

Perception And Expectation Of The Covid-19 Vaccine In Peruvian Families

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Abstract

Introduction: *Given the uncertainty of Covid-19 vaccines, whether they are effective or not, and whether they live or die, it is important to know the perception and expectation of their acceptance.*

Objective: *To analyze the perception and expectation of the Covid-19 vaccine among Peruvian families in an urban area of Lima.*

Methodology: *Descriptive, cross-sectional, non-probabilistic and convenience sampling study, with the participation of 197 families, who were digitally recruited through a neighborhood leadership and an online survey was applied with prior consent.*

Results: *The majority of families have a favorable perception of COVID-19 vaccines, despite not having presented the disease and represents 81.54%, as well as when they are not sure if they had positive COVID-19 88.46%. Likewise, they have a favorable perception: if they received both doses, 82.57%, three doses 90.36%, while those who decided not to be vaccinated 50% (1) have an unfavorable perception and another 50% (1) have a moderately favorable perception and those who have not yet received any dose the majority have a moderately favorable perception 66.67%. respectively.*

Conclusions: *the majority (100%) have a favorable perception and expectation about the vaccine against Covid-19 (=132.83) and the p-value (0.00); Regarding the desire to be vaccinated, it stands out to have had a family member who died from X^2_c the coronavirus, hence health personnel must continue with the preventive promotional work of vaccination in order to obtain favorable results in the entire population.*

Keywords: *Perception; Vaccine; Expectation; Suburbs, Covid-19. (Decs-Bireme)*

INTRODUCTION

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Mass vaccination for Covid-19 was one of the cost-effective measures to control the spread of Covid-19 worldwide. So much so that a good group of the population did not agree to get vaccinated. However, (1) healthcare workers caring for Covid-19 positive people, as well as their family members, were more likely to be vaccinated. (2) In China, the United Kingdom, there was strong demand and great acceptance of the Covid-19 vaccine (3,4). However, the lowest Covid-19 vaccine acceptance rates were found in Kuwait (23.6%), Jordan (28.4%), Italy (53.7%), Russia (54.9%), Poland (56.3%), USA (56.9%) respectively. Likewise, (5) (6) there was a high willingness to receive the Covid-19 vaccine, highlighting sociodemographic factors and risk perceptions. (7) Approximately 68% of all respondents supported Covid-19 vaccination, but side effects, efficacy and duration of testing remained a concern. (8)

In Latin America, eight out of 10 adults intended to be vaccinated and at the same time presented fear of adverse effects. (9) On the other hand, the acceptance of being vaccinated against Covid-19 produced distrust in the population, emerging conjectures about efficacy, possible side effects, among other factors. However (10), the opinions and attitudes regarding Covid-19 and Covid-19 vaccines highlight the distrust towards them, especially the effectiveness and safety (11,12).

In Peru, the prevalence of intention to be vaccinated was 74.9%. (13) There is also a group of people who are unsure about receiving Covid-19 vaccines. (14) The intention to be vaccinated against Covid-19 reached 75% in health workers with discrepancies between occupational categories. The results indicated that 68% and 65% agreed to be vaccinated for themselves and their dependents, respectively. Risk perceptions (severity and susceptibility to Covid-19) were associated with vaccine acceptance (15) (16). The overall intention to be vaccinated against Covid-19 during the first year of the pandemic fluctuated between 27.7% and 93.3%, highlighting socio-demographic differences, risk perceptions and susceptibility to the disease. He also highlighted that health professionals in particular have greater doubts about vaccines related to the efficacy of vaccines and distrust of health authorities (17,18)

