Psychological Adjustment of Adolescents in Residential Care: Comparative Analysis of YSR / SDQ

[1]Faculty of Psychology and Education Sciences, University of Porto

[2]Faculty Psychology, University of Oviedo

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Author Note

Sónia Rodrigues, ((https://orcid.org/0000-0001-6973-1600), Faculty of Psychology and Education Sciences, University of Porto; Maria Barbosa-Ducharne, (https://orcid.org/0000-0003-1024-9603), Faculty of Psychology and Education Sciences, University of Porto; Jorge F. Del Valle, Faculty of Psychology, University of Oviedo (https://orcid.org/0000-0003-1858-641X); Joana Campos, (https://orcid.org/0000-0001-6577-5155), Faculty of Psychology and Education Sciences, University of Porto.

Correspondence relating to this article should be addressed to Sónia Rodrigues, Faculty of Psychology and Education Sciences, University of Porto. Rua Alfredo Allen, 4200-135 Porto. E-mail: pdpsi11008@fpce.up.pt

Abstract

Residential care (RC) in Portugal accounts for almost 90% of out-of-home placements of childrenSince the Youth Self-Report (YSR) and the Strengths and Difficulties Questionnaire (SDQ) are the most commonly used psychological (mal)adjustment screening instruments, it is important to analyze their comparative validity specifically in the context of RC. This study aims to analyze the comparative effectiveness of YSR/SDQ as screening tools of psychological (mal)adjustment, looking for differences in the way psychological problems and difficulties are identified by these two measures in adolescents in RC. Sixty-one adolescents, aged 12 to 20, living in five RC settings participated in this study. Participants' characteristics at the time of admission were collected using the Previous Request for Infomation (PIP) from the Portuguese Comprehensive Assessment System for Residential Care Quality (ARQUA-P). Participants filled out both the YSR and the self-report form of SDQ. Results showed significant correlations between the two self-report measures of adolescents' psychological adjustment. Additionally, the utility of each measure differed based on youngsters' characteristics, potentially supporting the simultaneous use of both instruments. Implications for further research and professional practice in RC are discussed, namely the differential utility of using YSR and/or SDQ as a screening tool with this population.

Keywords: Residential Care; psychological adjustment of adolescents in residential care, mental health of adolescents in residential care, YSR, SDQ.

Psychological Adjustment of Adolescents in Residential Care: Comparative Analysis of YSR / SDQ

According to the latest data available, 6583 children and young people are in non-specialized residential care (RC) in Portugal (ISS.IP, 2018), accounting for 87% of all out-of-home placements. Considering the most recent demographic data (FFMS, 2017), this number corresponds to 0.32% of all Portuguese children and young people under nineteen. This is a significantly high rate in comparison to the overall worldwide estimate of 0.12%, as reported by Petrowski, Cappa, and Gross (2017). .

Several studies found that the prevalence rate of mental health problems is higher in children in RC than the normal population (Baker, Kurland, Curtis, Alexander, & Papa-Lentini, 2007; Casey et al., 2008; Egelund & Lausten, 2009; Evans et al., 2017; Gearing, MacKenzie, Schwalbe, Brewer, & Ibrahim, 2013; Gearing, Schwalbe, MacKenzie, Brewer, & Ibrahim, 2014; Goodman, Ford, Corbin, & Meltzer, 2004; Kjelsberg & Nygren, 2004; Pracana & Santos, 2010; Simsek, Erol, Oztop, & Ozcan, 2008; Wolkind & Rushton, 1994), and can range from 34% to 86% (Janssens & Deboutte, 2009; Schmid, Goldbeck, Nuetzel, & Fegert, 2008). Female adolescents in RC tend to manifest higher levels of psychopathology and more behavioral problems than male adolescents (Baker, Archer, & Curtis, 2007; Jones, Landsverk, & Roberts, 2007), and are more at risk for attempting suicide (Evans et al., 2017). An increase on the prevalence of disorders and self-perceived maladjustment troughout adolescence, from eleven to eighteen years of age, is also reported (Abad, Forns, & Gómez, 2002). In contrast, the presence of siblings in the same RC centre can act as a protective factor against psychological suffering (Smith, 1998; Mota, Serra, Relva, & Fernandes, 2017).

