Psychometric properties of the Inventory of School Difficulties in Adolescents (ISDA) within the Chilean population

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Recent studies have indicated that health-risk behaviors and behavioral problems are appearing increasingly at a younger age within the Latin-American population. The Inventory of School Difficulties in Adolescents (ISDA. Martinez-Gonzalez & Vera-Villarroel, 2013) is a new screening scale of 13 items that assesses behavioral problems and common risky behaviors highly relevant within educational settings, especially related to school failure. The aim of this study is to examine the psychometric properties and factor structure of the ISDA. The ISDA, a social-demographic questionnaire and a measure of anxiety and depression symptoms were applied to a sample of 719 Chilean adolescents. The results indicate that the ISDA contains a bi-factor structure: behavioral problems and risky behaviors for health. Estimations of internal consistency and test-retest reliability, as well as evidences of convergent-discriminant validity were adequate. Therefore, the ISDA is an adequate screening tool for assessing risky behaviors and behavioral problems for Chilean adolescents within school settings.

Keywords: School difficulties, risky behavior, behavioral problems, adolescents, validation.

Propiedades psicométricas del Inventory of School. Estudios recientes han indicado que los comportamientos de riesgo para la salud y los problemas de comportamiento aparecen cada vez más a una edad más temprana en la población latinoamericana. El *Inventory of School Difficulties in Adolescents* (ISDA. Martínez-González y Vera-Villarroel, 2013) es una nueva escala de 13 ítems que evalúa los problemas de conducta y las conductas de riesgo comunes de gran relevancia dentro del entorno educativo, especialmente en relación con el fracaso escolar. El objetivo de este estudio es examinar las propiedades psicométricas y la estructura de factores del ISDA. En este estudio se aplicaron el ISDA, un cuestionario sociodemográfico y una medida de ansiedad-depresión a una muestra de 719 adolescentes chilenos. Los resultados indican que el ISDA contiene una estructura bifactorial: problemas de comportamiento y conductas de riesgo para la salud. Las estimaciones de consistencia interna y fiabilidad test-retest y evidencias de validez convergente-discriminante fueron adecuadas. Por lo tanto, el ISDA es una herramienta de evaluación válida para evaluar los comportamientos de riesgo y los problemas de conducta de los adolescentes chilenos dentro de un entorno escolar.

Palabras clave: Dificultades escolares, conductas de riesgo, problemas de conducta, adolescentes, validación.

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Adolescence is a time of crisis and physiological changes with social, academic and psychological implications. During this evolutionary period, the appearance of conduct problems and behavior dangerous to health such as substance abuse or unprotected sex, amongst others, is common (Sawyer et al., 2012).

The adolescent can show different types of non-prosocial behavior, with a tendency towards aggression and impulsivity. The estimations of incidence of behavioral problems or aggressive conduct in adolescents are between 2% and 10%, being higher in males (APA, 2013). Additionally, externalizing symptoms, characterized by problems of disruptive conduct and impulse control, are common in a number of disorders such as: oppositional defiant disorder (with a prevalence of 2% to 10%), intermittent explosive disorder (with a prevalence of 2.7%), antisocial personality disorder and attention deficit disorder, with or without hyperactivity (APA, 2013).

Recent research has provided evidence on the neurobiological mechanisms of aggressive behavior (Dorfman, Meyer-Lindenberg, & Buckholtz, 2014). It has recently been conceived that a common characteristic amongst these mental disorders is executive dysfunction or difficulties in the ability to inhibit impulsive conduct and make appropriate decisions, related to the development of the frontal lobes (Becker & Langberg, 2014; Hummer et al., 2015).

This study has thoroughly investigated the prosocial and non-prosocial behavior in adolescents. Thus, the results of the study indicates that prosocial students have higher levels of self-concept, academic goals, learning strategies and academic performance compared to non-prosocial students (Ingles, Martínez-González, & García-Fernández, 2013; Ingles, Martínez-González, Torregrosa, García-Fernández, & Ruíz-Esteban, 2011a; Ingles, Martínez-González, Valle, García-Fernández, & Ruíz-Esteban, 2011b).

