Propiedades psicométricas del cuestionario Conflictalk en una muestra de adolescentes mexicanos estudiantes de bachillerato

Psychometric Properties of the Conflictalk Questionnaire in a Sample of Mexican Adolescent High School Students

Propriedades psicométricas do questionário Conflictalk em uma amostra de adolescentes mexicanos do ensino médio

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Resumen

El Conflictalk es un cuestionario que evalúa estilos de manejo de conflictos interpersonales (agresivo, pasivo y cooperativo) en población adolescente, el cual ha mostrado ser útil a lo largo de estudios realizados en diversos países. No obstante, el análisis de las propiedades psicométricas del instrumento ha sido poco abordado en la literatura, por lo que se hace necesario contar con mayor información a este respecto, considerando, en particular, el contexto escolar. Por lo anterior, el presente estudio se planteó como objetivo llevar a cabo un análisis de las propiedades psicométricas del Conflictalk a fin de aportar nuevos datos sobre su validez y confiabilidad. La muestra ($N = 286$) estuvo compuesta por estudiantes mexicanos de bachillerato con rango de edad de 15 a 20 años. Además del Conflictalk, los participantes respondieron el Cuestionario sobre estilos de mensajes en el manejo de conflictos (CMMS). Se llevó a cabo un análisis factorial exploratorio, así como uno de confiabilidad, y se estudiaron las diferencias de grupos por edad y género. Además, se analizaron correlaciones entre las escalas de los dos cuestionarios utilizados. En los resultados, se obtuvo una solución trifactorial adecuada al modelo teórico con cargas factoriales de los reactivos superiores a 0.45, un porcentaje de

varianza explicada total de 45.70, e índices de confiabilidad de los factores de 0.80, 0.73 y 0.82. En el análisis de diferencias de grupo, los varones puntuaron más alto que las mujeres de manera estadísticamente significativa ($p < 0.001$) en el estilo agresivo de manejo de conflictos. Asimismo, en la interacción de edad y género los adolescentes varones del grupo de 17-20 puntuaron más alto en el estilo agresivo, seguidos de los varones de 15 y 16 años, las mujeres de 15 y 16 y, por último, las mujeres de 17 a 20 años; ello, de manera estadísticamente significativa ($p < 0.01$). Este resultado indica una acentuación de las diferencias de género en los grupos de mayor edad. Además de lo anterior, se identificaron correlaciones significativas del Conflictalk con las escalas del CMMS. En conclusión, este estudio aporta información de relevancia para sustentar propiedades aceptables de validez y confiabilidad del Conflictalk en población mexicana adolescente escolarizada de nivel bachillerato. Dentro de las limitaciones y sugerencias, se recomienda para posteriores estudios examinar las relaciones con otros instrumentos y variables de referencia a fin de acumular más elementos de validez convergente y divergente, ampliar el rango de edad de la muestra, así como realizar un nuevo estudio de validación pero desde una perspectiva confirmatoria.

Palabras clave: adolescencia, solución de conflictos, test psicológico.

Abstract

The Conflictalk questionnaire is an instrument that evaluates interpersonal conflict handling styles (aggressive, passive and cooperative) in adolescent population, which has proved useful throughout studies carried out in different countries. However, the analysis of the psychometric properties of this instrument has been little addressed. For this, it is necessary to have more information about it, considering adolescents' school contexts. In this framework, the aim of this study was to carry out an analysis of the psychometric properties of the Conflictalk in a sample of Mexican high school students in order to provide new data on the validity and reliability of this instrument, considering in particular this type of population. The sample ($N = 286$) was composed of Mexican high school students with an age range of 15-20 years. The participants answered two instruments: the Conflictalk and the Ross-DeWine Conflict Management Message Style Instrument (CMMS). The findings showed a 3-factor solution adequate to the theoretical model with factorial loads above 0.45, a percentage of total explained variance of

45.70, and reliability indices of 0.80, 0.73 and 0.82. In group differences, men scored higher than women, in a statistically significant manner ($p < 0.001$), in the aggressive style of conflict management. Likewise, the interaction of gender and age showed differences with statistical significance ($p < 0.01$) in the aggressive style: men of the 17-20 age group scored higher than the men of 15-16 years, followed by the women of 15-16, and finally the women of 17 to 20 years old. This result indicates an accentuation of gender differences in the older age groups. In addition to the above, we also identified significant correlations of the Conflictalk with the CMMS scales. In conclusion, this paper provides relevant information to support acceptable validity and reliability properties of the Conflictalk in the Mexican adolescent at the high school level. Within the limitations and suggestions, it is recommended for further studies to examine the relationships with other instruments and variables in order to accumulate more elements of convergent and divergent validity, extend the age range of the sample, as well as perform a new study of validation from a confirmatory perspective.

