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Evaluation of the Internal Structure and Reliability of the School Violence Questionnaire (CEVEIP) in Peruvian Children from 9 to 13 Years of Age

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Abstract

This study is of psychometric and instrumental design, aimed at examining the psychometric evidence of the CEVEIP school violence questionnaire in children aged 9 to 13 in Lima and Callao. It consists of 27 items and 3 dimensions: witnessed, perpetrated, and experienced situations. The instrument was administered virtually via a form, with 458 children participating in the final sample. Additionally, 10 expert judges were consulted, achieving a 100% agreement through Aiken's V. Explained variances of 68%, 63%, and 61% were obtained in the EFA through the indicators composing each dimension; in the CFA across the 3 dimensions, the obtained indices were CFI = .97, TLI = .96, GFI = .99, RMSEA = .04, and SRMR = .06, indicating acceptable values. Reliability assessed through ordinal alpha was higher and acceptable across the three dimensions, with values of .86, .82, and .79. Consequently, the CEVEIP questionnaire is valid and reliable for its application.

Keywords: *School Violence, Children, Psychometric Evidence, Validity and Reliability*

INTRODUCTION

School violence is a contemporary problem of considerable seriousness, where minors perpetrate violent acts, both verbal and physical, towards their peers, with extremely harmful consequences for both victims and aggressors. This phenomenon, which occurs in both public and private educational institutions, has a direct impact on school coexistence and individual development. For this reason, the World Health Organization (WHO, 2019) defines it as the intentional use of force directed at oneself, other people or a group, with results ranging from psychological damage to extreme physical consequences, such as death. It is estimated that, between the ages of 2 and 17 years, one billion children worldwide experience physical, psychological, or sexual violence (para. 2).

In parallel, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2019) indicates that millions of children and youth are affected by violence, with an estimated 246 million experiencing violence in or around their schools (p. 11). Consequently, UNESCO has highlighted the importance of student well-being during the Safe to Learn event for world leaders to address this issue (p. 7).

In Latin America, according to the Economic Commission for Latin America and the Caribbean (ECLAC, 2017), 10 of the 15 countries in the region experience violence in the classroom, being more prevalent in the public sector and at the primary level, with a majority affectation towards boys. In addition, approximately 10% to 13% of students from third to sixth grade of primary school report receiving threats, being forced by their classmates to perform undesired activities, being isolated, or feeling fear of a classmate. In Peru, 18% of students report a high level of fear of being assaulted in the classroom (p. 33).

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According to data from the National Institute of Statistics and Informatics (INEI, 2015), through the National Survey on Social Relations (ENARES), 75% of children are victims of peer violence, with 71.1% being psychological in nature and 40.4% physical. Most incidents occur inside the classroom (75.7%), followed by the playground (39.2%) and outside the school or outside class hours (39.2%).

In addition, there is a web platform called Síseve (2020) that allows reporting cases of school violence, regardless of whether one is a victim, aggressor or observer. According to statistics from September 15, 2013 to January 31, 2020, 39,315 cases have been reported, with 17% occurring in private educational institutions and 83% in public ones. 53% of those affected are students, with equal gender representation (50%), and 36% of cases occurring in primary school. In Lima and Callao, between 2017 and January 2020, 4,371 cases were reported, mostly of a physical and psychological nature (3,691 cases) and sexual (680 cases) among peers. In Metropolitan Lima, 3,614 cases were reported, while in Callao, 347 cases were reported.

Ayala (2015) points out that school violence must be approached as a complex problem that requires examination from different approaches and disciplines, such as medicine, psychology, sociology and law. To prevent school violence, it is necessary to understand the various factors that influence this problem.

In terms of theories, Lorenz (1974) postulates that violence has a survival character, while Bandura's Social Learning Theory (1976) suggests that aggressive behavior may be learned by imitation. Cichetti and Cohen's (1995) Evolutionary Psychopathology Theory explores the interaction between biological, psychological and social systems to explain appropriate or inappropriate behavior.

This study will focus on Bronfenbrenner's (1987) Ecological Model, which considers the individual within different contexts: microsystem, mesosystem, exosystem and macrosystem. Understanding how individuals interact within these systems is crucial to effectively addressing school violence.

Despite knowing the impact of this problem, there are few questionnaires in Peru that can measure this variable, identify the type of violence or the role of each participant. Therefore, the CEVEIP questionnaire from Spain, which comprises three dimensions (witnessed, experienced and realized situations), will be used to examine the psychometric evidence in children aged 9 to 13 years in Lima and Callao in the year 2020. The objective is to statistically examine the items, assess content-based validity and internal structure, quantify reliability and establish norms of interpretation using quartiles.

METHOD

Design

It is an instrumental design study, since its purpose is to analyze the psychometric evidence of the CEVEIP questionnaire (Montero & León, 2002; Ato, López & Benavente, 2013).

Participants

The sampling used was non-probabilistic by convenience, because all the individuals who had access to the study were selected by filling out the form. A total of 458 children participated in the study, 231 girls and 227 boys between 9 and 13 years of age from Lima and Callao.

