

## RESEARCH ARTICLE

# Positive mental health level of outpatients in community centers according to socio-demographic variables in Arequipa, Peru

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### ABSTRACT

Positive mental health is a state of mental health, which supports people in face of different difficulties, enabling them to identify their social skills, with the aim of being more productive, emotionally stable and proactive, and helping and promoting community development. **Objective:** We analyzed the positive mental health level of outpatients according to socio-demographic variables in community mental health centers in Arequipa, Peru. **Methods:** Descriptive, quantitative and cross-sectional study; 1440 outpatients from community health centers over the age of 18 participated. The Lluch Positive Mental Health Scale, which was verified by Calizaya et al. for Peru, was applied, taking into account adaptability, personal satisfaction-autonomy and frustration tolerance. **Results:** The general level of PMH in the patients was the medium level (89.2%); in the adaptability dimension (F1), the level was high (73.1%). However, the levels of satisfaction and personal autonomy (F2) and tolerance to frustration (F3) were low, 88.5% and 86.0%, respectively. There was no difference in PMH between female and male patients, nor by diagnosis of any disease ( $p > 0.05$ ). However, due to the educational level ( $p < 0.05$ ), patients with a higher educational level obtained higher scores. Likewise, older adults and those who are married, dependent workers, and residents of residential areas presented higher PMH levels than the other comparison groups. **Conclusion:** Outpatients who used the services provided by mental health centers showed a moderate level of positive mental health, as well as the ability to adapt to unfavorable situations. However, they presented problems in personal satisfaction and autonomy, as well as in frustration tolerance.

**Keywords:** mental health; positive psychology; outpatients; socio-demographic variables

## 1. Introduction

The present study aims to investigate the most positive aspects of mental health, because the study of this has been more inclined towards mental illnesses and disorders based on the biomedical model. However, positive psychology presents a broader model to understand how people interact with their social environment; to understand their expectations, desires, needs and what values they experience in their daily life; and to understand that the positive aspect of people is related to well-being, quality of life, resilience, satisfaction with life, happiness and self-efficacy.

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In addition, it is necessary to specify how positive mental health manifests itself in patients who make use of community health services, trying to understand what the behavior is and what attitudes these patients diagnosed with a mental problem develop considering their sociodemographic variables.

### **Theoretical framework**

Positive psychology is a novel method that in the past decades has been explaining the positive aspects experienced by people in the psychological and social, such as health, positive mental health, self-efficacy, life satisfaction, and happiness<sup>[1,2]</sup>, which are different from classic models that associate mental health with mental diseases and diseases based on medicine and biology<sup>[3]</sup>, such as anxiety, depression, anguish, frustration, panic and behavioral disorders, which alter mental health in the population<sup>[4,5]</sup>.

In this sense, contemporary health psychology, against these classic models (biomedicine and behavioral science), explains that positive emotions are the protectors of physical and mental health and the prevention of diseases<sup>[6]</sup>. However, they question whether well-being alone can develop a person's mental health, but think that other variables should be included, such as the development of individual capacities, the improvement of social and economic situation and living conditions, as the basis for ensuring population health<sup>[7,8]</sup>.

Therefore, positive mental health (PMH) has been defined as a state of mental health that supports people in the face of different difficulties, enabling them to identify their social skills, with the aim of being more productive, emotionally stable and proactive, and helping and promoting community development<sup>[9,10]</sup>.

In addition, the concept of PMH was introduced into the research field with Jahoda in 1958<sup>[11]</sup>, taking into account biomedical, behavioral and well-being models. According to Lluich's research since 1999<sup>[12]</sup>, a multifactorial model of PMH was introduced from a holistic perspective that differentiated the concept and the structure<sup>[13]</sup>, considering the following dimensions: personal satisfaction, prosocial attitude, self-control, autonomy, problem-solving, self-conceptualization and interpersonal skills.

