to communicate and acquire information (43.6%), the type of nuclear family (46.6%), living with a family member (69.2%), sociocultural influence at a medium level (72.3%), a personality with characteristics of neurocytism at a medium level (51.7%), sensation seeking at a medium level (47.5%) and aggressiveness at a medium level (45.0%)

With respect to the regular level of preventive culture, the following are males (9.5%), SIS-type health insurance, income less than 750 soles (7.0%), do not work (9.1%), independent

house (13.4%), own home (11.0%), use the bus as a means of transport (13.7%), use the internet as a means of communication (8.6%), type of nuclear family (9.5%), live with a family member (14.8%), medium-level sociocultural influence (16.7%), personality traits such as medium-level neurocytism (9.5%), high-level sensation-seeking (8.6%) and medium-level aggressiveness (14.5%).

Finally, the people with an inadequate level of preventive culture are male (4.6%), health insurance (SIS-type (5.1%), income between 2500 and 1501 soles (2.6%), working temporarily (3.3%), owning an independent house (4.0%), rented housing (3.5%), using the bus as a means of transport (3.7%), using television as a means of communication and receiving information (3.2%), Single-parent family type (3.5%), cohabitation with family (4.3%), sociocultural influence of medium level (5.2%), personality traits of neurocytism with medium level (3.8%), sensation seeking at medium level (3.3%) and aggressiveness at medium level (4.8%).

**DISCUSSION**

After the tabulation and interpretation of the data in the research, we proceed to contrast them with other studies to provide a critical judgment based on the purpose of the research, being to relate the sociodemographic characteristics and the preventive culture in the students of the Jorge Basadre Grohmann National University of Tacna. It is a relevant work because it provides an overview of the situation of students and how it has influenced their characteristics during the two years of the SarS-CoV 2 pandemic.

The data obtained in Table N°01 indicate that the regular level of knowledge and practice on preventive measures against COVID-19 predominates in the students of Basadrino (61.8%), followed by the low level (38.2%) and with respect to the high level does not represent a significant percentage (0.0%). Table 02 shows that 76.9% have an adequate level of preventive culture, but 5.7% have an inadequate level.

A survey conducted at seven universities in Saudi Arabia found that 82.1% of students scored 9.85 (SD = 1.62, Range = 0-12). Likewise, the majority of the surveyed population stated that they frequently carried out preventive behaviors with the exception of hand washing with a duration of less than 20 seconds and disinfection of surfaces, finding a variation in the results of our population due to the fact that students from the different professional schools are approached, unlike the contrasted study that considered only nursing students where the female sex predominates. which belongs to one of the variables linked to a high knowledge of Covid-19. Therefore, the promotion of knowledge and preventive practices against Covid-19 in men and in other professional careers exempt from Health Sciences should be encouraged.[12]

On the other hand, in the research carried out in public and private universities in China, results were identified that differ from those obtained, where adequate knowledge prevailed represented by 82.3% of the population, and more than half of the students indicated that they had positive attitudes and proactive practices. Therefore, the researchers infer that these inequalities were obtained due to the fact that the vast majority of the Chinese population belonged to medical students, being a different reality from our study developed where health sciences students did not represent even 30% of the selected sample.[13]

In other similar studies applied to university students, it is stated that they possess an adequate level of knowledge, practice and attitudes. (both of them) It was noted that the level of preventive knowledge and attitudes is associated with knowledge about COVID-19 and with respect to preventive practices, a significant link was found with gender, geographic area, and knowledge about COVID-19. Therefore, when comparing both studies, the essential value of the theoretical foundation of pathology for the acquisition of elements that make up a preventive culture is highlighted, which is why it is meritorious to promote reliable information through the different sources of communication to achieve an adoption of a preventive culture.[14,15]

In a study carried out in Spain, aimed at students of health sciences, it was highlighted that the knowledge about community prevention was adequate. The students had little confidence in dealing with cases, but their willingness and moral responsibility were high. Students rate the measures adopted in Spain more favourably. The students' knowledge of COVID-19 community prevention measures was adequate, but not of preventive measures when treating COVID-19 patients.[16]

The preventive culture against covid-19 addresses the knowledge, practices, willingness to learn and disseminate knowledge about covid-19. In which it is supported and guided in the modification of change, acquiring a greater adaptation to be able to face the unknown risks of the disease. This is evidenced by the results of the aforementioned research.

