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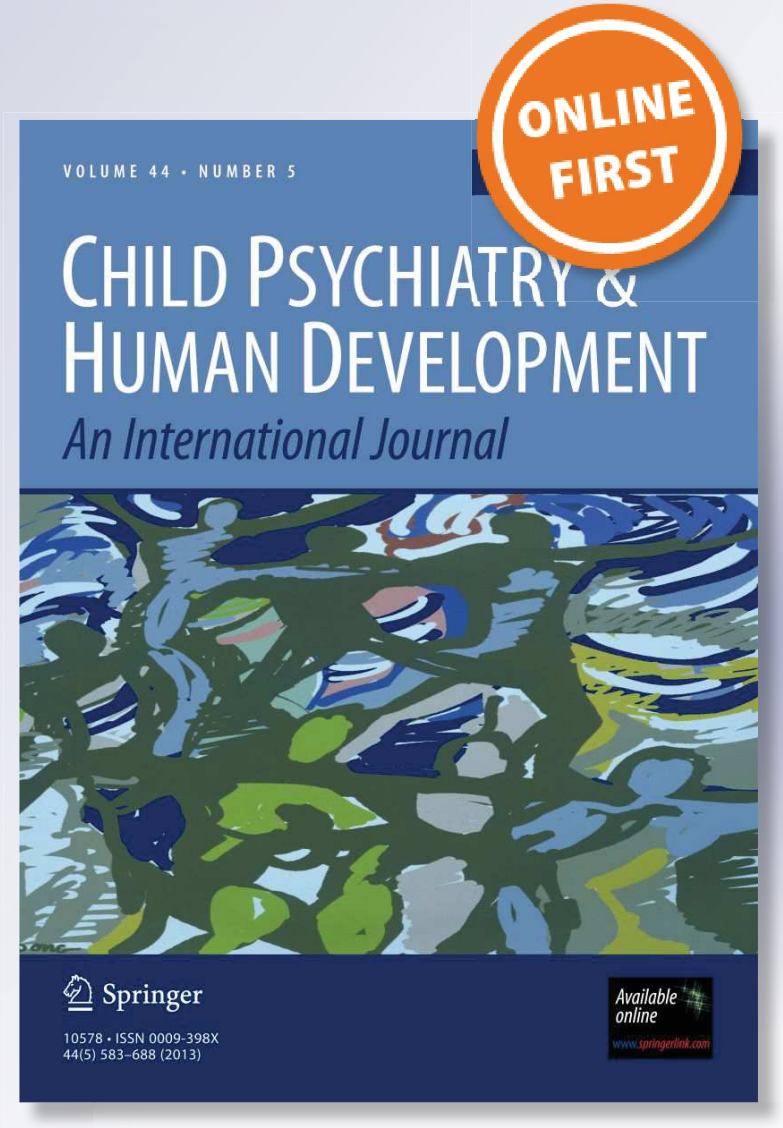

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ORIGINAL ARTICLE

The Strengths and Difficulties Questionnaire-Parents for Italian School-Aged Children: Psychometric Properties and Norms

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Abstract The Strengths and Difficulties Questionnaire [SDQ; (1)] is a multi-informant instrument for screening developmental psychopathology. This study contributes to the validation of the Italian SDQ-Parent version (SDQ-P), analyzing its factorial structure, providing norms and investigating cross-informant agreement (parents-teachers). The SDQ-P and the SDQ-Teacher version (SDQ-T) were completed for 1917 primary and middle school students. Confirmatory factor analyses were performed to compare two factorial structures: the original five-factor model and the structure obtained in a past Italian study (2). The original model showed the best fit. Significant differences by gender and school grade were found; norms were provided separately for males and females attending 1st–2nd, 3rd–5th and 6th–8th grades. Finally, the analysis of parent-teacher agreement showed correlations ranging from small (prosocial behavior) to large (hyperactivity-inattention). This study offers some reflections on the best way to use this instrument in a community sample.