The presence of psychological problems in adolescents in RC has been evaluated/ measured using various instruments, but the different forms of the Achenbach System of Empirically Based Assessment (ASEBA: Achenbach & Rescorla, 2001; Achenbach et al.,

2014) and the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997; Goodman, Meltzer, & Bailey, 2003) are the measures most frequently cited in research. In an attempt to understand the degree of psychological adjustment of adolescents in RC, many studies either, favor collateral-reports of CBCL (Child Behavior Checklist school age forms) or TRF (Teacher Report Form) and/or SDQ version for parents or teachers (Baker, Woerner et al., 2007; Fernández-Molina, Del Valle, Fuentes, Bernedo, & Bravo, 2011; Hukkanen, Sourander, Bergroth, & Piha, 1999; Kjelsberg & Nygren, 2004; Rahman et al., 2013; Sainero, Del Valle, & Bravo, 2015) or compare the perspectives of multi informants using either the CBCL or SDQ (Egelund & Lausten, 2009; Erol, Simsek, & Munir, 2010; Fernández-Daza & Fernández-Parra, 2013; Gearing et al., 2013; Goodman et al., 2004; Janssens & Deboutte, 2009; Schmid et al., 2008).

Self-report measures, such as the Youth Self-Report (YSR) and SDQ, may serve as a rapid screening on adolescents' problems and difficulties. The use of YSR and SDQ directly with adolescents in RC to collect information regarding their mental health, emotional wellbeing and difficulties in social relationships, may allow the RC centre to identify adolescents' level of psychological adjustment. These self-report measures usually play a complementary role to the reports of parents or caregivers and teachers. In most studies, only one of these self-report measures is chosen, since as Goodman and Scott (1999) argued, they have roughly the same object of study, and one can replace the other in the screening of psychological problems. To knowledge, only Janssens and Deboutte (2009), in a study with children at risk with different protective measures, in Belgium, compared the various versions of the SDQ with those of the ASEBA, but the small number of participants (19 for the SDQ and 15 for the YSR) did not allow for conclusions to be drawn about the utility of the parallel use of these two instruments.

The assessment of the psychological adjustment of adolescents in RC is necessary to identify their needs for treatment. For many youngsters in RC, these needs are not met in a timely manner, since the services and support interventions they require are often neglected (Ford, Vostanis, Meltzer, & Goodman, 2007; Goodman et al., 2004; Janssens & Deboutte, 2009; McCann, James, Wilson, & Dunn, 1996, Whittaker, Del Valle, & Holmes, 2014).

There is general support for the position that youngsters improve their developmental and mental health status over time in RC (Gilman & Barry, 2003; Knorth, Harder, Zandberg, & Kendrick, 2008; Little, Kohm, & Thompson, 2005; Southwell & Fraser, 2010), especially if they live in small RC units (James, 2011). For this to happen in an effective manner youungsters' needs must be evaluated quickly and accurately and proper help must be given to them. The accurate and timely evaluation of yougsters' needs requires the use of instruments that are both reliable and valid for use with troubled children in RC. This will allow for the selection of treatment models and adequate therapeutic strategies (Eglund & Lausten, 2009; Fernández-Molina et al., 2011; Ford et al., 2007; Holden, Anglin, Nunno, & Izzo, 2014; Pecora, Jensen, Romanelli, Jackson, & Ortiz, 2009; Sainero, Bravo, & Del Valle, 2014).

The simultaneous use, in the present study, of YSR and SDQ with adolescents in RC can contribute to a better understanding of the relationship between the different dimensions of both measures. At the same time, it may permit the clarification of whether these two questionnaires complement each other in the screening of psychological problems and the way they relate to the individual characteristics of the adolescents in RC. The present study aims to: 1) analyse the results of both YSR and SDQ as screening tools of psychological adjustment, looking at how adolescents' psychological problems and difficulties are identified by these two measures; 2) explore correlations between YSR and SDQ measures; 3) explore the relationships between YSR and SDQ scores and some demographic variables such as gender, age, age at placement and time in care, presence of siblings in the same RC centre or at another

facility, specialized support received during RC,; and 4) explore relationships between YSR and SDQ scores and the variables related to the RC context such as the number of children per centre and ratio children / caregiver.

Method

The current study is a pilot study of a nationwide research examining the quality of RC in Portugal. It is an exploratory analysis that aims to validate the methods of the broader research and, particularly, collect evidence that determines the benefits of using YSR and SDQ together or to support thefurther option for one of these measures in order to assess adolescents' psychological adjustment Data collection procedures were approved by the Ethic Committee of the University of Porto

Participants

Fifty-nine adolescents in care, from five Portuguese generalist RC centres (without specific intervention programs) participated in this study. The number of participants from each center varied from 2 to 22. Table 1 presents participants' distribution according to individual characteristics as well as type and size of RC centre.

- Insert Table 1 -

Instruments

Participants' individual and institutional data were collected using the Portuguese Comprehensive Assessment System for Residential Care Quality (ARQUAP-P Rodrigues, Barbosa-Ducharne, & Del valle, 2005). YSR and SDQ were used to assess the psychological adjustment of youngsters in RC.

