Psychometric Evaluation of the Social Experience Questionnaire in Adolescents: Descriptive Data, Reliability, and Factorial Validity

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ABSTRACT: This study evaluated the psychometric properties of the Social Experience Questionnaire (SEQ) in a sample of 1158 adolescents aged 13–17 years. Confirmatory factor analysis fit indices supported the hypothesized three-factor model of the SEQ that assesses overt and relational victimization, and prosocial behaviors from peers. Analyses of gender differences revealed that boys reported being overtly victimized more than girls, and girls reported greater receipt of prosocial behaviors from peers than boys. No gender differences in relational victimization were found. The internal consistency was adequate across gender, and test–retest stability over 12 months was modest. Intercorrelations among overt and relational victimization subscales suggest that these subscales assess related, but relatively independent constructs of peer victimization. These findings support the use of the SEQ with adolescents.

KEY WORDS: peer victimization; social experience questionnaire; validity; reliability; Adolescents.

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Child Psychiatry and Human Development, Vol. 36(2), Winter 2005 © *2005 Springer Science+Business Media, Inc.*
DOI: 10.1007/s10578-005-3495-z

Psychometric Evaluation of the Social Experience Questionnaire in Adolescents: Construct Validity, Descriptive Data, and Test–Retest Stability

Recently, increasing attention has been given to peer victimization and its relation to poor psychosocial adjustment among children and adolescents.[1] It is estimated that as many as one in five youth are frequently victimized by peers in forms of aggression ranging from overt to relational assaults.[2] Overt victimization involves harming others through physical attacks or threats of such attacks (e.g., hitting, pushing, yelling). Relational victimization, in contrast, harms others through manipulation or purposeful damage to interpersonal relationships (e.g., spreading rumors, excluding a peer from social interactions).[3] Both forms of peer victimization have been associated with a range of behavioral and emotional adjustment indices including depressive symptoms,[4] social anxiety and loneliness,[2,4–6] self-restraint,[3] and externalizing symptoms.[7] Prospective investigations have also supported the harmful effects of peer victimization with positive relations between peer victimization and later depressive symptoms,[8] general anxiety,[8] and social phobia symptoms.[9]

Given the deleterious consequences of peer victimization, assessing exposure to peer aggression is of utmost importance. Unfortunately, the extant literature has been limited by self-report instruments that focus solely on overt victimization without considering relational victimization. To fill this gap in the literature, Crick and Grotpeter[3] developed the Social Experience Questionnaire (SEQ), a 13-item self-report questionnaire that assesses overt and relational victimization and prosocial behaviors from peers. Initial psychometric data in a sample of 474 third through sixth graders (female = 215) identified a three-factor model using a principal components factor analysis with varimax rotation that assessed Overt Victimization, Relational Victimization, and Prosocial Behaviors. Other psychometric properties are promising with adequate internal consistency across the factors ($\alpha = 0.77$ to 0.80) and significant positive correlations with measures of depressive symptoms, loneliness, and social anxiety, providing evidence for the convergent validity of the SEQ.[3–5,10] For example, Storch et al.[4] found correlations of a medium to large effect size among overt and relational victimization and depressive symptoms ($r = 0.49$ and 0.49), loneliness ($r = 0.44$ and 0.34), and social anxiety ($r = 0.47$ and 0.51). Finally, assessment of gender differences in peer victimization and prosocial behavior show that boys report higher rates of overt victimization, whereas girls report greater prosocial

support from peers.[2–5] In contrast, no gender differences have been found in rates of relational victimization among adolescents.[2,4,7]

Although the SEQ has been used in numerous studies,[2–4,10,11] there has only been one psychometric investigation of this measure[3] and this was conducted in a sample of children. Further, no data have been published confirming the existence of the three-factor structure in adolescents nor documenting the long-term stability of this measure. Therefore, the purpose of this study was to provide psychometric information on the SEQ in an adolescent population. The present research had three goals: (1) to confirm the three-factor model of the SEQ found by Crick and Grotpeter;[3] (2) to provide descriptive data for the SEQ in an adolescent sample; (3) to examine the internal consistency; and (4) to investigate the 12 month test–retest reliability of the SEQ in order to examine the stability of peer victimization between school years.

