Psychometric Properties of the Premarital Sexual Permissiveness Scale of Reiss (PSP)

Fernando Joel Rosario Quiroz^{1,*}, Samira D.J. Rivas Barrantes¹, Yolvi Ocaña-Fernández², Mitchel Alberto Alarcón-Diaz¹ and Jessica Paola Palacios Garay³

¹Universidad César Vallejo, Lima, Perú

²Universidad Privada San Juan Bautista, Lima, Perú

³Universidad Privada Norbert Wiener, Perú

Abstract: Sexuality is a very important issue in the life of a person and society. Issues such as premarital sexual permissiveness are necessary to understand because it is related to having a flexible attitude towards sexual practices regardless of the emotional bond. Therefore, this research seeks to explore the psychometric properties of the scale of premarital sexual permissiveness of Reiss (PSP) in a group of high school students. In this sense the study offers evidence of validity and reliability of the PSP translated for a Peruvian sample. Regarding the methodology, the research is of psychometric and technological type; the scale of premarital sexual permissiveness of Reiss (PSP) was used with the participation of 1013 female students of national schools of Lima of the last years of the regular basic education; a non-probabilistic type sampling was used - by judgment. Evidence of content validity was found through the criteria of judges, through the V. of Aiken with acceptable values p>0.80; construct validity was evaluated with the Confirmatory Factor Analysis obtaining an $X^2/g|=2.697$, GFI=0.985, CFI=0.982, AGFI=0.973, SRMR=0. 0312 and the reliability was found by Cronbach's Alpha coefficient=0.801 and Omega=0.804; these results indicate that the PSP scale can be used efficiently in a Peruvian sample to evaluate autonomy and acceptability on premarital sexual permissiveness because it has all the required psychometric properties.

Keywords: Premarital sexual permissiveness, kisses, caresses, sexual relations, psychometrics.

INTRODUCTION

Sexuality today has become a very free subject, giving way to permissive attitudes between two people without the need for an effective bonding "What interests everyone is not a relationship, it's just flirting because you won't see her again. To pass the time, to feel, not to commit" (Spanish League of Education, 2013). In adolescence, a stage where beliefs and paradigms about sexuality and other issues are formed, it is important to provide adequate information to avoid irreparable consequences in our adolescents. In the case of the female sex, the consent of attitudes of affection before a marriage formalization has as a consequence early pregnancy, abortions and death, in the worst case (Rosas, 2013).

The UNFPA (2016) indicates that according to the provinces with a high rate of pregnancies after Lima (26.7%), these are Maynas and Coronel Portillo both in the jungle, followed by Cajamarca, Trujillo, San Martín and Callao.

Currently, in our country in the field of psychology, psychometrically no validated and reliable instrument assesses the levels of premarital sexual permissiveness presented by adolescents. However, in the United States, sociologist Ira L. Reiss (1964), carried out a research directed to adolescents, about the ideas they had about sexual permissiveness before marriage.

Through this research, he tried to determine the psychometric properties of the scale (PSP); besides contributing to he psychological field with a valid and reliable instrument.

For this reason, the only revision made to the PSP Scale was taken as the main background; Sprecher, McKinney, Walsh and Anderson (1988) in their research "A Revision of the Reiss Premarital Sexual Permissiveness Scale" who reviewed the psychometric properties for adaptation. The researchers used an experimental design and their sample was randomized; as a result, the researchers presented a new version of the Scale with an internal validity of Cronbach's Alpha (α = .85). Also, it indicated that a person's gender did not affect item responses; however, men were found to have higher levels of sexual permissiveness than women.

It is important to conceptualize the variable for better understanding. Reiss (1964) indicates that premarital sexual permissiveness varies directly with the level of autonomy; the degree of permissiveness is closely linked to the social and cultural environment of

^{*}Address correspondence to this author at the Universidad César Vallejo, Lima, Perú; Tel: +51 958123385; E-mail: rquirozf@ucv.edu.pe

the group; it also indicates that it is a flexible attitude towards sexual actions or practices, where the main interest is satisfaction without the importance of maintaining an affective bond (Cañizo & Salinas, 2010).

The variable is divided into three indicators: kissing, the act of merging two bodies that feel attraction; caressing, which means having sexually stimulating behavior; and sexual relations, which for the author means "the act of having sex; that is, going all the way" (Reiss, 1964).

