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**MENTAL HEALTH IN THE SCHOOL CONTEXT: A STUDY OF**  
**RESILIENCE IN CHILDREN AND ADOLESCENTS**

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*Abstract*

There is a set of risk and protective factors that have an impact on mental health of children/adolescents. Resilience is considered a protective factor because it moderates the effects of risk exposure. This study aimed to identify the level of resilience of children and adolescents and the relationship with sociodemographic variables in order to classify the level of resilience in children and adolescents and their relationship with sociodemographic variables. A cross-sectional study carried out within the framework of MaiSaúdeMental Project (CENTRO-01-0145-FEDER-023293), with 567 children/adolescents aged 9-17 years old (mean = 12.40, SD = 1.591) from elementary/secondary schools from the center of Portugal. Used a socio-demographic characterization questionnaire and the Healthy Kids Resilience Assessment Module (Version 6.0), adapted by Martins (2005), with 18 questions and six dimensions. The majority (38.4%) of the sample were 12-13 years old; 78.8% lived with their parents and 45.7% with siblings. Globally, 47.8% had moderate resilience characteristics (48.6% of the boys) and high in 34.8% of the girls, without statistical significance. Resilience decreased significantly with increasing age and schooling, and was higher in children living with parents, except in empathy, problem solving, and goals/aspirations. The study revealed a relationship between the level of resilience and sociodemographic factors and the context of the children. So, the school can be considered an important context to improve opportunities and social connections, and needs to exercise the innate strengths of children/adolescents so they will be better able to face the adversities of the world.

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## 1. Introduction

Mental health is an integral part of health and well-being, as reflected in the WHO's definition of health and, like other aspects of health, can be affected by a range of personal and social factors that need to be addressed through comprehensive strategies for promotion, prevention, treatment and recovery in a whole approach.

Determinants of mental health includes not only individual attributes such as the ability to manage their self-thoughts, emotions, behaviors and interactions with others, but also social, cultural, economic, political and environmental factors (WHO, 2013). Throughout their growth and development, children navigate learning paths that allow them to respond adequately to challenges related to the environment, in an increasingly autonomous way. Accordingly, the child may face challenges for which she is not yet able to respond and if the environment does not provide adequate support to do so, this can be a risk factor for mental health problem (Lima, Simões, Jorge, Ribeiro, & Silva, 2016). Exposure to adversities of life at a young age is an established preventable risk factor for mental disorders. Some individuals and groups in society may be placed at a significantly higher risk of experiencing mental health problems; these vulnerable groups may include those living in poverty, people with chronic health conditions, infants and children exposed to maltreatment and neglect, adolescents first exposed to substance use and some minority groups (WHO, 2013).

In the current global financial/social crisis and despite all the concern about this, the prevalence of mental illness in childhood and adolescence has increased in recent years, implying an increase in human and financial burden on society and which constitutes one of the great challenges of public health (Marques, 2009). It is estimated that 2 to 5% of children / adolescents reveal mental health problems in the European population while in the United States, psychosocial problems have doubled in the last 20 years. In Portugal, various studies indicate that between 10-20% of children and adolescents have one or more mental health problems (Ministério da Saúde, 2009). This concern is evident in the speech of the WHO Director-General, Dr. Margaret Chan (2013, p.5), when she states that "Mental well-being is a fundamental component of WHO's definition of health. Good mental health enables people to realize their potential, cope with the normal stresses of life, work productively, and contribute to their communities. Mental health matters, but the world has a long way to go to achieve it".

Mental health disorders may be precursors to disabling disorders in adulthood, hence the importance of their diagnosis and early appropriate treatment. In this context, the important role of the community, in particular Primary Health Care, is highlighted by its connection to the family and school, places where children act and develop, allowing them to create new knowledge, essential to their autonomy, but facilitate the exposure to new risks, such as school failure, which in itself may stimulate the onset or increase in mental disorders, such as emotional or behavioral symptoms (Lima et al., 2016). The child's ability to adapt to risk factors and, despite the multiple risks involved, to present a normative development, is called resilience. Rutter (2007) conceptualized resilience as the phenomenon that leads some people to a relatively positive adjustment, despite having in their life history, experiences that could lead to serious consequences for their development. The study of the resilience concept have evolved over time. From the focus on the characteristics of the individual to face adversities, to the concern in understanding how interactions with the environment can determine maladaptation or positive adaptation

in the development process (Cicchetti, 2003), to the current view, which emphasizes the creation of programs that guide efforts with the intentional sense of promoting the development of resilience, especially at the school level (Wright & Masten, 2006).