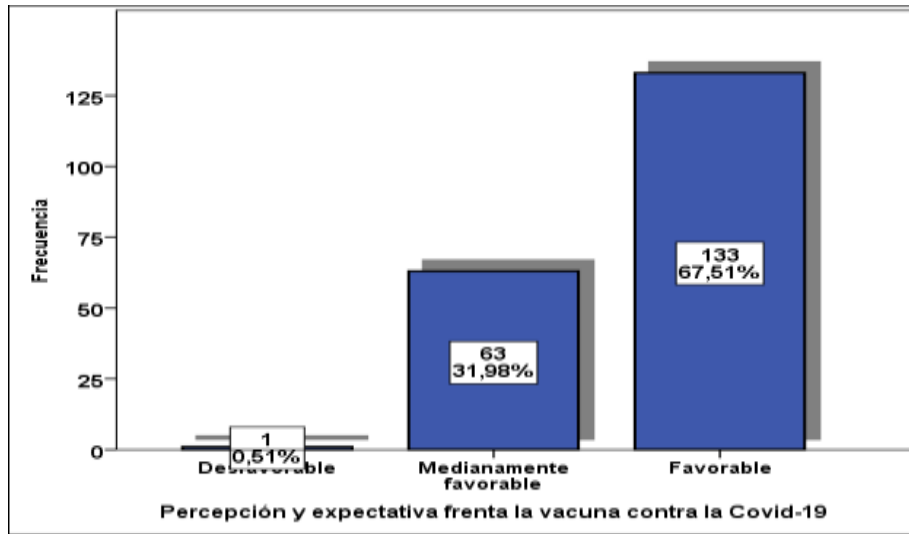
METHODOLOGY

The study was carried out in a marginal urban area of the District of Lima, Province of Lima, Peru, at an altitude of 154 meters above sea level (masl), with average annual temperatures ranging from 15 to 27 °C. Samples were taken between March and April 2021. For the study, the non-experimental, correlational design was considered in a sample of 197 families from a district of Lima selected through non-probability and convenience sampling. To evaluate the variables, an online questionnaire of perception and expectation of the vaccine against covid-19 was used, prepared by the authors based on the literature review and is composed of questions on general data on perception and expectations, then both variables were classified as favorable, moderately favorable and unfavorable. The instruments were tested for validity through expert judgment. The reliability was performed with Cronbach's alpha according to the scale of (0.74) on the perception and expectation of the vaccine against Covid-19, it is located between the range of 0.72 to 0.99 that indicates that the instrument has excellent reliability. (19) The results were expressed as a percentage, with a 95% confidence interval. For statistical analysis processing, the SPSS version 22 statistical package was used, and for correlation, the Chi-square statistical test was used, presenting the results in figures and tables. Likewise, the study considered the ethical principles of research such as anonymity and reliability of the data, and to participate in the study, informed consent was applied with the option of participating or not in the instrument.

RESULTS

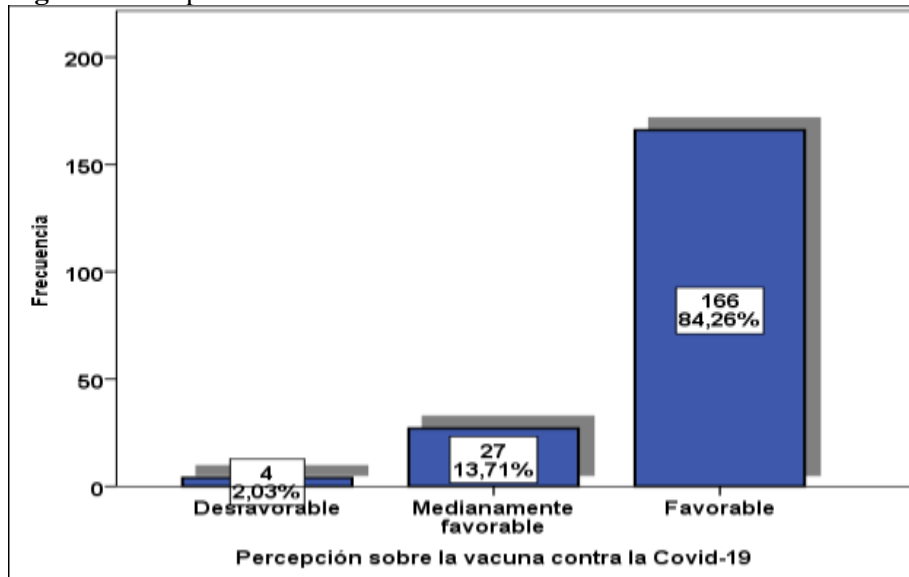
Figure 1

Perception and expectation of the Covid-19 vaccine in Peruvian families in an urban area of Lima



The majority (67.51%) (133) of the families surveyed have a favorable perception and expectation about the Covid-19 vaccine, likewise, 31.98% (63) have a moderately favorable perception and only 0.51% (1) of the families have an unfavorable perception of the Covid-19 vaccine. The Chi-square obtained ($= 132.83$) and the p-value (0.00) X^2_c indicate that perception and expectation about the vaccine against Covid-19 is positive.