It has as its theoretical basis the theory of sexual behavior, where they propose that knowledge about this topic should be expanded and that it should be understood beyond genital contact (Kinsey, Pomeroy, Martin & Gebhard ,1953). Also, the theory of social or vicarious learning postulated by Bandura (1977) refers to the degree to which new behaviors are learned through observation (Morris & Maisto, 2005). The systemic theory postulated by Bertanlanffy (1925) the actions of some member can have some effect on another member of the system (cause-consequence) due to the circular interaction (Garibay, 2013). And theory proposed where an adolescent creates his basic set of values from the experience with his parents, his friends and social groups to which he is exposed as he matures. As dating begins, he finds himself increasingly pressured and influenced by the permissive values that dominate the area of courtship. How quickly he responds to these permissive pressures depends on his strength, as well as the kind of core values he brings to the situation from his parental upbringing (Reiss, 1964)

The Psychometric theory refers to quantitative measurement; that by using numerical results the behavior is explained. The homogeneity index of an item provides information about the level at which the item contributes to the test as a whole; these should have a score greater than 0.20 (Kline, 1998). Communality is called the proportion of variance explained by common factors in a variable. These have values between 0 and 1, taking into account that if <0.40 the item must be eliminated (Rodríguez and Mora, 2001). Asymmetry is an indicator of how measurements are distributed in a distribution or curve (Toledo, 2006). Kurtosis refers to or indicates the degree of "flattening" of a distribution compared to a normal one, to identify the curve (Oliva, 2010).

Concerning validity, an instrument is valid when the variable to be measured is measured. Reliability can be

described as the range of confidence assigned to the results (Ruiz, 2015). Cronbach's Alpha coefficient is commonly used to evaluate reliability or homogeneity with values between 0 and 1, if the number is closer to 1, it represents total reliability (Corral, 2009); the omega coefficient works with factorial loads, to have an adequate level, it should be at a score of 0.70 and 0.90 (Ventura & Caycho, 2017).

Confirmatory factorial analysis (CFA) is understood as the formulation of a set of specific hypotheses by the researcher that would highlight the adjustment of a model (Joan & Anguiano, 2010). The X² statistician who is in charge of contrasting the null hypothesis with a new estimated model, which is divided by the degrees of freedom and where the ratio between these two statisticians must be 2 to 3 and with limits of up to 5 for a good fit. The GFI, which is an index of variability explained by a model, has values between 0 and 1, but if the value, is greater than 0.90 it indicates a perfect fit. The SRMR (Mean Square Error Rate) is responsible for measuring the variances and covariances of a sample, the closer it is to the "0" value, the better the fit (Escobedo, Hernández, Estabané & Martínez, 2016).

The AGFI is the GFI adjusted by the degrees of freedom of the proposed null model. For the values they indicate that they are >0.90 thus indicating a good fit of the model to the data. The CFI is a measure of centrality, when the sample passes 200 it automatically becomes an important index in the investigation. It indicates a good fit when the values are close to 1 (Lévy and Varela, 2006).

Exploratory factor analysis (AFE) is used when a new measurement instrument is being created, for which hypotheses are needed; therefore, this exploratory application is carried out (Joan and Anguiano, 2010). To perform this analysis, Bartlett's sphericity test must be performed to check the null hypothesis of the observed matrix or identity (Sig.) is greater than 0.05 the null hypothesis of sphericity will not be rejected (Pedroza and Dicovsky, 2006).). The KMO test (Kaiser-Meyer-Olkin) values less than 0.5 indicate that factorial analysis should not be used (Sobh, 2008). The explained variance is a measure of the degree of dispersion of the values of the variable, to be calculated it needs to add up the factor weights of each factor I value is < 1 (Moncada, Solera and Salazar, 2002).

Because of this, the research question has been asked, what are the psychometric properties of the

Reiss Premarital Sexual Permission Scale in female students of 3rd, 4th and 5th secondary level in three public educational institutions, Callao 2019?

For this reason, the general objective has been to identify the psychometric properties of the Reiss Premarital Sexual Permission Scale in female students of 3rd, 4th and 5th secondary level in three public educational institutions, Callao 2019. Similarly, 7 specific objectives have been set to obtain more detailed results, which are as follows: a) To establish the content validity of the PSP scale; b) To establish construct validity through confirmatory factor analysis; c) To establish descriptive analysis of the items; d) To establish validity through exploratory factor analysis; e) to establish the reliability by Cronbach's alpha coefficient; f) to establish the reliability by Omega coefficient and q) to establish the percentiles of the Reiss Premarital Sexual Permission Scale in female students of 3rd, 4th and 5th secondary level in three public educational institutions, Callao.