Keywords Strengths and Difficulties Questionnaire · Parents · Psychometric properties · Italian norms · Cross-informant agreement

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Introduction

The Strengths and Difficulties Questionnaire (SDQ) [1, 3] is a screening instrument widely used in mental health care and research. It is a brief questionnaire for assessing negative and positive behavioral attributes of children and adolescents aged 3–17 years, from the point of view of their parents (SDQ-P), teachers (SDQ-T) and of adolescents themselves when they are over the age of 11. It measures emotional problems, conduct problems, hyperactivity-inattention, peer problems, and prosocial behavior; the first four subscales are used to calculate a total difficulties score. Compared to longer questionnaires such as the Child Behavior Check List (CBCL) [4], the SDQ increases acceptability in respondents, in particular considering low-risk children and community samples, by offering a brief and partly positively worded questionnaire [5]. This questionnaire has been translated into more than 80 languages, but national norms are available only for a few countries [6].

Psychometric properties of SDQ-P and SDQ-T for assessing children aged 4–12 have been reviewed by Stone et al. [6]: the questionnaires showed globally satisfactory internal consistency, adequate test–retest reliability, and the original five-factor structure [1] was confirmed in most of the studies considered. It was also showed that the agreement between parents and teachers was relatively high (between 0.26 and 0.47). This review also highlighted that the teacher version of the SDQ has generally stronger psychometric properties than the SDQ-P, in particular considering internal consistency. In fact, the analysis of the SDQ-P showed that prosocial behavior and emotional symptoms subscales have internal consistencies below 0.70 and conduct problems and

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peer problems below 0.60. No studies of the Italian version of the SDQ were included in this review.

Currently, an analysis of the psychometric properties of the Italian SDQ-P and norms for this version of the questionnaire are available only for adolescents aged 12–17: a recent work by Li and colleagues [7] analyzed SDQs filled in by both mothers and fathers of 422 adolescents, showing medium to low internal consistencies of its subscales, with conduct problems (fathers $\alpha = 0.52$; mothers $\alpha = 0.48$) and peer problems (fathers $\alpha = 0.51$; mothers $\alpha = 0.46$) showing the lowest Cronbach's Alphas, coherently with the review by Stone et al. [6]. Furthermore, the analysis of the SDQ-P structure revealed that the five-factor model by Goodman [1] was better than other competing models. However, a partially different factorial structure emerged in a study investigating the Italian version of the SDQ-T [2] on a community sample of 3302 children aged 3–15 years: items 2 ("Restless, overactive, cannot stay still for long") and 10 ("Constantly fidgeting or squirming") loaded on conduct problems, instead of hyperactivity/inattention. A similar result was preliminarily found in a previous study of the Italian SDQ-T involving primary school children [8], and in a Norwegian study [9].

These latent structure differences observed in the Italian sample could be due to a cultural peculiarity of attention-deficit hyperactive disorder (ADHD) representation. The original Hyperactivity-inattention subscale [1], was created including three groups of items based on nosographic criteria: items 15 and 25 are related to attention, items 2 and 10 investigate hyperactive behaviors, and item 21 reflects impulsivity. Tobia et al. [2] assumed that Italian teachers tend to view hyperactive traits as general conduct problems, most likely because misbehavior figured predominantly in both groups of items, namely items 2 and 10, and items of the conduct problems subscale. On the contrary, attention and reflexive skills would be considered as distinct from such behavioral manifestations. The result that Italian teachers tend to consider attention problems as separate from those linked to hyperactivity and impulsivity has also been found by another study [10]. This attitude could partially support the division found between the two types of symptoms in the SDQ-T. An alternative explanation is that teachers may be influenced by some "halo effect" [11] which is the impact of one class of behavior on the perception of another. Considering the large use of the SDQ-P for both clinical and research purposes, it would be important to compare the original factorial structure proposed by Goodman [1] with the one found by Tobia et al. [2] in a sample of Italian teachers: this comparison, beyond examining the latent structure of the questionnaire in a new sample, would allow investigating if the representation of ADHD symptoms and conduct problems reflected by the questionnaire's responses is similar in Italian teachers and parents.

