

Social Provisions in Adolescents' Relationships With Parents, Best Friends, and Teachers: Validation of the Network of Relationships Inventory–Social Provisions Version

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Abstract

Adolescents' relationship quality plays a central role in socioemotional development. The Network of Relationships Inventory–Social Provisions Version (NRI-SPV) is widely used to assess relationship quality. However, evidence regarding its psychometric properties across different relationship types remains limited. This study examined the factor structure, internal consistency, construct validity, and convergent validity of the NRI-SPV in relationships with mothers, fathers, best friends, and teachers. A total of 714 participants (53.2% girls), aged 11 to 15 years ($M = 13.08$, $SD = 1.30$), completed the inventory. Confirmatory factor analyses supported a nine-factor first-order structure, comprising seven positive provisions (reliable alliance, admiration, affection, companionship, instrumental help, intimacy, and nurturance) and two negative provisions (conflict and punishment), with good fit across relationship types ($\chi^2/df = 1.99$ – 2.56 , $CFI = .92$ – $.97$, $TLI = .90$ – $.96$, $RMSEA = 0.04$ – 0.06 , $SRMR = .04$ – $.06$). In contrast, a second-order model with two higher-order factors (social support and negative interactions) showed poorer fit ($\chi^2/df = 2.78$ – 3.98 , $CFI = .87$ – $.92$, $TLI = .85$ – $.91$, $RMSEA = .06$ – $.07$, $SRMR = .10$ – $.16$). Internal consistency was acceptable to strong, and all items loaded significantly on their intended factors. Convergent validity was demonstrated through robust associations with attachment security to mothers and fathers, indicating that the NRI-SPV effectively captures relational qualities aligned with established attachment constructs.

Keywords

adolescence, scale reliability, factor structure, construct validity, convergent validity, quality of relationships

Introduction

Adolescents develop within a complex network of social interactions and close relationships, each contributing uniquely to their psychological functioning. Given the developmental changes and challenges characteristic of this period, adolescence is widely regarded as a stage of heightened vulnerability and risk. From a developmental perspective, the quality of these relationships plays a central role in emotional, cognitive, and social development (Oh et al., 2021), shaping both adaptive and maladaptive trajectories (Cummings et al., 2000). Relationships with mothers, fathers, close friends, and teachers are particularly salient during adolescence, influencing emotion regulation, social competence, and vulnerability to psychopathology (Collins & Laursen, 2004).

Although early models focused primarily on the mother-child attachment (Bowlby, 1969), more recent

perspectives highlight the importance of a broader array of relationships and their distinct developmental roles (Furman & Buhrmester, 2009; van Meegen et al., 2024). For example, paternal involvement supports self-regulation and academic adjustment (Lamb & Lewis, 2010), friendships provide intimacy and stress buffering during adolescence (Bernasco et al., 2022), and teacher-student relationships influence both academic outcomes and emotional well-being (Roorda et al., 2011). Taken together,

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these relationships offer diverse contexts fostering security, autonomy, and social competence.

Parental relationships, with both mothers and fathers, shape emotion regulation, self-concept, and the internal working models that guide future interpersonal social functioning (Grossmann et al., 2002; Verissimo et al., 2011). Friendships during adolescence provide opportunities for mutuality, perspective-taking, and emotional sharing, becoming increasingly influential for psychosocial adjustment (Bukowski et al., 2018). High-quality friendships protect against mental health difficulties, such as anxiety and depression, and are associated with greater life satisfaction (Nishida et al., 2024). Conversely, limited or poor-quality social connections have been linked to increased psychological distress, including higher levels of anxiety and depressive symptoms, as well as lower overall well-being (Qualter et al., 2015). Beyond adolescence, there is broader evidence that indicates that social connectedness plays a central role in long-term mental and physical health, with supportive relationships acting as protective factors across the lifespan (Holt-Lunstad et al., 2015).

Meanwhile, teachers are also important sources of support in school, where teacher-student relationships influence academic motivation, behavior, and socioemotional well-being (Pianta et al., 2003). When adolescents stay at school, physically separated from their primary attachment figures, and cannot rely on them, they may seek support from other adults, especially in distressing circumstances (Buist, 2018). In such a context, teachers can provide guidance and reassurance during experiences of pain, fear, danger, or even illness (Verschuereen & Koomen, 2012).