Previous research on PMH among outpatients in mental health centers was not significant due to the low production of research related to such samples. We found a publication to evaluate the PMH level of Spanish schizophrenics, and came to the conclusion that the PMH level of women was higher than that of men, while that of patients with poor function was higher<sup>[14]</sup>. However, researchers focused on understanding PMH in other samples, especially during the pandemic, such as college students. They came to the conclusion that prosocial attitude, self-control and problem solving are significant in the impact of PMH of students<sup>[15]</sup>. Likewise, physical activity favors in the treatment and prevention of mental disorders, developing better PMH<sup>[16]</sup>.

As mentioned above, few PMH studies have been found among patients in mental health centers, and it is necessary to understand the behavior of research variables in such samples according to their socio-demographic variables.

Therefore, the overall goal is to analyze the positive mental health level of outpatients according to the socio-demographic variables of community mental health centers in Arequipa, Peru. Being the specific research questions: What is the level of positive mental health presented by outpatients in community health establishments? Are there statistically significant differences in the level of positive mental health according to the sociodemographic variables of the patients? It was hypothesized: it is likely that levels of positive mental health will vary due to the sociodemographic factors of the patients.

## **2. Materials and methods**

The STROBE cross-sectional reporting guidelines were used, which are detailed below.

## **2.1. Study type**

This study is descriptive-comparative, quantitative and cross-sectional<sup>[17]</sup>. The survey data were collected in the mental health centers in Arequipa, Peru from October to December 2022.

## **2.2. Participants**

1440 patients who used outpatient services in six community mental health centers in Arequipa participated in the survey for three months (October–November–December). These patients were selected by intentional sampling, including outpatients, patients over the age of 18, family members or other persons accompanying the user (the elderly or disabled), and patients who gave their consent to the survey. As exclusion criteria: accompanied by underage patients, patients or family members who do not want to participate in the study, users with severe mental disorders, patients without family members, and patients receiving other types of counseling.

In addition, to calculate the sample size required to perform the statistical analyses, the *G-Power* program was used, considering the following aspects: for the comparative analysis of two samples, the *t*-test means was used: difference between two independent means (two groups), effect size: 0.20 (small), with a probability of 0.95 and 0.05 margin of error; and the *F* test–ANOVA: fixed effects, omnibus, one-way, effect size: 0.10 (small), with a probability of 0.95 and 0.05 margin of error, in more than two groups.

## **2.3. Instrument**

The instrument used is the Peruvian adaptation<sup>[10]</sup> of Positive Mental Health Scale developed by Lluich<sup>[12]</sup>. They studied the evidence of reliability based on internal structure and instrument score in Arequipa-Peru general population. Exploratory and confirmatory factor analysis showed a good fitting rate with local samples in Peru ( $\chi^2(431) = 2473.378$ ; CFI = 0.959; TLI = 0.956; RMSEA = 0.049; SRMR = 0.051) and internal consistency showed the reliability through the Omega coefficient, which is greater than 0.81. Reducing the scale from 39 items to 31, it also indicated the existence of three factors: F1—adaptability, F2—personal satisfaction and autonomy, and F3—frustration tolerance. The instrument consists of 31 Lickert-type response items with scores (always/almost always = 4, quite frequent = 3, sometimes = 2, never/almost never = 1). In addition, socio-demographic variables were added to the scale.

## **2.4. Procedure**

Authorization was obtained from the directors of the health centers to apply the instrument to the patients waiting for external consultation. After informed the objective of the research, the instructions of the scale and the confidentiality of the data provided, accepting to participate voluntarily, each participant signed the informed consent. And according to their own experience, the instrument was given to them to respond individually. The application of the scale lasted between 20 to 30 min in person, and there were some patients who did not wish to participate, being 90% of the patient contacts who accepted their participation.

## **2.5. Data analysis**

The data were digitized into XLSX files of Excel programs. SPSS version 27 was used for statistical analysis. Then, the Shapiro-Wilk test<sup>[18]</sup> was used to analyze the distribution, asymmetry, yield and normality of the data, finding that the data did not conform to the normal distribution ( $p < 0.001$ ). Likewise, we conducted homogeneity of variance tests, and decided to use non-parametric tests for inferences. We made a descriptive analysis and comparison of positive mental health according to the socio-demographic variables of patients: sex, age, population group, marital status, educational level, work status and place of residence.