The results presented in tables 03 and 04 on the demographic and sociocultural characteristics of the students show that 56.3% are young people between 19 and 29 years of age, with a predominance of women (89.0%), who live in urban areas with their own housing. Likewise, 69.0% have SIS, of which 58.3% have an economic income of less than 750 soles, and 59.9% do not work. The most frequently used means of transport is the bus. On the other hand, a regular level of sociocultural influence on students predominates.

In a study on self-care behaviors in students at the University of Huánuco, it was found that 54% are adolescents, of which 65.9% are female, 80% live with their families. 56.3% have health insurance, and 59.5% do not work. [17]

The COVID-19 pandemic has, once again, highlighted the world's cultural diversity through a variety of reactions to measures imposed by the global spread of the deadly virus. In this study, most of the students' sociocultural behaviors could have been anticipated by the authorities. Students involved in one study reported that it was not necessary to wear a mask on holidays or at family events; This behavior is classified as "normal". Because it was a way to feel like you're in the new normal. The unexpected results indicate that there is versatility in different cultures that is still changing under the influence of the Western world.[18]

When comparing the research referred to in the previous paragraphs, a significant difference is shown with our population, due to the fact that we worked with students of different professional careers in their different years of study with a predominance of young female population. Therefore, most of the results reflect the reality of this population group, which is why a proportional amount of each age group must be included in all intervention activities to obtain favorable changes in the application of preventive practices against COVID-19.[17:19]

In the findings obtained on the relationship between sociodemographic characteristics and preventive culture, Table N°05, emphasis is placed on female students who have comprehensive health insurance (SIS), who have a high level of preventive culture.

Similar results were obtained in a study carried out in northern Iran at the beginning of the pandemic, involving young people and adults who presented significant differences according to sex in the level of preventive behavior against COVID-19, especially women. Similarly, in the area of residence, a higher score was obtained than in the urban area. However, in our research, despite having similar results in the descriptive analysis, it differs in the bivariate analysis, probably due to the statistical test used.[20]

On the other hand, in four higher education institutions in the Amhara region, Ethiopia. It was evidenced that the variable of living with the family is a predictor of the level of knowledge, because living with family members disseminates experiences and information of events that transcend in the world, which increases knowledge about the context of COVID-19, being a support for our finding; However, there was a disparity in life stage and marital status, due to the fact that young people (19-29 years old) prevail in our results, and the urban area was only an independent predictor of good practice against COVID-19, but not because of the other dimensions that make up the preventive culture, so it was not significant in the results presented in Table 5.[21]

The level of relationship between the preventive culture and the variables of means of transport (p=0.010), means of communication (p=0.000), type of family (0.003) is significant.

In contrast to the research carried out by Vergel H., Prada V., Hernández R., on the effects caused by mandatory distancing on teachers and students at the University of Santander in Cúcuta, where 94% of students, each with different realities in their family environment, stated that they had changes in their culture (routine and daily tasks) to prevent the spread of covid-19. Therefore, a difference was found in the study population, due to the fact that in the present work a sample was considered by platforms of different years of study.[22]

A study conducted by Ávalos J., Huamán L., on COVID-19 prevention measures and healthy habits in people aged 20 to 59 years shows that 78.2% who maintain a high preventive culture maintain an adequate healthy life as one of their main characteristic traits. Likewise, 73.6% of people who maintain high protection measures are those who maintain a regular eating habit.[23]

Preventive measures will be given through continuous practice, and it is demographic characteristics such as age, marital status, economic income, and among other relevant characteristics, that determine the continuity of the spread of the disease.

Finally, based on the findings obtained, it is established that there is a significant relationship between the preventive culture of university students and the following variables: sex (p=0.000), health insurance (p=0.006), economic income (p=0.000), occupation (p=0.000), type of housing (p=0.000), housing tenure regime (p=0.000), means of transport (p=0.010), means of communication (p=0.000), type of family (0.003), experience with a family member (P=0.016), sociocultural influence (p=0.011) and some personality traits such as neurocytism (p=0.044), sensation-seeking (p=0.023), aggressiveness (p=0.000).

Likewise, an adequate level of preventive culture prevails among the Basadrino students due to the fact that when the research was carried out, two years of dissemination of knowledge and practices on preventive measures against Covid-19 through various media had elapsed.

The formation of a preventive culture against COVID-19 requires the constant practice of the members of society so that the number of infections by this disease can be controlled.

**CONFLICT OF INTEREST.**
The authors declare that there is no conflict of interest in the research.

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