In fact, adolescents rely on a network of close relationships, each contributing uniquely to their development. Parental relationships shape emotion regulation, self-concept, and internal working models, whereas friendships provide intimacy, mutual support, and protection against social stressors. Teachers may offer guidance and support within school contexts when primary attachment figures are absent.

According to Weiss (1974), relationships fulfill six social functions, or “provisions,” which can be obtained from multiple relationship types. Assistance-related provisions support problem-solving under stress (e.g., guidance from teachers or parents, reliable alliance from family), whereas non-assistance-related provisions enhance overall functioning (e.g., reassurance of worth, opportunity for nurturance, intimacy from family or friends, and social integration from peers). Taken together, these provisions promote self-efficacy, purpose, security, and identity, highlighting how diverse relationships contribute to adolescents’ social, emotional, and cognitive development.

Given the distinct but interrelated influences of these relationships, there is a clear need for instruments that provide valid, multidimensional, and comparable assessments of the quality of relationships across contexts. Although

the interrelations among relationship contexts are widely recognized, relatively few studies have simultaneously examined young adolescents’ relationships with mothers, fathers, friends, and teachers (De Laet et al., 2014; Laursen & Mooney, 2008). Importantly, the use of consistent measurement across relationship contexts remains scarce, despite being crucial for enabling direct and meaningful comparisons of perceived relationship quality.

Network of Relationships Inventory–Social Provisions Version (NRI-SPV)

The NRI-SPV (Furman & Buhrmester, 1985) is based on Weiss’s (1974) *Social Needs Theory*, which conceptualizes the social provisions and interpersonal needs underlying close relationships. It uses the same set of items to assess how different relationship partners fulfill seven core provisions, such as affection, reliable alliance, reassurance of worth (often referred to as admiration), intimacy, instrumental help, companionship, and nurturance, along with negative interactions (conflict and punishment). A key strength of the NRI-SPV is its consistent use of items across multiple relationship contexts (e.g., parents, friends, teachers), allowing direct comparisons of perceived relationship quality. This feature makes the instrument valuable for examining variations in relational experiences, and validating it across cultures ensures its applicability for both developmental research and clinical assessment.

The Present Study

Interpersonal relationships play a central role in adolescents’ development, shaping emotional well-being, identity formation, and social adjustment. Accordingly, instruments designed to assess perceived relationship quality must demonstrate strong psychometric properties, particularly when applied across different cultural contexts. Although the NRI-SPV has been widely used across developmental stages and cultural settings, its psychometric properties among adolescents remain relatively underexamined.

The present study addresses this gap by validating the Portuguese version of the NRI-SPV in a large sample of adolescents. Specifically, we aimed to examine (a) the factor structure of the instrument for each relationship (mother, father, best friend, and teacher), (b) its internal consistency and construct validity, (c) mean differences across relational contexts, and (d) associations among relationship ratings, including cross-links among adolescents’ perceptions of mothers, fathers, friends, and teachers.

In addition, to further establish the validity of the Portuguese NRI-SPV, we examined its convergent validity through associations with attachment security, using the *Kerns Security Scale* (KSS; Kerns et al., 1996). This approach is theoretically grounded in the conceptual overlap between social support and attachment processes. The NRI-SPV assesses key relational provisions, including

aspects related to the attachment system (e.g., proximity seeking, reliable alliance), whereas the KSS evaluates adolescents' perceptions of caregivers' availability and responsiveness. As such, both instruments tap into complementary dimensions of relationship quality. Moreover, the use of the KSS, which has been previously validated in Portuguese samples (Fernandes et al., 2020), provides a robust benchmark for evaluating concurrent criterion validity. Given that both measures are developmentally appropriate for adolescence and sensitive to variations in relational dynamics across social contexts, their associations offer important evidence regarding the extent to which the NRI-SPV captures meaningful aspects of adolescents' relational experiences.