Another issue related to the use of the SDQ concerns whether children of different gender and developmental period (i.e., attending primary and middle school) were rated differently. Differences between males and females have been found in past studies on the SDQ-P, consistently with the well-known gender differences in the field of child psychopathology [12]. Boys were rated to have more conduct problems, hyperactivity-inattention and, in some studies, more problems with peers than girls, whereas girls showed more emotional symptoms and prosocial behavior [13, 14]. In a sample of Italian students rated with the SDQ-T, gender differences were similar to the ones reported above for parents' ratings, except emotional symptoms that showed similar scores for males and females [2]. Differences in the SDQ-P can also be found considering children's developmental stage, for example comparing children in primary school with early and late adolescents. Past research has reported lower emotional symptoms, hyperactivity/inattention and conduct problems, and higher prosocial behavior, for older children rated by parents [13–15]. Teachers rating Italian primary and middle school students reported lower peer problems, hyperactivity/inattention, and total difficulties scores, and higher prosocial behavior, at primary school [2]. This appeared to be in contrast with other studies on the SDQ-T [16], but it is in line with studies investigating the transition from primary to middle school: this developmental period has been identified as a critical change for early adolescents, with adverse consequences on their self-esteem, motivation, and social relationships at school [17, 18].

In sum, the present study aimed at analyzing the psychometric properties of the Italian version of the SDQ-P for children aged 6–13 (primary and middle school) and provides national norms, considering the lack of information on this specific issue. In particular, two factorial structures were compared: the original Goodman's [1] 5-factor structure and the slightly different latent structure emerged in the study that analyzed the Italian version of the SDQ-T [2], in which two items originally part of the hyperactivity/inattention subscale loaded on the conduct problems subscale. Then, differences in SDQ-P scores based on children's gender and school level (1st–2nd grade, 3rd–5th grade, 6th–8th grade) were analyzed. Based on the past studies presented above, we expected to find males showing higher scores for conduct and peer problems and hyperactivity/inattention, and females scoring higher for emotional symptoms and prosocial behavior. Considering children's school level, we wanted to explore if scores reflected milder difficulties for older children, as reported by past literature on the SDQ-P [14], or the opposite pattern reported by Tobia et al. [2] in their study on the Italian SDQ-T. Finally, this study aimed

at analyzing agreement in the SDQ scores between parents and teachers, in a large community sample.

Method

Participants

Parents of 2030 students gave informed consent for the research, and 1917 of them returned the SDQ-P without missing data, constituting the final sample. Then, a teacher for each class was administered with the SDQ-T, for a total of 138 teachers. The final sample included students from 11 primary and 8 middle schools in Northern Italy; in particular, 408 students were attending 1st and 2nd grade (44.85% females), 937 of them were attending 3rd–5th grade (53.15% females), and 572 were in middle school (6th–8th grade; 49.65% females).

Instruments

The single-sided version of the Italian SDQ-P and the SDQ-T [1] was administered. These questionnaires include 25 items describing positive and negative behavioral traits; in particular, they measure emotional symptoms, conduct problems, hyperactivity-inattention, peer problems, and prosocial behavior, each measured with a 5-item scale. Respondents use a 3-point Likert-type scale (0 = not true, 1 = somewhat true, and 2 = certainly true). Scores for the five subscales (range = 0–10) and a total difficulties score (range = 0–40), obtained by summing up the scores of the four difficulties subscales, were calculated. Higher scores on the four subscales that report on difficulties and the total score reflect more serious problems, whereas higher scores on the prosocial behavior subscale denote better social behavior. The scoring procedures are available online (http://www.sdqinfo.org).

Procedure

A group of primary and middle schools in Northern Italy was chosen based on the variability of the urban areas covered, including both central and peripheral regions. All the 19 schools that were asked to participate in the research accepted. First, parents received the SDQ-P and the consent form in a sealed envelope and the 81.72% of them returned the documents filled in. For these participants, the SDQ-T was administered to the teachers by undergraduates in psychology. Both parents and teachers were asked to complete the questionnaire individually and thinking about the children's behavior during the last six months.