On the other hand, the studies have analyzed the positive relationship between behavioral and self-control problems and anxiety (Modecki, Zimmer-Gembeck, & Guerra, 2017), depression (Blain-Arcaro & Vaillancourt, 2016) and OCD in adolescents (Saad et al., 2017).

In the same manner, a relationship between aggressive behavior, risky decision-making and health-risk behavior exists (Fernández et al., 2013; Kendler et al., 2014; Kim-Spoon et al.,2015; Popovici et al., 2014; Thompson et al., 2013). Scientific literature provides information on the motivating and reinforcing effect of health-risk behavior in human beings (Sjoerds et al., 2014). As a matter of fact, most recent studies indicate that health-risk behaviors are increasingly appearing at younger ages, from approximately ages of 14 to 15 years old in the Hispanic population (Sánchez, Hernández, Pando, & Sánchez, 2013). This health-risk behavior can lead to substance abuse and dependence, sexually transmitted diseases and unwanted pregnancies (Blum & Nelson-Mmari, 2004;

Epstein et al., 2014; Lowry, Crosby, Brener, & Kann, 2014; Ramiro, Falomir, & Bermúdez, 2011).

Additionally, adolescents with emotional disorders may also begin to show health-risk behaviors (Danzo, Connell, & Stormshak, 2017; Kimbrel et al., 2014; Nelemans et al., 2016; Thompson, Connelly, Thomas-Jones, & Eggert, 2013). Similarly, the onset of health risk behaviors is also linked to poor academic performance and school failure in adolescents (Quiroga, Janosz, Bisset, & Morin, 2013), a consequence that is a first-rate problem for the social-economic future of Spanish-speaking countries (Choi de Mendizabal & Calero-Martínez, 2013; Roman, 2013).

In addition, recent studies have indicated that social interaction (with parents, teachers and peers) is an important factor in the development of emotional self-regulation and impulsive behavior (Arnocky & Vaillancourt, 2012; Barajas-González & Brooks-Gunn, 2014; Kendler, Ohlsson, Sundquist, & Sundquist, 2014; Martínez-González, Ingles, Piqueras, & Ramos, 2010; Volk et al., 2015; Zhao, Chen, & Wang, 2015) and can explain the appearance of risky behaviors in the adolescents (Barajas-González & Brooks-Gunn, 2014; Crimmins & Seigfried-Spellar, 2014; Kendler, Ohlsson, Sundquist, & Sundquist, 2014; Rodríguez Góngora, Pérez-Fuentes, & Gázquez, 2014; Zhao, Chen, & Wang, 2015).

With the goal of evaluating problems of antisocial and risk-taking behavior in adolescence, various authors have developed scales in order to detect their appearance during this period. Some of these scales are centered specifically on risk taking behavior related to eating disorders and others on drug use, sexuality, academic performance and prosocial behavior. These scales have been psychometrically validated showing adequate reliability and validity: *Scale of Risk Factors Associated with Eating Disorders* (EFRATA-II. Platas et al., 2013), while others count on a satisfactory psychometric study to determine their psychometric properties within the Spanish-speaking population, such as the case of the *Scale of Risk Behaviors in Adolescents* (ECRA. Adapted from the questionnaire "Adolescent Health Survey".Viner et al., 2006 and validated in the Chilean population by Blum, 1997). In the United States the *Cognitive Appraisal of Risky Events* with varying versions have been used (CARE. Fromme, Katz, & Rivet, 1997; CARE-R. Katz, Fromme, & D'Amico, 2000), assessing the perception of negative and positive consequences related to the practice and participation in risky behaviors. The versions of CARE evaluate illicit drug use, alcohol abuse, risky sexual behavior (CARE-R), coercive sexual behavior, (CARE-R), aggressive and illegal conduct (CARE), high-risk sports (CARE) and academic performance (CARE). CARE has shown a high internal consistency in all three factors (.90, .89 y .83). The last revision of CARE is the *Cognitive Appraisal of Risky Events-Antisocial/Prosocial* (CARE-A/P. Halaby, 2009), that includes aspects related to prosocial behavior, a variable that, according to research literature, should be taken into consideration (Martínez-González et al., 2010).