Keywords: adolescence, conflict resolution, psychological tests.

Resumo

O Conflictalk é um questionário que avalia estilos de gerenciamento de conflitos interpessoais (agressivo, passivo e cooperativo) na população adolescente, o que demonstrou ser útil em estudos realizados em vários países. No entanto, a análise das propriedades psicométricas do instrumento tem sido pouco abordada na literatura, sendo necessário ter mais informações a esse respeito, considerando, em particular, o contexto escolar. Portanto, o presente estudo teve como objetivo realizar uma análise das propriedades psicométricas do Conflictalk, a fim de fornecer novos dados sobre sua validade e confiabilidade. A amostra (N = 286) foi composta por estudantes mexicanos do ensino médio, com faixa etária de 15 a 20 anos. Além do Conflictalk, os participantes responderam ao Questionário sobre Estilos de Mensagens de Gerenciamento de Conflitos (CMMS). Foi realizada uma análise fatorial exploratória, bem como uma de confiabilidade, e as diferenças de grupos por idade e sexo foram estudadas. Além disso, foram analisadas correlações entre as escalas dos dois questionários utilizados. Nos resultados, uma solução de três fatores adequada ao modelo teórico foi obtida com cargas fatoriais de reagentes maiores que 0,45, porcentagem da variância total explicada de 45,70 e índices de confiabilidade

de fatores de 0,80, 0,73 e 0,82. Na análise das diferenças entre os grupos, os homens pontuaram mais alto que as mulheres de forma estatisticamente significante (p <0,001) no estilo agressivo de gerenciamento de conflitos. Da mesma forma, na interação idade e sexo, os adolescentes do grupo 17-20 tiveram uma pontuação mais alta no estilo agressivo, seguidos pelos homens de 15 e 16 anos, as mulheres de 15 e 16 anos e, finalmente, as mulheres de 17 a 20 anos; isso, de forma estatisticamente significante (p <0,01). Este resultado indica uma acentuação das diferenças de gênero nas faixas etárias mais velhas. Além do acima, foram identificadas correlações significativas do Conflictalk com as escalas do CMMS. Em conclusão, este estudo fornece informações relevantes para apoiar propriedades aceitáveis de validade e confiabilidade do Conflictalk em adolescentes mexicanos de nível médio. Dentro das limitações e sugestões, recomenda-se que estudos subsequentes examinem as relações com outros instrumentos e variáveis de referência, a fim de acumular mais elementos de validade convergente e divergente, ampliar a faixa etária da amostra e realizar um novo estudo de validação, mas de uma perspectiva confirmatória.

Palavras-chave: adolescência, resolução de conflitos, teste psicológico.

Introduction

The expression conflict management style refers to "a certain way of dealing with conflicts which an individual tends to assume regularly in his daily life" (Luna, Valencia, Nava and Ureña, 2019, p. 158). This definition coincides with that of other authors who have considered such styles as a disposition or inclination of each person to treat interpersonal conflicts in a characteristic way (Blake and Mouton, 1970; Filley, 1985; Laca, 2005). For example, a person may be inclined to impose their position on the counterparts they encounter in their various conflicts, tending to affirm their own interest (dominant style). On the other hand, another person may be inclined to give in to the claims of others, preferring to satisfy the demands and interests of others, even at the expense of their own (complacent style). A third person may be inclined to handle conflicts so that both parties fully obtain the satisfaction of their respective interests (collaborative style). It should be noted that in the literature of the area there are several

models among which there are divergences regarding the number and characteristics of these styles (Luna, 2018; Rahim, 2001).

At present, the study of conflict management styles that adolescents use in the different relational contexts in which they operate, and especially in the field of relationships with their peers in the school context, has received increasing attention for part of the researchers (Luna, Mejía and Laca, 2017). This growing interest can be explained by several factors. On the one hand, in the contemporary literature there is a growing recognition that conflicts are inherent in human relationships and can be constructively transformed if approached in an appropriate manner (Paris, 2009; Ramón, García and Olalde, 2019) . On the other hand, the formation of skills for the constructive management of conflicts has been considered an element in the education of adolescents and young people that favors better forms of coexistence, contributes to the reduction of violence and strengthens a culture of peace (De la Rosa, Ángeles y Pérez, 2018; Pegalajar, 2018). According to Azzolini (2017), "violence in schools is one of the great obstacles for children to effectively enjoy the right to education" (p. 56). Therefore, "curricula must be promoted in which equity, non-violence and the peaceful resolution of conflicts between the main educational objectives are incorporated" (Santamaría-Cárdaba, 2019, p. 72).

In this context, the need to have more knowledge about how adolescents face the conflicts that arise in the course of their daily lives in the school context has become an aspect of relevance both to understand the interpersonal dynamics that they affect how to generate proposals for training, attention and intervention.