The comparison of two independent samples, Mann-Whitney U was used with its respective effect size (ES). The calculation of the probability of superiority ( $P_{Sest}$ ) was performed, and the interpretation criteria were: no effect ( $P_{Sest} \leq 0.0$ ), small ( $P_{Sest} \geq 0.56$ ), medium ( $P_{Sest} \geq 0.64$ ) and large ( $P_{Sest} \geq 0.71$ )<sup>[19]</sup>. The comparison of  $k$  independent samples was performed with Kruskal Wallis H and pos hoc tests. The effect size used was epsilon squared ( $\epsilon^2$ )<sup>[20]</sup>, and its interpretation criteria were: small for  $\epsilon^2 \geq 0.01$ , medium for  $\epsilon^2 \geq 0.06$ , and large for  $\epsilon^2 \geq 0.14$ <sup>[21]</sup>.

## 2.6. Ethical considerations

This research was carried out under the ethical consideration of health research involving human subjects under the guidelines of the Ministry of Health through ministerial resolution No. 233-2020-MINSA issued on 27 April 2020. Its purpose is to promote human health research in accordance with national and international ethical standards.

Likewise, approval was obtained from the Ethics Committee of Universidad de la Costa-Colombia (Act No. 009-2020), on the research called multi-center and multi-dimensional study of mental health in the population of Barranquilla and Arequipa, Colombia-Peru.

## 3. Results

Descriptive analysis was made of socio-demographic variables of participants receiving treatment in mental health centers, and the following information was found. 50.8% were females and 49.2% were males. According to the population group, 26.5% were young people, 60.6% were adults and 12.9% were older adults. According to the marital status, 32.7% were single, 25.6% were married, 26.3% were cohabitants, 10.8% were widowed and 4.6% were divorced. With regard to the educational level, 0.4% had no education, 3.8% primary level, 39% secondary level and 56.9% high school level. According to the work status of patients, 51.7% were self-employed, 30.4% were dependent workers and 17.9% were unemployed. Likewise, variables such as the diagnosis of mental disorders were included, and it was found that 93.1% had no mental disorders and 6.9% had mental disorders. As for the types of patients' health insurance, 28.3% had social security, 56.3% were beneficiaries of health programs, 0.2% were insured by the armed forces, 0.8% were privately insured, and 14.4% had no insurance.

In **Table 1**, the positive mental health (PMH) level and its study dimensions were estimated, taking into account the values and cut-off points of the instruments used. It was found that the overall level of PMH was medium, and the level of adaptability dimension (F1) was high, but the levels of personal satisfaction and autonomy (F2) and frustration tolerance (F3) were very low.

**Table 1.** Positive mental health level and study dimensions in patients.

Positive mental health level				
Level	PMH (FX) %	F1 (FX) %	F2 (FX) %	F3 (FX) %
Low	(87) 6.0	(60) 4.2	(1275) 88.5	(1239) 86.0
Medium	(1284) 89.2	(327) 22.7	(117) 8.1	(123) 8.5
High	(69) 4.8	(1053) 73.1	(48) 3.3	(78) 5.4
Total	(1440) 100	(1440) 100	(1440) 100	(1440) 100

Note: PMH = positive mental health; F1 = adaptability; F2 = personal satisfaction and autonomy; F3 = frustration tolerance; FX = frequency; % = percentage.

In **Table 2**, the PMH level and study dimensions were compared according to sex, and no statistically significant differences were found in the general measurement and adaptability; however, in the other

dimensions, significant differences were found according to sex, with females feeling more personally satisfied and more tolerant to frustration compared to male patients (small effect size).

And when comparing the PMH level according to the diagnosis of a disorder presented by the patient, no statistically significant differences were found in the general PMH level and the frustration tolerance dimensions. On the contrary, differences were found in the other dimensions, that patients who did not present a diagnosis of a disorder felt more satisfied and autonomous, and showed stronger adaptability than patients who did present a disorder (small effect size).

**Table 2.** Comparison of positive mental health and study dimensions according to sex and diagnosis of any disorder of patients.