MATERIAL AND METHODS

In the present investigation, an instrumental research design was used, of a technological type since they are related to research on the development of a test or its adaptation; including reviews (Montero and León, 2002). Besides, it presents a level of applied research, since it seeks to apply the tests for immediate intervention (Sánchez and Reyes, 2006); likewise, it has a quantitative focus since it uses large samples (Fiallo, Cerezal and Hedesa, 2008).

Participants

The research sample consisted of 1013 female students from 3rd, 4th and 5th grades of secondary school; besides, there were three public educational institutions in Callao. The ages ranged from 13 to 18 years old. For Montero, and Leon, (2012), the appropriate sample size for the creation or revision of psychometric properties of an instrument should be 1000 subjects. We worked with female students because, according to the Peruvian Ministry of Health, the onset of motherhood is between the ages of 15 and older, while the United Nations Population Fund indicates that the rate of unplanned pregnancies is 26.7% in Lima which is the highest in Peru.

Instruments

The scaling of premarital sexual permissiveness of Reiss (PSP). The scale is from the USA created by the

Rosario et al.

author Ira L. Reiss (1964); it presents 12 items, divided into three indicators (kissing, caressing and sexual intercourse). It shows a type of measurement using the Guttman scale (cumulative); it is important to mention that the author does not consider for the final score the items 4 and 8 due to a margin of error that both reagents presented at an individual level. This scale makes it possible to show whether or not the participant agrees with the statements read, the intensity of the response (strong, medium, and slight), and the openness (parents and friends).

Procedure and Data Analysis

The sample was selected by trial, the support of the educational institutions was requested, through the letter of presentation, the dates for the evaluation were programmed with the students from third to fifth grade of secondary school, who participated voluntarily; besides, the indications were given in a verbal way to develop the Reiss Premarital Sexual Permission Scale.

For data analysis, several programs were used to obtain the results. For this purpose, the Excel calculation program version 2013, the statistical software SPSS V. 23 and the statistical program Jamovi 0.2.9.8. were used to establish construct validity through AFC, construct validity through AFE and criterion validity. An item analysis was also made where homogeneity indexes and communalities were established for an adequate functioning of the reagents. In the same way, the reliability of the instrument was established by means of Cronbach's alpha and omega coefficients.

RESULTS AND DISCUSSION

In Table 1, it can be seen that the five expert judges consulted agree with the questions asked in the reading test, reaching a V coefficient of Aiken of 100 %, which indicates that this test gathers evidence of content validity being the value p.>0.80 according to Aiken (2003).

The adjustment of the original model of the scale, with its 3 indicators through the AFC (n=1013) was examined

Confirmatory Factor Analysis

The adjustment of the original model of the scale, with its 3 indicators through the AFC (n=1013) was examined

Table 1:	Evidence of Validity Based on the Content of the Test of Comprehension of Written Texts by Means of Aiken's
	V Coefficient

Ítem	Jı	ıdge	ə 1	Jı	udge	2	Jı	udge	3	J	udge) 4	J	udge	9 5	Ju	ıdge	6	Jı	Jdge	97	Right	V. of	Acceptable
	Ρ	R	С	Ρ	R	С	Р	R	С	Ρ	R	С	Ρ	R	С	Ρ	R	С	Ρ	R	С		Aiken	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
4	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	1	17	81%	Yes
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
8	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	1	1	1	17	81%	Yes
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	100%	Yes
10	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	20	95%	Yes
11	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	19	90%	Yes
12	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	1	18	86%	Yes

Note: Disagree = 0, Agree = 1; P = Relevance, R = Relevance, C = Clarity.



Figure 1: Confirmatory factor analysis with 3 indicators, excluding two items that the author does not consider for the score.

In Table **2**, the following results were obtained by means of the Confirmatory Factor Analysis according to the original model proposed by the author of the scale, having as base 12 items but without considering two for its score (4 and 8). The values he gave in his fit indexes with a ratio of X^2 / gl= 11.989, indicating that the test does not fit properly, the SRMR =0.881 does not present an optimal value to confirm the model proposed by the author. (Escobedo, Hernández, Estabané and Martínez, 2016); the IFC= 0.082 being

<1 indicating that it is not adequate, the GFI=0932 having an acceptable value and AGFI= 0.884 <0.90 being adequate (Lévy and Varela, 2006).