Instruments

The CEVEIP school violence evaluation questionnaire designed by Natalia Albaladejo Blázquez in 2011 in Spain, aims to evaluate school violence in children aged 5 years and at the primary educational level. This questionnaire consists of 27 items distributed in 3 dimensions: witnessed, realized and suffered situations. Each item is scored on a polytomous ordinal scale ranging from never, rarely, many times to always. To consider a participant as involved in school violence, scores of 23, 26 and 27 are required in each dimension respectively. Otherwise, it is classified as non-involvement.

Procedure

In a first stage, a virtual form was designed according to established research criteria, with the purpose of guaranteeing its adequate dissemination and reaching the target population: children between 9 and 13 years of age in Lima and Callao. Subsequently, this form was shared through social networks, emphasizing the need for the guardian's consent for minors to answer the questionnaire. It is important to note that the application of the form was carried out in two distinct phases: the first during the final period of the pandemic and the second after its end. Throughout the process, the confidentiality, anonymity and voluntary participation of the participants was emphasized. Finally, the data collected through the virtual form were processed to carry out the relevant statistical analyses.

Data Analysis

The Excel spreadsheet was used to create the form, which was subsequently exported to the SPSS 25 program and to Excel in csv format. To carry out the statistical analysis of the items, following the recommendation of Morales (2009), various psychometric parameters were evaluated, both at the level of the test as a whole and of the individual items. Among the analyses performed were the arithmetic mean, standard deviation, skewness coefficient and kurtosis, as well as communality, homogeneity and discrimination index. In addition, polychoric correlations were calculated to examine the relationships between items, taking into account their nature, according to Tabachnick and Fidell (2001).

To assess the content-based validity of the questionnaire, the Aiken V statistical technique was used, which, according to Escurra (1988), allows estimating the importance of the items, with a score close to 1 indicating greater validity.

Subsequently, to explore the evidence of validity based on the internal structure of the instrument, exploratory factor analysis (EFA) was carried out using the parallel analysis method (Factor 10.9), as well as confirmatory factor analysis (CFA) using Rstudio. As Pérez and Medrano (2010) and Lloret et al. (2014) point out, EFA is the most commonly used procedure in the evaluation of psychological measurement instruments, whereas CFA allows contrasting a previously constructed model with the observed data, according to an established theory, as mentioned by Herrero (2010) and Domínguez (2019). Furthermore, Lloret et al. (2014) suggest that one of the most robust methods to perform CFA is WLSMV, known as robust weighted least squares, whose use is determined by the sample size.

Next, to quantify the reliability of the questionnaire, alpha and omega coefficients were calculated, following the recommendations of Viladrich, Angulo-Brunet and Doval (2017).

Finally, rules for the interpretation of the questionnaire were developed by collecting data from the entire sample and applying the technique of 25th, 50th and 75th percentile ranks.

RESULTS

Evidence of Validity Based on the Content of the CEVEIP Questionnaire

The Aiken V coefficient is evidenced by 5 judges who coincide 100% in expressing their opinion based on the established criteria of the items (Escurra, 1988).

Table 1. Matrix of polychoric correlations

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27
V1	1																										
V2	0.55	1																									
V3	0.68	0.39	1																								
V4	0.32	0.74	0.56	1																							
V5	0.52	0.55	0.49	0.52	1																						
V6	0.45	0.46	0.49	0.45	0.58	1																					
V7	0.5	0.46	0.5	0.48	0.56	0.57	1																				
V8	0.41	0.47	0.55	0.52	0.58	0.57	0.61	1																			

V9	0.44	0.11	0.34	-0.01	0.2	0.09	0.09	0.23	1																					
V10	0.26	0.31	0.2	0.24	0.17	0.1	0.04	0.24	0.65	1																				
V11	0.23	0.07	0.39	0.12	0.16	0.1	0.15	0.27	0.65	0.54	1																			
V12	0.13	0.2	0.3	0.16	0.11	0.14	0.06	0.32	0.41	0.54	0.73	1																		
V13	0.17	0.17	0.12	0.15	0.34	0.2	0.17	0.24	0.32	0.3	0.39	0.3	1																	
V14	0.21	0.06	0.25	0.05	0.15	0.26	0.19	0.31	0.49	0.33	0.45	0.32	0.43	1																
V15	0.15	0.11	0.15	0.1	0.2	0.19	0.27	0.29	0.41	0.37	0.53	0.46	0.46	0.48	1															
V16	0.24	-0.01	0.23	-0.09	0.05	0.23	0.05	0.29	0.59	0.46	0.57	0.48	0.29	0.66	0.59	1														
V17	0.17	0.06	0.23	0.07	0.1	0.07	0.14	0.23	0.45	0.33	0.53	0.4	0.29	0.34	0.49	0.45	1													
V18	0.04	0.03	0.07	0.04	0.02	0.07	0.06	0.17	0.31	0.29	0.33	0.32	0.2	0.15	0.23	0.3	0.42	1												
V19	0.16	0.25	0.15	0.2	0.15	0.17	0.14	0.28	0.3	0.49	0.47	0.47	0.3	0.22	0.32	0.42	0.46	0.6	1											
V20	0.48	0.14	0.32	-0.01	0.25	0.13	0.12	0.11	0.58	0.33	0.43	0.12	0.15	0.2	0.08	0.34	0.31	0.16	0.25	1										
V21	0.39	0.28	0.3	0.14	0.18	0.14	0.11	0.17	0.44	0.46	0.4	0.36	0.18	0.17	0.15	0.26	0.2	-0.03	0.2	0.67	1									
V22	0.4	0.11	0.44	0.11	0.24	0.18	0.25	0.35	0.53	0.39	0.63	0.37	0.19	0.26	0.27	0.4	0.38	0.14	0.34	0.69	0.6	1								
V23	0.32	0.31	0.33	0.22	0.15	0.1	0.18	0.26	0.35	0.47	0.46	0.41	0.27	0.15	0.26	0.28	0.32	0.22	0.4	0.54	0.56	0.59	1							
V24	0.18	0.24	0.12	0.2	0.38	0.22	0.18	0.15	0.16	0.26	0.22	0.11	0.4	0.14	0.22	0.16	0.14	0.13	0.26	0.41	0.43	0.35	0.35	1						
V25	0.21	0.14	0.12	0.02	0.23	0.19	0.17	0.24	0.29	0.24	0.33	0.21	0.22	0.28	0.26	0.34	0.36	0.24	0.32	0.42	0.24	0.46	0.42	0.44	1					
V26	0.23	0.23	0.26	0.14	0.29	0.15	0.29	0.28	0.28	0.16	0.37	0.13	0.27	0.25	0.22	0.33	0.28	0.11	0.16	0.41	0.34	0.47	0.3	0.37	0.55	1				
V27	0.13	0.03	0.15	-0.06	0.01	0.14	0.03	0.31	0.44	0.38	0.4	0.33	0.29	0.3	0.37	0.43	0.45	0.31	0.31	0.48	0.38	0.4	0.48	0.37	0.57	0.4	1			