Data Analysis

Confirmatory factor analyses were undertaken using weighted least squares mean and variance adjusted (WLSMV) estimator, for ordinal data. Two factorial structures were tested: the original 5-factor solution proposed by Goodman [1] and the factor structure emerged for the SDQ-T with an Italian sample [2]. Multiple indices were chosen to evaluate the model fit: the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis Index (TLI). RMSEAs that are no greater than 0.08 and CFIs and TLIs of 0.90 or higher suggest an acceptable model fit [19].To analyze internal consistency, Cronbach's Alpha of each subscale and the total difficulties scale were calculated.

Then, differences based on gender and school level were performed using 2 (males, females) × 3 (1st–2nd grade, 3rd–5th grade, 6th–8th grade) MANOVA and ANOVA designs, followed by Tukey's post-hoc analysis. The MANOVA was performed on the five subscales and the ANOVA on the total difficulties scale. Norms based on gender and school level were also reported.

Pearson correlation analyses were finally conducted to investigate parent-teacher agreements. Correlation coefficients of 0.10, 0.30, and 0.50 represent small, medium, and large effect size, respectively [20]. As a rule of thumb, the cutoff of $r = 0.27$, derived from a meta-analytic study of inter-rater agreement between parents and teachers for the CBCL [21], is used as a benchmark of agreement or data quality [3, 6].

SPSS 22.0 and Mplus 6.0 were used to analyze the data.

Results

Factorial Structure and Reliability

Two CFAs were performed to evaluate and compare Goodman's [1] and Tobia et al.'s [2] structures of the SDQ. Results showed similar goodness-of-fit indices for the two models, with Goodman's [1] factorial structure showing slightly better results; the standard loadings for this model are presented in Fig. 1. In particular, Goodman's [1] model showed RMSEA = 0.048 (90% CI 0.045–0.050), CFI = 0.920, and TLI = 0.909, whereas Tobia et al.'s [2] model had RMSEA = 0.050 (90% CI 0.047–0.052), CFI = 0.914, and TLI = 0.902. In both cases, a correlation between the unique variances of items 2 and 10 was allowed, as suggested by Mplus' modification indices and consistently with theoretical considerations (they are both items of the same scale, measuring similar constructs). Such minor change can improve model fit by increasing the proportion of variance