Figure 2 Perception of the Covid-19 vaccine in Peruvian families in an area of Lima



Most of the families surveyed, 84.26% (166) have a favorable perception of the Covid-19 vaccine, 13.71% (27) have a moderately favorable perception and only 2.03% (4) have an unfavorable perception of the Covid-19 vaccine.

Board 1

Perception of Peruvian families in an area of Lima about the vaccine against Covid-19 according to sociodemographic data

	Perceptions						Total	
	Unfavourable		Moderately favorable		Favourable			
	fi	%	fi	%	fi	%	fi	%
Age								
From 18 to 29 years old	2	2,27	11	12,50	75	85,23	88	100,00
From 30 to 59 years old	2	2,08	16	16,67	78	82,25	96	100,00
Ages 60 and over	0	0,00	0	0,00	13	100,00	13	100,00
Sex								
Male	1	1,47	10	14,71	57	83,82	68	100,00
Female	3	2,32	17	13,18	109	84,50	129	100,00
Religion								
Catholic	4	2,92	14	10,22	119	86,86	137	100,00
Evangelical	0	0,00	8	33,33	16	66,67	24	100,00
Agnostic	0	0,00	1	11,11	8	88,89	9	100,00
Other	0	0,00	4	14,81	23	85,19	27	100,00
Educational level								
Primary	0	0,00	1	100,00	0	0,00	1	100,00
High school	0	0,00	1	6,67	14	93,33	15	100,00
Non-university higher education	2	11,11	5	27,78	11	61,11	18	100,00
Student	2	1,22	20	12,27	141	86,50	163	100,00
Occupation								
Self-employed	0	0,00	7	25,93	24	88,89	31	100,00
Dependent worker	3	3,26	14	15,22	75	81,52	92	100,00
Domestic worker	0	0,00	0	0,00	6	100,00	6	100,00
Student	1	1,49	6	8,96	60	89,55	67	100,00
Other	0	0,00	0	0,00	1	100,00	1	100,00
Marital status								
Married	1	2,33	11	25,58	41	95,35	53	100,00
Divorced	0	0,00	0	0,00	4	100,00	4	100,00
Single	2	1,73	11	9,57	102	88,70	115	100,00
Cohabitant	1	4,35	4	17,39	18	78,26	23	100,00
Other	0	0,00	1	50,00	1	50,00	2	100,00

In relation to the age of the families surveyed in the three age groups, the majority have a favorable perception: 85.23% (75) from 18 to 29 years old, 82.25% (78) from 30 to 59 years old, and 100.00% from 60 years old and older (13). In the study sample divided by gender, it can be seen that most of them have a favorable perception: 83.82% (75) male and 84.50% (109) female. According to the religion professed by the respondents, the majority have a favorable opinion: 86.86% (119) are Catholic, 66.67% (16) are Evangelical, 88.89% (8) are agnostic, and 85.19% (23) are other religions. In relation to the educational level, most have a favorable perception: 93.33% (14) have a favorable perception: 61.11% (11) have a non-university higher education and 86.50% (141) have a moderately favorable perception. According to the occupation, it can be seen that most of them have a favorable perception: 88.89% (24) are self-employed, 81.52% (75) are dependent workers, 100.00% (6) are domestic workers, 89.55% (60) are students, and 100.00% (1) are others. Regarding marital status, most of them had favorable perceptions: 95.35% (41) were married, 100.00% (4) were divorced, 88.70% (102) were single, 78.26% (18) lived together, and half of the respondents had a moderately favorable

perception of other marital status, 50.00% (1) had a moderately favorable perception and the other 50.00% (1) had a favorable perception, respectively.