Based on previous research, we expected that (a) the original factor structure of the NRI-SPV would be supported across the relationship contexts; (b) the scales would demonstrate adequate internal consistency; (c) meaningful differences would emerge across relationship types analyzed in this study; and (d) NRI-SPV scores would be positively associated with attachment security, providing evidence of convergent validity.

Together, these analyses provide a comprehensive evaluation of the psychometric properties and relational sensitivity of the Portuguese version of the NRI-SPV.

Method

Participants

A total of 714 adolescents participated in the study (53.2% girls), aged between 11 and 15 years ($M = 13.08$, $SD = 1.30$). Participants were recruited from three public junior-high schools in the Lisbon metropolitan area and were predominantly attending seventh grade (89.5%). Although all participants were invited to report on the perceived quality of their relationships with their mother, father, best friend, and teacher, not all completed every section. The final subsamples included 590 adolescents for mother reports, 545 for father reports, 511 for best-friend reports, and 478 for teacher reports. Across subsamples, participants were comparable in age ($M \approx 13.0$ years) and gender distribution (approximately 54%–55% girls), with the majority attending the seventh grade ($\approx 90\%$).

Measures

NRI-SPV (Furman & Buhrmester, 1985). Adolescents' perceptions of close relationship qualities were assessed using the Portuguese adaptation of the NRI-SPV. Although the measure can be applied to various types of relationships, the present study focused on adolescents' reports regarding their mothers, fathers, best friends, and a teacher they considered important.

The inventory includes 33 items covering seven positive and supportive qualities (reliable alliance, admiration, affection, companionship, instrumental help, intimacy, and

nurturance), and two negative dimensions, conflict and punishment (three items per subscale). For example, items include “*How sure are you that this relationship will last no matter what?*” (reliable alliance) and “*How often do you and this person disagree and quarrel with each other?*” (conflict). Following standard scoring procedures, we computed mean scores for the positive subscales and for the negative subscales to create higher-order indices of social support and negative interactions. Two additional subscales were also included. Relationship satisfaction and relative power were included as complementary indicators of relationship quality. Given that these dimensions do not form part of the core social provision's structure, they were not included in the evaluation of the instrument's factor structure, but they were examined in the remaining psychometric analyses to provide a more comprehensive assessment of adolescents' relationship experiences.

Participants rated each item on a 5-point scale (1 = *None/Not at all* to 5 = *Very much/Almost always*). Higher scores on supportive dimensions indicate greater perceived support, whereas higher scores on negative dimensions reflect greater relationship strain. Prior research has demonstrated adequate reliability across gender, age, and ethnic groups (Ackermann et al., 2020; Furman & Buhrmester, 1992; Oh et al., 2021; Wang, 2014).

KSS (Kerns et al., 1996). The instrument consists of 15 items per parent (30 items in total) and was developed to capture how securely youth feel attached to their mother and father. It assesses beliefs about a caregiver's availability and responsiveness, the extent to which adolescents seek support from that caregiver in stressful situations, and their comfort and interest in communicating with them.

For each item, participants chose which of two contrasting statements best reflected their experience (e.g., “*Some youths find it easy to trust their mother/father*” vs. “*Other youths are not sure they can trust their mother/father*”), following the response format introduced by Susan Harter (1982). They then indicated whether the chosen statement was “*completely true*” or “*sort of true*” for them. Scores for each parent were computed by averaging responses across the 15 items, which were rated on a 1–4 scale. The factorial structure of the Portuguese version has been validated previously (Fernandes et al., 2020). Higher scores reflect greater perceived attachment security to mother and father. Internal consistency was high in our study, with Cronbach's $\alpha = .84$ for fathers and $.83$ for mothers.

Procedure

Data were collected during the second trimester of the academic year. Following approval from school authorities, parental consent and adolescent assent were obtained. Participants completed paper-and-pencil questionnaires in classroom settings during a single 45-min session administered by trained research assistants, who ensured confidentiality, voluntariness, and independent responding. All

procedures complied with APA Ethical Guidelines and the Declaration of Helsinki, ensuring participants' anonymity and confidentiality. The assessment protocol was approved by the ISPA – Instituto Universitário Ethical Committee and MIM (ref. number: 0578000013)

Results

Given that relationship satisfaction and relative power capture broader evaluative and structural aspects of relationship functioning, rather than the social provisions dimensions underlying the NRI-SPV factor structure, these subscales were excluded from the factor-structure model and examined in all other analyses.

