Abstract

Objective: To characterize self-perception of resilience in children and adolescents, and to analyze how this self-perception differs from the perception of their parents in correlation with sociodemographic variables.

Methods: This was a cross-sectional study conducted as part of the MAISclusãoMental (More Mental Health) project with a nonprobability convenience sample including 567 children and adolescents, 50.6% of whom were females aged between 9 and 17 years old (mean = 12.40; SD = 1.59 years old) enrolled in basic education schools from Central Portugal, and 592 parents (mean age = 40.43 years old; SD = 2.58 years old). A questionnaire for sociodemographic characterization was used, along with the Healthy Kids Resilience Assessment Module (version 6.0) Internal Assets subscale, adapted to the Portuguese population by Martins (2005), composed of 18 items and 6 dimensions.

Results: Out of the total number of children/adolescents, 78.8% lived with their parents. Out of the total number of parents, most were between the ages of 40 and 41 years old. Resilience was classified as moderate by 47.8% of children/adolescents at an identical distribution in parents. The t-test showed children’s self-perception of resilience to be more positive when compared to their parents with significant differences seen in all dimensions (p <0.000). Younger parents showed a more positive perception of their children’s resilience, significant only for “empathy and respect” (0.036) and “problem-solving skills” (0.001). Resilience decreased significantly with age and higher education levels, and children living with their parents showed higher resilience.

Conclusion: Study results show differences between the perceptions of resilience in children and their parents, which are influenced by sociodemographic characteristics.

Resumo

Objetivo: Caracterizar a auto-percepção de resiliência das crianças e adolescentes; analisar as diferenças na percepção dos pais e sua relação com algumas variáveis de contexto sociodemográfico.

Métodos: Estudo transversal realizado no âmbito do Projeto MAISclusãoMental, numa amostra não probabilística de conveniência de 567 crianças e adolescentes, 50,6% do sexo feminino, idade entre 9-17 anos (média = 12,40; Dp = 1,59 anos) de escolas do ensino básico da região centro de Portugal e 592 pais (média idade = 40,43 anos; Dp = 2,58 anos), Utilizou-se um questionário de caracterização sociodemográfica e a subescala Internal Assets do Healthy Kids Resilience Assessment Module (versão 6.0), adaptada à população Portuguesa por Martins (2005), composta por 18 itens e seis dimensões.

Resultados: Das crianças / adolescentes 78,8% moravam com os pais. Dos progenitores a maioria tinha entre 40 e 41 anos. A resilência foi classificada como moderada por 47,8%, das crianças / adolescentes.
Introduction

The analysis of the ability to adapt to the adversity in life has been a recurring theme under investigation, given its relevance for identifying resources to mobilize the promotion of positive outcomes in the most diverse settings, namely prevention of risk behaviors and promotion of mental health in childhood and adolescence. Some authors define resilience as an interactive and dynamic process characterizing the ability of an individual to resist and adapt to adversity in life. Rutter goes on to recognize that there is huge heterogeneity in individual’s responses to all manner of environmental adversities, based on evidence that certain individuals show better outcomes than others even when experiencing a comparable level of adversity. The authors noticed the crucial importance of environmental mediation of risks and various factors contributing to higher vulnerability and/or adaptation to adversity, namely the interaction between characteristics of the individual’s nature and their environment. The initial resilience studies focused mainly on children in high risk environments, namely in the family and social settings. These studies considered the origin of resilience to reside in children subjected to adversity, such as living in extreme poverty or under recurring abuse and being exposed to excessive or prolonged stress. Later studies began to increase recognize family and social factors as elements that may help the child in compensating for these various environmental influences. Support and quality relations with adults may also constitute an opportunity to build skills for adapting in the face of adversity.

Currently, a positive and integrative outlook on resilience can be seen in association of the concept with models based on individual strengths focusing on the comprehension of epigenetic and neurobiological processes of the developing brain, especially in connection with tipping points and their effect on experiences renewing chances and abilities for facing adversity. This investigation is of great relevance, especially considering how it may be a benefit for children and adolescents.