Hence, in recent international studies, aspects related to antisocial and prosocial behavior have been included (Halaby, 2009) as an important protection factor in the appearance of health-risk behavior and very much related to aspects of social interaction and motivation in the adolescent. Nevertheless, there are only a handful of psychometric studies that include both dimensions: behavioral problems (non-prosocial academic performance, aggressive behavior towards teachers, family and classmates) and risky behavior (alcohol consumption, illicit drug use, sexual activity, amongst others). Moreover, the majority of studies on risky behavior in the adolescent Chilean population are qualitative descriptive studies (Florenzano, 2005; Huitron-Bravo et al., 2011).

As a result, considering the nonexistence of well-established scales in the Spanish-speaking population centered on the detection of behavioral problems and risky behavior that influence school adjustment in Chilean adolescents, this study aims to carry out a psychometric validation of a new tool in detecting behavioral problems and risky behavior in the adolescent Chilean population: the *Inventory of School Difficulties in Adolescents* (ISDA. Martínez-González & Vera-Villarroel, 2013).

This study expect to confirm a model of two factors (behavioral problems and risky behavior), with good internal consistency (Nunally & Bernstein, 1995) and test-retest reliability. In addition, we will find a positive and significant correlation between behavioral problems and the subscales of the *Revised Child Anxiety and Depression Scale* (RCADS. Chorpita, Yim Moffit, Umemoto, & Francis, 2000), since these are greatly related to emotional aspects (Dirks, Treat, & Weersing, 2014). Specifically, we expect to find that adolescents with higher levels of behavioral problems will have more anxiety and depressive symptoms (Blain-Arcaro & Vaillancourt, 2016; Modecki, Zimmer-Gembeck, & Guerra, 2017). However, correlations are expected to be lower between the risky behavioral subscale and the RCADS subscales.

METHOD

Participants

The sample consisted of 719 Chilean adolescents from three educational establishments, from the Santiago Metropolitan Region, VI Libertador Bernardo O'Higgins Region and IX La Araucania Region, between the ages of 15 years and 18 years old, with an average age of 15.94 (SD=1.14), of whom 66.1% were boys.

Instruments

Social demographic questionnaire. An instrument designed ad hoc for this study, consisting of a series of questions on age, sex, grade and country of birth, was used.

Inventory of School Difficulties in Adolescents (ISDA; Martínez-González & Vera-Villarroel, 2013). This questionnaire was developed in order to identify those

adolescents with behavioral problems and risky behavior. The ISDA consists in 13 items in a 4-point Likert scale response format (Never=0, Sometimes=1, Often=2 and Always=3) and contains two subscales: 1) Behavioral problems and 2) Risky behavior. The scale measures the frequency of these conducts throughout the past year. The first subscale contains items on perceived support and conflicts with teachers, parents, peers and academic imbalance; and the second subscale includes items on illicit drug use, alcohol abuse and risky sexual behavior. In the design of the scale the rational strategy was applied, one of the three strategies described by Kelly (1967) in self-reporting development (Fernández-Ballesteros, 2004). According to this strategy, first a bank of items is selected and judged by a group of four experts in the field and subsequently the psychometric properties of the total of selected items for the scale are tested (Fernández-Ballesteros, 2004).