ARQUA-P

The ARQUA-P (Rodrigues, et al.,, 2015) is an ecological system for assessing the quality of residential settings that includes multiple methods, and resorts to multiple informants

in order to assess the personal characteristics and needs of the children in care, the services and resources provided by the RC centres, and the match between children's caracteristics and needs and RC services and resources. Only data collected through the Previous Request for Information (PIP) instrument was used in this study. PIP provides the participant's individual data and information about the type and size of RC centre.

YSR

The YSR, authorized Portuguese translation from Dias, Ramalho, Lima, Machado, and Gonçalves (2013), was used to describe and evaluate adolescents' self-reported emotional and behavioral problems (Achenbach et al., 2014). The YSR includes 112 itens organized in 8 subscales and answered in a 3 point-lickert scale (from not true to "very often true"): Anxiety/Depression, Withdrawal/ Depression, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior. YSR scores also include two broadband behavior syndromes, termed Internalizing and Externalizing and a Total of Behavior Problems Score (Achenbach et al., 2014).

Strengths and Difficulties Questionnaire – self-report (SDQ)

The SDQ, Portuguese translation available at http://www.sdqinfo.com, is a 25 item self-report measure of easy application that can be useful in the screening of psychological adjustment problems (Goodman, 1997; Goodman et al., 2003). It includes five subscales: Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention, Peer Problems and Prosocial Behavior. SDQ items are evaluated on a Likert scale corresponding to three categories of response ("not true", "somewhat true", "and certainly true").

The Total Difficulties scale is obtained by the sum of the scores of all the scales, except the Pro-Social one. The Total Difficulties scale can vary between 0 and 40, as long as all four

subscales are completed. Cut-off points were established by Goodman (1997) in UK, with approximately 80% of respondents falling in the range of the normal score; 10% falling in the borderline range, and 10% falling in the clinical range. A score falling in the clinical or borderline score in any of the scales or in the 'total difficulties' scores, therefore, indicates the presence of emotional and behavioral difficulties (Fleitlich, Loureiro, Fonseca, & Gaspar, 2005).

SDQ psychometric properties and factor structure were satisfactorily replicated in a number of countries (Becker, Woerner, Hasselhorn, Banaschewski, & Rotherberger, 2004; Ford et al., 2007; Guglani, Rushton, & Ford, 2008), indicating that the validity and sensitivity of the SDQ are robust. There are no norms, however, for the Portuguese version of the SDQ self-report questionnaire, so English original norms were used. In the present study SDQ presents a Cronbach alpha of .64 on 'total difficulties' and acceptable internal consistency values in all the scales except for the Peer Relations Problems scale ($\alpha = .57$). Therefore, the analysis of the results of this scale will be disregarded in this study. In the remaining scales the reliability Cronbach Alpha varied between .60 (Emotional Symptoms and Hyperactivity/ Inattention) and .70 (Conduct Problems and Prosocial Behavior).

Procedures

A team of 4 researchers, trained in the ARQUA-P methodology and on the application of YSR and SDQ, visited each centre. Participation in the research was strictly voluntary for all participants (including the RC centres). The visits were previously prepared: information about the research was made available to each RC centre; an Informed Consent Statement Form was signed by the persons in charge of the institution/centre; the Previous Request for Information (PIP) was sent by e-mail to provide participants' demographic data and institutional elements essential for planning the visit. A study specific identification number was created for each participant, allowing for the maintenance of anonymity and ensuring the confidentiality of all

information sources. Informed consent was obtained from each RC program, and separately from each adolescent who participated in the study. YSR and SDQ were completed in a group setting with the presence of at least two observers and one caregiver.

Data analysis

An exploratory data analysis was performed to verify the assumptions of parametric statistical methods using the Shapiro-Wilk and Levene's test, revealing that some variables were not normally distributed. In most cases skewness values were lower than 3 and kurtosis lower than 7, assuring the robustness of t-student tests and Pearson's or biserial correlations (Kline, 2005). Nevertheless, both parametric and non-parametric equivalent tests (Mann-Whitney test and Spearman correlations) were conducted and parametric test results are presented only when the conclusions of both sets of tests are convergent, as recommended by Marôco (2011). For the analysis of the correlations, Cohen's (1988) recommendations were followed. IBM SPSS statistics software (v.21) was used to analyze the data.

Results

YSR results

Table 2 presents the YSR percentages of clinical, borderline and normative cases, compared to the YSR normalization study for the Portuguese school age population. The analysis of the scores obtained in the different YSR scales, when compared to the normative data for the Portuguese school age population, showed that participants were classified as clinical or borderline cases in high percentages displaying the presence of psychological problems and inappropriate behaviors that may indicate psychopathological symptomatology.