Along with the need for greater knowledge, there is the need to have valid and reliable instruments that allow an evaluation with adequate psychometric guarantees. In international literature there are various models and instruments to describe and evaluate conflict management styles in different contexts; Among the best known, it is possible to mention Thomas-Kilmann Conflict Management of Differences (MODE) by Thomas and Kilmann (1974), Rahim's Organizational Conflict Inventory-II (ROCI-II) by Rahim (1983) and Conflict Management Message Style Instrument (CMMS) by Ross and DeWine (1988). Although these instruments have been used in various studies to evaluate conflict management styles in the adolescent population - for example: Chang and Zelihic (2013), De Conti (2014) and Luna and Laca (2014) - the truth is that they have not been designed specifically for this age group.

Conflictalk is an instrument proposed by Kimsey and Fuller (2003) to evaluate conflict management styles specifically in the adolescent population. The approach of the instrument is communicative, since it considers these styles based on the type of verbal messages that individuals tend to use in their conflicting interactions. Although the CMMS questionnaire by Ross and DeWine (1988) to assess styles of verbal messages in conflict situations already existed, Kimsey and Fuller (2003) considered that a new instrument that was adapted to the specific language of adolescents was necessary. Indeed, according to these authors, the language of adolescents is part of their culture and is considered by them as the vehicle of the most authentic communication; thus, they will be more skilled in handling their conflicts to the extent that they can use their characteristic language to express themselves in such situations. Hence the importance of evaluating conflict management styles based on message styles expressed in the adolescents' own language, according to the authors mentioned.

Kimsey and Fuller (2003) developed the Conflictalk by working with a sample of 500 elementary school students (elementary school, 4th and 5th grade; n = 222), middle school (middle school, 6th to 8th grade) grade; n = 133) and high school, from 9th to 12th grade; n = 145). In its original version, the instrument was composed of 18 reagents divided into three scales: a) the self-focused style (rhino-aggressive), b) the problem-oriented style (problem focus) (dolphin -cooperative) and c) the style focused on others (other-focus) (ostrich-passive). Animal symbols were used by the authors to facilitate the understanding of each of these styles.

According to Kimsey and Fuller (2003), the self-focused style (rhino-aggressive) consists, as its name implies, in being self-centered, wanting things done in their own way, acting as Aggressive and authoritarian way in the face of conflict. It is a dominant style in which the teenager tries to satisfy his own interests even at the expense of others. The style focused on the problem (dolphin-cooperative) is to show interest in the cause of the conflict and to specifically identify the problem in collaboration with the other. It is a collaborative style where interest is focused on finding the best solution to the problem, as well as acting cooperatively. Finally, the style focused on others (ostrich-passive) is based on the belief that every conflict is always a bad thing to avoid, as well as the desire for the other party to be happy. It is a style in which the adolescent acts passively and avoidantly in the face of conflict (Kimsey and Fuller, 2003; Garaigordobil, Machimbarrena and Maganto 2016).

Conflictalk has proven useful in studies with adolescent population conducted in various countries such as the United States - for example, Donegani and Séguin (2018) and Lane, Ybarra, Zajac and Vierra (2005) -, Israel (Hochhauser, Weiss and Gal, 2018), Spain - for example, Garaigordobil (2009, 2012, 2017), Garaigordobil and Maganto (2011), Garaigordobil and Martínez (2015), Garaigordobil et al. (2016) and Garaigordobil, Maganto, Pérez and Sansinenea (2009) - and Mexico — for example: De la Rosa et al. (2018), Laca, Alzate, Sánchez, Verdugo and Guzmán (2006) and Luna and Laca (2017). That is why, at present, it has become a reference tool for this area of research.

The translation of Conflictalk into the Spanish language was carried out in Mexico by Laca et al. (2006) in a study with a sample of 526 children and adolescents from the city of Colima, Colima, which had an age range of 9 to 17 years. In Spain, Garaigordobil (2009) reported Conflictalk validation studies conducted with samples (N = 313, 285 and 123) of adolescents aged 15 to 17 years in which adequate reliability and validity data were obtained. More recently, Garaigordobil et al. (2016) presented a Spanish adaptation of Conflictalk in a study with a sample of 2283 participants from the Basque Country, with an age range of 12 to 17 years.

Considering the aforementioned background, as well as the importance and the current interest that exists in studying the processes through which adolescent students handle the interpersonal conflicts that are presented with their peers in the school context, is that the present study was raised Carry out an analysis of the psychometric properties of Conflictalk in a sample of Mexican adolescents high school students, in order to provide new data on the validity and reliability of this instrument, considering in particular this type of population. The foregoing mainly due to the reasons set forth below.