Resilience assets in children/adolescents are reflected in different areas, namely internal assets, the family environment, and the social environment. Internal assets—this study’s area of interest—represent individual strengths and skills, such as temperament, communication, learning and self-efficacy abilities, self-esteem, and adaptive abilities. These are considered protective constructs developed early in life both dynamically and progressively, however, they are subject to variations in setting and development, such as gender and age. In this perspective,
some studies\(^1,10\) have observed that the women usually presents a more positive resilience compared with men, however, this behavior decreases with age.\(^{11}\) Thus, life circumstances seem to have a material impact on the promotion of resilience. Places such as school, home, and community health centers can potentially promote resilience, and nurses have a central role in the process, mainly when it comes to conducting interventions with the child/family within the community. These interventions and the mobilization of health and/or community assets afford nurses a central role in co-creating chances for the development of skills in the child/family, which will later help to identify and mobilize their own protective factors and assembling the ability to build a healthy life trajectory.\(^12\) However, interventions promoting resilience cannot exist in isolation, but along with the child/family’s everyday life. Other studies\(^13,14\) analyzing resilience in the family and school environments have verified that there is a correlation between parents’ opinions on their children’s resilience and their perception of their child’s academic skills and success. However, children give different meanings to this phenomenon associating it with their family’s expectations and please themselves and others, which lead them to adapt accordingly. In other words, students’ opinion about their own resilience seems to depend on their perception of their teachers and parents’ view.

Evidence has shown the significance of the first years of life in building a foundation for healthy psychosocial development.\(^15,17\) Stable bonding and attachment relationships with parents and other caregivers create the foundation for children’s physiological functioning, for their emotional and cognitive interpretations of their own social experiences, and for the acquisition of meaning about themselves and others in several social situations. These relationships have a significant impact on how children reaction to stress, social performance, and physical and mental health. If a child receives the proper affectionate care and support to become autonomous when experiencing their environment, they will develop a sense of self-worth and a belief in the availability of others. This feeling of secure attachment is considered a significant individual protective factor that has been correlated with better outcomes later in life, in areas such as self-confidence, self-efficacy, empathy, and social competence in school-age children and adolescents. In a different perspective, this didactic relationship established between children and their caregivers tends to promote feelings of efficacy among caregivers in a proportional manner, due to the perception of competence afforded by adequately interpreting and responding to the child’s needs. Studies show these relational forces, when positive, have the potential for compensating for experiences of abusive or stressful parenthood.\(^18,19\) Along these same lines, parental cognition of their children’s development/skills has been shown to influence how parents relate to their children, and this behavior tends to influence child development through a feedback process: positive parental cognition provides adequacy to a child’s development needs.\(^20,21\) On the topic of resilience, parental perspective correlates to parents’ perception of their children’s abilities, which may also correlate to social status and gender. In the study by Zolkoski and Bullock\(^22\), younger parents were the more positively to perceive their children’s resilience in almost all internal domains, but especially in “self-awareness”, “cooperation and communication skills”, and “problem-solving skills”. A different study including 393 students between the age 14 and 21 years old enrolled in three different secondary schools in Northern Portugal showed that resilience was influenced by the family and the school environments, and peer relationships, and family environment was the main predictor of resilience.\(^1\) The same study observed that resilience correlates with the women and age, suggesting that younger students showed better levels of resilience.\(^1\)

This study aimed to determine self-perception of resilience in children and adolescents, and to analyze how this self-perception differs from the perception of parents, by also considering sociodemographic variables.

**Methods**

This was a cross-sectional descriptive study with quantitative approach conducted as part of the
Polytechnic Institute of Viseu’s School of Health’s mental health promotion project for children and adolescents in the Portuguese school setting, MAISaúdeMental (More Mental Health, ref. N. CENTRO-01-0145-FEDER-023293). The sample included 567 children/adolescents aged between 9 and 17 years old (mean = 12.40; SD = 1.591) from a pool of basic/secondary schools located in Central Portugal and their parents (father and mother), totaling 592 subjects (mean age = 40.43 years old; SD = 2.58 years) selected by nonprobability and convenience sampling.

A questionnaire for sociodemographic characterization was used for assessing and understanding internal resilience factors that correlate with healthy development, along with the children/adolescent and parent versions of the Healthy Kids Resilience Assessment Module (version 6.0), adapted to the Portuguese population by Martins (2005) composed of 18 items and 6 dimensions. The original scale includes the External and Internal Assets subscales and response-set breakers. The Internal Assets subscale used in this study includes positive development outcomes or resilience traits and consists of 18 items, containing the following six dimensions: “cooperation and communication skills”, “self-efficacy”, “empathy”, “problem-solving skills”, “self-awareness”, “goals and aspirations”. These are classified in a four-point Likert scale, which 1 = not at all true and 4 = very much true; the score is obtained by the total sum of individual items divided by the number of items in each subscale. In this study, the scores obtained in each dimension were converted to a scale of 0 to 100 to correspond to the minimum and maximum results obtained in each dimension, respectively. The level of resilience was classified in a scale of percentiles, with cutoffs falling below, in-range, and above the 25 and 75 percentiles, i. e., low, moderate, and high levels of resilience, respectively.