- Insert Table 2-

Considering all scales of symptoms, the percentages of adolescents classified as clinical and borderline, exceeded 20%, ranging from 22% to 50.8%. The prevalence of symptoms of

psychological maladjustment in participants of this study is evident in the 'total of problems' (TP) score, with the sum of adolescents' percentages with clinical or borderline scores rising to 44.1%.

SDQ results

Table 3 presents the scores of the SDQ difficulties scales. The frequency of symptoms and difficulties is higher than those found in the English normative sample. Percentages above 10% in the 'borderline' and 'abnormal scores' and those 20% beyond the cut-off point, correspond to significant levels of psychological maladjustment. In the 'total difficulties' global scale (TD), 42.4% of the participanting adolescents showed levels of symptomatology and changes of behavior superior to those considered desirable for satisfactory psychological adjustment.

- Insert Table 3 -

Interscales correlations and correlations between YSR and SDQ means

All YSR scales showed strong significant correlations. Regarding SDQ, all scales were positively and significantly correlated, except the 'pro-social behavior' scale that showed a significant and negative, but weak correlation with the 'conduct problems' scale (r = -.26, p = .048). All YSR ss and SDQ scales were signigicantly corrleted, except SDQ's 'emotional symptoms' and 'pro-social behavior' scales. 'Emotional symptoms' was not correlated with 'externalizing' and 'rule breaking behavior'; the 'pro-social behavior' scale only was significantly and negatively, correlated with YSR 'externalizing' (r = -.30, p = .020), 'rule breaking behavior' (r = -.29, p = .024), and 'aggressive behavior' (r = -.27, p = .035) scales . Table 4 sumarizes the correlations found between, SDQ 'total of difficulties' and YSR 'total problems', 'externalizing' and 'internalizing' scales.

- Insert Table 4 –

Relationships between YSR and SDQ means and adolescents' variables

There were significant differences both in YSR and SDQ results according to gender, with girls showing more problems, difficulties and psychological maladjustment in several scales, as shown in table 5. A significant moderate negative association ($r = -.32$, $p = .014$) between SDQ 'total difficulties' global scale (TD) and adolescents' age was observed, revealing that as adolescents got older they reported fewer difficulties. No associations were found between YSR or SDQ scales and other individual variables such as time in RC or age at placement in RC.

- Insert Table 5-

YSR scores showed no significant differences according to the presence of siblings, except for'thought problems' (ThP) and 'rule-breaking behavior' (RBB) scales. Adolescents who had siblings in the same RC centre presented less though problems and rule-breaking behaviors than those who did not have siblings in the RC. Results of SDQ scales did not show significant differences in these variables.

As displayed in Table 6, no significant differences were found in any of the YSR scales, according to whether or not the adolescent received specialized therapeutical support. On the contrary, a significant difference was observed in SDQ's 'total of difficulties' scale between adolescents who received some kind of specialized support or therapyand those who did not. Adolescents' who received specialized support or therapy revealedmore difficulties.

- Insert Table 6-

Table 7 shows how YSR and SDQ participants' scores were distributed taken in account if they were benefiting or not from a specialized mental health support. Twenty-seven adolescents (45.8%) scored at least as borderline in YSR TP or in SDQ TD. Most of these adolescents (25) scored as borderline or abnormal in SDQ TD but only 7 in YSR TP. Among adolescents that scored as borderline or clinical/abnormal on YSR and/or SDQ, 7 (11.5 %) did not benefit of a specialized support (Psychology, child Psychiatry, speech therapy, other

therapies). From the total of 35 (59.3%) who benefited from a specialized aid, 15 (25,4%) scored as normal both in YSR TP and SDQ TD.

- Insert Table 7-

Relationships between self-report measures and RC centres' characterization variables

Moderate and negative correlations were found between 'number of adolescents in care at that centre/ centre's size' and YSR 'Internalizing scale *(r* = -.36, *p* = .005) and SDQ 'total difficulties' (*r* = -.35, *p* = .007). YSR internalization score was also negatively correlated with the 'child / caregiver ratio' (*r* = -.42, *p* = .001).

Discussion

The main aim of this study was to compare YSR and SDQ use in RC in order to identify their efficacy as screening tools of psychological adjustment problems. Apart from empirically supporting using one or both simultaneously, we were also interested in understanding their distinct usefulness, ways in which they complement each other and also discriminate the difficulties and symptoms that may derive from the specific characteristics of adolescents in RC and those that are inherent to the RC context. Consequently, the intent ist to help caregivers realize how these measures identify youngsters' needs allowing, in a more focused manner, to respond adequately and timely to those necessities, implementing intervention strategies and/or referring youngsters to adequate support services.