Revised Child Anxiety and Depression Scale (RCADS; Chorpita, Yim, Moit, Umemoto, & Francis 2000; Spanish version by Sandin et al., 2009). A recent meta-analysis has showed that RCADS is a reliable measure of anxiety and depression symptoms appropriate for children and adolescents cross-culturally (Piqueras, Martín-Vivar, Sandin, San Luis, & Pineda, 2017). The original version is composed of 47 items, assessed on a frequency scale of 0 to 3, intended to evaluate a wide spectrum of anxiety and depression symptoms in children and adolescents. Besides the total score, six subscales can be calculated: separation anxiety, social phobia, generalized anxiety disorder, panic/agoraphobia, obsessive-compulsive disorder and major depressive disorder. The psychometric properties of this test in the Spanish population are excellent (Sandín et al., 2009) and it has been used with Chilean samples (Martínez-González et al., 2015). The internal consistency was good for each subscale and the total score: panic disorder α=.85, social phobia α=.82, separation anxiety disorder α=.73, generalized anxiety disorder α=.74, OCD α=.71, major depressive disorder α=.85, and total α=.94.

Procedure

An incidental sampling was used. Participants came from three educational establishments from the Santiago Metropolitan Region, VI Libertador Bernardo O'Higgins Region and IX La Araucania Region, belonging to urban areas of different sizes (rural and urban areas). The educational establishments were all public and were mixed-sex and single-sex (female or male). Consequentially, the social-economic status of the sample was broad and representative of the community population. Of the total of the sample, only four subjects rejected participating in the study or were excluded from the statistical analysis due to the existence of items improperly answered or because they were younger than 15 years or older than 18 years old.

The protocol was administered in the adolescents' educational establishment itself. The subjects completed the questionnaire in their classes, in a collective and completely voluntary manner during the second semester of 2013, with prior written consent from the establishment and the students. Thereupon, they were given the instructions to each of the selected scales. The investigator stayed in the classroom during its completion for the purpose of providing individualized help to those students who expressed difficulties. The time taken to complete all of the scales was approximately 20 minutes. One month after the first test, the ISDA was administered once again to a random sample of 139 individuals. These subjects were part of the total sample of 719 subjects. None of the subjects received any type of financial incentive.

Statistical analysis

The statistical analysis was carried out using the computer programs FACTOR 9.3 and IBM SPSS-Statistics 22.

The exploratory factor analysis (EFA) was achieved using the program FACTOR 9.3 (Lorenzo-Seva & Ferrando, 2014). In the metric study of the items and the dimensionality of the scale, descriptive analysis of the items and the EFA were carried out. The latter two were developed through the Unweighted Least Squares (ULS) extraction method, suitable for the determination of latent factors that underlie the shared variance of the items; and the Direct Oblimin method, appropriate when a correlation between the analyzed factors is assumed or known (Worthington & Whittaker, 2006). The suitability of the matrix in order to carry out the EFA was tested using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Sphericity Test, whereas the extraction of the number of factors was performance by parallel analysis (PA). This procedure has proven to be more accurate than the usual extraction criteria (Velicer, Eaton, & Fava, 2000).

Data on the internal consistency of ISDA subscales and total score were also collected using the program FACTOR 9.3 (Lorenzo-Seva & Ferrando, 2014). McDonald's omega index (ω_t, McDonald, 1999) was used to estimate the internal consistency, as they are more valued estimators of reliability than the Cronbach's alpha (Schweizer, 2011). In addition, to examine the temporary stability (test-retest reliability), correlations (Pearsons' r) using the program SPSS-22 (2013) was calculated.

Lastly, in regards to the evidence of convergent and discriminant validity, the coefficients of correlation between the ISDA score and the remainder of measures were calculated. We also used the Cohen's criteria (Cohen, 1988) to evaluate the effect size (ES) of the correlations. In this case an ES is considered small when the correlation is below .10, medium when between .10 and .30 and large when above .50 (Cohen, 1988; Lipsey & Wilson, 2001). Finally, to analyze the differences in anxiety, depression and obsessive-compulsive disorder symptoms between groups with different degree of behavioral problems we used non-parametric and parametric tests. According the 25th, the