All ethical requirements were properly followed. The study protocol was first submitted to the Portuguese Data Protection Authority (ref. N. 03.01, 38790, 12/18/2017) and later to the General Directorate for Education (DGE, N. 0012100017). After approval, permission with the partnering School Cluster Board was sought and informed consent was obtained from legal guardians, followed by our data collection process: parent questionnaires were distributed to each child/adolescent by class teachers inside a closed envelope, along with the informed consent form to authorize children’s participation; the parents who accepted joining the study completed the questionnaire, which was returned to the class teacher inside a closed envelope, along with the signed consent form. Children/adolescents whose parents authorized their participation completed the questionnaires at class, which were later sent by the class teacher to researchers.

Statistical Package for the Social Sciences® (SPSS, version 24.0) was used for statistical management of data, based on a descriptive and analytical statistical analysis, including the use of the ANOVA analysis of variance and the t-test for difference of means, and using a 95% confidence interval (CI; significance p<0.05).

### Results

**Sociodemographic characterization of children/adolescents and parents**

In our sample of children/adolescents, 38.4% were in the 12-13 years old age group (mean age = 12.41; SD = 1.615) followed by students younger than 11 years old (33.5%) with comparable gender percentages. Regarding family setting, 77.4% lived with their parents, 18.5% lived with their mother only, 82.2% lived with a sibling, and 17.8% with two or more siblings. At school, most students were attending the ninth and eighth year (22.8% and 21.5%, respectively) year, followed by those at sixth, seventh, and fifth year (21.0%, 17.8%, and 16.9%, respectively) with no significant differences between sexes. Parent’s mean age was 40.43 years old (SD = 2.58), most of them were in the 40-41 years old age group (33.5%) with comparable gender percentages. Regarding family setting, 77.4% lived with their parents, 18.5% lived with their mother only, 82.2% lived with a sibling, and 17.8% with two or more siblings. At school, most students were attending the ninth and eighth year (22.8% and 21.5%, respectively) year, followed by those at sixth, seventh, and fifth year (21.0%, 17.8%, and 16.9%, respectively) with no significant differences between sexes. Parent’s mean age was 40.43 years old (SD = 2.58), most of them were in the 40-41 years old age group (33.5%), followed by those under 39 (32.9%). Of these, 84.8% were mothers.

**Characterization of level of resilience**

Subscale mean values were between 88.32 (SD = 16.25) and 70.48 (SD = 19.73) for the “Goals
and aspirations” and “Self-efficacy” dimensions, respectively. These results suggest that internal resources—i.e., study children/adolescents’ resilience traits—may be considered high, since the dimensions to most positively contribute to the perception of resilience were “goals and aspirations” and “self-awareness”, in light of mean values. In terms of gender (Table 1), higher mean values were seen for girls compared with boys in all dimensions, except for “self-efficacy” and “self-awareness”; statistical significance was seen only for “cooperation and communication skills” (t = -2.194; p = 0.029) and “empathy” (t = 4.637; p = 0.000). In terms of age, the ANOVA analysis of variance showed higher and more significant mean values for all dimensions (p<0.05) in children under 11 years old, except for the “goals and aspirations” dimension (F = 1.857; p = 0.157), and a similar trend was seen for level of education.

Considering the cutoffs point defined above in method section, most children/adolescents classified their own resilience as moderate (47.8%), followed by high (31.2%), and low (21.0%) at a similar trend between genders and showing no statistical significance (chi-squared = 4,797; p = 0.091). In Table 3, which contains data from the parental perspective, the “goals and aspirations” dimension shows the highest mean (M = 77.06 ±21.75), followed by “problem-solving skills” (M = 72.11 ±21.05), and “empathy” (M = 71.55 ±18.07). Coefficients of variation suggest a moderate dispersion, considering means. Regarding classification of the sample globally, 48.0% considered their children/adolescents’ resilience as moderate, 27.0% as high, and 25.0% as low (Table 2). This trend can be verified in the analysis of the parents’ perception of resilience, despite a higher percentage of mothers considering their children moderately resilient (48.4%) compared with fathers, who tend to consider them highly resilient (28.9%), albeit no statistical significance was seen (chi-squared = 0.279; p = 0.870).