As in most studies regarding this population (Baker, Kurland et al., 2007; Egelund & Lausten, 2009; Evans et al., 2017; Gearing et al., 2013; Gearing et al., 2014; Goodman et al., 2004; Kjelsberg & Nygren, 2004; Pracana & Santos, 2010; Simsek et al., 2008; Wolkind & Rushton, 1994), in the present study, there is evidence of psychological problems and psychosocial difficulties which may indicate a high frequency of psychopathology. The sum of the percentages of adolescents with clinical or borderline YSR's 'total of problems' scores

reached 44.1%, 'internalizing' 44% and 'externalizing' 50.8%. The sum of the percentages above the cut-off points for the borderline and abnormal scores in the SDQ 'total of difficulties' was 42.4%. These percentages were within the range of 34% to 86% described by Schmid et al. (2008) and Janssens and Deboutte (2009), making up the percentages found in different studies with participants in RC.

Considering gender differences, female adolescents presented a significantly higher average of problems in the YSR TP and in the 'internalizing', 'somatic complains', 'anxiety and depression' and 'attention problems' scales and also in the TD and 'hiperactivity' and 'emotional symptoms' scales of the SDQ. Indeed, as in Jones, et al. (2007) and Baker, Archer et al. (2007), girls reported more problems and difficulties both in the YSR and SDQ leading to the conclusion that female adolescents present more psychological maladjustment than boys.. This seems to be another indicator that at a RC centre special attention must be paid to the specific needs of female children and young girls.

The SDQ TD showed a significant negative correlation with the age of the adolescents, which expresses the identification of more difficulties in younger adolescents. It should be noted that the correlations with 'age of the children at entry/admission in RC' or with 'length of the stay in RC'are not significant, which should guide its interpretation through issues of developmental nature. Thus, this correlation may indicate that the lower maturity of the younger adolescents, or the fact that they have less skills, generate more difficulties in dealing with adverse circumstances, which requires additional support to younger adolescents in RC. The correlation between age and YSR TP was not significant differently from what was observed by Abad, Forns and Gómez (2002).

Adolescents who have siblings living in the same RC centre presented fewer Though Problems and Rule-Breaking Behavior. These results may reflect a positive effect of keeping siblings together in the same RC centre (Smith, 1998; Mota et al., 2017), and constitute a valid

argument against separating siblings. No differences were found in how adolescents with and without siblings in the same RC centre scored in the various scales of the SDQ.

Although it has not been possible to find differences in the YSR scales depending on whether or not adolescents are benefiting from external supplementary specialized support, in SDQ these differences were quite significant on the 'total of difficulties' scale, with youngsters already benefiting from some type of support revealing more difficulties. Adolescents who showed more problems in YSR (7) are fewer than those scoring as borderline or abnormal on SDQ (25). Even if 59.3% of participants were engaged in a psychological or child psyquiatric support, crosstabs showed that 7 (11.5%) adolescents who scored as borderline or clinical on YSR's 'total of problems' or as borderline or abnormal on SDQ's 'total of difficulties' were not referred to any specialized support. The sum of those who scored positively on both the YSR TP and the SDQ TD is 27 (45%). On studies in which only self-report measures are used in RC contexts, as in this case, the symptoms and problems acknowledgment can be lower. Caregivers, as informants, reporte more externalized problems. When adolescents and caregivers are considered sources of information small to modest correlations between self-reported and staff-reported scores are normaly found, with a higher child-caregiver agreement on external/observable problems than in internalized symptoms (Gearing et al., 2014; Sainero, Bravo, & Del Valle, 2015). These facts give rise to the hypothesis that these numbers may be even worse if other informant measures were used. At the same time, the considerable percentage of young people who received specialized support but did not show significant scores in either the YSR or the SDQ (25.4%) can be a sign that they had already improved benefiting from it or may point to the need for a more careful evaluation and screening of the adolescents in RC referenced for mental health supports.

The ambiguity of these results seems to reflect what has been observed in the literature. In fact, several authors (Ford et al., 2007; Goodman et al., 2004; Janssens & Deboutte, 2009;

McCann et al., 1996) admit that a significant number of children in RC which present psychological problems are not assessed in a timely manner, so the need for a specific support may be being neglected or the supports provided may not be the most suitable, or not at the right intensity and /or duration to the real needs of those children. The results highlight also the importance of investing efforts in the identification / evaluation of psychopathological symptomatology and problems of socio-psychological adjustment of children and young people in RC, as early as possible. This screening would allow better identification of adolescents who need mental health support and may permit their timely reference to specialized support.