First, in the validation studies carried out in Spain (Garaigordobil, 2009; Garaigordobil et al., 2016), the authors contributed abundant elements of convergent and discriminant validity, but did not present an analysis of the factor structure of Conflictalk. On the other hand, in the validation study carried out in Mexico by Laca et al. (2006), although a factor analysis was carried out, the distribution of the reagents between the scales varied significantly with respect to the original instrument.

In addition to the above, it is important to note that in all these validation studies of the Castilian version of Conflictalk (Garaigordobil, 2009; Garaigordobil et al., 2016; Laca et al., 2006), the age ranges of the participants were considered up to 17 years; However, at present, the range of

17 to 20 years is usually considered as corresponding to the period of late adolescence (Ibarra and Jacobo, 2014; Iglesias, 2013; Steinberg, 2017). A study group of the World Health Organization [WHO] (1986), for example, considered the following division: initial adolescence from 10 to 14 years, average adolescence from 14 to 17 years and final adolescence from 17 to 20 years.

Related to the latter, it is worth mentioning that in the original study by Kimsey and Fuller (2003), an exploratory factor analysis of the reagents was carried out in each of the three subsamples of adolescents. And it turned out that the three factors were grouped as they had been hypothesized in the sub-samples of elementary and middle school participants, but in the sub-sample of high school adolescents varied slightly, since there were a couple of reagents (one and two) that did not present adequate factor loads (in both cases they were less than 0.40), and reagent 16 presented an ambiguous assignment between the style focused on the other part and the one focused on itself (factor loads of 0.40 and 0.43, respectively). According to these authors, this finding could suggest "that as subjects mature there is an evolution in their style of messages in conflict management" (Kimsey and Fuller, 2003, p. 76).

Due to all of the above, it was considered appropriate to carry out the present study that intends to evaluate the psychometric properties of Conflictalk in a sample of Mexican adolescents high school students, aged 15 to 20 years. For this, the factor structure of this instrument will be analyzed, as well as its internal consistency, and the possible differences by age and gender.

On the other hand, it is important to consider that until today most of the studies conducted in Mexico on conflict management styles in adolescents - for example, Luna and Laca (2014), Luna (2014, 2017) and Luna et al . (2017) - have been based on the model of Ross and DeWine (1988). Due to this, it was considered pertinent in the present work, in addition to what was stated above, to also analyze the relationships that could occur between the conflict management styles of the Kimsey and Fuller model (2003) and the styles of the Ross and DeWine (1988), as this will contribute to the discussions that compare the results of the studies carried out with both instruments, in addition to adding a convergent validity criterion to the present analysis.

Ross and DeWine (1988) proposed three styles of conflict management: a) the self-centered style (concern for self), which is presented when in the management of a conflict the individual focuses on his own interest or personal posture , without considering the interest of the other

person; b) the style centered on the other party (concern for other): when the subject is focused on satisfying the interest of the counterpart, even leaving aside the interests of their own, and c) the style centered on the problem (concern for issue), which is manifested when the individual decides to focus on the issue that is the subject of conflict, expressing messages in which he invites the other party to collaborate or agree on a solution that meets at least partially the interests of both. To evaluate these styles, Ross and DeWine proposed the aforementioned CMMS, whose characteristics will be indicated in the following section.

Synthesizing all of the above, the present study has set out four specific objectives: 1) analyze the factor structure of Conflictalk in a sample of adolescent high school students aged 15 to 20 years; 2) analyze the internal consistency of the aforementioned questionnaire with the data of the study sample; 3) analyze differences in age and gender in the scores of the scales that make up the Conflictalk, and 4) analyze the correlations between the three mentioned Conflictalk scales and those corresponding to the CMMS questionnaire by Ross and DeWine (1988).

In relation to this last objective, it is expected as a hypothesis that there are statistically significant positive correlations: a) between the self-centered style of the CMMS and the self-centered (rhino-aggressive) style of the Conflictalk, b) between the style centered on the other part of the CMMS and the one focused on the others (ostrich-passive) and c) between the style centered on the CMMS problem and the one focused on the problem (dolphin-cooperative) of the Conflictalk. The above due to the obvious theoretical affinity between each of these styles derived from the fact that Kimsey and Fuller (2003), according to their own statement, took CMMS as a "prototype" in the design of their questionnaire.

Method

Participants

The study was carried out in a public preparatory school located within the Metropolitan Zone of Guadalajara, Jalisco (Mexico). The total population of the participating school was 1350 students, of which 635 were women (47.0%) and 715 men (53.0%). Sampling was carried out by randomly choosing a group from each grade (semester). Thus, the sample was composed of 286 students. Of these, 52.1% were women and 47.9% men. The age range was 15 to 20 years, with arithmetic mean (M) of 16.52 years and standard deviation (SD) of 1.05. For the purposes

of this study, two age groups were formed: 15 and 16 years (57.3%) and 17 to 20 years (42.7%). This division corresponds, in general terms, to the periods of middle and late adolescence, respectively (Ibarra and Jacobo, 2014; Iglesias, 2013; WHO, 1986; Steinberg, 2017). Table 1 shows the distribution of participants by age, according to gender.