Table **3** shows that the kisses indicator presents a negative asymmetric distribution since its values are <0 (Toledo, 2006). Likewise, it has a measure of leptocurtic kurtosis since its measures are greater than "0" (Oliva, 2010); also, it evidences values of the total correlation of the corrected elements (IHC) indicating a

Table 2: Goodness-of-Fit Measures of Confirmatory Factor Analysis of the Reiss Premarital Sexual Permission Scale (PSP) (n=1013)

	Fitting rates	Original model	Optimal rates	Author
Absolu	te adjust			
X²/ gl	Chi-square ratio / degrees of freedom	11.989	2-3 (Acceptable)	(Escobedo, Hernández, Estabané and Martínez, 2016)
GFI	Goodness-of-fit index	0.932	1 (Acceptable)	(Lévy and Varela,2006)
AGFI	Modified goodness-of-fit index	0.884	>0.90 (Acceptable)	(Lévy and Varela,2006)
SRMR	Standardized medium quadratic waste	0.881	0 (Acceptable)	(Escobedo, Hernández, Estabané and Martínez, 2016)
Compa	rative Adjustment			
CFI	Comparative adjustment index	0.0822	1 (Acceptable)	(Lévy and Varela,2006)

Table 3: Descriptive Analysis of the Items of the Kissing Indicator (n=1013)

Ítems	Frecuency		м	DE	g¹	g²	IHC	h²	Acceptable
	0	1							
AP1	12,5	87,5	.87	.331	-2.266	3.141	.345	.473	SI
AP2	8,1	91,9	.92	.273	-3.077	7.485	.442	.671	SI
AP3	10,1	89,0	.90	.303	-2.569	5.073	.429	.610	SI

Note: M = Mean; SD = Standard deviation; g1 = Asymmetry; g2 = Kurtosis; IHC = Corrected total elemental correlation; h2 = Community.

good significance. Since, according to Kline (1968) it should be >0.30 fulfilling this criterion the first three items; regarding, the communality should be h2>0.40, where the item 1,2 and 3 have an adequate significance.

In Table **4** it is observed that in the indicator caresses, it presents a negative asymmetric distribution since its values are <0 (Toledo, 2006). Likewise, it has a measure of leptocurtic kurtosis since its measures are greater than "0" (Oliva, 2010); also, it evidences values of the total correlation of the corrected elements (IHC) indicating a good sign, since, according to Kline (1968) it must be >0.30 fulfilling this criterion the first

three items; with respect, the communality must be h^{2} , where the items comply with the proposed.

Table **5** shows that in the indicator sexual relations, it presents a negative asymmetric distribution for the items (9 and 12) and a positive asymmetry for the items (10 and 12) since their values are <0> (Toledo, 2006). Likewise, it has a measure of platysmal kurtosis since its measures are <0 (Oliva, 2010); also, it shows values of the total correlation of the corrected elements (IHC) indicating a good sign, since, according to Kline (1968) items 10, 11 and 12 should be >0.30 fulfilling this criterion, but item 9 would be eliminated since it presents a value below what is accepted; concerning

Table 4. Descriptive Analysis of the items of the Caress indicator (n=10)	ble 4: Descrip	ive Analysis o	of the Items	of the C	Caress Indicator	(n=1013)
---	----------------	----------------	--------------	----------	------------------	---------	---

Ítems	Frecu	ency	м	DE	g ¹	g²	IHC	h²	Acceptable
	0	1							
AP5	26,6	73,6	.73	.442	-1.063	871	.590	.634	SI
AP6	26,4	73,6	.74	.441	-1.075	846	.657	.722	SI
AP7	23,8	76,2	.76	.426	-1.233	481	.624	.685	SI

Note. M = Mean; SD = Standard deviation; g1= Asymmetry; g2= Kurtosis; IHC= Corrected total elemental correlation; h2 = Community.

Ítems	Frecuency		м	DE	g¹	g²	IHC	h²	Acceptable
	0	1							
AP9	21,8	78,2	.78	.413	-1.367	132	.268	.224	NO
AP10	56,6	43,4	.43	.496	.265	-1.933	.583	.680	SI
AP11	48,6	51,4	.51	.500	057	-2.001	.611	.710	SI
AP12	72,0	28,0	.28	.449	.979	-1.043	.428	.465	SI

Table 5: Descriptive Analysis of the Items of the Indicator Sexual Relations (n=1013)

Note. M = Mean; SD = Standard deviation; g1= Asymmetry; g2= Kurtosis; IHC= Corrected total elemental correlation; h2 = Community.