Polycorrelations Between Items

At the same time, the correlations between items show an intensity that does not exceed 0.90 when evaluated by dimension (Tabachnick and Fidell, 2001). This indicates that the items of the Smartphone Addiction Scale (EAS - IC) have an optimal performance.

Statistical Analysis of The CEVEIP Questionnaire Items

In the following table, with respect to Fisher's skewness (g^1) and kurtosis (g^2), there are items greater than +/- 1.5, which indicates a non-normal distribution (Forero, Maydeu and Gallardo, 2009). The item-test correlation all exceeded 0.30, which is adequate (Kline, 1986). On the other hand, the communalities exceed 0.40 (Detrinidad, 2016), except for item 13, from which it is inferred that because it is a direct question the participants biased their response, in addition to the fact that this item contains 2 alternatives, which could have confused the response since they did not know which one to answer.

Questionnaire Table 2. Descriptive analysis of the items of the CEVEIP.

Dimensions	Items	M	DE	g^1	g^2	IHC	h^2
SP	V1	1.7	0.8	1.0	0.6	0.58	0.71
	V2	2.1	1	0.5	-0.8	0.67	0.81
	V3	1.5	0.7	1.5	1.9	0.61	0.71
	V4	2.1	1	0.5	-0.9	0.64	0.83
	V5	2	0.8	0.6	-0.1	0.69	0.61
	V6	1.9	0.8	0.7	-0.2	0.65	0.56
	V7	1.9	0.8	0.6	-0.2	0.68	0.62
	V8	1.5	0.7	1.3	1.3	0.7	0.62
SV	V9	1.4	0.7	2.1	4.7	0.63	0.58
	V10	1.5	0.8	1.4	1.7	0.49	0.4
	V11	1.2	0.5	3.4	13.6	0.65	0.61
	V12	1.3	0.5	2.1	4.1	0.59	0.49
	V13	1.8	0.8	0.8	0.1	0.44	0.36
	V14	1.5	0.7	1.3	0.9	0.47	0.61
	V15	1.7	0.8	1.1	0.8	0.61	0.49
	V16	1.2	0.6	3	9	0.68	0.61

SR	V17	1.4	0.7	2.1	4.3	0.54	0.4
	V18	1.5	0.8	1.9	2.8	0.4	0.66
	V19	1.4	0.7	2.1	4.2	0.54	0.72
	V20	1.2	0.6	2.7	8.6	0.5	0.57
	V21	1.3	0.6	2	4.3	0.53	0.67
	V22	1.1	0.4	3.3	12.8	0.64	0.71
	V23	1.2	0.5	2.4	6.2	0.54	0.55
	V24	1.4	0.7	1.6	2.5	0.53	0.48
	V25	1.3	0.6	2.4	5.8	0.53	0.71
	V26	1.3	0.6	2.1	4.4	0.54	0.62
	V27	1.1	0.4	4.3	21.2	0.54	0.55

Note: = SP= Situations witnessed; SV= Situations lived; SR= Situations realized.

Validity Evidence Based on the Internal Structure of the CEVEIP Questionnaire

Table 3 and Figure 1 present the model composed of 3 dimensions proposed by the original author of the instrument, this model obtained fit indexes: CFI= .97, TLI= .96, all of these being greater than .90, which indicates the fit, in addition to RMSEA= .04 and SRMR= .06 (Schreider, Stage, Nora and Barlow, 2006). These were analyzed through the WLSMV estimation method due to the sample size, and they are more recommended when analyzing ordinal data, taking into account that they are far from normality (Flora and Curran, 2004).

Table 3. Confirmatory factor analysis of the school violence questionnaire (CEVEI).

