BEHAVIORAL RATING SCALE FOR INTERNALIZING AND EXTERNALIZING PROBLEMS IN ACADEMIC SKILLS IN BRAZILIAN SCHOOLCHILDREN

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Abstract

Objectives: To develop a Behavioral Rating Scale of Internalizing and Externalizing Academic Skills for use by Elementary School Teachers and showcase its results concerning data corroboration. Method: The research was divided into three phases: 1) preparation of items and criteria for the scale; 2) data corroboration; and 3) internal consistency analysis. Conclusion: The rating scale was reliable enough for its application in forthcoming research regarding the identification of internalizing and externalizing behavioral issues among schoolchildren of Elementary School.

Keywords: Problematic behavior, Behavioral Rating Scale, teachers, schoolchildren.

1. Introduction

Externalizing behaviors are primarily expressed in regard to other people, such as opposition, aggression, hyperactivity, impulsivity and antisocial challenges or manifestations (Achenbach & Edelbrock, 1978). Internalizing behaviors refer to self-focused conducts and include some symptoms of depression and anxiety, such as sadness, social retraction, and solitude (Achenbach, Ivanova, Rescorla, Turner, & Althoff, 2016).

The association between externalizing and internalizing behaviors and hindrances to one's academic skills has been well established in literature (D'abreu & Marturano, 2010), which demonstrates how it can be easily identified early-on and the impacts it causes on overall schoolchildren development. Within this context, the early detection of emotional and behavioral risks is widely recommended, suggesting that behavioral tracking tools employed by teachers are substantially more effective when identifying schoolchildren at risk, particularly those who exhibit internalizing or externalizing behaviors (Chan, Bull, Ng, Waschl, & Poon, 2021).

In Brazil, although there has been a growth spurt in papers focused on the analysis of schoolchildren behavior (Correia-Zanini, Marturano, & Fontaine, 2018), there are still little to none concerning the development of tracking tools for the identification of externalizing and/or internalizing behaviors made for school teachers in order to provide clear methods for the identification of behavioral issues, which are closely related with the learning process.

On account of this concerning gap in knowledge, the following argument was brought to light: Would it be possible to develop an instrument – both valid and reliable – subject to psychometric criteria for the purpose of assisting teachers in identifying internalizing and externalizing behavioral issues during Reading, Writing and Math homework for schoolchildren? Consequently, the following hypothesis was formulated: It is possible to develop an instrument – both valid and reliable – subject to psychometric criteria for the purpose of assisting teachers in identifying internalizing and externalizing behavioral issues during Reading, Writing and Math homework for schoolchildren. As such, this paper aimed to develop the Rating Scale of Internalizing and Externalizing Behavioral Issues in Academic Skills, intended for the use of Elementary School teachers, as well as showcase the validity of its contents.

2. Method

A cross-sectional study was realized following approval by the Research Ethics Committee. The research was divided into three phases:

Phase 1: A systematic bibliographical inquiry was performed, using sources from national and international literature (PubMed, Scielo Brasil, LILACS and CAPES/MEC Periodic Portal), in order to enable the identification and selection of specific descriptors used in the preparation of the scale's items and criteria. The revision attempted to answer the following question: "What are the evaluation instruments most employed in the classification of behavioral traits in Elementary schoolchildren, used by teachers?"

Phase 2: For data corroboration, six independent judges (two speech therapists, two pedagogues and two psychologists) were brought in. To measure statistical rapport among them, each aspect was evaluated according to Fleiss' Kappa statistical methodology. The chosen level of significance was of 0.05 (5%) and the confidence interval was established at a 95%.

Phase 3: Six Elementary teachers from a state-funded school participated, completing the rating scale and evaluating 42 schoolchildren, aged approximately 8.57 years old, male and female, from the 1st to 5th year. For data analysis, Cronbach's Alfa coefficient and confidence intervals with 95% confidence were utilized.

3. Discussion

Results obtained in phase 1, literary revision and instrument analysis enabled the establishment of two behavioral issue categories: externalizing issues and internalizing issues (Achenbach, Ivanova, Rescorla, Turner, & Althoff, 2016; Achenback & Rescorla, 2001), as well as the identification of specific descriptors (APA, 2023; OMS, 2000; Achenbach, Dumenci, & Rescorla, 2001; Achenbach & Edelbrock, 1978; Reid, Patterson, & Dishion, 2002). Literary revision also revealed the scarcity of national research focused on developing evaluative and/or tracking instruments for the identification of behavioral issues in schoolchildren and employed by school teachers, which is something closely related with the Brazilian population's learning process (Lemos, Michelis, & Batista, 2017).

Within the literature the frequent association between the terms "internalizing behavior" and "externalizing behavior" with child behavior issues is widely observed (Compas, et al., 2017; Rescorla, et al., 2007; Burns, Geiser, Servera, & Becker, 2022). The association between externalizing and internalizing behaviors and hindrances to academic skills is well established in the literature (D'abreu & Marturano, 2010; Dodge & Pettit, 2003), demonstrating its early identifiability – in pre-school – and its impacts on overall schoolchildren development.

Next, in the data corroboration phase, results obtained through Fleiss' Kappa methodology enabled the measurement of statistical confidence among the judges, which corroborated the first scale's modifications, due to the fact that none of the analyses showcased statistical significance or at least considerable ones. Except for font size, font type and scale type (general aspects) criteria; as well as sentence size among the three categories (Reading, Writing and Math), in which a Fleiss's Kappa of 1.000 was obtained. Results obtained from the second analysis attained the maximum possible for Fleiss' Kappa; meaning, maximum agreement. Thereby, both the method and statistical results indicated to comply with instrument preparation techniques, guaranteeing the validity of its contents (Pasquali, 2003), allowing a clearer definition of its domains, its content sector and its content representation, the connection of its content with the processes which are to be evaluated, the relative significance of each unit, the preparation and theoretical analysis of the items, as well as its user-friendliness, relevance and empirical analysis for future use.

Data obtained through the internal consistency analysis revealed Cronbach's Alfa for the sample, to be almost perfect, with the lowest value found for the Internalizing Behavior Category in Writing being 0.814, leading to an internal consistency in all Behavioral, Academic Skill and Total Categories, not impacting the instrument's following analysis according to three conditions: removing the item in cross-reference and showing the Alfa for the instrument as a whole; removing the item in cross-reference and showing the Alfa for the category; and, lastly, removing the item in cross-reference and showing the Alfa for behavior category.

The stated value may depend on the fact that externalizing behaviors are expressed through reactions directed towards other people, which may be observed in problems related with aggression, lack of attention, disobedience and deviant behaviors. Internalizing behaviors, on the other hand, are expressed within the individual themselves, manifesting as anxious and depressive behaviors as well as somatic symptoms, which can be observed in the school environment (Achenbach & Edelbrock, 1978; Bevilacqua, et al., 2021).

4. Conclusion

This study's data lead to the conclusion that the aforementioned rating scale is valid enough to identify Internalizing and Externalizing Behavioral Issues in Academic Skills when used by teachers in schoolchildren from Elementary schools (EP-CEI). Therefore, obtained results are valid and reliable enough to justify the rating scale's application in other studies regarding the identification of Externalizing and Internalizing Behavioral Issues in schoolchildren from Elementary school.

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