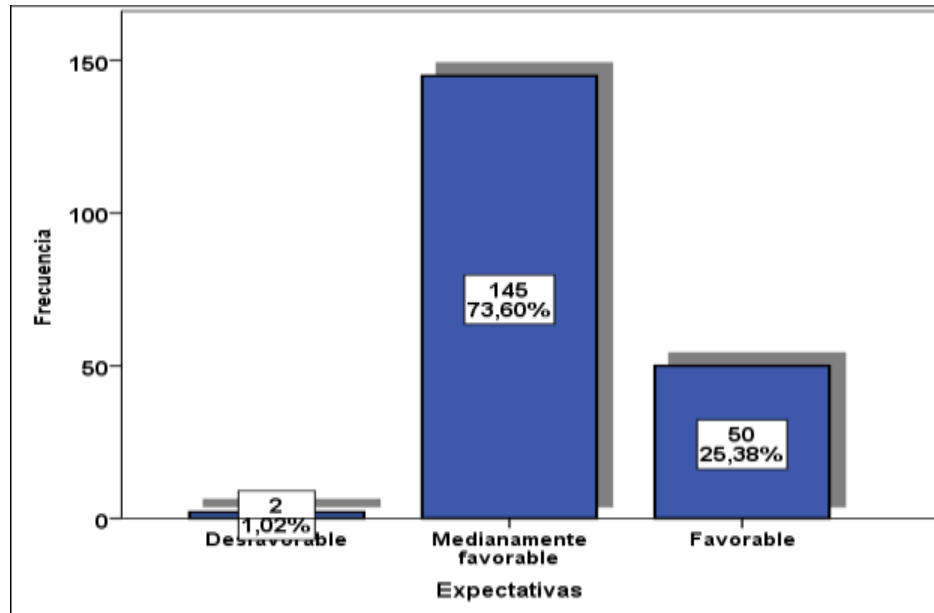
Board 2

Perception of Peruvian families in a marginal urban area of Lima about the Covid-19 vaccine according to the consequences of the disease

	Perceptions						Total	
	Unfavourable		Moderately favorable		Favourable		fi	%
	fi	%	fi	%	fi	%		
Developed the disease								
No	4	6,15	8	12,31	53	81,54	65	100,00
I'm not sure	0	0,00	12	11,54	92	88,46	104	100,00
Yes	0	0,00	7	25,00	21	75,00	28	100,00
A deceased family member								
No	4	5,19	9	11,69	64	83,12	77	100,00
I'm not sure	0	0,00	18	0,00	96	84,21	114	100,00
Yes	0	0,00	0	0,00	6	100,00	6	100,00
Received the vaccine								
I decided not to get vaccinated	1	50,00	1	50,00	0	0,00	2	100,00
I still don't get any doses	0	0,00	2	66,67	1	33,33	3	100,00
Yes, I received all 2 doses	3	2,75	16	14,68	90	82,57	109	100,00
I got the 2 doses, plus the booster dose	0	0,00	8	9,64	75	90,36	83	100,00

Table 2, according to whether they had the disease, shows that most of them have a favorable perception: 81.54% (53) did not present the disease, 88.46% (92) were not sure if they had the disease, and 75% (21) were unsure if they had the disease. In relation to whether they had a family member who died due to Covid-19, the majority presented a favorable perception: When a family member did not die (83.12%) (64), when they were not sure of a deceased family member (84.21%) (96) and when they had a deceased family member 100%. The perception if they received the vaccines, it can be seen that those who received the two doses or more do have a favorable perception: if they received the two doses 82.57% (90) and if they received the three doses 90.36% (75), while those who decided not to be vaccinated 50% (1) have an unfavorable perception and another 50% (1) have a moderately favorable perception and those who have not yet received any dose the majority have a Moderately favorable perception 66.67% (2).

Figure 3 Peruvian families in a marginal urban area of Lima expect the Covid-19 vaccine



It can be seen in Figure 3 that the majority of 73.60% (145) of the families surveyed have moderately favorable expectations about the Covid-19 vaccine, 25.38% (50) have a favorable expectation and only 1.02% (2) have an unfavorable expectation of the Covid-19 vaccine.

Board 3

Expectations of Peruvian families in a marginal urban area of Lima about the vaccine against Covid-19 according to sociodemographic data

	Expectations						Total	
	Unfavourable		Moderately favorable		Favourable		fi	%
Age	fi	%	fi	%	fi	%	fi	%
From 18 to 29 years old	0	0,00	66	75,00	22	25,00	88	100,00
From 30 to 59 years old	2	2,08	73	76,04	21	21,88	96	100,00
Ages 60 and over	0	0,00	6	46,15	7	53,85	13	100,00
Sex	fi	%	fi	%	fi	%	fi	%
Male	2	2,94	49	72,06	17	25,00	68	100,00
Female	0	0,00	96	74,42	33	25,58	129	100,00
Religion	fi	%	fi	%	fi	%	fi	%
Catholic	2	1,46	97	70,80	38	27,74	137	100,00
Evangelical	0	0,00	22	91,67	2	8,33	24	100,00
Agnostic	0	0,00	7	77,78	2	22,22	9	100,00
Other	0	0,00	19	70,37	8	29,63	27	100,00
Educational level	fi	%	fi	%	fi	%	fi	%
Primary	0	0,00	1	100,00	0	0,00	1	100,00
High school	0	0,00	12	80,00	3	20,00	15	100,00
Non-university higher education	0	0,00	15	83,33	3	16,67	18	100,00
Student	2	1,23	117	71,77	44	27,00	163	100,00
Occupation	fi	%	fi	%	fi	%	fi	%
Self-employed	0	0,00	21	67,74	10	32,26	31	100,00
Dependent worker	2	2,17	69	75,00	21	22,83	92	100,00