Tabla 1. Distribución de los participantes según género y edad

	Mujeres	**Hombres**	**Total**
15 a 16 años	89 (31.1 %)	75 (26.2 %)	164 (57.3 %)
17 a 20 años	60 (21.0 %)	62 (21.7 %)	122 (42.7 %)
Total	149 (52.1 %)	137 (47.9 %)	286 (100 %)

Nota: Los porcentajes son con respecto a la muestra total.

Fuente: Elaboración propia

Instruments

Instrument to evaluate message styles in conflict management in youth and adolescents (Conflictalk questionnaire)

This questionnaire informs about the frequency with which participants perceive using the three styles of conflict management proposed by Kimsey and Fuller (2003). As already mentioned, in its original version it is composed of 18 reagents divided into three scales: a) self-focused style (rhino-aggressive), b) problem-oriented style (dolphin-cooperative) and c) style focused on others (ostrich-passive).

Each of the items is a sentence that represents a message given by an individual to their counterpart in a situation of interpersonal conflict, for example: "I am not good at this. I just don't know how to make you feel better "(reagent two) or" What's going on? We need to talk "(reagent three) or" Shut up! You are not right! I will not listen to you "(reagent eight). To answer, the participant is asked to indicate how often he has used, in their conflicts, messages similar to those represented in each reagent. The response format is a five-point Likert scale: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Frequently, and 5 = Always. For the qualification of the questionnaire, the means and standard deviations of the participants in each of the three scales are obtained.

As noted, Conflictalk was developed by Kimsey and Fuller (2003). The authors reported a Cronbach alpha reliability of 0.81, 0.87 and 0.63 for the self-focused (rhino-aggressive) scales, focused on the problem (dolphin-cooperative) and focused on the others (ostrich-passive), respectively. The reliability indices reported by Garaigordobil et al. (2016) for the Castilian version of these same scales were 0.77, 0.90 and 0.70 respectively.

Questionnaire on message styles in conflict management (CMMS)

This is a self-report questionnaire that assesses conflict management styles based on the type of verbal messages that individuals perceive to use during situations of conflictive interaction. It consists of three scales: self-focused style, style focused on the other part and style focused on the problem.

Similar to Conflictalk, each of the CMMS reagents is a sentence that represents a verbal message given by an individual to their counterpart in a situation of interpersonal conflict, for example: "How can I make you feel good again?" (reagent two) or "I am very upset about some things that are happening; Can we talk about them? "(Reagent three), or" Shut up, you're wrong! I don't want to hear anything else you have to say "(reagent eight). To answer, the participant is asked to indicate how often he has used messages similar to those represented by each reagent. The response format is a five-point Likert scale: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Frequently, and 5 = Always. For the CMMS qualification, the means and standard deviations of the participants in each of the three scales are obtained.

Ross and DeWine (1988) originally designed and validated the CMMS after a series of studies carried out with university students in the United States. Mejía and Laca (2006) and Laca, Mejía and Mayoral (2011) made the translation and validation into the Spanish language, in studies with samples of university students from Colima and the Basque Country, respectively. More recently, Luna and Laca (2014) conducted a validation study of the Castilian translation in a study in which 1074 Mexican high school, baccalaureate and undergraduate students participated, aged 11 to 25 years. These authors performed exploratory and confirmatory factor analysis of the CMMS. As a result, the instrument was composed of 13 reagents divided into three scales: a) self-focused style, b) style focused on the other part and c) style focused on the problem, with Cronbach's alpha reliability indices of 0.68, 0.72 and 0.83, respectively.

Process

The present study adhered in all its development to the ethical principles and code of conduct of the American Psychological Association [APA] (2017), as well as to the relative aspects of the Code of Ethics of the Psychologist of the Mexican Society of Psychology (2010).

The application of the instruments was carried out within the classroom, once the corresponding permits were obtained from the authorities of the campus. The researcher, accompanied by two previously trained assistants, entered each classroom, informed the students about the objectives of the research and was invited to participate in a completely voluntary and anonymous manner; Those who did not wish to participate were allowed to leave the classroom, as well as those who decided not to continue once the application began. They were not asked for information that could identify them individually, only some general data for statistical purposes (school, grade, gender and age). They were guaranteed that the information would be treated in a strictly confidential manner and that the data would be used for exclusively scientific purposes. They were also informed that in this type of instruments there are no good or bad answers, but the important thing for the investigation is that their answers be as honest as possible.