Considering that parental age could influence perception, a t-test was applied to differentiate between means, showing that younger parents had a more positive perception of their children’s resilience compared with older parents. Higher means were seen for all dimensions, however only “empathy” (p = 0.036), “problem-solving skills” (p = 0.001), and overall resilience (p = 0.047) were of statistical significance. As seen in Table 3, a t-test comparing means was used to analyzed differences between the perception of resilience in parents and children/adolescents, which verified that children showed higher and more significant means for all internal asset dimensions of resilience when compared to their parents (p <0.05). “goals and aspirations”, “self-awareness”, “cooperation and communication skills”, and “problem-solving skills” were the internal assets to most contribute to a high perception of resilience in children/adolescents, whereas “goals

Table 1. Statistics for all six dimensions and total of resilience subscale per gender (children/adolescents’ perception)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Mean</th>
<th>SD*</th>
<th>Girls</th>
<th>Mean</th>
<th>SD*</th>
<th>Boys</th>
<th>Mean</th>
<th>SD*</th>
<th>T-test</th>
<th>p-value+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation and communication skills</td>
<td>75.60</td>
<td>18.85</td>
<td>77.31</td>
<td>18.29</td>
<td>73.84</td>
<td>19.28</td>
<td>-2.194</td>
<td>0.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-ficacy</td>
<td>70.48</td>
<td>19.73</td>
<td>69.06</td>
<td>19.85</td>
<td>71.94</td>
<td>19.55</td>
<td>1.739</td>
<td>0.083</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>74.79</td>
<td>20.24</td>
<td>78.63</td>
<td>18.86</td>
<td>70.87</td>
<td>20.89</td>
<td>-4.637</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem-solving skills</td>
<td>75.26</td>
<td>22.23</td>
<td>75.61</td>
<td>23.22</td>
<td>74.92</td>
<td>21.22</td>
<td>-0.369</td>
<td>0.713</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-awareness</td>
<td>78.95</td>
<td>18.77</td>
<td>77.47</td>
<td>19.51</td>
<td>80.48</td>
<td>17.89</td>
<td>1.912</td>
<td>0.056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goals and aspirations</td>
<td>88.32</td>
<td>16.25</td>
<td>88.97</td>
<td>15.44</td>
<td>87.66</td>
<td>17.06</td>
<td>-0.958</td>
<td>0.339</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total resilience</td>
<td>77.23</td>
<td>14.23</td>
<td>77.84</td>
<td>14.09</td>
<td>76.62</td>
<td>14.38</td>
<td>-1.022</td>
<td>0.307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*SD = standard deviation; +T-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Parents’ perception of children/adolescent resilience per gender

<table>
<thead>
<tr>
<th>Resilience</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Residual</th>
<th>X²</th>
<th>p-value+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n(90) (%(15.2))</td>
<td>n(502) (%(84.8))</td>
<td>n(592) (%(100.0))</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>23 (25.6)</td>
<td>125 (24.9)</td>
<td>148 (25)</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.279</td>
</tr>
<tr>
<td>Moderate</td>
<td>41 (45.6)</td>
<td>243 (48.4)</td>
<td>284 (48)</td>
<td>-0.5</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>26 (28.9)</td>
<td>134 (26.7)</td>
<td>160 (27)</td>
<td>0.4</td>
<td>-0.4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90 (100.0)</td>
<td>502 (100.0)</td>
<td>592 (100.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (%) = percent; +Chi-squared
and aspirations”, “problem-solving skills”, and “empathy” were the constructs to most contribute to a high perception in parents.

**Table 3.** Statistics for all six dimensions and total of resilience subscale per group (children/adolescents and parents)

<table>
<thead>
<tr>
<th>Perception per group</th>
<th>Children/adolescents</th>
<th>Parents</th>
<th>T-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>Mean</td>
<td>SD*</td>
<td>Mean</td>
<td>SD*</td>
</tr>
<tr>
<td>Cooperation and communication skills</td>
<td>75.60</td>
<td>18.85</td>
<td>69.85</td>
<td>18.80</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>70.48</td>
<td>19.73</td>
<td>62.36</td>
<td>19.13</td>
</tr>
<tr>
<td>Empathy</td>
<td>74.79</td>
<td>20.24</td>
<td>71.54</td>
<td>18.07</td>
</tr>
<tr>
<td>Problem-solving skills</td>
<td>75.26</td>
<td>22.23</td>
<td>72.10</td>
<td>21.05</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>78.95</td>
<td>18.77</td>
<td>68.93</td>
<td>20.61</td>
</tr>
<tr>
<td>Goals and aspirations</td>
<td>88.32</td>
<td>16.25</td>
<td>77.06</td>
<td>21.74</td>
</tr>
<tr>
<td>Total resilience</td>
<td>77.23</td>
<td>14.23</td>
<td>70.31</td>
<td>15.66</td>
</tr>
</tbody>
</table>