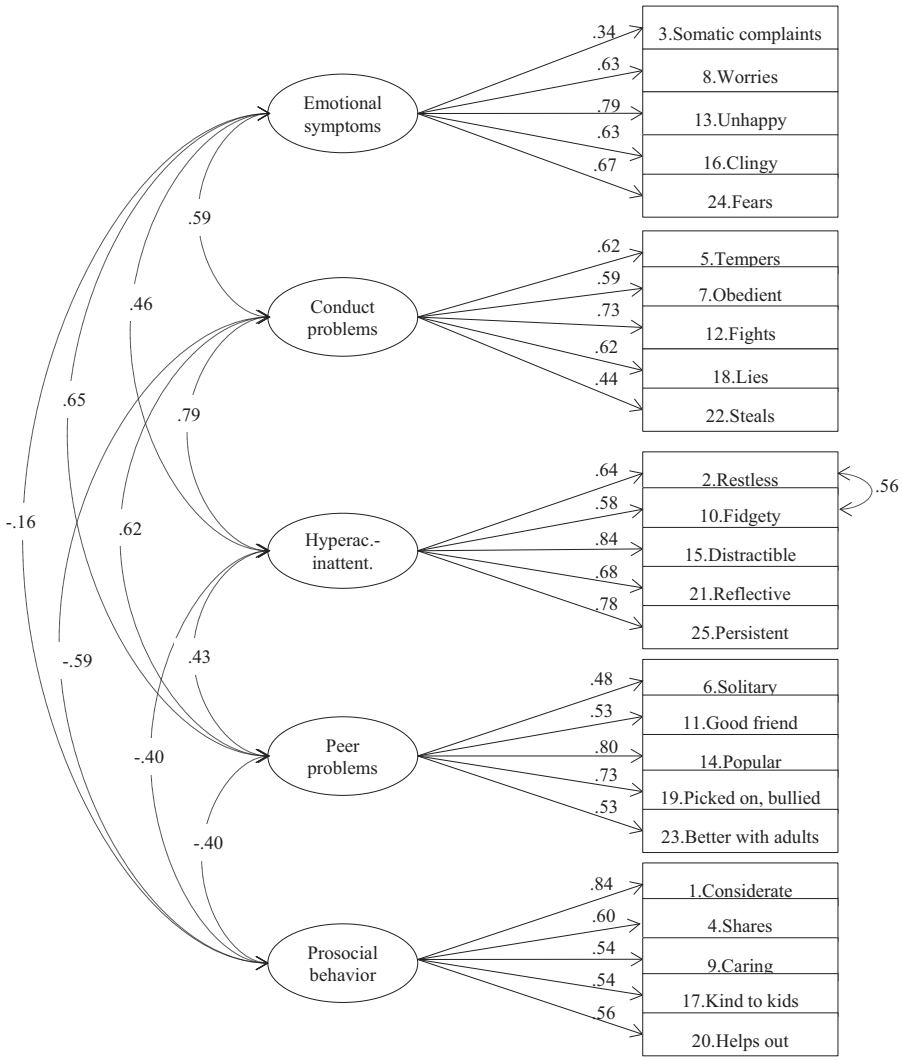

Fig. 1 Standard lodings for the SDQ-P. Model by Goodman [1]

explained but do not substantially change the conclusions regarding the adequacy of a hypothesized factor structure in describing the data [22].

Cronbach's Alpha of each subscale and of the total difficulties scale were calculated based on the Goodman's model, showing poor to good values: $\alpha = 0.63$ for emotional symptoms, $\alpha = 0.56$ for conduct problems, $\alpha = 0.77$ for hyperactivity-inattention, $\alpha = 0.59$ for peer problems, $\alpha = 0.61$ for prosocial behavior, and $\alpha = 0.81$ for the total difficulties score. For the two subscales with Alphas lower than 0.60, we looked more closely into single items to explore which of them was responsible for the low reliability. Considering the conduct problems subscale, item 22 ("Steals from home, school or elsewhere") showed low correlations ($r < 0.100$) with the other subscale's items, and the subscale's reliability would increase if item 22 was deleted, despite remaining relatively poor ($\alpha = 0.59$). For the peer problems subscale there was no specific item that caused low consistency.

Differences Based on Gender and School Level

The MANOVA performed on the five SDQ-P subscales showed a significant multivariate effect of Gender, Pillai's Trace = 0.055, F (5, 1907) = 22.181, $p < .001$, $\eta^2 = 0.055$, and of School level, Pillai's Trace = 0.032, F (10, 3816) = 6.288, $p < .001$, $\eta^2 = 0.016$, whereas the interaction Gender × School level was non-significant. Comparisons between male and female students showed significant differences on four of the subscales, with the exception of emotional symptoms. Males obtained significantly higher scores on Conduct problems, F (1, 1911) = 24.677, $p < .001$, $\eta^2 = 0.013$, Hyperactivity-inattention, F (1, 1911) = 76.623, $p < .001$, $\eta^2 = 0.039$, and Peer problems, F (1, 1911) = 15.071, $p < .001$, $\eta^2 = 0.008$, whereas females had higher scores on Prosocial behaviour, F (1, 1911) = 27.967, $p < .001$, $\eta^2 = 0.014$. Univariate analysis of School level differences showed significant results for all the 5 subscales:

Emotional symptoms: F (2, 1911) = 8.079, $p < .001$, $\eta^2 = 0.008$

Conduct problems: F (2, 1911) = 3.651, $p < .05$, $\eta^2 = 0.004$

Hyperactivity-inattention: F (2, 1911) = 3.842, $p < .05$, $\eta^2 = 0.004$

Peer problems: F (2, 1911) = 16.689, $p < .001$, $\eta^2 = 0.017$

Prosocial behavior: F (2, 1911) = 5.485, $p < .01$, $\eta^2 = 0.006$

An ANOVA was run to analyze gender and school level differences in the total difficulties score of the SDQ-P. Significant main effects of both Gender, F (1, 1911) = 37.234, $p < .001$, $\eta^2 = 0.019$ (males higher scores than females), and School level, F (2, 1911) = 7.050, $p = .001$, $\eta^2 = 0.007$, were found; on the contrary, the interaction was non-significant.

Results of Tukey's post-hoc analysis for School level and norms for the SDQ-P are reported in Table 1.

Cross-Informant Agreement

Parents-teachers agreement, measured with correlations between SDQ-P and SDQ-T, is reported in Table 2. Correlations for the same scales of the two versions of the questionnaire ranged from small ($r = 0.199$ for prosocial behavior) to large ($r = 0.519$ for hyperactivity-inattention) effect size.

Table 1 Norms and post-hoc analysis for the subscales and total difficulties scale of the SDQ-P

		Emotional symptoms	Conduct problems	Hyperactivity-Inattention	Peer problems	Prosocial behavior[a]	Total difficulties
Females Primary school Grades 1–2	Mean (SD)	2.08 (1.90)	1.26 (1.42)	2.84 (2.18)	0.99 (1.36)	8.42 (1.52)	7.17 (5.16)
	80th	3	2	5	2	7	11
	90th	5	3	6	3	6	15
	95th	6	4	7	4	5	18
Males Primary school Grades 1–2	Mean (SD)	2.06 (1.76)	1.64 (1.61)	3.72 (2.50)	1.35 (1.52)	7.91 (1.63)	8.76 (5.41)
	80th	3	3	6	3	7	13
	90th	5	4	7	4	5	16
	95th	5	5	9	4	5	20
Females Primary school Grades 3–5	Mean (SD)	2.04 (1.90)	1.18 (1.32)	2.44 (2.09)	1.02 (1.34)	8.60 (1.43)	6.69 (4.66)
	80th	4	2	4	2	7	10
	90th	5	3	5	3	6	13
	95th	6	4	6	4	6	16
Males Primary school Grades 3–5	Mean (SD)	2.00 (1.79)	1.58 (1.54)	3.41 (2.52)	1.41 (1.52)	8.13 (1.66)	8.39 (5.32)
	80th	3	3	5	3	7	13
	90th	4	4	7	4	6	16
	95th	5	4	8	4	5	18
Females Middle school Grades 6–8	Mean (SD)	2.50 (1.93)	1.45 (1.35)	2.39 (2.01)	1.58 (1.84)	8.22 (1.57)	7.92 (5.18)
	80th	4	3	4	3	7	12
	90th	5	3	5	4	6	16
	95th	6	4	6	5	5	18
Males Middle school Grades 6–8	Mean (SD)	2.33 (2.12)	1.72 (1.42)	3.44 (2.35)	1.73 (1.93)	8.00 (1.65)	9.23 (5.66)
	80th	4	3	5	3	7	14
	90th	6	4	7	5	6	17
	95th	7	4	8	6	5	20
Tukey's Posthoc[b]		Grades 1–2, 3–5 < Grades 6–8	Grades 3–5 < Grades 6–8	Grades 3–5, 6–8 < Grades 1–2	Grades 1–2, 3–5 < Grades 6–8	Grades 1–2, 6–8 < Grades 3–5	Grades 3–5 < Grades 6–8

80th, 90th, 95th percentiles: cutoffs representing, respectively, a borderline, high risk and very high risk score

[a]For the Prosocial behavior subscale the 80th, 90th, and 95th percentiles corresponds to the 20th, 10th and 5th percentiles respectively: for this subscale, a higher score corresponds to better performance, therefore the cutoff show values under which there is a problematic lack of prosocial behaviors