Variable	Sex	N	Average range	U	Z	p	P <sub>Sest</sub>
Positive mental health	Male	732	719.71	258,565.5	-0.071	0.943	0.015
	Female	708	721.27				
F1. Adaptability	Male	732	734.86	248,962.5	-1.291	0.197	0.016
	Female	708	706.61				
F2. Personal satisfaction and autonomy	Male	732	684.09	233,347.5	-3.281	0.001	0.047
	Female	708	755.72				
F3. Frustration tolerance	Male	732	699.93	241,561.5	-2.876	0.041	0.046
	Female	708	740.40				
Variable	Diagnose of any disorder	N	Average range	U	Z	p	P <sub>Sest</sub>
Positive mental health	Yes	99	724.14	60,898.5	-1.375	0.169	0.010
	No	1341	665.14				
F1. Adaptability	Yes	99	711.50	54,315.0	-3.026	0.002	0.054
	No	1341	842.36				
F2. Personal satisfaction and autonomy	Yes	99	580.00	52,470.0	-3.497	0.000	0.060
	No	1341	730.87				
F3. Frustration tolerance	Yes	99	680.14	62,383.5	-1.017	0.309	0.012
	No	1341	723.48				

Note: N = sample; U = Mann-Whitney U statistics; Z = statistical value; p = significance (0.05); P<sub>Sest</sub> = probability of superiority.

In **Table 3**, comparing the PMH level according to the population group of patients, there were statistically significant differences found in the general measurement and adaptability dimensions. In addition, internal comparisons were made between groups through post hoc tests, and it was found that older adults presented higher PMH levels and adaptability than young people and adults. However, no differences were found in the other dimensions, exhibiting similar levels between the comparison groups (small effect size).

Comparing the PMH level in the case of the patients' marital status, statistically significant differences were found. Post hoc tests (internal comparisons between groups) showed that married patients had higher PMH levels and showed stronger adaptability than the other comparison groups, and that widowed patients were more satisfied and autonomous, and tolerant to frustration than the other comparison groups (small effect size).

**Table 3.** Comparison of patients' positive mental health and study dimensions according to population group and marital status of patients.

Variable	Population group	N	Average range	H	gl	p	$\epsilon^2$
Positive mental health	Young	381	695.63	6.832	2	0.033	0.028
	Adult	873	716.31				
	Older adult	186	791.10				
F1. Adaptability	Young	381	677.76	6.013	2	0.049	0.025
	Adult	873	715.93				
	Older adult	186	740.13				
F2. Personal satisfaction and autonomy	Young	381	733.96	5.511	2	0.064	0.012
	Adult	873	702.57				
	Older adult	186	777.09				
F3. Frustration tolerance	Young	381	747.56	5.273	2	0.072	0.011
	Adult	873	700.70				
	Older adult	186	758.02				
Positive mental health	Single	471	689.49	69.444	4	0.000	0.011
	Married	369	848.56				
	Widowed	156	795.76				
	Cohabitant	378	612.89				
	Divorced	66	664.25				
F1. Adaptability	Single	471	717.98	49.909	4	0.000	0.014
	Married	369	838.72				
	Widowed	156	617.46				
	Cohabitant	378	670.45				
	Divorced	66	607.73				
F2. Personal satisfaction and autonomy	Single	471	681.51	55.649	4	0.000	0.015
	Married	369	700.35				
	Widowed	156	936.82				
	Cohabitant	378	680.52				
	Divorced	66	829.05				
F3. Frustration tolerance	Single	471	724.98	43.185	4	0.000	0.017
	Married	369	702.90				
	Widowed	156	846.27				
	Cohabitant	378	668.79				
	Divorced	66	785.82				

Note: N = sample; H = Kruskal Wallis statistics; gl = degree of freedom; p = significance (0.05);  $\epsilon^2$  = epsilon square.

In **Table 4**, comparing the PMH level according to the patients' educational level, statistically significant differences were found in the general measurement and the personal satisfaction and autonomy dimensions. In addition, internal comparisons were made between groups through post hoc tests, and it was found that patients with higher educational levels presented higher PMH levels, and personal satisfaction and autonomy than the other comparison groups. However, no differences were found in the other dimensions, exhibiting similar levels between the comparison groups (small effect size).