*SD = standard deviation; +T-test

**Discussion**

Young adult setting—and especially the school setting—is often a hostile environment for mental health. In light of the recent paradigm shifts in health—and especially health in schools—this poses a growing challenge. This study has helped identify a profile of the internal forces and assets in this sample of children/adolescents, as well as that of ones closest to them, their parents, as a form of responding to the demands of the MAISaúdeMental Project.

Results suggest that children and adolescents’ self-perception of resilience was overall positive, especially considering the domains of “goals and aspirations” and “self-awareness”, which are significant internal assets for facing adversities. For some authors, these domains are protective and resilience-promoting factors, given their correlation with self-awareness and comprehension of one’s own emotions, strengths, weaknesses, and needs. These assets lead us to a positive and integrative outlook on resilience associated with models based on the individual’s internal strengths that develop through natural and gradual exposure to difficulty in manageable levels. Additionally, this perspective also frames the idea that resilience as a process is not unchangeable. However, this perspective develops and changes throughout life, requiring a balance between risk and protective factors and the ability to manage them according to one’s development characteristics. This fact seems to warrant differences associated with individual factors, such as gender and age. Similarly to various national and international studies, the authors verified that girls show a more positive perception of their internal assets compared with the opposite sex, except for self-efficacy and self-awareness, which decrease with age. Gender differences are explained by the female sex’s development maturation providing early development of skills benefitting social adaptiveness, such as empathy and cooperation and communication skills. However, the transition to adolescence leads to a certain amount of vulnerability and disorganization personally, family wise and in terms of their relationships with their group of peers, which is at the base of a less positive self-perception of resilience associated with age. However, evidence shows that support and quality relationships with adults may help to build adaptive abilities, which is especially evident when it comes to the individual’s immediate family environment, namely parents and their cognition of their children’s development/skills. In this sense, parents’ abilities to monitor and identify their children’s adequate and inadequate social behavior is a first step towards well-adjusted and successful to connect practices. Additionally, studies show that parents’ perception of their children’s resilience tends to be associated with the perception of their children’s academic skills and success, which strongly connects to aspirations and expectations for their children’s academic success. However, this study verified that children showed a more positive self-perception of resilience compared with their parents. Given the study’s evidence, this may be an indicator for a certain level of impairment of trust in the relationship between parents and their children and consequently of the adequacy of parental responsibilities towards their children’s needs. The authors have also verified that younger parents were the ones to most positively perceive their children’s resilience, as shown in similar studies. These results have helped identify a potential path for a nursing intervention in the setting of the MAISaúdeMental project and for the definition of resilience-promoting strategies for
children/families in the school and community settings, therefore, mobilizing health and/or community resources for a healthier life.\(^{(12)}\)

However, this evidence must be considered based on few limitations, including the limited number of children included in the study, the non-random nature of the sample, and the cross-sectional nature of the study. These generalization-limiting factors may be understood as a snapshot of a dynamic construct’s actualization and as a static analysis of perceptions that knowingly undergo changes as the child grows and develops. Despite this, identifying and understanding our intervention’s target group’s characteristics facilitated defining the strategies to implement for strengthening this group’s adaptive and success assets. This help intervening in the current social conjuncture, where adversities in the family and environment settings, such as school, are frequent.

**Conclusion**

The results of our study provide an insight into the profile of these children and adolescents’ internal forces, mainly characterized by a moderate self-perception of resilience, where the internal assets of “goals and aspirations”, “self-awareness”, “cooperation and communication skills”, and “problem-solving skills” play a major role. Girls and younger children (under the age of 11) classified their internal resilience assets in a more positive way. Most parents show a moderate perception of their children’s resilience, especially considering the internal assets of “goals and aspirations”, “problem-solving skills”, and “empathy”; younger parents showed the most positive perception. A significant statistical difference was verified between children/adolescents’ perception of their own resilience and that of their parents, where younger children show higher values for all internal asset dimensions.

**Acknowledgment**

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**Collaboration**

Aparício G, Ferreira M, Duarte J, Silva E, Cunha M, Bica I, Albuquerque C, and Cabral L contributed to the conception of the study, analysis and interpretation of data, drafting the paper, critical review of content, and approval of the final version to be published.

**References**