Method

Participants

Participants were 1178 adolescents (female = 79%, male = 21%) from two parochial high schools (one girls school, one co-educational school) in New York City. Students ranged in age from 13 to 17 years ($M = 14.49$, $SD = 0.78$) and were in the ninth (46%), 10th (43%), or 11th (11%) grades. According to their self-report, 83% of the adolescents were European American, 7% were Latin American, 2% were African American, 2% were Asian American, 5% identified with another ethnicity, and 1% did not indicate their ethnicity. Socioeconomic status was estimated as middle class based on the percentage of children receiving subsidized school lunches (0%) and the school principal's subjective report (independently corroborated by guidance counselors). The consent rate for participation across both schools was 93.9% (1178/1254). Because of substantial missing data (missing more than two SEQ items or missing two items on the Overt Victimization subscale), 20 adolescents were excluded from analyses resulting in a final sample of 1158 adolescents.

In addition, 142 ninth grade students (female = 65%, male = 35%) completed the SEQ one year later. This subsample ranged in age from 13 to 15 years ($M = 13.87$, $SD = 0.39$), with self-reported ethnicities of 83% European American, 9% Latin American, 2% African American, 2% Asian American, and 4% other ethnicity.

Measures.

Demographics. Demographic information (e.g., gender, age, grade, ethnicity) was collected via self-report on the first page of the SEQ.

Social Experience Questionnaire. The SEQ[3] was used to assess the adolescents' experience of peer victimization. The SEQ is a self-report measure consisting of two victimization subscales: overt victimization (three items; e.g., frequency with which peers attempt to physically harm the adolescent), and relational victimization (five items; e.g., frequency with which peers attempt to harm adolescent's relationships with others). In addition, a third scale assesses the receipt of prosocial acts from peers (five items; e.g., frequency with which peers direct caring behaviors toward the adolescent). Items are rated on a five-point likert scale anchored by 1 = "never" to 5 = "always."

Procedure

Approval to conduct this study was obtained by the New York University Institutional Review Board. Parents were mailed consent forms detailing the purpose of this study along with self-addressed stamped envelopes. Parents were requested to return the form by mail or to the school guidance counselor in person if they did not wish for their child to partake in the research. If parents had no objection to the study, they did not have to return anything. Adolescents provided written assent immediately before completing the SEQ. The SEQ was administered to participants in their homeroom class as part of a battery of questionnaires. A research assistant supervised the administration, answered students' questions, and collected the forms. Participation was voluntary and students wrote their names on study packets. However, students were assured that their responses would remain confidential from other students and teachers. No incentives were provided for participation. Students who did not participate engaged in other activities (e.g., schoolwork, independent reading).

Results

Descriptive Data

Descriptive information for the SEQ by gender is presented in Table 1. To examine gender differences on the SEQ, a multivariate analysis of variance (MANOVA) was conducted. The MANOVA revealed a significant difference between the males and females on the subscales of the SEQ, Wilks' $\Lambda = 0.799$, $F(3, 1154) = 97.0$, $p < 0.001$. Univariate results revealed that males had significantly higher scores on the Overt Victimization subscale and females had significantly higher scores on Prosocial Behavior subscale ($p < 0.001$). There was no gender difference in Relational Victimization ($p > 0.05$).

Table 1
Means and Standard Deviations for SEQ by Gender

	Overt victimization		*Relational victimization*		*Prosocial behavior*	
	M	*SD*	*M*	*SD*	*M*	*SD*
Gender						
Male	4.68	2.14	10.32	3.59	16.85	4.05
Female	3.63	1.52	9.77	3.28	20.52	2.99
F	71.6*		4.8		233.8*	

Note: All univariate tests for gender differences have (1, 1157) degrees of freedom. *$p < 0.0001$.

Internal Consistency and Interscale Correlations

Table 2 details Cronbach's alpha reliability coefficients[12] for the SEQ for the total sample and by gender. The Cronbach's alpha reliability coefficients were acceptable for the Relational Victimization and Prosocial Behavior subscales (range of 0.82–0.77) and were consistent across gender. Lower internal consistencies were found with the Overt Victimization subscale, particularly for females (0.50).