Statistic analysis

In order to analyze the factor structure of Conflictalk, an exploratory factor analysis was carried out. The relevance of the technique of this analysis to the sample data was determined through two procedures: a) the Kaiser-Meyer-Olkin sample adequacy test and b) Bartlett's sphericity test. Then the factors were extracted using the main axis method. This method is advisable to examine the underlying structure of the reagents of a scale, in situations where Likert scales of at least five options are used and distributions are not far from normal (Lloret, Ferreira, Hernández and Tomás, 2014). As an rotation method, an orthogonal type (Varimax) was chosen, since it was used by Kimsey and Fuller (2003) in the validation study of the original instrument. For the choice of the number of components to be retained, the following criteria were considered (Moral de la Rubia, 2016): a) that the component had an autovalue greater than one, b) that the component be located above the inflection point of the curve in the sedimentation graph, c) that each component was composed of more than two variables with saturations greater than 0.40, d) that it was possible to place each variable in a single component based on the

highest saturation of said variable, provided that it is greater than 0.40 and e) that the component is identifiable and interpretable, based on the construct and the design of the instrument.

Having done the above, the Cronbach alpha reliability coefficient for each resulting factor was calculated, as well as the corresponding mean scores and standard deviations.

In order to identify possible effects of age and gender on the study variables, a multivariate analysis of the variance (Manova) was carried out with a 2 x 2 design (two levels of gender by two of age).

To identify possible significant correlations between the Conflictalk and CMMS scales, a partial correlation analysis was carried out, introducing age and gender as control variables.

All calculations were performed using the statistical program SPSS 21 (IBM Corporation, 2012).

Results

The exploratory factor analysis was carried out in three rounds. Initially, the extraction method yielded a four-factor solution; however, Factor IV was composed only of two reagents (two and four). Therefore, it was decided to dispense with said reagents, in accordance with the established criteria. In a second round of analysis, carried out with 16 reagents, the extraction method yielded a three-factor solution; however, reagent 18 showed an ambiguous allocation since it loaded with 0.534 in the second factor and with 0.431 in the third. Finally, a third round of analysis carried out with 15 reagents resulted in a solution that met all established criteria. The values of this final solution are reported below.

Appropriate values were obtained in the Kaiser-Meyer-Olkin measure of sample adequacy and in the Bartlett sphericity test (KMO = 0.80; Ji2 (105) = 1424.77, p <0.001), indicating the relevance of the exploratory factor analysis. The extraction method yielded a three-factor solution that explains a total of 45.70% of the variance with a Cronbach alpha index of 0.77 for the total scale. Table 2 shows the factor weights, the eigenvalue, the variance explained and the reliability indices obtained for each factor in this final solution.

Tabla 2. Análisis factorial exploratorio del Conflictalk (*N* = 286)

Reactivos	Factor		
	I	**II**	**III**
11. Funcionará si trabajamos juntos.	**0.755**	0.052	-0.128
12. Trabajaremos para sacar esto adelante.	**0.749**	-0.111	-0.091
17. Necesitamos concretar juntos cuál es el problema.	**0.679**	-0.014	0.159
7. Vamos a hablar sobre esto y a encontrar una solución.	**0.654**	-0.060	0.133
5. Tenemos que concretar eso.	**0.582**	-0.005	0.090
3. ¿Qué está pasando? Necesitamos hablar.	**0.544**	-0.108	0.060
6. Quisiera que pudiéramos evitar todo este asunto.	**0.453**	0.040	0.256
9. ¡Es culpa tuya! Y no voy a ayudarte.	-0.037	**0.778**	0.136
8. ¡Cállate! ¡No tienes razón! No voy a escucharte.	-0.075	**0.748**	0.249
10. Harás lo que yo te digo. ¡Te voy a obligar!	-0.093	**0.687**	0.071
1. ¿No te das cuenta de lo estúpido/a que eres?	0.023	**0.555**	0.257
15. Esto no va a ninguna parte, olvidemos todo el asunto, ¿de acuerdo?	0.190	0.088	**0.691**
13. De acuerdo, me rindo, lo que tú quieras.	0.063	0.112	**0.587**
16. Si no quieres hacerlo, olvídalo; ya se lo pediré a algún otro.	-0.031	0.313	**0.582**
14. No quiero hacer esto nunca más. Vamos cada uno por su lado.	0.077	0.218	**0.576**
Autovalor	1.79	2.92	2.14
Porcentaje de varianza explicada	11.93	19.49	14.29
Confiabilidad alfa de Cronbach	0.823	0.802	0.733

Nota. Técnica de extracción: Factorización de ejes principales. Rotación: Varimax.

Fuente: Elaboración propia

As can be seen, the reagents that comprise Factor I correspond to the problem-focused style (dolphin-cooperative) of the original questionnaire; Factor II corresponds to the self-focused style (rhino-aggressive) and Factor III to the other-focused style (ostrich-avoidant). The

average scores obtained by the participants in each of the scales mentioned were 3.22 (SD = 0.89), 1.70 (SD = 0.83) and 2.26 (SD = 0.86), respectively.