Table 6: Exploratory Factor Analysis through the KMO and Barlett's Sphericity Test of the Reiss Premarital Sexual Permission Scale (PSP)

KMO and Bartlett test		
Kaiser-Meyer-Olkin Measurement of Sampling Adequacy		.808
Bartlett's Sphericity Test	gl	45
	Sig.	0.000

communality, it should be $h^2>0.40$, where the items comply with what is proposed except for item 9.

In Table **6**, the results of the KMO measure for the Reiss Sexual Permission Scale (PSP) is 0.808, a value close to 1 and therefore acceptable (Sobh, 2008). Likewise, the Bartlett Sphericity Test is not significant >0.05, allowing the AFE to be performed (Pedroza and Dickovsy, 2006).

Table **7** shows the factor structure with 3 factors or indicators that explain 63.242 % of the variance in its entirety, where it can be deduced that it is acceptable

since its value is greater than 50% of the explanation of the Scale. It should be noted that the indicators proposed by the author Reiss (kissing, caressing and sexual relations

In Table **8**, we can see the regrouping of the items to the indicators, where in the first indicator or factor we have three items, besides, their factorial loads oscillate between .7 and .9. In the second indicator, there are 4 items, being the item 9 the one that is regrouping its factorial loads oscillate between .7 and .9. Finally, the third indicator has 4 items whose factorial loads

|--|

	Total explained Variance											
Component		Auto initial va	llues	S	ums of loads squ extractior	ared from	Sums of loads squared of the rotation					
	Total	% de variance	% accumulated	Total	% de variance	% accumulated	Total	% de variance	% accumulated			
1	3,666	36,659	36,659	3,666	36,659	36,659	2,512	25,125	25,125			
2	1,495	14,946	51,606	1,495	14,946	51,606	2,019	20,186	45,311			
3	1,164	11,636	63,242	1,164	11,636	63,242	1,793	17,931	63,242			
4	,767	7,672	70,915									
5	,697	6,975	77,890									
6	,567	5,668	83,558									
7	,527	5,267	88,825									
8	,410	4,104	92,929									
9	,376	3,756	96,685									
10	,332	3,315	100,000									

Table 8: Ma	trix of Rotated C	components of the R	eiss Premarital Sexua	I Permission Scale	(PSP)) (n=1013)

	Rotated component matrix											
	Component											
	1	2	3									
5AP	,812											
7AP	,756											
9AP	,754											
6AP	,742											
11AP		,812										
10AP		,807										
12AP		,706										
2AP			,818									
3AP			,752									
1AP			,666									



Figure 2: Confirmatory factor analysis for model 1, rearranging the item Figure 2.

oscillate between .7 and .9; therefore, the values are adequate since they are >.50 and are considered strong (Osborne and Costello, 2004)

Confirmatory Factor Analysis

Then, the adjustment of the new model was reviewed, considering item 9 in the indicator caresses through the AFC (n=1013)

Confirmatory Factor Analysis

A new AFC was performed to identify if any items on the Reiss Premarital Sexual Permission Scale (PSP) would co-vary with each other (n=1013) In Table **9**, the following results were obtained using the AFC for a new model of the scale, regrouping item 9. The values it gave in its fit indexes with a ratio for the first model of X^2 / gl= 4.786 indicating that the test does not fit properly and for the second model X^2 / gl= 2.697 indicating that it has a good fit, in the first model SRMR =0.350 and SRMR =0.0312 for the second model being an acceptable value. (Escobedo, Hernández, Estabané and Martínez, 2016); first model the CFI= 0.959 and CFI= 0.982 for the second model being close to 1 indicating that it is adequate, the first model GFI=0.6969 and GFI=0.985 fitting better for the second model and finally for the first model the AGFI= 0.947



Figure 3: Confirmatory factor analysis for model 2, analyzing items (9< >5).