Interscale correlations are shown in Table 2. Intercorrelations among the three SEQ subscales ranged from −0.12 to 0.45. The highest intercorrelation of 0.45 occurred between Overt Victimization and Relational Victimization for males and the lowest intercorrelation

Table 2
Internal Consistency (Alpha) and Interscale Correlations for the Social Experience Questionnaire (SEQ)

	Total sample	*Males*	*Females*
Internal consistency			
Overt victimization	0.60	0.64	0.50
Relational victimization	0.78	0.79	0.78
Prosocial behavior	0.82	0.81	0.77
Interscale Correlations			
Overt victimization / Relational victimization	0.30	0.45	0.24
Overt victimization / Prosocial behavior	−0.25	−0.27	−0.12
Relational victimization / Prosocial behavior	−0.32	−0.29	−0.34

Note: All intercorrelations are significant at $p < 0.0001$.

of −0.12 occurred between Overt Victimization and Prosocial Behavior for females. Small to modest intercorrelations indicate that subscales of the SEQ represent unique but interrelated constructs of social experience.

Test–retest Stability

One hundred forty-two adolescents (male = 49) were readministered the SEQ 12 months following the baseline assessment. Stability across the first and second SEQ assessments was examined by calculating one-way random effects intraclass correlation coefficients (ICC)[13] between SEQ subscale scores across the two administrations (see Table 3). ICC is a measure of agreement for dimensional measurements. Scores range between 0 and 1, with scores greater than 0.75 indicating excellent reliability. ICCs were significant for all SEQ subscales ($p < 0.001$). Specifically, ICC values were 0.57 for Overt Victimization, 0.53 for Relational Victimization, and 0.73 for Prosocial Behavior. Significant differences between time 1 and 2 were found for overt victimization [$t(141) = 3.32$, $p < 0.001$] and relational victimization [$t(141) = 5.53$, $p < 0.001$] with scores on both variables being lower on the second administration.

Confirmatory Factor Analysis

Confirmatory factor analysis (CFA), using the statistical structural equation modeling software, AMOS 3.62,[14] was utilized to examine the SEQ factor structure. The three-factor structure of the SEQ proposed by Crick and Grotpeter[3] was used as the basis for comparing the observed structure with the theoretical model. The maximum likelihood estimation method was used to test the covariance matrix to determine how well the model fit the sample data. Missing data

Table 3
Test–retest Stability of SEQ Scores ($n = 142$)

SEQ scores	*ICC*	*95% CI*	*Time 1 mean (SD)*	*Time 2 Mean (SD)*
Overt victimization	0.57	0.40–0.69	3.99 (1.48)	3.59 (1.12)
Relational victimization	0.53	0.35–0.66	10.39 (3.17)	8.74 (3.14)
Prosocial behaviors	0.73	0.62–0.80	19.20 (3.92)	19.35 (4.33)

from participants was very low, with a missing data rate less than 1%. In the case of missing data on individual items, individual item means were used as a substitute for missing values.

The CFA permits evaluating the adequacy of a proposed factor structure. The overall fit of the model to the data was examined in several ways. Ideally, a small, non-significant chi-square statistic represents a good fit. However, because chi-square is sensitive to sample size and tends to be significant in large samples such as the present one, additional fit indices are necessary to assess. Based on established recommendations,[15,16] a number of commonly used fit indices were examined: the Tucker–Lewis index (TLI), the Comparative Fit index (CFI), the Goodness of Fit index (GFI), and the root mean square error of approximation (RMSEA). TLI and CFI fit indexes range from 0 to 1, with values of 0.90 or higher indicating a good fit between the observed model and the theoretical model.[17] For the RMSEA, values below 0.05 indicate a good fit and values as high as 0.08 represent an adequate fit.

Results from the CFA suggested that the three-factor structure[3] fit well to the sample data and despite the large chi-square statistic ($X^2 = 515.9$, df = 62, $p < 0.001$), other fit indices all indicated a modest model fit (TLI = 0.901, CFI = 0.911, GFI = 0.933, RMSEA = 0.079). No departures from normality in the data were noted based on visual inspection of the plot of the deviations. Lastly, there were no specification errors nor were any additional alterations of the model specified.