When comparing the PMH level according to the patients' work status, a statistically significant difference was found. According to the post hoc tests (internal comparisons between groups), patients with dependent work conditions showed higher PMH levels, stronger adaptability and frustration tolerance than other comparison groups, and there was no difference between the comparison groups in the dimension of personal satisfaction and autonomy (small effect size).

**Table 4.** Comparison of positive mental health and study dimensions according to the educational level and work status of patients.

Variable	Educational level	N	Average range	H	gl	p	$\epsilon^2$
Positive mental health	No education	6	685.25	16.245	3	0.040	0.013
	Primary	54	688.58				
	Secondary	561	699.49				
	High school	819	754.61				
F1. Adaptability	No education	6	524.75	4.719	3	0.194	0.008
	Primary	54	621.92				
	Secondary	561	730.66				
	High school	819	721.47				
F2. Personal satisfaction and autonomy	No education	6	791.75	25.551	3	0.000	0.022
	Primary	54	767.65				
	Secondary	561	676.56				
	High school	819	888.67				
F3. Frustration tolerance	No education	6	935.00	2.809	3	0.422	0.014
	Primary	54	737.42				
	Secondary	561	705.28				
	High school	819	728.24				

  

Variable	Work status	N	Average range	H	gl	p	$\epsilon^2$
Positive mental health	Independent	744	745.67	20.175	2	0.000	0.016
	Dependent	438	771.74				
	Unemployed	258	647.57				
F1. Adaptability	Independent	744	754.35	27.296	2	0.000	0.014
	Dependent	438	769.02				
	Unemployed	258	634.42				
F2. Personal satisfaction and autonomy	Independent	744	716.61	136	2	0.934	0.005
	Dependent	438	724.83				
	Unemployed	258	724.37				
F3. Frustration tolerance	Independent	744	705.68	9.538	2	0.008	0.017
	Dependent	438	768.99				
	Unemployed	258	680.91				

Note: N = sample; H = Kruskal Wallis statistics; gl = degree of freedom; p = significance (0.05);  $\epsilon^2$  = epsilon square.

In **Table 5**, comparing the PMH level according to the patients' place of residence, statistically significant differences were found. Post hoc tests (internal comparisons between groups) showed that patients living in residential areas had higher PMH levels and showed greater personal satisfaction and autonomy, and frustration tolerance compared to the other groups, and patients living in residential areas had stronger adaptability than the other comparison groups (small effect size).

**Table 5.** Comparison of positive mental health and study dimensions according to patients' place of residence

Variable	Place of residence	N	Average range	H	gl	p	$\epsilon^2$
Positive mental health	Human settlement	339	593.37	74.236	5	0.000	0.012
	Young village	501	792.02				
	Association	219	687.17				
	Cooperative	69	560.26				
	Residential	36	928.00				
	Urbanization	276	786.26				
F1. Adaptability	Human settlement	339	563.70	124.341	5	0.000	0.014
	Young village	501	805.35				
	Association	219	628.75				
	Cooperative	69	594.26				
	Residential	36	639.50				
	Urbanization	276	872.73				
F2. Personal satisfaction and autonomy	Human settlement	339	849.38	107.787	5	0.000	0.015
	Young village	501	677.92				
	Association	219	809.02				
	Cooperative	69	701.13				
	Residential	36	940.75				
	Urbanization	276	545.38				
F3. Frustration tolerance	Human settlement	339	760.75	45.452	5	0.000	0.017
	Young village	501	638.20				
	Association	219	800.41				
	Cooperative	69	706.35				
	Residential	36	970.13				
	Urbanization	276	728.03				

Note: *N* = sample; *H* = Kruskal Wallis statistics; *gl* = degree of freedom; *p* = significance (0.05);  $\epsilon^2$  = epsilon square.

## 4. Discussion

The objective of this investigation was to analyze the level of positive mental health in outpatients according to socio-demographic variables in community mental health centers in the city of Arequipa, Peru. The results obtained indicated that outpatients presented moderate levels of PMH, and high levels in the dimension of adaptability (F1), but low levels in personal satisfaction and autonomy (F2) and frustration tolerance (F3). In this sense, patients expressed different positive and negative emotions in the face of difficulties and good life experiences, especially after the effect of the pandemic, such as: the ability to cope with adverse situations, maintaining hope, calm, appreciation and love for the family. Likewise, they presented problems that altered mental health, such as: depression, stress and anguish situations that have been generated during and after the pandemic, adapting to these changes, as explained by Rojas and Rodríguez<sup>[1]</sup>, Livia et al.<sup>[4]</sup>, and Portela and Machado<sup>[5]</sup>.