Table 9:	Goodness-of-Fit Measures of Confirmatory Factor Analysis of the Reiss Premarital Sexual Permission Scale
	(PSP) (n=1013)

Adjustment rates		Original Model	Model 1	Model 2 9< >5	Optimal rates	Author
	Absolute Adjust					
X²/ gl	Chi-square ratio / degrees of freedom	11.989	4.786	2.697	2-3 (Acceptable)	(Escobedo, Hernández, Estabané and Martínez, 2016)
GFI	Goodness-of-fit index	0.932	0.6969	0.985	1 (Acceptable)	(Lévy and Varela,2006)
AGFI	Modified goodness-of-fit index	0.884	0.947	0.973	>0.90 (Acceptable)	(Lévy y Varela,2006)
SRMR	Standardized medium quadratic waste	0.881	0. 0350	0.0312	0 (Acceptable)	(Escobedo, Hernández, Estabané and Martínez, 2016)
		Compa	arative adjustme	ent		
CFI	Comparative adjustment index	0.0822	0.959	0.982	1 (Acceptable)	(Lévy ands Varela,2006)

and AGFI= 0.973 for the second model <0.90 being adequate (Lévy and Varela, 2006).

In Table **10**, it is evident that the reliability for the scale in general PSP for the original model has adequate values close to 1; however, in the reliability by indicators, low values are evidenced. However, when the following two models are carried out, the reliability by both coefficients increases where their values are $\alpha = 0.801 \ \omega = 0.804$ being > 0.70.

DISCUSSION

The analysis of the items was carried out, using the validity of content which is the criterion of expert judges

(V. de Aiken); where none of the items was eliminated, since according to Aiken (1966) the acceptable value is <=0.80, fulfilling the author's criterion. In the (AFC) of the original model, where there was evidence of inadequate values for the ratio of X^2 / gl= 11.989 (Escobedo, Hernández, Estabané y Martínez, 2016) that determines the adjustment to a distribution or model, the value of the comparative adjustment index CFI= 0.0822, where the adjustment is not adequate, which is linked to the degree of adjustment of the instrument to the study sample (Lévy y Varela, 2006), this index GFI=0. 932 having an acceptable value where it indicates the degree to which the item contributes to the variable (Lévy and Varela, 2006) and

		Original Mode	Model 1 10 ítems	Model 2 5<>9
PSP	α	0.814	0.801	0.801
	ω	0.817	0.804	0.804
Kiss	α	0.550	0.633	0.633
	ω	0.628	0.655	0.655
Caresses	α	0.757	0.802	0.655
	ω	0.778	0.804	0.814
Sexual Relations	α	0.685	0.685	0.729
	ω	0.703	0.703	0.743

Table 10: Reliability Analysis of the Sexual Permission Scale and its Indicators using Cronbach's Alpha and Omega Coefficients (n=1013)

the average standardized residue SRMR =0.881, evidencing inadequate values, this is obtained by dividing the RMSEA by the standard deviation (Escobedo, Hernández, Estabané and Martínez, 2016) and AGFI= 0.884 <0.90 being adequate (Lévy and Varela, 2006)

Likewise, the descriptive analysis of the items for each indicator was made, a negative asymmetric distribution was obtained for the items 1,2,3,5,6,7,9 and 12, being their values <0 and for the items 10 and 11 presented values >0 being a positive asymmetric distribution(Toledo, 2006). Also, a measure of leptocurtic kurtosis was found for items 1, 2, 3, 5, 6 and 7 where the value is <0 and a measure of platysmal kurtosis since its value is >0 (Oliva, 2010). For the IHC, it indicated that items 1, 2, 3, 5, 6, 7, 10, 11 and 12 were acceptable, exceeding the value of .30, which means that they are measuring the variable that should be measured (Kline, 1968) where item 9 is the one that does not comply with the value proposed by the author. On the other hand, the communalities of items 1,2,3,5,6,7,10,11 and 12 are adequate since they are > .40 (Rodríguez and Mora, 2001), except item 9.