Discussion

The SEQ was developed to assess overt and relational victimization as well as the receipt of prosocial behaviors (e.g., how often the youth is the recipient of caring behaviors from peers) in children and adolescents. Evaluating all types of peer aggression is essential given the negative outcomes associated with peer victimization. Although the SEQ has been used in numerous studies, to date, only one investigation[3] has examined the psychometric properties of this measure. Therefore, the current study aimed to provide descriptive data for the SEQ, examine the internal consistency and 12 month test–retest stability, and confirm the previously found three-factor model of the SEQ in a large sample of adolescents

Our data supported the three-factor model previously found by Crick and Grotpeter,[3] providing further evidence for distinct factors of overt and relational victimization, and receipt of prosocial peer

behaviors. In addition, intercorrelations were low between the overt and relational victimization factors. These findings, taken together, suggest that these subscales represent unique constructs of peer victimization among adolescents, and that adolescents are exposed to a range of aggressive experiences including both overt and relational attacks.

Internal consistency was good for the relational victimization and prosocial behavior subscales. The lower alpha for the overt victimization subscale is likely due to the small number of items assessed. Further, alpha's within the 0.50 range are generally considered acceptable for scales with a small number of items and when scale items are only moderately related.[18] It is recommended, however, that caution be used when interpreting the overt victimization subscale in adolescent female samples. Test–retest stability over 12 months yielded modest relationships for all three subscales suggesting that there is some variability, particularly in rates of victimization, among responses over time. As such, it will be interesting for future research to investigate various factors (e.g., peer support, coping skills) that alter rates of bullying.

Consistent with prior work,[2–5] males reported experiencing significantly greater rates of overt victimization, whereas females reported significantly higher scores on the prosocial behavior factor. No gender differences were found in relational victimization. This finding indicates the importance of assessing both forms of peer maltreatment in understanding adolescents peer experiences. Since past research has primarily investigated overt forms of victimization, it is possible that previously reported rates of both males and female victimization were underestimates of actual negative peer experiences.

While these preliminary findings are encouraging, some future directions for research should be noted. First, although it allowed us to test the stability of SEQ scores over consecutive school years, the 12 month retest period was not entirely ideal for the evaluation of test–retest stability. Future studies should examine test–retest stability both in the long-term (12 months) and short-term (e.g., 2 weeks) to assess the variability of reports over time. Second, although support for the convergent validity of the SEQ has been documented in other studies vis-à-vis positive relations with psychosocial maladjustment,[4,5] examining the relations between the SEQ and peer and teacher reports of victimization among adolescents would potentially provide a useful examination of validity.

Several limitations of the present study should be noted. First, findings may not generalize beyond this population of largely

Caucasian adolescents attending parochial schools. Second, our analyses included relatively more girls than boys. It is possible that this unequal gender distribution may have impacted the gender differences within the categories of victimization found in this study. Third, given the community sample used in this study, findings may differ in samples of adolescents with more severe clinical difficulties. For example, some evidence suggests that clinically anxious youth have more negative peer interactions than non-anxious youth.[19] Fourth, although factor analytic results provide partial validity support, our findings are limited by the lack of additional validation measures (e.g., teacher reports of peer victimization). Finally, this study is the only known investigation the psychometric properties of the SEQ with adolescents. Further psychometric analysis of the SEQ among child and adolescent populations is warranted.

Summary

This study adds to the literature by documenting the psychometric properties of the SEQ in an adolescent sample. The SEQ was found to have acceptable psychometric properties in a large sample of adolescents, with favorable reliability and validity estimations. The brevity, ease, and efficiency of the SEQ administration make it practical to use as a screening instrument of peer victimization in schools and community agencies to identify at-risk youth. In addition, the SEQ may be valuable for rapid assessment of peer relations in clinical settings. Positive endorsements of negative peer experiences may then guide the clinician to conduct a more thorough assessment of interpersonal functioning to determine appropriate treatment planning.

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