Preliminary Analyses

All items were examined for normality. Based on recommended thresholds ($|Sk| < 2; |Ku| < 7$), most items met normality assumptions (Kline, 2011). No violations were observed for father reports ($Sk = -1.85$ to 1.12 ; $Ku = -1.58$ to 2.29). In contrast, several items showed deviations in other relationship contexts: for mothers, Items 1, 23, and 35 (reliable alliance) and Items 7 and 19 (affection); for best friends, Item 8 (punishment); and for teachers, Item 17 (intimacy), with skewness and kurtosis values exceeding recommended thresholds.

Internal Consistency and Scale Reliability

To examine the internal consistency of the NRI-SPV, Cronbach's alpha coefficients were calculated for all factors. The results showed acceptable to strong internal consistency for all nine first-order factors (mother: $\alpha = .88-.67$; father: $\alpha = .92-.74$; best friend: $\alpha = .85-.64$; important teacher: $\alpha = .84-.54$), and for the second-order factors (mother social support $\alpha = .89$ and mother negative interactions $\alpha = .54$; father social support $\alpha = .94$ and father negative interactions $\alpha = .52$; best friend social support $\alpha = .91$ and best friend negative interactions $\alpha = .46$; important teacher social support $\alpha = .89$ and important teacher negative interactions $\alpha = .52$). In addition, the two other relevant subscales also showed an acceptable, to strong internal consistency: satisfaction with the relations ($\alpha = .93-.80$) and relative power ($\alpha = .82-.65$).

Factor Structure

Based on the original NRI-SPV (Furman & Buhrmester, 1985), a confirmatory factor analysis (CFA) was used to test the hierarchical factor structure, in which the NRI items pertaining to a relationship would load on nine first-order factors, seven representing positive qualities (reliable alliance, admiration, affect, companionship, instrumental help, intimacy and nurturance) and two representing negative qualities (conflict and punishment) of relationships. In addition, a

second-order factorial model, also proposed by the original authors, was tested with nine subscales loading on two higher-order factors, which were 'social support', comprising the seven positive qualities, and 'negative interactions', comprising the two negative qualities of relationships.

Separate CFAs were conducted for ratings of relationships with each parent, best friend and teacher. The factorial models were estimated with Amos (IBM SPSS Amos 30) using robust maximum likelihood (MLR) estimation to address issues with non-normally distributed data. The goodness of fit for each model was evaluated using several fit indices, such as comparative fit index and Tucker–Lewis index (CFI and TLI $> .95$ good and $> .90$ acceptable), root mean square error of approximation (RMSEA $< .05$) with a 95% confidence interval, and standardized root mean square residual (SRMR $< .08$) (e.g., Hu & Bentler, 1999). A normed chi-square (χ^2/df) < 5.0 is considered adequate, and smaller values are indicative of a best-fitting model.

The proposed first-order model with nine latent factors (reliable alliance, admiration, affect, companionship, instrumental help, intimacy, nurturance, conflict and punishment) was tested for each type of relationship separately, to check if it provides an adequate fit in a sample of Portuguese adolescents. Fit indices are presented in Table 1. The results of CFAs revealed acceptable to good fit indices for each of the relationship types. However, the analysis of the modification indices showed the possibility of improvements. The standardized residuals for Items 17 and 29, 18 and 30, and 21 and 33, for father; Items 1 and 24, 18 and 30, and 21 and 33, for mother; Items 21 and 33, for best friend; and Items 6 and 30, for important teacher, were correlated (each pair has similar meaning). The model for each type of relationship was tested again, and a better fit was reached for most of the fit indices. The improved first-order models revealed a good fit to the data for all relationship types (range = $\chi^2/df = 1.99-2.56$, CFIs = $.97-.92$, TLIs = $.96-.90$, RMSEAs = $0.04-0.06$, and SRMSRs = $0.04-0.06$).