Model	X^2/gl	IFC	TLI	SRMR	RMSEA	PNFI
Original model	1.59	0.97	0.96	0.06	0.04	0.84

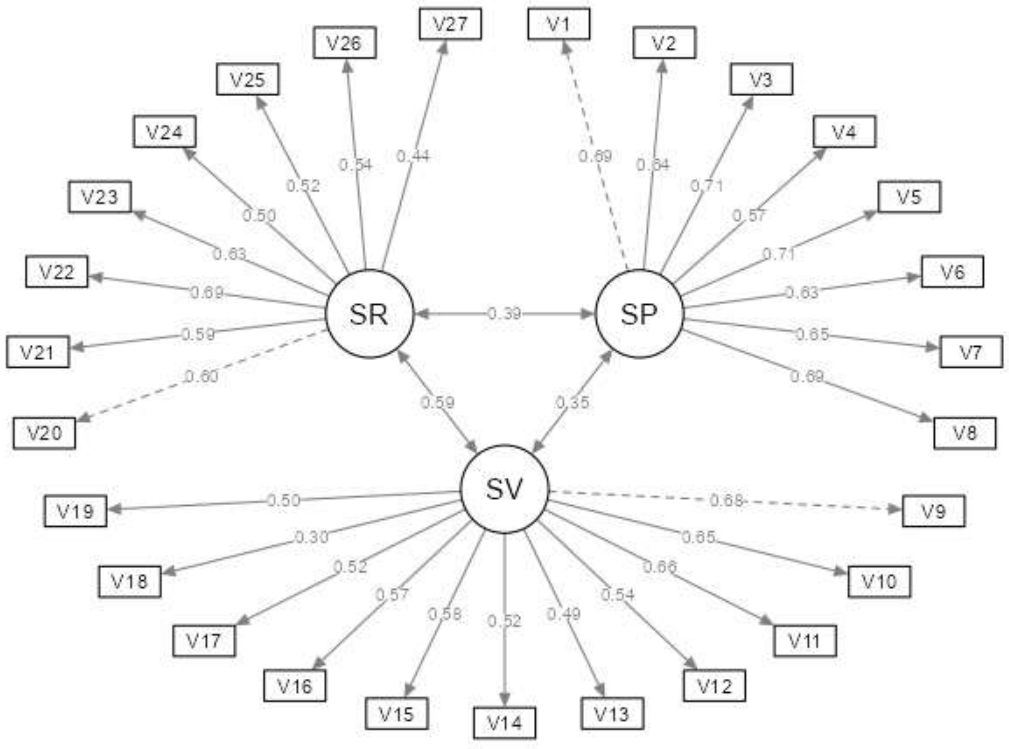

Figure 1. First order confirmatory factor analysis of the CEVEIP Questionnaire.

Note: SP= Situations witnessed; SV= Situations lived; SR= Situations realized.

Table 4. Confirmatory factor analysis of each of the dimensions proposed by the original author of the school violence questionnaire (CEVEIP).

Dimensions	Indicators	X²/gl	IFC	TLI	SRMR	RMSEA	PNFI
Presential situations (SP)	I1=8,7,6,3,4 I2=1,5,2	2.66	0.98	0.98	0.06	0.06	0.66
Situations experienced (SV)	I3=15,13,18,16 I4=9,11,10,12 I5=19,17,14	1.18	0.9	0.99	0.05	0.02	0.72
Realized situations (SR)	I6=22,24,23,21,20 I7=25,27,26	0.64	0.99	0.99	0.04	0.00	0.66

Note: I1= Physical violence witnessed; I2= Verbal violence witnessed; I3= Indirect violence experienced; I4= Direct violence experienced; I5= Psychosocial violence experienced; I6= Direct violence realized; I7= Indirect violence realized

Tables 4 and 5 plus Figure 2 show the fit indices, factor loadings and conceptual path diagrams of the confirmatory analyses of each of the dimensions and their respective indicators that include the CEVEIP scale, with the intention of verifying that these present an optimal independent functioning, observing that in all cases the fit indices: CFI, TLI, all being greater than .90 that indicates the fit, in addition to RMSEA and SRMR (Schreider, Stage, Nora and Barlow, 2006).

At the same time, the factor loadings of these three CFAs indicate that the items contribute significantly to the measurement of the construct of interest.

Table 5. Factor loadings of the original model and of each of the dimensions independently.

Factor loadings of the original model			Factor loadings by dimensions and indicators		
Dimensions	**items**	**β**	**Indicators**	**items**	**β**
SP	V1	0.69	I1	V8	0.65
	V2	0.64		V7	0.69
	V3	0.71		V6	0.65
	V4	0.57		V3	0.67
	V5	0.71		V4	0.66
	V6	0.63	I2	V1	0.63
	V7	0.65		V5	0.73
	V8	0.69		V2	0.68
	V9	0.68		V15	0.62
SV	V10	0.65	I3	V13	0.45
	V11	0.66		V18	0.32
	V12	0.54		V16	0.63
	V13	0.49	I4	V9	0.68
	V14	0.52		V11	0.69
	V15	0.58		V10	0.65
	V16	0.57		V12	0.61
	V17	0.52	I5	V19	0.43
	V18	0.30		V14	0.50
	V19	0.50		V17	0.49
	V20	0.60	I6	V22	0.67
	V21	0.59		V24	0.5
SR	V22	0.69		V23	0.61
	V23	0.63		V21	0.62
	V24	0.50		V20	0.72
	V25	0.52		V25	0.64
	V26	0.54	I7	V27	0.51
	V27	0.44		V26	0.61