Regarding the context variables, SDQ TD as well as YSR internalizing behaviors and TP present significant negative correlations with the number of adolescents in care (and in the case of the two YSR scales also with the child / caregiver ratio): as the number of adolescents per centre decreases, the difficulties and problems they present increase, meaning that when data were collected for this study, adolescents living in RC centres with a lower ratio child / caregiver presented more psychological maladjustment. These correlations are not easily corroborated by the literature and seem to contradict even the theoretical assumptions. Delap (2011) affirms that there is some evidence to suggest that small group homes lead to better outcomes than large-scale RC facilities and youngsters with psychological problems or behavioral difficulties, who may require treatment and support, are best cared by a concentrated group of professionals in a small group RC centre. A plausible explanation for this result may be smaller RC centres showing more availability to accommodate adolescents who not always are ‘eligible’ to be admitted in other RC centres given their personal characteristics, life history and the severity of the problems they experienced previously to their removal from the birth family. Small therapeutic group care settings have been described

as a realistic alternative for youngsters with problems (James, 2011) and this may contribute to increase the proportion of adolescents with significant difficulties in these smaller centres.

The observed differences between YSR and SDQ may introduce some questioning of Goodman and Scott's position (1999) when they argue that one can replace the other, since the two instruments showed a different sensitivity to some of the variables related to the context and adolescents themselves. These results also showed the concurrent validity of both YSR and SDQ when applied to this sample of adolescents in RC, as the correlations found between these two psychological adjustment measures are positive and highly significant. Participants who score higher in the YSR TP also score higher in the SDQ TD and vice versa.

Conclusion

In the current study, Portuguese adolescents in RC showed a higher frequence of mental health symptoms and psychological maladjustment than the normative population, confirming similar research carried out in other countries. Both YRS and SDQ provided important information whereby at least one of these instruments should be used with the ARQUA-P system in the assessment of RC centres' quality. Similarly, these two instruments should be used regularly at centres, by caregivers, as screening tools, especially at children´s placement. Despite the positive and highly significant correlations found between YSR and SDQ, which seemed to legitimize that one can replace the other, the differences observed in the sensitivity of the two instruments to the same variables lead to consider the usefulness of the joint use of both, in research and in direct interventions with children. A better screening of psychological adjustment, problems, difficulties and signs of psychopathology in adolescents in RC may benefit from the joint use of both YSR and SDQ.

Limitations

This is an exploratory study toward an informed decision about the possible option for the use of one or both YSR and SDQ as screening instruments in a nationwide research project

on the quality of Portuguese RC. Thus, although it allowed the decision to use both measures, this study has several limitations. The origins of adolescents' psychological adjustment problems were not explored. Only one administration was used, which does not allow for understanding the evolution of the adolescents' difficulties or symptoms while in RC.

Implications for Future Research

The simultaneous use in research of YSR and SDQ must be considered due to their role in the identification of problems and difficulties that must answered during RC placement. Nevertheless, they should continue being studied regarding their different uses in assessing specific needs of adolescents in RC.

Implications for Professional Practice and Policies in Portuguese Residential Centres

Although the objectives of this study were focused on the methodology definition and on the piloting of instruments for a broader research project, the results obtained call for the need for a larger number of specialized RC units, the integration of more trained psychologists at RC centres, the refining of screening and psychological assessment procedures and the promotion of specific (basic and in-service) training for all caregivers. The definition of specific interventions according to each child's specific needs and the implementation of a therapeutic approach of care on daily basis, are critical in an RC context. So it is the foundation of specialized therapeutic units.

Universities and schools that recruit and train social workers, psychologists and all future caregivers must redefine their curricula to correspond to present requirements of RC services, accordingly with international standards and based on an updated knowledge of children and young people in RC. In addition to the more general and basic matters - child and youth development; attachment theory, psychological emotional trauma, physical and sexual abuse, neglect, resilience, systemic work with families, and intervention from an ecological perspective -, specific knowledge about RC is also important for potential future caregivers.

Other critical issues in the preparation of RC caregivers are: knowledge of RC background, child protection legislation and the protection system itself, including alternatives to RC, out-of-home protective interventions and interventions in children's life context, awareness of nationally and internationally stated child's rights, quality and standards of quality in RC, acknowledgement of the effects of maltreatment in childhood, intervention models and programs, evaluation of the child and of his/her different life contexts; model of organization of a child' s case file and definition of intervention objectives, crisis management skills; awareness of the relevance of children's family ties namely with siblings; management of children's behavior consequences; and participation of the child in all questions that are of interest to him/her, namely the management of the centre.

Children in smaller centres showed more clinical / abnormal or borderline scores. According to our knowledge of the Portuguese RC system, this situation corresponds to a greater confidence of the tutelary entities in the quality of smaller centres, referring the most difficult "cases" to these centres because of the care quality and affection these children will receive from caregivers in a context considered similar to a family one. The Portuguese welfare system follows a child based funding approach. Therefore, larger centres receive more funding than smaller ones. They also have more amenities and human resources. In order to improve RC quality, it is essential to change this funding system and each centre should receive funding according to the specific needs of the children in care and the services provided.