50th, and the 75th percentiles, level of behavioral problems was categorized as follows: low level were direct scores lower than 4 on the subscale Behavioral Problems (first quartile; q1=4); medium level were direct scores between 5 and 7 on the subscale Behavioral Problems (q2=5; scores between q1 and q3); high level were direct scores higher than 8 on the subscale Behavioral Problems (q3=8). We first tested the assumption of homogeneity (Levene's test). Then, we calculated Kruskal-Wallis test. We also calculated parametric tests in order to provide post-hoc comparisons between groups (ANOVAs and post-hoc comparisons by Scheffe´s method). The relationships were considered statistically significant when $p<.001$. We also provide Cohen's d (standardized difference between two means) as an estimator of effect size ($.20 \leq d \leq .50$ small; $.51 \leq d \leq .79$ medium, and $d \geq .80$ large effect size (Cohen, 1988; Lipsey & Wilson, 2001).

RESULTS

Items analysis

The results show that all the corrected item-total correlations surpass the .30 value, except item 12 that nonetheless was very close (Nunally & Bernstein, 1995). It was not observed that the elimination of these items improved the global Cronbach's alpha of the scale (.79) (see table 1).

Table 1. Mean (M), Standard Deviation (SD), Corrected item-total correlation ($r_{it}{}^c$)
and Cronbach´s alpha if the item is eliminated (α_{-i})

Items	M	SD	$r_{it}{}^c$	α_{-i}
1	.57	.59	.33	.79
2	1.15	.74	.43	.78
3	.43	.60	.42	.78
4	.63	.77	.38	.79
5	.45	.62	.41	.78
6	1.23	.75	.34	.79
7	.88	.79	.54	.77
8	.93	.89	.42	.78
9	.83	.77	.52	.77
10	.70	.92	.58	.77
11	.46	.78	.55	.77
12	.04	.26	.25	.80
13	.45	.77	.34	.79
Total	8.75	5.10		.80

Factor analysis

The sample adequacy index (KMO=.81) and Bartlett's Sphericity Test (χ^2=2284.1; df=78; $p<.001$) indicated suitability of the data in carrying out the factor analysis. The factor solution obtained by means of Parallel Analysis (PA) criterion was formed by two factors that explained 53% of the variance; the risky behavior factor explained 38% and the behavioral problems factor 15%. The correlation between the two

factors was .38. In table 2 the factor loadings of the items for each one of the selected factors are summarized.

Table 2. Saturations of the items in each factor

Item	Behavioral problems	Risky Behaviors	h^2
1	.31	.23	.49
2	.65	-.04	.48
3	.34	.34	.73
4	.42	.14	.63
5	-.01	.66	.56
6	.57	-.09	.54
7	.77	.01	.74
8	.79	-.14	.94
9	.07	.69	.70
10	.14	.69	.80
11	-.02	.88	.92
12	-.07	.74	.84
13	-.10	.74	.84
13	-.10	.68	.55

Note. The table does allow to see letters in bold

Internal consistency

The internal consistency (McDonald's omega) for the ISDA total score and each of its subscales were high. The reliability indices indicate that the internal consistency was high for the total score of the ISDA ($\omega_t=.86$), the behavioral problems subscale ($\omega_t=.78$) and the risky behavior subscale ($\omega_t=.87$).

Test-retest reliability (1 month)

Concerning temporary stability, our results indicate that the ISDA total score had an $r=.71$, equivalent to a high test-retest correlation, as in the behavioral problems ($r=.67$) and risky behavior ($r=.74$) subscales. For all of the cases, p was below .0

Convergent-discriminant validity

The correlations of the ISDA total score, the behavioral problems and risky behavior subscales in regard to the RCADS total score and each of the subscales in the total sample are represented in table 3.