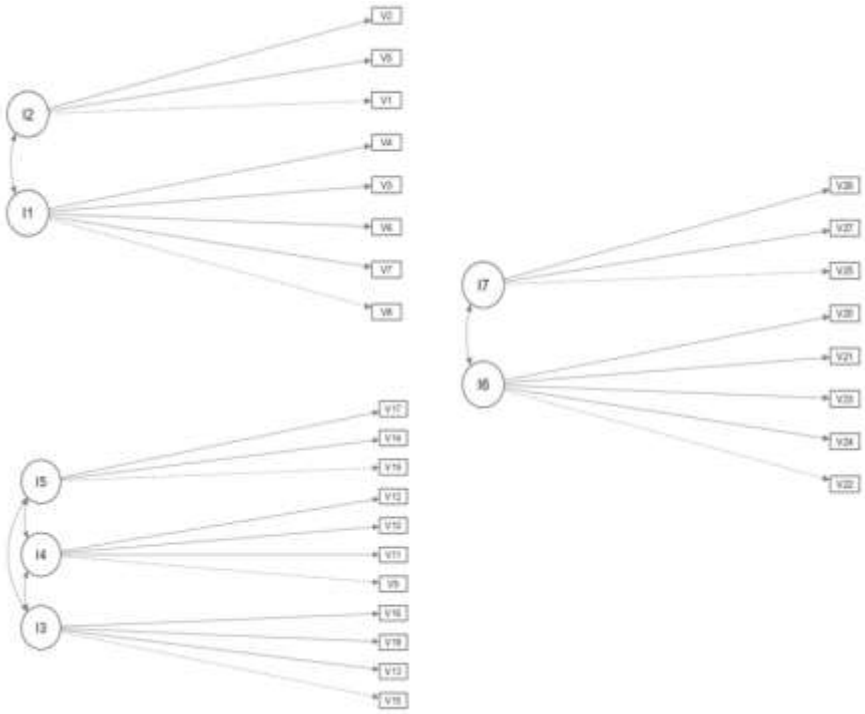

Figure 2. Path diagrams of independent dimensioning

Assumptions Prior to Exploratory Factor Analysis

Table 2. KMO test and Bartlett's sphericity test.

KMO and Bartlett's test		Situations witnessed	Situations experienced	Realized situations
Kaiser-Meyer-Olkin measurement		0.83	0.86	0.82
	Approx. chi-square	1078.078	1070.537	688.653
Bartlett's test for sphericity	gl	28	55	28
	Sig.	0.000	0.000	0.000

To check the degree of contribution of each proposed dimension, the AFE was performed, prior to this, the criteria of the Kaiser-Meyer-Olkin test were first calculated, obtaining KMO= .83, .86, .82; Bartlett's test of sphericity proved to be significant with respect to the 3 dimensions respectively, so the adequacy of the data allowed the AFE (Ferrando and Anguiano, 2010), in addition Kayser (1974) indicates that the KMO between .80 and .90 are considered meritorious to continue.

Exploratory Factor Analysis

Table 3. Total explained variance of the CEVEIP Questionnaire by dimensions

Total variance explained Dimensions	Indicators	Total	% variance	Accumulated
Situations Witnessed	I1	4.44	55.54	55.54
	I2	1.02	12.73	68.26
Situations Experienced	I3	4.68	42.53	42.53
	I4	1.25	11.36	53.89
	I5	1.00	9.09	62.98
Realized Situations	I6	3.61	45.12	45.12
	I7	1.25	15.65	60.76

The total variance of the questionnaire through its 3 dimensions, where the total explained variance of situations witnessed through its two indicators of physical and verbal violence presents 68.26%. Situations experienced through its three indicators of direct, indirect and psychosocial violence presents 62.98%. Finally, situations realized through its two indicators obtained a variance of 60.76%, all of them being adequate (Hair, Anderson, Tatham and Black, 1999).

Table 5. Evidence of reliability by the internal consistency method.

Dimensions	Coefficient alpha	Omega Coefficient
Witnessed Situations (SP)	0.86	0.86
Situations Experienced (SV)	0.82	0.83
Realized Situations (SR)	0.79	0.79

Evidence of Reliability of the CEVEIP Questionnaire

In Table 5, it can be seen through the alpha and omega coefficient by dimension that the following percentages were obtained: in witnessed situations .86 and .86 respectively. In situations experienced, .82 and .83 were obtained. Finally, in the dimension of realized situations the percentages of .79 and .79 were obtained, showing that the optimal values.

Table 6. Evidence of the interpretation rules for the use of the questionnaire through quartiles (n=458).

Dimensions	25th percentile	50th percentile	75th percentile	Minimum score	Maximum score	N° of elements
Witnessed Situations (SP)	11	15	19	8	32	8
Situations Experienced (SV)	13	15	19	11	38	11
Realized Situations (SR)	8	10	12	8	31	8

Interpretation Rules for the Use of the CEVEIP Questionnaire

Table 6 shows the elaboration of percentiles through its 3 dimensions, since each one has the function of identifying each participant in an act of violence, whether aggressor, victim or observer. It is important to take into account the minimum and maximum scores for each one, as well as to take into account that to be qualified as a participant in this problem, one must reach scores of 23, 26 and 27 respectively for the dimensions, according to the proposal of the author who created the instrument.