Using self-report measures allows adolescents in RC to express their own feelings and thoughts. From that perspective, when filling a self-report screening, adolescents can express themselves freely. Children's participation and opinions regarding all issues and aspects of their life at the centre and of the RC centre's management (rules, routines, tasks, pocket money, shopping, interior design, activities, consequences...) must be always taken into account, according to international recommendations and respecting children's rights. Listening to girls

in RC is particularly important due to the consistent scientific evidence showing the presence of more adjustment problems and psychopathological internalizing symptoms. Many RC centres in Portugual are not adequate to the needs of girls. Changes must be designed and implemented in order to ensure that RC services and resources are tailored to the specific characteristics and needs of girls and are best suited to them. A greater attention must be given to the psychological difficulties of younger adolescents, since their lack of maturity requires more support to help them cope with their problems. Siblings in care should be kept together on the same RC centre, independently of their different ages, not only because it is a right established on national and international laws and quality standards for RC but also because when with siblings, children tend to present fewer thought and behavioral problems. The definition of age ranges and gender segregation in RC centres prevents brothers and sisters from being together while in RC. This is a strong argument against homogeneity of ages and gender segregation in RC centers.

SDQ and YSR are brief instruments that allow the screening of adolescents' psychological problems and mental health, and permit a timely referral for specialized help. In addition, the use of these measures can also help caregivers to better know children in care, be more attentive to their problems and difficulties, their needs and how these needs are reflected on children's behavior, in order to adequately adjust behaviors and act therapeutically. In view of the results of this study, we strongly defend the importance in RC work of the regular use, as a screening tool, of, at least, one of these instruments, particularly at the admission into RC of a child/youth and during the process of psychological assessment. We advocate for the combined use of YSR and SDQ, due to the differential sensibility that each measure showed to different variables in this study. These tools provide a more profound and rapid knowledge of youngsters' necessities, making possible to mobilize the resources and services of the RC center to respond adequately and in a timely manner to their needs.

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Table 1

Participants Characterization and Distribution by Centre's Type and Size

Variable	n	%	M (SD)	Min	Max
Age (in years)	59		15.76(1.95)	12	20
Gender					
M	37	62.7			
F	22	37.3			
Time in RC at current centre (months)			29.91(26.80)	2	108 (9 years)
Less than a year	18	29.5			
3 months or less	3	4.9			
Age of entry/admission in RC					
Months			163.9(28.58)	58	214
Time in RC at other centre	24	39.3	6.63(12.79)	0	60
Total time in RC			29.91(26.68)	2	108 (9 years)
Siblings	55	90.2			
In RC	18	29.5			
At same centre	7	11.9			
At another centre	11	18.6			
Specialized support	35	59.3			
Psychology	25	42.4			
Child psychiatry	11	18.6			
Both	4	6.6			
Neither	27	45.8			
Ratio children/caregivers			1.79(.83)	1.09	2.87
Type of RC centre					
Segregated by gender	57	96.6			
For Boys	36	61			
For Girls	21	34.4			
Mixed	2	3.3			
Size of RC centre			28.36 (14.52)	10	46
Small (≤ 12)	14	23.7			
Medium size (13-24)	23	37.7			
Large (≥ 24)	22	36.1			

Table 2

YSR Symptomatic Scales Scores: Cut-off Points, and Participants' distribution

YSR Scales	Sample *M*(SD)	Normative		Borderline		Clinical	
		Study Sample (N=59)	National Sample (N=1442)	Study Sample (N=59)	National Sample (N=1442)	Study Sample (N=59)	National Sample (N=1442)
Anxiety/Depression	.64 (.39)	78%	87.6%	15,3%	9.8%	6.8%	2.6%
Withdrawal/Depression	.88 (.40)	71.2%	90.4%	18.6%	7.5%	10.2%	2.1%
Somatic Complaints	.41 (.40)	78%	91.8%	16.9%	6.6%	5.1%	1.6%
Social Problems	.46 (.34)	76.3%	96.9%	15.3%	2.4%	8.5%	0.7%
Thought Problems	.69 (.50)	69.5%	95.5%	16.9%	3.4%	13.6%	1.1%
Attention Problems	.79 (.42)	78%	93.6%	5.1%	4%	16.9%	2.3%
Rule-Breaking Behavior	.54 (.34)	67.8%	96%	18.6%	3.6%	13.6%	0.4%
Aggressive Behavior	.56 (.37)	74.6%	92.7%	20.3%	5.9%	5.1%	1.4%
Internalizing Problems	.64 (.35)	55.9%	72.7%	18.6%	14.4%	25.4%	12.9%
Externalizing Problems	.55 (.34)	49.2%	87.1%	22%	6.3%	28.8%	6.6%
Total Problems	6.97 (3.73)	55.9%	83.6%	11.9%	9.1%	32.2%	7.3%