Then, the KMO test was performed having a value of 0.808 being close to 1 and acceptable (Sobh, 2008) and Bartlett's sphericity test indicated to be nonsignificant since its value was >0.05 thus allowing to perform the exploratory factorial analysis AFE (Pedroza and Dickovsy, 2006). With respect to the explained variance, the test is explained by 63% in three factors or indicators which are those proposed by the author, where it is appropriate that the test should be explained in a percentage > 50% (Martínez, 2005); when the matrix of rotated components is made, item 9 is the one that changes from the indicator sexual relations to caresses, besides, it was shown that factorial loads ranged from 0.70 to 0.90, thus indicating that they are strong loads because they are > 50 (Osborne and Costello, 2004). Then, the AFC has performed again with the new model 1 proposed considering item 9 in the caress indicator; where, the ratio of $X^2/gl= 4.786$ decreases considerably (Escobedo, Hernández, Estabané y Martínez, 2016), the value of the comparative adjustment index CFI= 0.959, where the adjustment is acceptable, which is linked to the degree of adjustment of the instrument to the study sample (Lévy y Varela, 2006), this index GFI=0. 6969 having an acceptable value where it indicates the degree to which the item contributes to the variable (Lévy and Varela, 2006) the average standardized residue SRMR =0.0350, evidencing a better value (Escobedo, Hernández, Estabané and Martínez, 2016) and AGFI= 0.947 < 0.90 being adequate (Lévy and Varela, 2006).

However, the analysis of the items was carried out to identify if any of them would covariate with each other; resulting in items 9< >5 presenting a covariance. Improving the proposed model 2 where, the ratio of $X^2/$ gl= 2.697 being within the acceptable by the authors (Escobedo, Hernández, Estabané y Martínez, 2016), the value of the comparative adjustment index IFC= 0.982, where the adjustment is acceptable, which is linked to the degree of adjustment of the instrument to the study sample (Lévy y Varela, 2006), this index GFI=0. 985 having an acceptable value where it indicates the degree to which the item contributes to the variable (Lévy and Varela, 2006) the average standardized residue SRMR =0.0312, being acceptable (Escobedo, Hernández, Estabané and Martínez, 2016) and AGFI= 0.985 < 0.90 being adequate (Lévy and Varela, 2006).

Also, the reliability values were found for the total scale and by indicators through Cronbach's Alpha coefficient; without considering the items 4 and 8 due to their low values, obtaining values α =0.801 which is acceptable (Corral, 2009), some values fluctuate between .00 and 1.00, where the last one indicates perfect reliability (Aiken, 2003). Likewise, the author mentions that the total reliability of the sexual permissiveness scale is α =0.95 (Reiss, 1964) and in another research the internal validity was evidenced with a value of α = .85, being located in the acceptable (Sprecher, McKinney, Walsh and Anderson, 1988). Likewise, the reliability of the proposed models as evidenced by indicators with adequate values; kissing indicator α =0.633 (Model 1 and 2), is within the acceptable (Corral, 2009), caresses α =0.802 and α =0. 655 (Model 1 and 2) respectively having acceptable values (Corral, 2009) and the indicator sexual relations α =685(model 1) and α =0.729 (model 2) presenting adequate values for both models; corroborating the values that oscillate between .00 and 1.00 (Aiken, 2003).

Besides, reliability was found using McDonald's Omega coefficient for the original scale with a value of ω =0.804 being adequate since it is located between 0.70 and 0.90 (Ventura and Caycho, 2017); with respect to the reliability of the kissing indicator ω =0.655 (Model 1 and 2) being below the adequate value (Ventura and Caycho, 2017), caresses ω =0. 655 (model 1) does not have an adequate value and ω =0.814 (model 2) raises the reliability value closer to that proposed by the authors (Ventura and Caycho, 2017) and the sexual relations indicator ω =0.703 (model 1) and ω =0.743 (model 2) presenting adequate values for both coefficients respectively.

REFERENCES

- Aiken, L. (2003). Tests psicológicos y evaluación. (11a ed.).México: Pearson.
- Cañizo, E. & Salinas, F. (Julio-Diciembre 2010). Conductas sexuales alternas y permisividad en jóvenes universitarios. Enseñanza e Investigación en Psicología. Volumen 15(2), pp.285-309.
- Corral, Y. (9 febrero 2018). Validez y confiabilidad de los instrumentos de investigación para la recolección de datos. Revista ciencias de la educación. Volumen 19(33), pp. 228-247.
- Escobedo, M., Hernández, J., Estabané, V. y Martinez, G. (2016) Structural equation modeling: Features, phases, construction, implementation and results. SCIELO, 18(55).
- Fiallo, J., Cerezal, J. & Hedesa, Y. (2008). La investigación Pedagógica una vía para elevar la calidad educativa. Perú: Taller Gráficos San Remo.