DISCUSSION

This study was carried out to analyze the psychometric evidence of the CEVEIP questionnaire in children from 9 to 13 years of age in Lima and Callao through its three dimensions; witnessed, experienced and realized situations. The results are then discussed with previous research on the same instrument.

Based on this, Marcela, Barrios, Gutiérrez and Mayorga (2014) point out that for the evidence of content validity, two methods are used: expert judgment and analysis with various mathematical formulas (p.549). With which Aiken's V was performed through 10 experts as in the study of Albaladejo (2011), being 100%, which indicates validity and is acceptable according to Escurra (1988). As Robles (2018) points out that if 10 judges have intervened to examine a questionnaire the minimum acceptable would be .80 to indicate its validity.

Consequently, Sireci (1988) mentions that when applying the test to a group of participants, the statistical methods and the responses of the individuals can be analyzed (cited in Pedrosa, Suárez and García, 2013). That is why, in terms of the results through item analysis, values were obtained with respect to the homogeneity index items greater than .30 so it agrees with that postulated by Kline (1986). The communalities all items obtained values greater than .40, being adequate (Detrinidad, 2016) however, item 13 did not comply with it because the participants must have been confused by not knowing which one to mark due to the fact that the premise contains two alternatives.

Likewise, the AFC replicated the guidelines postulated by the author of the test, obtaining adequate adjustment indexes as indicated by Schreider, Stage, Nora and Barlow (2006) in the CFI, TLI, GFI, RMSEA and SRMR through the WLSMV estimate as indicated by Flora and Curran (2004), since the sample was of considerable size and the data obtained were far from normality, this being a robust method. Similarly Escobedo, Hernández, Estebanè and Martínez (2016) indicate that these are acceptable. However, for Ruiz, Pardo and San Martin (2010) indices greater than .95 are acceptable, so the GFI= .94 would not be acceptable. Nevertheless, Cupani (2012) indicates that indices higher than .90 demonstrate a satisfactory fit and higher than .95 indicate an optimal fit. Similarly, the study by Albaladejo (2011) reported very similar values through the AFC where a GFI= .99 was obtained. Even in the study by Gonzales, Hernandez, Lopez and Hernandez (2018) fit indices close to .90 were obtained.

Then the previous assumptions were made to carry out the AFE, as indicated by Méndez and Rondón (2012) this type of analysis is carried out to demonstrate the internal structure of the questionnaire through its factors and to have a perspective of how these are grouped, also to see the contribution of each item to the dimension (p.199). Consequently, one of the previous assumptions for this analysis is to obtain an acceptable KMO, where KMO= .83, .86 and .82 were obtained, which are adequate and acceptable according to Kayser (1974). Similarly Albaladejo (2011) obtained values of KMO= .80, .75 and .77 with respect to the 3 dimensions with variances of 61%, 59% and 71%. On the contrary, in the study by Gonzales, Hernández, López and Hernández (2018) the explained variances obtained by dimensions were 26%, 13% and 8% since they did not take into account the indicators that each dimension possessed being these evaluated as a single one through the number of items. With respect to the explained variance obtained in this research were 68%, 63% and 61% each through the number of its indicators being adequate since they explain and define the factor well (Hair, Anderson, Tatham and Black ,1999).

Also, the evidence of reliability of the questionnaire was carried out where Cronbach's Alpha was .86, .82 and .79 respectively to the dimensions of situations witnessed, experienced and realized; being these acceptable (Mejía, 2008). Like the values presented in the antecedent of Albaladejo (2011), it is also worth noting that in the study of González, Hernández, López and Hernández (2018) the omega was also calculated, yielding adequate values according to Contreras and Novoa (2018)

To conclude, according to Frías (2019) indicates that within an investigation it is possible to speak of four types of validity: internal, statistical conclusion, construct and external (p.5). Therefore, within this psychometric type study, it is worth mentioning that difficulties were encountered, since due to the fact that information was collected in the final part of the COVID-19 pandemic, the application of the questionnaire had to be done through a virtual form, where the collection of information took more than five weeks because the population to which the instrument was addressed were children from 9 to 13 years old and the authorization of the parent was needed to carry out the development of the same, since as mentioned by Alarco and Alvarez (2012) virtual surveys often have as a disadvantage the speed in the response rate or the few responses that are achieved because not many manage to finish or record their answers (p.9). However, this difficulty was not in itself a threat to the study, since the required sample of 458 children was reached by sharing the form through social networks, as Orellana and Sanchez (2006) indicate, technology currently helps researchers to carry out data collection (p.1). Likewise, the answers obtained through this modality underwent a filtering process, since the identity documents of both the proxy and the child were validated to back up the veracity of the data. On the other hand, the results obtained regarding the psychometric evidence of the school violence evaluation questionnaire (CEVEIP), it should be noted that despite having similarities with other research previously presented, such as in Spain and Mexico, this cannot be generalized worldwide or the same can be expected, since it depends on the characteristics of the population to which the application of the instrument is made, for example, cultural factors. Thus, for this research, based on the psychometric criteria, the objectives, the statistics used, the knowledge of the functioning and the construct, it was possible to demonstrate the reliability and validity of the CEVEIP questionnaire.