Domestic worker	0	0,00	5	83,33	1	16,67	6	100,00
Student	0	0,00	50	74,63	17	25,37	67	100,00
Other	0	0,00	0	0,00	1	100,00	1	100,00
Marital status	fi	%	fi	%	fi	%	fi	%
Married	0	0,00	40	75,47	13	24,53	53	100,00
Divorced	0	0,00	3	75,00	1	25,00	4	100,00
Single	0	0,00	87	75,65	28	24,35	115	100,00
Cohabitant	2	8,70	14	60,87	7	30,43	23	100,00
Other	0	0,00	1	50,00	1	50,00	2	100,00

Note: fi= frequencies

Table 3 shows that, in relation to age, in two age groups the majority have a favorable expectation: 75.00% (66) from 18 to 29 years old and 76.04% (73) from 30 to 59 years old, while the majority of respondents aged 60 and over (53.85%) (7) have a favorable expectation. By gender, it can be seen that most also have a moderately favorable expectation about the Covid-19 vaccine: Male 72.06% (49) and Female 74.42% (96). According to the religion professed, the respondents present a moderately favorable expectation: 70.80% (97) were Catholic, 91.67% (22) were evangelical, 77.78% (7) were agnostic, and 70.37% (19) were other religions. In relation to the educational level, most have a moderately favorable expectation about the vaccine against Covid-19: 100.00% (1) primary (1), 80.00% (12) secondary (12), 83.33% (15) non-university higher education and 71.77% (117) university students. According to occupation, they have a moderately favorable expectation: 67.74% (21) are self-employed, 75.00% (69) are dependent, 83.33% (5) are domestic workers, 74.63% (50) are students, and 100.00% (1) have a favorable outlook. Regarding marital status, most of them have favorable perceptions: 75.47% (40) are married, 75.00% (3) are divorced, 75.65% (87) are single, 60.87% (14) live together, and half of the respondents have a moderately favorable expectation and the other 50.00% (1) have a favorable expectation.

Board 4

Peruvian families in a marginal urban area of Lima expect the COVID-19 vaccine according to the consequences of the disease.

	Expectation						Total	
	Unfavourable		Moderately favorable		Favourable		fi	%
Developed the disease	fi	%	fi	%	fi	%	fi	%
No	4	6,15	8	12,31	53	81,54	65	100,00
I'm not sure	0	0,00	12	11,54	92	88,46	104	100,00
Yes	0	0,00	7	25,00	21	75,00	28	100,00
A deceased family member	fi	%	fi	%	fi	%	fi	%
No	4	5,19	9	11,69	64	83,12	77	100,00
I'm not sure	0	0,00	18	0,00	96	84,21	114	100,00
Yes	0	0,00	0	0,00	6	100,00	6	100,00
Received the vaccine	fi	%	fi	%	fi	%	fi	%
I decided not to get vaccinated	1	50,00	1	50,00	0	0,00	2	100,00
I still don't get any doses	0	0,00	2	66,67	1	33,33	3	100,00
Yes, I received all 2 doses	3	2,75	16	14,68	90	82,57	109	100,00
I got the 2 doses, plus the booster dose	0	0,00	8	9,64	75	90,36	83	100,00

Table 4, according to whether they had the disease, shows that the majority had a favorable expectation: 81.54% (53) did not present the disease, 88.46% (92) were not sure if they had the disease, and 75.00% (21) were unsure if they had the disease. In relation to whether they had a family member who died due to Covid-19, the majority presented a favorable expectation: When a family member did not die (83.12%) (64), when they were not sure of a deceased family member (84.21%) (96) and when they had a deceased family member, 100.00%. The expectation based on whether they received the vaccines, those who received the two doses or more do have a favorable expectation: if they received both doses, 82.57% (90) and if they received all three doses, 90.36% (75), while those who decided not to be vaccinated 50.00% (1) have an unfavorable expectation and another 50,005 (1) have a moderately favorable expectation and those who have not yet received any dose, the majority have a Moderately favorable expectation: 66.67% (2) families, respectively.