Once the Manova was performed, the main effect of the age variable was not statistically significant (Wilks lambda (3/280) = 0.987, p = 0.308); but the gender (Wilks lambda (3/280) = 0.915, p <0.001) and the gender and age interaction (Wilks lambda (3/280) = 0.954, p <0.01). In both cases, said statistically significant difference corresponded to the self-focused style (rhino-aggressive), with F (1/285) = 24.021 (p <0.001) in the first case, and F (1/285) = 8.098 (p <0.01) in the second. Table 3 shows the average scores and corresponding standard deviations. As can be seen, in the aggressive style, men 17 to 20 years old get the highest scores, followed by men 15 and 16 years old. The group with the lowest score in that style was that of women aged 17 to 20 years.

Tabla 3. Medias y desviaciones estándar en el estilo agresivo por género y edad ($N = 286$)

	Mujeres	Hombres	Total
	M (DE)	M (DE)	M (DE)
15 a 16 años	1.57 (0.78)	1.73 (0.75)	1.64 (0.77)
17 a 20 años	1.40 (0.61)	2.13 (0.99)	1.77 (0.90)
Total	1.50 (0.72)	1.91 (0.89)	1.70 (0.83)

Fuente: Elaboración propia

Finally, in order to explore the relationships between Conflictalk's conflict management styles and those of the CMMS questionnaire by Ross and DeWine (1988), a Pearson correlation analysis was carried out between the scales of both instruments. Because, as noted, an effect of gender and its interaction with age was found, it was decided to use the partial correlation analysis in order to control these variables. The results are shown in Table 4. As can be seen, both the aggressive and avoidant style of Conflictalk positively correlated statistically significantly with the self-focused style of the CMMS questionnaire. For its part, the cooperative style of Conflictalk correlated significantly with the styles focused on the other party and focused on the CMMS problem.

Tabla 4. Coeficientes de correlación parcial entre estilos de manejo de conflictos, controlando género ($N = 282$)

	Estilo enfocado en sí mismo	Cuestionario CMMS	
		Estilo enfocado en la otra parte	Estilo enfocado en el problema
Conflictalk			
Estilo enfocado en sí mismo (rinoceronte-agresivo)	0.447***	0.002	-0.073
Estilo enfocado en la otra parte (avestruz-evitativo)	0.287***	0.061	0.067
Estilo enfocado en el problema (delfín-cooperativo)	0.038	0.495***	0.621***

Nota: ***$p < 0.001$.

Fuente: Elaboración propia

Discussion

As noted, the present work set out as specific objectives to analyze: a) the factor structure of Conflictalk in a sample of adolescent high school students aged 15 to 20 years; b) the internal consistency of the aforementioned questionnaire; c) the possible differences by age and gender, and d) the correlations between the Conflictalk scales and those of the CMMS questionnaire.

With respect to the first objective, the results suggest a three-factor solution, with good indicators of validity according to the criteria considered (Moral de la Rubia, 2016). This solution is consistent, in general terms, with the original model of Kimsey and Fuller (2003), which has been taken as a reference in most of the studies carried out with this instrument at international level, to which it was made reference above.

In the context of the above, it is worth highlighting the fact that in the scale of the style focused on the other part (ostrich-avoidant) reagents two and four were eliminated during the analysis in the present study, while the reagent 16, which originally belonged to the scale focused on

itself (rhino-aggressive). On the one hand, this result is consistent with the original study by Kimsey and Fuller (2003), where, in the sub-sample of high school adolescents, reagent two also did not obtain an adequate factor load and reagent 16 presented an assignment ambiguous between the scales focused on himself and focused on the other side. On the other hand, by reviewing the content of the four reagents that were loaded on this scale in the present study (see table 2), it is possible to observe a congruence between them in the sense that they all contain messages oriented towards ending or ending a discussion, which is consistent with the avoidant nature of this conflict management style.

On the other hand, with respect to the second objective, Cronbach's alpha reliability indices were acceptable in one case and good in the other two, since the first was greater than 0.70 and the others were 0.80 (George and Mallery, 2003). This result is similar, in general terms, to that obtained in the previous study carried out by Garaigordobil et al. (2016) in the Basque Country when analyzing the reliability of the Castilian version of Conflictalk.

Moving on to the third objective, in relation to gender differences, as observed, men generally presented a tendency towards higher scores than women in the self-focused style (rhino-aggressive). This result is consistent with the literature of the area in which a greater inclination of males towards aggressive forms of conflict management has been consistently found (Garaigordobil et al., 2016; Luna, De Gante and Gómez, 2018). The most accepted explanation suggests that the processes of differential gender socialization, based on traditional gender roles and stereotypes, favor in men the development of more aggressive and instrumental characteristics, while emphasizing in women those of the relational type and Expressive (Rocha, 2008; Rebollo, Ruiz and García, 2017).