Therefore, it is suggested that the variable of school violence be examined in greater depth, as well as to continue with psychometric research in order to obtain a standardized scale, and to consider for future research the cultural aspects related to aggressive behaviors in such a way that the evidence of the construct and content of the instrument can be expanded. Thus, finally, the interested reader is referred to the references consulted for further research on these topics.

CONCLUSIONS

Evidence of validity and reliability of the CEVEIP questionnaire was found. However, further studies with a larger sample are required to carry out other types of studies with respect to this instrument in order to obtain normative data in a population of children in Lima and Callao; as well as to achieve a better approach to the issue of school violence according to the role of the individual in this problem.

REFERENCES

Alarco, J and Álvarez, E. (2012). Google docs: an online survey alternative. Educación Médica, 15 (1), 9-10.

Albaladejo, N., Ferrer, R., Reig, A and Fernández, D. (2011). Does school violence exist in Early Childhood and Primary Education: a proposal for its evaluation and management. Anales de psicología, 29(3), 1060-1069.

Ato, M., López, J and Benavente, A. (2013). A classification system for research designs in psychology. Annals of Psychology, 29 (3), 1038-1059.

Ayala, M. (2015). School violence: a complex problem. Ra Ximhai, 11 (4), 493-509.

Bandura, A. (1976). Teoría del aprendizaje social. Editorial Espasa.

Bronfenbrenner, U. (1987). The ecology of human development. Editorial Paidós.

Cichetti, D and Cohen, J. (1995). Developmental psychopathology: Theory and methods, Wiley.

Economic Commission for Latin America and the Caribbean (2017). Las violencias en el espacio escolar. Editorial CEPAL.

Celada-Reynoso, E; Romero-Carazas, R; Márquez-Urbina, P; Paul Espíritu-Martínez, A; Zulema Espinoza-Véliz, M; Espinoza-Egoavil, M.J; Gómez-Pérez, K.K; Valero-Ancco, V.N; Gonzales-Figueroa, I.K. (2023). Estrategia B-learning para un desarrollo significativo: una revisión bibliométrica. Bibliotecas. Anales de Investigacion;19(2), 1-15

Carpio-Delgado, F. D., Bernedo-Moreira, D. H., Espiritu-Martinez, A. P., Aguilar-Cruzado, J. L., Joo-García, C. E., Mamani-Laura, M. R., & Romero-Carazas, R. (2023). Telemedicine and eHealth Solutions in Clinical Practice. EAI Endorsed Transactions on Pervasive Health and Technology, 9. https://doi.org/10.4108/eetpht.9.4272.

Conteras, S and Novoa, F. (2018). Advantages of ordinal alpha over Cronbach's alpha illustrated with the AUDIT-WHO survey. Pan American Journal of Public Health. https://doi.org/10.26633/RPSP.2018.65.

Cupani, M. (2012). Structural equation analysis: concepts, stages of development and an example of application. Thesis Journal. 186- 199.

Detrinidad, E. (2016). Exploratory and Confirmatory Factor Analysis applied to the secularization model proposed by Inglehart-Norris. (Master's Thesis) https://masteres.ugr.es/moea/pages/curso201516/tfm1516/detrinidad_barquero_tfm/

Dominguez, S. (2019). Correlation between residuals in confirmatory factor analysis: a brief guide to its use and interpretation. Interactions, 5 (3), https://doi.org/10.24016/2019.v5n3.207.

Elosua, P and Zumbo, B. (2008). Reliability coefficients for ordered categorical response scales. Psicothema, 20(4), 896-901.

Escobedo, M., Hernández, J., Estabané, V. and Martinez, G. (2016) Structural equation modeling: Features, phases, construction, implementation and results. Scielo, 18 (55).

Jam, F.A., Khan, T.I., Zaidi, B., & Muzaffar, S.M. (2011). Political Skills Moderates the Relationship between Perception of Organizational Politics and Job Outcomes.

Escurra, L. (1). Quantification of content validity by criterion judges. Revista de Psicología, 6(1-2), 103-111. https://doi.org/10.18800/psico.198801-02.008

Farooq, A. J., Akhtar, S., Hijazi, S. T., & Khan, M. B. (2010). Impact of advertisement on children behavior: Evidence from pakistan. European Journal of Social Sciences, 12(4), 663-670.

Ferrando, J and Anguiano, C. (2010). Factor analysis as a research technique in psychology. Papeles del Psicólogo, 31 (1), 18-33.

Forero, G., Maydeu, A., & Gallardo, D. (2009). Factor analysis with ordinal indicators: A monte Carlo study comparing DWLS and ULS estimation. Structural Equation Modeling, 16, 625-641.

Flora, V and Curran, J. (2004). An empirical evaluation of alternative methods of estimation for confirmatory factor analysis with ordinal data. Psychological Methods, 9, 466-491.

Frias, D. (2019). Material III. Research designs in psychology: validity of the results. University of Valencia.

González J., Hernández, A., López, D and Hernández, M. (2018). Internal structure of the Child and Primary School Violence Assessment Questionnaire in a violent environment in Mexico. Interactions, 4(1), 21-30.