DISCUSSION

Regarding the perception of vaccines against Covid 19 in Peruvian families in an urban area of Lima, the majority have a favorable perception and expectation, and in relation to the perception, the majority also have a favorable perception, according to sociodemographic data the perception is favorable in the group of 18 to 29 years old, female, in agnostics, have completed secondary school, be self-employed and married. And according to the consequences of the disease, 100% have a favorable perception when they had a deceased family member.

The results agree with the (Vidal-Cuéllar et al., 2022) perception of Covid 19 vaccination in a hospital in Lima, Peru, it was found that most older adults have a positive perception, 91.55% received their vaccine and 65.43% report that the vaccines are safe. Similarly, in the (21) study on factors associated with Covid-19 vaccination in the rural area of Chupaca-Peru, it found that those in the agricultural sector (p -value=0.00), those who have not had the disease (p -value=0.05) and those who do not know if they have had the disease (p -value=0.02) did not want to be vaccinated ; on the contrary, Those who most wanted to be vaccinated were those in the health sector (p =0.03). These data are interesting to be processed by the health services in order to find the best strategy for the majority of the population to be vaccinated.

In relation to the associated factors, in a rural community in Ecuador, relatives of older adults who received the Covid-19 vaccine maintain that vaccination is positive since it prevents the severe form of the disease and although there are adverse reactions, the advantage of being vaccinated is always greater. They also consider that all doubts about the vaccine should be informed and clarified and that there should be no preference for certain vaccines, all in order for the majority of users to have a satisfactory perspective on vaccination and on the perception of vaccinating their children under 12 years of age, 83.5% intend to vaccinate them and 16.5% would not vaccinate them because they consider it not necessary, that it does not protect you and you fear adverse effects; likewise, the greater intention to vaccinate them is associated with living in the jungle or in the mountains, that children can be infected, that they develop serious symptoms or that they can die from Covid 19. Similarly, 55.9% say they would vaccinate their children when vaccines are available, (22) 57.7% would vaccinate them with Pfizer, 73.8% think the vaccine is safe and would not develop adverse effects (Gonzales-Zamora et al., 2022).

In relation to the expectations to be vaccinated against COVID-19, these are favorable to moderately favorable in the study group based on demographic data or some experience with the disease. In relation to age and marital status, all of them are favorable because the disease is no longer related to certain age groups as it was at the beginning. Regarding sex, religion

and occupation, in all of them there are moderately favorable expectations in the majority, it may be because there are still groups that are not predisposed to mass vaccination for fear of side effects (Águila-Gordo et al., 2021). (Rios-González, 2021).

Regarding the expectations of the population and their experiences of close illness, they were positive for the COVID-19 vaccine, whether or not they had the disease; such as whether a family member passed away or not. But if you had a deceased family member, the expectation is one hundred percent because they see their hopes pinned that the event will not happen again with vaccination. Therefore, it would be necessary to take advantage of the high expectations of the population to conclude and continue with the vaccination against COVID-19 (26) (Gómez García et al., 2022).

In , on the expectations of Covid 19 vaccination, it is revealed (28) that 71% of adults have the expectation that Covid 19 will remain permanently among us, 63% of the participating countries consider that the vaccine should be mandatory, 32% oppose it, 51% in China and 85% in the Netherlands consider that the disease and its variants can never be stopped despite the measures Health. Likewise, 71% support vaccination to enter sporting events, 69% to travel, 66% to enter restaurants, and 64% for work.

CONCLUSIONS

According to the proposed objectives, it is demonstrated that the majority of Peruvian families in an area of Lima have a favorable perception and expectation about the vaccine against Covid-19 ($\chi^2=132.832$) and the p-value (0.00). χ^2_c

In relation to perception, the majority also have a favorable perception, according to sociodemographic data the perception is favorable in the group of 18 to 29 years old, female, in agnostics, having completed secondary school, being self-employed and married in civil status.

According to the consequences of the disease, 100% have a favorable perception when they had a deceased family member. With respect to expectation, most of them have moderately favorable expectations, and according to sociodemographic data, the expectation is favorable when they are 18 to 29 years old, female, evangelical religion, primary education, domestic worker and single. And according to the consequences of the disease, the expectation is favorable when you are not sure if you had the disease, had a deceased family member and those who received the three doses of vaccines. Hence, health personnel must continue with the preventive and promotional work of vaccination in order to obtain 100% favorable results in the entire population.

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