- Garibay, S. (2013). Enfoque sistémico: Una introducción a la psicoterapia familiar. (2a ed.). México: Manual moderno.
- Joan, P. & Anguiano, C. (2010). El análisis factorial como técnica de investigación en psicología. Papeles del psicólogo. Volumen 31(1), pp. 18-33.
- Kinsey, A., Pomeroy, W., Martin, C. & Gebhard, P. (1953). Sexual Behavior in the Human Female. Bloomington: Indiana University Press
- Kline, P. (1998). The new psychometrics: science, psychology and measurement. London: Routhledge.
- Lévy, J. & Varela. J. (2006). Modelización con estructuras de covarianzas en Ciencias Sociales: temas esenciales, avanzados y aportaciones especiales. (1a ed.). España: Netbiblo.
- Liga Española de la educación. (2013). Relaciones afectivas y sexualidad en la adolescencia. Recuperado de https://www.observatoriodelainfancia.es/ficherosoia/documen tos/4113_d_relaciones-afectivas-y-sexualidad-en-laadolescencia.pdf
- Moncada, J., Solera, A. & Salazar, W. (2002). Fuentes de varianza e índices de varianza explicada en las ciencias del movimiento humano. Revista de Ciencias del Ejercicio y la Salud. Volumen 2 (2), pp.70-74 https://doi.org/10.15517/pensarmov.v2i2.398
- Montero, I. & León, O. (2002). Clasificación y descripción de las metodologías de investigación en Psicología. International Journal of Clinical and Health. Volumen 2(3), pp.503-508.
- Morris, C. & Maisto, A. (2005). Introducción a la psicología. (10ma ed.). México: Pearson Educación.
- Oliva, J. (2010). Estadística. Recuperado de https://estadisticaucv.files.wordpress.com/2010/12/asimetriay-curtosis.pdf
- Osborne, J. W. & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. Practical Assessment, Research & Evaluation, 9(11). Recuperado de http://pareonline.net/getvn.asp?v=9&n=11
- Pedroza, H. & Dicovskyi, L. (2006). Sistema de Análisis Estadístico con SPSS. (1a ed.). Nicaragua:IICA.
- Reiss, I. (1964). Journal of Marriage and the family. New York:Holt, Rinehart & Winston.
- Reiss, I. (1964). The social context of Premarital Sexual Permissiveness. New York:Holt, Rinehart & Winston. https://doi.org/10.1037/t06651-000
- Rodríguez, M. & Mora, R. (2001). Estadística informática: casos y ejemplos con el SPSS. España: Universidad de Alicante.
- Rosas, M. (2013). La responsabilidad de la paternidad conversemos con los adolescentes. (3a ed.). Puerto Rico:InkRuiz, J. (2015). Valores, adolescencia y deportes de equipo: Marco de intervención y referentes axiológicos de los adolescentes en su práctica deportiva. (1a ed.).España:Wanceulen
- Ruiz, J. (2015). Valores, adolescencia y deportes de equipo: Marco de intervención y referentes axiológicos de los adolescentes en su práctica deportiva. (1a ed.).España:Wanceulen
- Sánchez, H. & Reyes, C. (2006). Metodología de la Investigación y Diseños en la Investigación Científica.Perú: Visión Universitaria.
- Sobh, T. (2008). Advances in Computer and Information Sciences and Engineering. (1a ed.). USA: Springer. <u>https://doi.org/10.1007/978-1-4020-8741-7</u>
- Sprecher, S., McKinney, K., Walsh, R. & Anderson, C. (Agosto 1988). Una revisión de la Escala de Permisividad Sexual Premarital de Reiss. Journal of Marriage and Family. Volumen 50(3), pp.821. https://doi.org/10.2307/352650

Toledo, M. (2006).	Pruebas y eva	luación psic	cológica.	Introducción a
las prueba	s y a la mediciói	n. (6ta ed.).	España	

UNFPA. (2016). Maternidad en la niñez en el Perú. Recuperado de https://www.unfpa.org/sites/default/files/pub-pdf/ES-SWOP2013.pdf

Received on 01-08-2020

Accepted on 17-09-2020

Published on 06-11-2020

Ventura, L. & Caycho, T. (Enero-Junio 2017). El coeficiente Omega: un método alternativo para la estimación de la confiabilidad. Revista Latinoamericana de ciencias sociales, niñez y

juventud. Volumen 15(1), pp. 625-627.

DOI: https://doi.org/10.6000/1929-4409.2020.09.100

© 2020 Rosario et al.; Licensee Lifescience Global.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<u>http://creativecommons.org/licenses/by-nc/3.0/</u>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.