The hierarchical structure with second-order factors, composed of two latent factors (social support and negative interactions), was also tested, keeping the nine first-order factors. Results of CFAs revealed a worse fit to the data for all relationship types compared with the model without the two higher-order factors (range = $\chi^2/df = 2.78-3.98$, CFIs = $.87-.92$, TLIs = $.85-.91$, RMSEAs = $0.06-0.07$, and SRMRs = $.10-.16$).

A $\Delta \chi^2$ differences test showed that the fit of the improved first-order model was significantly better than the second-order model for all types of relationships ($\Delta \chi^2(28) = 288.1-601.3$, $p < .001$).

Our results suggest that the model with nine first-order factors should be considered the better fit; the second-order scores may be used descriptively for composite indices, but the first-order model is preferred for measurement purposes.

Table 1. Fit Indices for the Tested Structural Models of NRI-SPV.

Relationship	Model description	χ^2/df	CFI	TLI	RMSEA (90% CI)	p	SRMR
Mothers	Original first-order factors	2.44	.96	.95	0.05 [0.04–0.05]	.57	.0629
	Improved first-order factors	2.09	.97	.96	0.04 [0.04–0.05]	.99	.0523
	Second-order factors	3.40	.92	.91	0.06 [0.06–0.07]	.00	.1357
Father	Original first-order factors	2.71	.96	.95	0.06 [0.05–0.06]	.02	.0451
	Improved first-order factors	2.26	.97	.96	0.05 [0.04–0.05]	.72	.0396
	Second-order factors	3.98	.92	.91	0.07 [0.07–0.08]	.00	.1641
Best friend	Original first-order factors	2.06	.95	.94	0.05 [0.04–0.05]	.92	.0436
	Improved first-order factors	1.99	.96	.95	0.04 [0.04–0.05]	.97	.0432
	Second-order factors	2.78	.91	.90	0.06 [0.05–0.06]	.00	.1172
Teacher	Original first-order factors	2.61	.92	.90	0.06 [0.05–0.06]	.00	.0588
	Improved first-order factors	2.56	.92	.90	0.06 [0.05–0.06]	.01	.0581
	Second-order factors	3.31	.87	.85	0.07 [0.06–0.07]	.00	.1020

Construct Validity

In general, all items loaded highly ($\lambda \geq .50$) on their expected first-order factors (regarding father: .46–.93, with only one item below .55, regarding mother: .40–.88, with only two items below .53, regarding best friend: .40–.85, also with only two items below .56, and important teacher: .35–.84, with three items below .58), showing that each factor has factorial validity. All items also have adequate individual reliability ($\kappa^2 \geq .25$).

Correlations Among Relationships

To examine whether relationship qualities were influenced by experiences across different relational contexts, correlations among relationship types were computed. The strongest associations emerged between mother and father ratings, with particularly high correlations for intimacy ($r = .66$) and nurturance ($r = .69$), indicating that adolescents perceived both parental relationships as highly close and nurturing. Best-friend ratings showed moderate correlations with both parents but lower values for intimacy (mother: $r = .12$; father: $r = .08$), suggesting that emotional closeness with friends is perceived as less comparable to parental relationships. Teacher ratings generally showed the lowest correlations, except for nurturance and punishment, reflecting a relationship characterized by lower affect but consistent support and discipline. Overall, all correlations were statistically significant, with the highest values occurring within the family (mother-father) and the lowest involving best friends and teachers.

These patterns indicate that the NRI-SPV effectively differentiates among relationship types. Stronger associations between mother and father ratings, combined with weaker and provisions-specific associations involving friends and teachers, support the measure's discriminant validity and demonstrate that adolescents perceive distinct relational profiles across contexts. When examining the two second-order factors, mother-father correlations were

again the highest for both social support ($r = .48$) and negative interactions ($r = .48$), suggesting a strong but potentially conflictual bond. Other relationships showed moderate correlations for social support ($r = .27$ –.30) and slightly higher correlations for negative interactions ($r = .35$ –.49), indicating that support and conflict coexist across relationships but are less intense than in parent-adolescent relationships.