Table 3. Correlations with anxiety and depression symptoms

	Behavioral problems	Risky behaviors	Total ISDN
SAD	.25**	.05	.18**
SP	.34**	-.05	.18**
GAD	.28**	.02	.19**
PD	.41**	.11**	.32**
OCD	.32**	.02	.21**
MDD	.56**	.11**	.41**
Total RCADS	.46**	.06	.32**

Note. **$p<.01$; SAD=Separation Anxiety Disorder; SP=Social Phobia; GAD=Generalized Anxiety Disorder; PD=Panic Disorder; OCD=Obsessive Compulsive Disorder; MDD=Major Depressive Disorder.

The correlations between the ISDA total score and the RCADS scores were between small and medium (effect size between .18 and .41). Specifically, the higher correlations between the behavioral problems subscale of the ISDA and the RCADS varied between low and medium effect sizes, except in the major depressive disorder subscale, with a large effect size of .56. However, the correlations between the risky behavior subscale and RCADS were lower (null or small effect size between -.04 and .11 for all the RCADS subscales). Differences in anxiety, depression and obsessive-compulsive disorder symptoms among three groups with different degree of behavioral problems.

Differences in symptoms of anxiety, depression and OCD across groups by level of behavioral problems

First, the testing of homogeneity of variances showed that only GAD comparisons confirm this homogeneity. Then, Kruskal-Wallis test showed statistically significant differences for all comparisons ($p<.001$).

Concerning parametric tests, table 4 presents the differences in RCADS scores across the three groups with different degree of behavioral problem (Behavioral Problem subscale). We found significant differences among the three groups of behavioral problems in all subscales and the total scale of the RCADS. Post-hoc comparisons showed statistically significant differences among the three groups by level of behavioral problems, following always the same order: the group with high level of behavioral problems showing higher scores than group with medium level and the medium level one greater than the low level of behavioral problems group. The only exceptions were for the comparison between the group with low level and the group with medium level of behavioral problems in SAD and GAD symptoms ($p<.05$).

Consequently, the comparisons between the group of subjects with low and high behavioral problems reveal large or near-large effect sizes: symptoms of separation anxiety disorder ($p=.001$; $d=0.71$); social phobia ($p=.001$; $d=0.78$); generalized anxiety disorder ($p=.001$; $d=0.66$); panic disorder ($p=.001$; $d=0.94$); obsessive-compulsive disorder ($p=.001$; $d=0.75$); and depression ($p=.001$; $d=1.44$).

The comparison between the group with medium and high levels of behavioral problems display medium or near-medium effect sizes: separation anxiety disorder ($p=.001$; $d=0.34$); social phobia ($p=.001$; $d=0.43$); generalized anxiety disorder ($p=.001$; $d=0.49$); panic disorder ($p=.001$; $d=0.61$); obsessive-compulsive disorder ($p=.001$; $d=0.49$); and depression ($p=.001$; $d=0.75$).

Finally, the differences between the group with medium and low levels of behavioral problems show mostly small effect sizes: social anxiety disorder ($p=.05$; $d=0.34$); social phobia ($p=.001$; $d=0.34$); panic disorder ($p=.001$; $d=0.33$); obsessive-compulsive disorder ($p=.01$; $d=0.27$); and depression ($p=.001$; $d=0.65$).

Table 4. Differences in symptoms of anxiety, depression and OCD across groups by level of behavioral problems

| RCADS | Groups by level of Behavioral Problems | | | | |
| | Low | Medium | High | | |
	M(SD) N=281	M(SD) N=238	M(SD) N=200	$F_{719(2)}$	p
SAD	1.43 (1.99)	1.96 (2.30)	2.91 (3.21)	20.55	.001
SP	7.74 (4.40)	9.34 (4.97)	11.60 (5.57)	35.74	.001
GAD	6.72 (3.34)	7.32 (3.20)	9.00 (3.60)	27.39	.001
PD	4.11 (3.57)	5.40 (4.12)	8.47 (5.80)	56.55	.001
OCD	3.41 (2.74)	4.18 (2.87)	5.76 (3.59)	35.00	.001
MDD	6.20 (3.63)	8.89 (4.56)	12.68 (5.49)	119.58	.001
Total RCADS	29.64 (15.00)	37.11 (17.32)	50.42 (22.05)	78.53	.001