[b]Homogenous subsets resulting from Tukey's procedure are reported. e.g.: for emotional symptoms, scores for grades 1–2 and 3–5 are similar and significantly lower than scores for grades 6–8

Table 2 Pearson's correlations between the teacher and parent versions of the SDQ

		SDQ-T					
		Emotional symptoms	Conduct problems	Hyperactivity-inattention	Peer problems	Prosocial behavior	Total difficulties
SDQ-P	Emotional symptoms	**0.309**	0.118	0.169	0.189	−0.096	0.265
	Conduct problems	0.195	**0.400**	0.335	0.202	−0.210	0.371
	Hyperactivity-Inattention	0.199	0.356	**0.519**	0.185	−0.228	0.434
	Peer problems	0.273	0.254	0.229	**0.385**	−0.182	0.368
	Prosocial behavior	−0.073	−0.199	−0.122	−0.098	**0.199**	−0.163
	Total difficulties	0.337	0.387	0.454	0.323	−0.250	**0.501**

All correlations are significant at $p < .001$

Bold indicates correlations between the same subscales for the SDQ-T and the SDQ-P

Discussion

This article presents the psychometric properties and norms of the Italian SDQ-Parents for children of the primary and middle school and investigates parents-teachers agreement for the SDQ scores. A considerable amount of research has analyzed psychometric properties of this widely used questionnaire, but only one of them considered the Italian version of the SDQ-P, providing norms and reliability data for adolescents aged 12–17 [7]. This study seeks to remedy this gap, considering the wide use of this questionnaire, also in Italy, as a screening and research tool, as a treatment outcome measure, and as part of clinical assessment [23–26].

The first aim was to analyze the latent structure of the questionnaire, in particular comparing the original five-factor model [1] and the structure obtained in the study by Tobia et al. [2], that analyzed the Italian version of the SDQ-T. Results showed adequate fit for both the factorial structures, with the original one presenting the best fit-indices. Therefore, the partially different representation of ADHD symptoms reflected by the latent structure of the Italian SDQ-T has not been replicated in a sample of parents. However, it should be observed that the factor loadings for items 2 and 10 on the hyperactivity-inattention latent variable were the lowest and that the alternative model tested also showed acceptable fit. The reliability of the total difficulties score of the SDQ-P, as well as the one of the hyperactivity-inattention subscale, was satisfactory. However, the other subscales were less reliable, and some of the items did not seem strongly related to the others items representing the construct (e.g., item 22 for conduct problems). These reliability estimates are very similar to those found in other studies [6]. We, therefore, recommend to use the total difficulties score preferably, and eventually the hyperactivity-inattention subscale, for screening purposes. This suggestion is in line with past studies concluding that the five subscales may not tap into distinct aspects of child mental health among low-risk community samples [14, 27].

Then, gender and school level differences in SDQ-P scores were analyzed, in order to assess if the Italian sample reflects the differences between male and female children found in other countries, as well as differences based on children's age, and in order to compare the results with the ones obtained with the Italian SDQ-T [2]. First, gender differences emerged were in line with past studies investigating European and non-European samples, and with the study investigating the Italian SDQ-T: boys showed significantly higher conduct and peer problems as well as hyperactivity-inattention, whereas females had higher scores on prosocial behavior. Effect sizes showed that the stronger differences were for hyperactivity-inattention related problems. This result further strengthens the idea that externalizing problems are stronger in males than females, independently of culture. Then, the present study analyzed SDQ-P scores based on children's school level. Both the primary school groups showed lower emotional symptoms and peer problems compared to middle school early adolescents, and the same pattern was observed for conduct problems and the total difficulties score when considering only children in 3rd–5th grade. On the contrary, children in 1st and 2nd grade were the ones showing higher hyperactivity-inattention. Finally, children in 3rd–5th grade showed higher prosocial behavior. Therefore, a complex pattern emerged: middle school students showed globally more psychosocial difficulties, including both internalizing (e.g., emotional symptoms) and externalizing (e.g., conduct problems) indicators. This is partially in line with results found with the Italian SDQ-T [2], and partially in contrast with results obtained with SDQ-P in other countries [13–15]. However, when considering hyperactivity-inattention, younger children (1st–2nd grade) were the ones showing more difficulties as reported by their parents. This result is in accordance