Regarding the interaction of gender and age, the results of the present study suggest that older men probably tend to have higher scores than younger men in the aforementioned aggressive style, while the opposite phenomenon occurs in women : lower scores in the older group. Such findings are consistent with the so-called gender intensification hypothesis (Arnett, 2008; Steinberg, 2017). According to this hypothesis, gender differences in individuals tend to intensify, at least temporarily, during adolescence due to the social pressure on individuals to adapt to established social roles. According to Arnett (2008), this has as a consequence, in the case of men, the greater presence of aggressive behaviors corresponding to the traditional stereotype. Still following this author, in that context "teenagers face the intimidating

perspective of being considered failed men. They defend themselves with verbal and even physical aggressions, when necessary" (Arnett, 2008, p. 147).

Regarding the fourth objective of the present study, the hypothesis was that there would be statistically significant positive correlations: a) between the self-focused styles of Conflictalk and CMMS; b) between the style focused on the other part of the CMMS and the one focused on the others (ostrich-passive), and c) between the styles focused on the problem of CMMS and Conflictalk.

As it was observed, the first and third hypotheses were fulfilled since the correlations indicated were presented in a statistically significant way. However, this did not happen in the case of the style focused on the other part (ostrich-avoidant), since this correlated significantly only with the style focused on the CMMS questionnaire itself. In turn, the style focused on the other part of this last questionnaire correlated statistically significantly with the cooperative style of Conflictalk.

A probable explanation of this last result can be obtained by considering the nature of the reagents with which these scales were composed, after their corresponding validation studies: in the case of CMMS, the reagents retained on the scale focused on the other party have an emphasis greater in the complacent or satisfaction behaviors of the counterpart's wishes (Luna & Laca, 2014), while the corresponding ones of the Conflictalk present in their writing a greater emphasis towards avoidance, as can be seen in Factor III of the table 2. While the Kimsey and Fuller model (2003) does not contemplate this difference between complacent and avoidant style, it is a usual distinction in most of the most recognized models of conflict management styles and strategies in literature on conflict theory - for example, Blake and Mouton (1970), Galtung (2003), Kriesberg and Dayton (2012) and Rahim (2001), ent There are many others.

Regarding the limitations of the present study and future lines of work derived from it, at least the following may be noted. In the first place, as it could be observed, it is possible that there are other styles of conflict management used by adolescents in their interpersonal relationships, which may escape the three-style model that serves as the basis for Conflictalk, such as the aforementioned CMMS complacent style. Therefore, it is advised for future studies to analyze the relationship of Conflictalk with other instruments based on models that contemplate a greater number of styles; among them the Rahim model (2001), whose questionnaire was validated with Mexican adolescents in a recent study (Luna, Valencia y Nava, 2018).

Secondly, it is advisable to contemplate samples with a greater age range in order to allow a broader analysis of the role of age and gender, and thereby deepen the findings of the present study regarding the interaction of these variables.

Thirdly, it is recommended in future studies to examine the possible relationships of the Conflictalk scales with variables associated with the dynamics of interpersonal conflicts, both dispositional (personality, cognition, affectivity, psychological well-being, among others) and situational (context relational, for example), with the aim of achieving a greater understanding of the properties of the instrument.

Finally, it would be advisable to carry out a new study in which the factor composition obtained in the present work is tested through the confirmatory factor analysis technique (AFC), in order to have data to assess the psychometric properties of the instrument, but from the confirmatory perspective.

Conclusions

In conclusion, the present study provides relevant data to support the validity and reliability of Conflictalk and, consequently, to consider it as an instrument with acceptable psychometric properties for the evaluation of conflict management styles in samples of Mexican high school adolescents. In particular, the results obtained support the interpretation that the instrument has a three-factor structure, with which it is possible to evaluate three styles of interpersonal conflict management: a) aggressive (rhino-aggressive), b) avoidant (ostrich-avoidant) and c) cooperative (dolphin-cooperative).

In addition to the above, the present study provides relevant information about Conflictalk's ability to identify gender and age differences that are consistent with the literature in the area; in particular, in what corresponds to the aggressive style, which showed greater presence in male adolescents with respect to women, and in older men with respect to those of younger age.

Finally, the present study also provides data in favor of the convergent and discriminant validity of Conflictalk when analyzing the relationship of its three scales with those of the CMMS instrument.

Notwithstanding the foregoing, in order to strengthen and expand the results of the present study, it is recommended to carry out new investigations with samples of broader age range, as well as

studies in which the factor structure of Conflictalk is analyzed from a confirmatory perspective and its relationship with more instruments that evaluate conflict management styles and other relevant variables.

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