Differences in Relationships

A mixed multivariate repeated-measures analysis of variance (ANOVA) examined differences in relationship qualities across relationship types (mother, father, best friend, teacher) and interactions with sex. Relationship type was the within-subjects factor, sex the between-subjects factor, and nine relationship qualities served as dependent variables. Because Mauchly's test indicated violations of sphericity, Huynh-Feldt corrections were applied, and Bonferroni-adjusted comparisons were used for follow-up tests. Significant main effects of relationship type and significant interactions with sex emerged for all dimensions: reliable alliance, $F(3, 665) = 451.73$, $p < .001$, $\eta_p^2 = .405$; admiration, $F(3, 664) = 205.67$, $p < .001$, $\eta_p^2 = .236$; affection, $F(3, 667) = 514.11$, $p < .001$, $\eta_p^2 = .435$; companionship, $F(3, 665) = 723.76$, $p < .001$, $\eta_p^2 = .521$; instrumental help, $F(3, 667) = 65.88$, $p < .001$, $\eta_p^2 = .090$; intimacy, $F(3, 666) = 590.70$, $p < .001$, $\eta_p^2 = .470$; nurturance, $F(3, 662) = 575.13$, $p < .001$, $\eta_p^2 = .465$; conflict, $F(3, 661) = 33.91$, $p < .001$, $\eta_p^2 = .049$; and punishment, $F(3, 666) = 3,323.06$, $p < .001$, $\eta_p^2 = .333$. Across dimensions, mothers and best friends generally received the highest ratings on positive qualities, whereas teachers consistently received the lowest. Girls tended to report higher support and intimacy with best friends, whereas boys reported higher scores with fathers on several dimensions. For negative qualities, conflict was highest with mothers and best friends, and punishment was severest with mothers. Sex differences were small but indicated that girls perceived less punishment from fathers and boys perceived less punishment from best friends.

Two additional dimensions, relative power and relationship satisfaction, showed similar patterns. Relative power demonstrated a significant main effect of relationship type, $F(3, 663)=282.01, p<.001, \eta^2_p=.298$, and an interaction with sex, $F(3, 663)=4.89, p<.001, \eta^2_p=.010$, with adolescents perceiving the greatest power in relationships with mothers and the least with teachers. Girls reported higher perceived power with best friends. Relationship satisfaction also showed a significant main effect, $F(3, 667)=229.65, p<.001, \eta^2_p=.256$, and an interaction with sex, $F(3, 667)=9.96, p<.001, \eta^2_p=.015$. Satisfaction was highest with mothers and decreased across best friends, fathers, and teachers. Boys reported higher satisfaction with parents, whereas girls reported higher satisfaction with best friends and marginally with teachers. Together, these results indicate that adolescents differentiate strongly between relationship types and that sex moderates several of these relational patterns.

Convergent Validity

To examine convergent validity, associations between perceived relationship qualities and adolescents' attachment security to both parents were analyzed using hierarchical multiple regression analyses (Table 2). Social support, negative interactions, relationship satisfaction, and relative power were entered as dependent variables, with sex included as a control variable in Step 1 and attachment security to mother and father entered in Step 2.

As expected, higher attachment security was positively associated with supportive relationship features and negatively associated with conflictual dimensions. Greater attachment security to mothers predicted higher perceived social support, lower negative interactions, and higher satisfaction and perceived power in the mother-adolescent relationship; similarly, attachment security to fathers predicted higher social support, satisfaction, and perceived power in the father-adolescent relationship. Regarding friendships, higher attachment security to mothers was associated with greater perceived social support and higher satisfaction in best-friend relationships. A similar pattern emerged for teachers, with higher attachment security to mothers predicting greater perceived social support, lower negative interactions, and higher satisfaction in teacher-adolescent relationships.

Discussion

Our study examined the psychometric properties and factor structure of the Portuguese version of the NRI-SPV. Overall, the findings indicate that the instrument is a valid and reliable tool for assessing perceived relationship quality among Portuguese adolescents across relationships with their mothers, fathers, best friends, and teachers. Consistent with the original conceptualization (Furman &

Table 2. Regression Models Examined the Predictive Role of the Perceived Attachment Security (to Mother and Father) in Relationship Qualities, With the Mothers, Fathers, Best Friends and Important Teachers.