with research proving a significant decline in ADHD symptoms with age [28]. Globally, these results suggest that in the Italian context, contrarily to other cultural settings, middle school students are perceived by both teachers and parents as more problematic than younger children, except hyperactivity-inattention that follows a different pattern. The transition from primary (1st–5th grade) to middle (6th–8th grade) school is quite a big change for pupils in Italy: for example, they go from having one main teacher per class, to having a different teacher in every school subject, and the relationship with these teachers is usually less close. Furthermore, primary school teachers are more oriented to offer individualized treatment to children–considering their learning style, their temperament, and their difficulties–, whereas in middle school teaching strategies are less personalized, and a stronger emphasis is placed on academic results. These changes could lead parents and teachers to identify more indicators of conduct, emotional and relational difficulties in middle schoolers. Furthermore, early adolescents tend to conceal their worries and problems from parents more than children do [29], and this can further negatively influence parents' ratings.

Finally, the analysis of parents-teachers agreement showed good results for the majority of the scales, except the prosocial behavior subscale for which the correlation was lower than the cutoff of $r = 0.27$ [3]. The same was observed by Stone et al. [6] in their review. This is understandable if we consider how much the context can influence the expression of prosocial behaviors: behaviors prompted by the group classroom setting can be consistently different from the behaviors observed by parents in the small familiar setting.

Some limitations of the present study should be noted. Firstly, the information regarding which parent completed the questionnaire was not collected. However, they were probably mainly completed by mothers rather than fathers, and this may have had an impact on the results. Then, almost 20% of parents that received the SDQ and the consent form decided not to participate in the study, making the sample less representative of the community population.

In conclusion, despite the limitations mentioned above, the present study demonstrates that the Italian version of the SDQ-P has globally good psychometric properties and can be therefore considered a well-functioning questionnaire. Having representative norms for all the multiple informants reporting on the SDQ allows to collect information on a specific child using multiple points of view, that is valuable considering that psychosocial problems may be highly situational, and therefore it is typically recommended that data from multiple informants be used [21, 30]. The present work, together with the studies by Tobia et al. [2, 31] and Li et al. [7], and other similar contributes [32], offers key information for the valid use of the instrument in the Italian context.

Summary

This study analyzed the psychometric properties of the Italian Strengths and Difficulties Questionnaire (SDQ) parent-version, a widely used screening and research tool, considering 1917 children attending primary and middle school. The original 5-factor solution [1] showed the best fit. The reliability of the total difficulties score, as well as the one of the hyperactivity-inattention subscale, was satisfactory; however, the other subscales were less reliable. We, therefore, recommend the use of the total difficulties score, and eventually the hyperactivity-inattention subscale, for screening purposes. The analysis of gender differences revealed that boys have significantly higher conduct and peer problems as well as hyperactivity-inattention, whereas females show higher levels of prosocial behavior. Then, differences based on school level were found: 1st–2nd and 3rd–5th graders showed lower emotional symptoms and peer problems compared to middle school students, and the same pattern was observed for conduct problems and for the total difficulties score when considering only children in 3rd–5th grade. On the contrary, children in 1st and 2nd grade were the ones showing higher hyperactivity-inattention. Finally, children in 3rd–5th grade showed higher prosocial behavior. Consequently, separated norms for males and females attending 1st–2nd ,3rd–5th and 6th–8th grades were provided. Finally, the investigation of cross-informant agreement between parents and teachers showed good results for the majority of the scales, except the prosocial behavior subscale. This result provides insights regarding the perception of children's psychosocial difficulties in different contexts.

Compliance with Ethical Standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical standards The study has been approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

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