Note. SAD=Separation Anxiety Disorder; SP=Social Phobia; GAD=Generalized Anxiety Disorder; PD=Panic Disorder; OCD=Obsessive Compulsive Disorder; MDD=Major Depressive Disorder

DISCUSSION

The objective of this study was to analyze the psychometric properties of the *Inventory of School Difficulties in Adolescents* in the Chilean adolescent population. Our data shows that the ISDA functions properly within an adolescent population between the ages of 15 and 18 years old.

Firstly, our data fitted the two-factor model for the total sample in an acceptable manner. Therefore, this factor structure is similar to those obtained through other health-risk behavior inventories (Halaby, 2009) and suggests the inclusion of two factors related to risky behavior on one hand and behavioral problems on the other.

The ISDA expresses a high internal consistency, similar to the one found in other studies that investigated risky eating behavior in the adolescent population (Platas et al., 2013). This study, as in other research, showed high test-retest reliability with adequate values, similar to those found in other studies within an adolescent population (Halaby, 2009). As a result, the data seems to support evidence of construct validity and reliability of the ISDA within the Chilean adolescent population.

Regarding the association of ISDA with other variables, this study shows a greater relationship between the behavioral problems subscale of the ISDA and the RCADS subscales, due to the existing relationship between behavioral variables and emotional variables (anxiety and depression). Specifically, the high relationship between the major depression subscale and the behavioral problems subscale may be reflecting a latent variable related to depressive symptomatology, greatly related to peer social interaction (Dirks, Treat, & Weersing, 2014), a variable that has been included in the behavioral problems subscale (Blum & Nelson-Mmari, 2004; Quiroga et al., 2013). Therefore, we found a significant difference within the severity of the behavioral problems in all subscales and within the total scale of the RCADS.

These results are similar to previous studies that found a relationship between anxiety, depression (Blain-Arcaro & Vaillancourt, 2016), OCD with behavioral problems (Saad et al., 2017) and difficulties within the emotional control in adolescents (Modecki, Zimmer-Gembeck, & Guerra, 2017). The results indicate that the relationship between the risky behavior subscale and the RCADS subscales (social anxiety, obsessive-compulsiveness, depression, agoraphobia, separation anxiety and panic) is very low and not significant or near-non-significant differences were found in the correlations between RCADS scales and risky behaviors. The results suggest that the risky behaviors are higher in external symptoms than in internal symptoms.

Therefore, these data results are in line with existing studies about emotional disorders and risky behaviors (Danzo, Connell, & Stormshak, 2017; Nelemans et al., 2016).

In summary, the ISDA has excellent psychometric properties for its implementation in adolescents within a Chilean academic context. It seems to be an appropriate instrument for quickly detecting behavioral problems and health-risk behavior ISDA can serve as a detection tool in order to avoid future academic failure.

Therefore, ISDA can be included within the psychological intervention programs for the prevention of behavioral problems and health-risk behavior in Chilean adolescents. Thus, this contribution can have positive consequences in the Chilean educational system and within the socio-economic level of Spanish-speaking countries.

However, this study presents a series of limitations that future research should take into consideration: (1) the results obtained cannot be generalized to other populations (children and adults) or to other Latin American countries. Future work should confirm whether the results found in adolescents differ or remain consistent in other age groups, carrying out the adaptation of the test; (2) it is important to underline that only self-reporting measures were used in this investigation. Future investigations should apply different assessment procedures (information derived from parents and teachers).

Despite these limitations, the ISDA is nonetheless a test with a number of strengths, such as adequate reliability and evidence of validity, that vouch for its use in the Chilean adolescent population. However, it is an indispensable and pending task to investigate the ISDA's psychometric properties in other countries, using similar tests for its validation.

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