The results of this study confirm the proposed hypothesis, pointing out that the levels of positive mental health vary due to the sociodemographic factors of the patients, as described below: In the overall PMH score, there was no difference between female and male patients or by diagnosis of any disorder, contradicting the results found by Luján-Lujan et al.<sup>[14]</sup>. However, if differentiated by the educational level, patients with higher



education obtained higher scores. Likewise, older adults and married people, as well as dependent workers and those living in residential areas, presented higher PMH levels than the other comparison groups.

When analyzing the PMH level of each factor or dimension, we found interesting aspects to discuss according to their socio-demographic variables:

In terms of adaptability (F1), according to the sex of the patients, the PMH level did not differ between males and females. However, if among patients with a certain disorder, patients without any diagnosis of disorder had higher scores than those with a diagnosis of disorder (better adaptability). In addition, when comparing the PMH level, older adult patients adapted better to daily situations than young people and adults, as well as married patients compared to single, widowed, divorced and cohabiting patients. The same trend occurred with patients who worked as dependents and lived in areas with all basic services and protection, such as urbanization and residences.

In terms of personal satisfaction and autonomy (F2), according to socio-demographic variables, females obtained higher scores than males, as well as patients who did not present diagnosis of a disorder. Likewise, married patients felt more satisfied due to family closeness. In addition, patients with higher educational levels presented higher levels of satisfaction and autonomy, and those living in residential areas showed better well-being and quality of life compared to the other groups.

And in terms of frustration tolerance (F3), according to the sex of patients, females were more tolerant than males, and older adults obtained higher scores than young people and adults. Similarly, dependent workers were more tolerant than independent workers and those who did not work. According to the place of residence, patients who lived in residential areas were more tolerant than those who lived in other areas.

Therefore, in the absence of previous studies associating socio-demographic variables with positive mental health of patients in community centers, the results of the present investigation are a significant contribution to future research related to the proposed topic.

In addition, this type of study should continue to include a larger number of participants with other characteristics in order to understand the behavior of the PMH level in the general population and to be able to compare the results, so that the disciplines and professionals involved in mental health can consider these results to improve their programs and professional practices for the benefit of the population.

Finally, there were some limitations in the data collection process due to the lack of support from some patients and authorities of the mental health institutions, as well as economic inconveniences due to the lack of funds for the execution of the research. Despite the interesting results, it is a cross-sectional study, where more robust analyzes cannot be carried out; therefore, it was a real institutional challenge to contact this population and incorporate more complete measures, because, as evidenced in the scientific literature, the panorama of emotional and psychological alterations in the general population and, in particular, in the patients of these community centers, has been significant, to contribute greater knowledge to the existing one.

## **5. Conclusion**

It's concluded that, outpatients who use the services provided by mental health centers showed the capacity to adapt to adverse situations. However, they showed problems in personal satisfaction and autonomy, as well as in frustration tolerance.

The results indicate that people by nature can face the adversities that occur in daily life, and that despite the fact that we develop some psychological and social problems, we can adapt to these problems and face them, autonomously or collectively, seeking to be resilient through positive attitudes that favor the

sustainability of our diseases.

Therefore, given the relevance of the study due to its originality, it is suggested that studies continue with a multidisciplinary approach to understand the behavior of different psychosocial problems that occur in the community.

## Author contributions

Conceptualization, JCL and YAV; methodology, PAS; software, TYF; validation, YAA, ACC and DMA; formal analysis, RBM; investigation, JCL; resources, YAV; data curation, RBM; writing—original draft preparation, JCL; writing—review and editing, ACC and DMA; visualization, TYF; supervision, YAA; project administration, JCL; funding acquisition, PAS. All authors have read and agreed to the published version of the manuscript.

## Conflict of interest

The authors declare no conflict of interest.

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