Relationship	Social support				Negative interactions				Satisfaction with relation				Relative power			
	F	R ²	β	T	F	R ²	β	T	F	R ²	β	t	F	R ²	β	T
Relationship qualities with mother																
Perceived attachment security to mother	128.85***	.39***	.63	16.31***	11.96***	.06***	-.25	-5.28***	106.80***	.34***	.59	14.81***	15.33***	.07***	.28	5.874***
Perceived attachment security to father			-.01	-.30			.05	.95			-.02	-.48			-.03	-.62
Relationship qualities with father																
Perceived attachment security to mother	96.09***	.32***	.00	.10	1.48	.01	-.07	-1.34	89.82***	.31	-.05	-1.09	36.38***	.15	-.06	-1.31
Perceived attachment security to father			.56	13.70***			.02	.47			.58	13.94***			.42	9.10***
Relationship qualities with best friend																
Perceived attachment security to mother	14.27***	.07***	.11	2.32*	1.14	.01	-.05	-1.03	7.68***	.04***	.10	2.08*	3.39	.02	.01	-.28
Perceived attachment security to father			.02	.32			.01	.20			.06	1.24			.02	.35
Relationship qualities with teacher																
Perceived attachment security to mother	5.67***	.03***	.11	2.25*	5.60***	.03	-.10	-1.96*	8.47***	.04***	.17	3.41***	1.41	.01	.06	1.17
Perceived attachment security to father			.07	1.43			.06	1.18			.04	.75			-.07	-1.33

Note. Mother $n=590$, Father $n=545$, Best friend $n=511$, Important teacher $n=478$.

* $p<.05$, ** $p<.01$, *** $p<.001$.

Buhrmester, 1985, 2009), the nine-factor first-order model showed acceptable to good fit across all relationship types, supporting the view that adolescents perceive distinct yet related dimensions of relationship quality that encompass both supportive and negative aspects of their interpersonal experiences.

The higher fit scores of the nine-factor model relative to the second-order hierarchical model suggest that adolescents differentiate specific relational provisions (e.g., intimacy, admiration, reliable alliance) rather than organizing them into a single higher-order construct of social support. This finding is consistent with other validation studies in other cultural contexts (e.g., Wang, 2014), reinforcing the robustness of the multidimensional structure originally proposed by Furman and Buhrmester (2009). High factor loadings across items and relationship types further support the construct validity of the Portuguese version, in line with Weiss's (1974) social provisions framework and evidence that adolescent relationships are differentiated yet interrelated (Couture et al., 2021; Laursen & Mooney, 2008; Oh et al., 2021).

These findings extend prior research by demonstrating that the NRI-SPV can be reliably applied within the Portuguese cultural context. The replication of the original factorial structure across relationship types suggests that the instrument captures culturally consistent aspects of adolescents' relational experiences. At the same time, cross-cultural differences in factor structure, such as evidence for hierarchical models in specific relational contexts (e.g., Zhang et al., 2025), highlight the importance of considering both cultural and relational specificity in future research.

From a developmental perspective, adolescence is marked by expanding social networks and increasing differentiation in relationship functions (Collins & Laursen, 2004; Rubin et al., 2011). By confirming the multidimensional structure of relationship qualities across mothers, fathers, friends, and teachers, this study underscores the complexity of adolescents' relational worlds. Portuguese adolescents distinguished among multiple provisions of support (such as intimacy, companionship, and admiration), suggesting that they see relationships as serving distinct yet complementary roles in meeting emotional and social needs. These results align with theoretical perspectives emphasizing that different relationships serve complementary roles in meeting emotional and social needs, contributing to security, self-worth, and social competence (Weiss, 1974).

Consistent with expectations, correlational patterns further supported the discriminant validity of the NRI-SPV and reflected meaningful developmental trends. Stronger associations between relationships with mothers and fathers, particularly for intimacy and nurturance, suggest that adolescents perceive parental relationships as emotionally cohesive. In contrast, relationships with friends and teachers showed more differentiated patterns, reflecting distinct relational functions: friendships emphasizing intimacy and companionship, and teacher relationships

emphasizing guidance and structure. These findings are consistent with research highlighting the complementary roles of family, peers, and teachers in adolescents' social networks (Furman & Buhrmester, 2009; Laursen & Mooney, 2008; Rubin et al., 2011).