Hayat, S., Ahmad, A., Yahiya, M., & Khan, T. (1996). Ageing effect on the germinability and loss of solutes from the seeds of chickpea (Cicer arietinum L.) cultivars.

Hair, J., Anderson, R., Tatham, R and Black, W. (1999). Multivariate Analysis, 5th edition. Madrid: Prentice Hall.

Herrero, J. (2010). Confirmatory Factor Analysis in the study of the Structure and Stability of Assessment Instruments: An example with the CA-14 Self-Esteem Questionnaire. Psychosocial Intervention, 19 (3), 289-300. National Institute of Statistics and Informatics (2015). National Survey on Social Relations. Editorial INEI.

Jam, F., Donia, M., Raja, U., & Ling, C. (2017). A time-lagged study on the moderating role of overall satisfaction in perceived politics: Job outcomes relationships. Journal of Management & Organization, 23(3), 321-336. doi:10.1017/jmo.2016.13

Kaiser, F. (1974). An index of factor simplicity. Psychometrika, 39, 31-36.

Khan, M. T., Khan, T. I., & Khan, S. (2020). Innovation & Its Diffusion in Business: Concept, Stages & Procedural Practices. sjesr, 3(4), 174-186.

Kline, P. (1986). A Handbook of Test construction: Introduction to psychometric design. Methuen.

Lloret, S., Ferreres, A., Hernández, A and Tomás, I. (2014). The exploratory factor analysis of items: a practical, revised and updated guide. Annals of Psychology, 30 (3), 1151-1169.

Lorenz, K. (1974). Considerations on animal and human behavior. Editorial Plaza & Janés.

Marcela, E., Barrios, S., Gutierrez, M and Mayorga, M. (2014). Optimal methods for determining content validity. Higher Medical Education, 28 (3), 547-558.

Mejía, E. (2008). Scientific Research in Education. Editorial UNMSM.

Méndez, C and Rondón, M. (2012). Introduction to exploratory factor analysis. Colombian Journal of Psychiatry. 41, 197-207.

Montero, I and León, O. (2002). Classification and description of research methodologies in Psychology. International Journal of Clinical and Health Psychology, 2 (3), 503-508.

Morales, P. (2009). Item analysis in objective tests. Editorial Facultad de Ciencias Humanas y Sociales de la Universidad Pontificia Comillas.

Jam, F. A., Akhtar, S., Haq, I. U., Ahmad-U-Rehman, M., & Hijazi, S. T. (2010). Impact of leader behavior on employee job stress: evidence from Pakistan. European Journal of Economics, Finance and Administrative Sciences, (21), 172-179.

Orellana, D and Sánchez, M. (2006). Data collection techniques in virtual environments most commonly used in qualitative research. Journal of Educational Research, 24 (1):205-222.

United Nations Educational, Scientific and Cultural Organization (2019). Behind the numbers: Ending school violence and bullying. UNESCO.

World Health Organization. (2019). Violence against children. WHO.

Pérez, R and Medrano, L. (2010). Exploratory Factor Analysis: Conceptual and Methodological Basis. Revista Argentina de Ciencias del Comportamiento, 2 (1), 58-66.

Pedrosa, I., Suárez, J., & García, E. (2013). Evidence on content validity: theoretical advances and methods for its estimation. Acción Psicológica, 10 (2), 3-18.

Robles, B. (2018). Content validity index: Aiken's V coefficient. Pueblo Continente. 29, 193-197.

Romero-Carazas, R. (2024). The Ethics of the Public Accountant: A Phenomenological Study (2024). Academic Journal of Interdisciplinary Studies, 13 (1), 339. https://doi.org/10.36941/ajis-2024-0025.

Romero-Carazas, R., La Cruz-Arango, O. D., Torres-Sánchez, J. A., Torres Cheje de Manchego, V., Suclla-Revilla, J. L., Gutiérrez-Monzón, S. G., … Bernedo-Moreira, D. H. (2023). Gestión del conocimiento y capital intelectual según variables sociodemográficas en docentes Universitarios. Encontros Bibli: Revista eletrônica De Biblioteconomia E Ciência Da informação, 29. https://doi.org/10.5007/1518-2924.2024.e96253.

Ruiz-Mori, I; Romero-Carazas, R; Espíritu-Martínez, A.P; Mamani-Jilaja, D; Valero-Ancco, V.N; Flores-Chambilla, S:G. (2023). Análisis bibliométrico de la producción científica sobre competencia y brecha digitales. Bibliotecas. Anales de Investigacion;19(2), 1-11

Ruiz, M., Pardo, A and San Martin, R. (2010). Structural equation modeling. Papeles del Psicólogo. 31(1), 34-45

Sìseve (September 15, 2013 to June 30, 2019). Number of cases reported in Sìseve at the national level. Síseve website: http://www.siseve.pe/Seccion/AcercadeSiseve

Schreider, J., Stage, F., Nora, A and Barlow, E. (2006). Reporting structural equation modeling and confirmatory factor analysis results. The Journal of Education Research, 99 (6), 323-337.

Tabachnick, B.G. and Fidell, L.S. (2001) Using Multivariate Statistics. 4th Edition, Allyn and Bacon

Viladrich, C, Angulo-Brunet, A and Doval, E. (2017). A journey around alpha and omega to estimate internal consistency reliability. Anales de Psicologia., 33 (3): 755-782.