Table 3

Scores of SDQ Problem's Scales: Cut-off Points and Participants' distribution

SDQ Scales	(N=59) *M*(SD)	Cut-off Point	Normal	Cut-off Point	Borderline	Cut-off Point	Abnormal
Total of Difficulties	13.63(5.76)	0-15	57.6%	16-19	28.8%	20-40	13.6%
Emotional Symptoms	3.92(2.07)	0-5	74.6%	6	16.9%	7-10	8.5%
Conduct Problems	2.59(2.04)	0-3	72.9%	4	10.2%	5-10	16.9%
Hiperatividade / Inattention	4.47(2.22)	0-5	61.0%	6	22.0%	7-10	16.9%
Pro-Social Behavior	7.20(1.96)	6-10	81.4%	5	11.9%	0-4	6.8%

Notes: Scores of Peer Relationships Problems scale are not presented due to the low internal consistency (α =.57).

Table 4

Correlations Between YSR Total Problems, YSR Externalizing, YSR Internalizing, SDQ Total of Difficulties, SDQ Pro-Social Behavior Scale and SDQ Emotional Symptoms Scale

	1 *r*	2 *r*	3 *r*	4 *r*	5 *r*	6 *r*
1. YSR Total Problems	1					
2. YSR Externalizing	–	1				
3. YSR Internalizing	–	.76***	1			
4. SDQ Total of Difficulties	.65***	.56***	.63***	1		
5. SDQ Pro-Social Behavior Scale	-.22	-.30*	-.10	_	1	
6. SDQ Emotional Symptoms Scale	.42**	.24	.51***	_	-.21	1
M	6.97	.55	.64	.68	1.44	.78
SD	3.73	.34	.35	.29	.39	.41

• $p < .05$; ** $p < .01$; *** $p = < .001$

Table 5

Mean Differences Between Boys and Girls on YSR and SDQ Scales

	Boys (n=37)		Girls (n=22)					
	M	SD	M	SD	*t*	*df*	95% CI	Cohen's *d*
YSR								
Total of Problems	6.26	3.85	8.16	3.27	-2.03*	57	[-3.87, -0.57]	.53
Internalizing	.54	.34	.81	.30	-3.01**	57	[-0.44, -0.09]	.84
Withdrawal/Depression	.80	.44	1.00	.30	-2.09*	57	[-0.40, -0.01]	.53
Somatic Complaints	.29	.34	.61	.42	-3.25**	57	[-0.52, -0.12]	.84
Anxiety/Depression	.54	.36	.81	.38	-2.66*	57	[-0. 47, -0.06]	.73
Attention Problems	.68	.41	.96	.38	-2.58*	57	[-0.50, -0.06]	.71
SDQ								
Total of Difficulties	.61	.30	.80	.23	-2.55*	57	[-0.34, -0.40]	.95
Hyperactivity / Inattention	.79	.47	1.07	.33	-2.48*	57	[-0.51, -0.05]	.69
Emotional Symptoms	.65	.42	1.00	.31	-3.37**	57	[-0.55, -0.14]	.71

Note: * = $p < .05$, ** = $p < .01$

Table 6

Mean Differences on YSR and SDQ Scales Between Adolescents With or Without Sibilings at Some Centre and Adolescents Which Receive or Not Specialized Support

Sibilings at Some Centre	Yes (n=7)		No (n=52)					
	M	SD	M	SD	*t*	*df*	95% CI	Cohen's *d*
Thought Problems (YSR)	.31	.19	.74	.50	4.32***	20	[0.23, 0.65]	1.14
Rule-Breaking Behavior (YSR)	.32	.14	.57	.35	3.57**	20	[0.10, 0.40]	.94
Specialized Support	Yes (n=35)		No (n=24)					
	M	SD	M	SD	*t*	*df*	95% CI	Cohen's *d*
Total of Difficulties (SDQ)	.77	.27	.55	.27	-3.11**	57	[-0.36, -0.08]	.81

Note: ** = $p < .01$, *** = $p < .001$

Table 7

Crosstable Counting Participants With and Without a Specialized Support and YSR Total of Problems and SDQ Total Difficulties Scores

Specialized Support			YSR Total Problems Score			Total
			Normative	Borderline	Clinical	
Without	SDQ Total of Difficulties	Normal	17	1	0	18
		Borderline	4	0	0	4
		Abnormal	1	0	1	2
	Total		22	1	1	24
With	SDQ Total of Difficulties	Normal	15	1	0	16
		Borderline	11	0	2	13
		Abnormal	4	0	2	6
	Total		30	1	4	35
Total	SDQ Total of Difficulties	Normal	32	2	0	34
		Borderline	15	0	2	17
		Abnormal	5	0	3	8
	Total		52	2	5	59