Mean-level differences across relationship types further illustrate this differentiation. Mothers were rated highest on reliable alliance, admiration, affection, and instrumental help, whereas best friends were rated highest on intimacy, companionship, and nurturance, consistent with the increasing importance of peer relationships for emotional closeness during adolescence. Teachers, although perceived as less emotionally close, remained relevant sources of support and regulation. Gender differences were generally modest but followed expected patterns: girls reported higher intimacy and support in friendships, whereas boys perceived greater support in relationships with fathers (e.g., Bokhorst et al., 2010; Rudolph & Dodson, 2022).

Evidence of convergent validity further supported the construct validity of the Portuguese NRI-SPV. Attachment security to parents was positively associated with perceived social support, satisfaction, and relational power, and negatively associated with conflict and negative interactions within the family context. Moreover, these associations extended beyond the family domain, with higher attachment security, particularly to mothers, predicting more positive perceptions of friendships and teacher relationships. This pattern is consistent with attachment theory (e.g., Bowlby, 1969; Grossmann et al., 2002) and supports the notion of relational generalization across contexts (Laible, 2007; van Rijn-van Gelderen et al., 2025; Verschueren & Koomen, 2012), suggesting that secure parental bonds facilitate the development of adaptive relational expectations in broader social networks. Secure bonds with caregivers shape internal working models that promote effective regulation and a sense of fairness (particularly salient for father-child relationships), where perceived support and power dynamics may be influenced by attachment security (Kerns & Brumariu, 2014).

Overall, these associations confirm that the NRI-SPV captures meaningful variation in relationship quality consistent with broader socioemotional models, further reinforcing its validity for Portuguese samples.

In sum, the Portuguese version of the NRI-SPV demonstrates strong psychometric properties and provides a multidimensional and developmentally sensitive assessment of adolescents' relationship quality. The findings highlight the importance of considering the differentiated and context-specific nature of adolescents' relationships, while also supporting the role of attachment processes in shaping relational perceptions across domains.

Beyond structural validity, the NRI-SPV demonstrated strong concurrent and convergent validity through associations with attachment security, satisfaction, and relational power, indicating that it captures core facets of socioemotional functioning. From an applied perspective, the validated instrument

offers a valuable tool for clinicians and researchers to assess relational functioning, identify potential vulnerabilities, and inform interventions aimed at promoting adolescents' socio-emotional well-being. Future research should examine longitudinal stability, cross-cultural generalizability, and the influence of contextual factors such as family structure, peer networks, and school climate.

Despite its strengths, several limitations should be acknowledged in our study. First, the reliance on adolescents' self-reports may introduce bias, including social desirability effects. Future research should include multiple informants or observational methods to provide a more comprehensive assessment. Second, our sample was drawn from a single geographic context, a characteristic shared by much psychological research, which may constrain the generalizability of the findings. Given that emotional processes are likely to be shaped by cultural and contextual influences, the present results should therefore be interpreted with appropriate caution. Future research should seek to replicate these findings in more culturally and geographically diverse samples. Third, the assessment of convergent validity only relied on a measure of attachment security that focuses exclusively on relationships with mothers and fathers. Although appropriate for examining associations with parent-adolescent relationships, this approach may have limited the breadth of the convergent validity evidence obtained, as it does not capture attachment representations across other important relationship contexts. Furthermore, the measure primarily assesses attachment security and does not capture attachment-related anxiety and avoidance. Future research could use broader attachment and social support measures encompassing multiple relationship targets and dimensions to provide more comprehensive evidence of convergent validity.

Finally, the cross-sectional design prevents conclusions about causality, highlighting the need for longitudinal studies to better understand developmental processes.

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Authors Contribution

A.J.S., O.R. and M.V. designed the study. A.J.S. and O.R. analyzed and interpreted the data. O.R. and C.S. drafted the manuscript. A.J.S., M.V., C.S., K.R., and O.R. critically revised the manuscript. All the authors read and approved the final manuscript.

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Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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