In this context, this study aims to classify the level of resilience in children and adolescents from the 5<sup>th</sup> to the 9<sup>th</sup> grade and their relationship with sociodemographic variables

## **2. Problem Statement**

A number of factors have been identified as affecting the mental health of the child or adolescent. These factors can be generically referred to as risk and protective factors. Risk factors refer to conditions that increase the likelihood of occurrence of mental health problems, while protective factors moderate the effects of risk exposure. We can find risk and protection factors at the biological, psychological and social level. The ability to adapt to difficult situations, mobilizing internal and external resources is called resilience (Anaut, 2005). In this context, resilience refer to good mental health and developmental outcomes, despite exposure to significant adversity (Luthar & Cicchetti, 2000; Rutter, 2007). Resilience is perceived by authors in this field to be based on a combination of personal strengths and supportive contexts (e.g. family and community supports). So, resilience could be conceived as a common and normative process, because everyone has a natural tendency to improve resilience in the face of adversities. In this perspective, resilience is not perceived as immutable, but rather as a dynamic process of psychic construction that may suffer interference from critical turning points, such as the beginning of schooling or the transition to adolescence. In this view, all the social interactions in which the child is involved in their environment may constitute contexts that may or may not support the development of individual processes of protection against risk.

The promotion of resilience thus, has a key role in the prevention of mental illness (Dray et al., 2015). Schools represent a potential setting within which protective factors for children and adolescents may be fostered through resilience-focused interventions. These studies, targeting mental health outcomes such as the overall improvement of mental health or reduction in the prevalence of mental health problems in children and adolescents, have been conducted and reported to have positive effects (Lima et al., 2016; Dray et al., 2015; Martins, 2007).

## **3. Research Questions**

The questions that guided this study were:

3.1 What is the level of resilience in children/adolescents from t 5<sup>th</sup> to 9<sup>th</sup> grades?

3.2 What is the relationship between the sociodemographic variables and the level of resilience of children/adolescents from 5<sup>th</sup> to 9<sup>th</sup> grades?

## **4. Purpose of the Study**

This study aims to classify the level of resilience of children and adolescents from 5<sup>th</sup> to 9<sup>th</sup> grades and to relate the level of resilience with their socio-demographic variables.

The purpose is to implement a school health intervention program that promotes mental health and resilience in children and adolescents through the MaisaudeMental project - reference CENTRO-01-0145-FEDER-023293.

## 5. Research Methods

This is a quantitative, non-experimental cross-sectional study, carried out within a broader framework named *MaiSaúdeMental* Project, reference CENTRO-01-0145-FEDER-023293, performed on a sample of 567 children / adolescents aged between 9 and 17 years old (mean= 12.40, SD= 1.591) from a number of elementary/secondary grouping of schools of the Central region of Portugal which was selected based on convenience.

We used a socio-demographic characterization questionnaire and the sub-scale of *Internal Assets* from the “Healthy Kids Resilience Assessment Module” (Version 6.0), adapted to the Portuguese population by Martins (2005). The Healthy Kids Resilience Assessment Module in its full and original version (Constantine & Bernard, 2001) comprises fifty-eight questions that assess the seventeen protective factors and traits of resilience, namely external and internal assets and the Response-set Breakers group. The sub-scale of *Internal Assets* used in this study comprises 18 items rated on a 4-point Likert-scale from 1= Not all True, 2= A Little True, 3= Pretty Much True and 4=Very Much True, and the following six dimensions: *Cooperation and Communication*; *Self-Efficacy*; *Empathy*; *Problem solving*; *Self-awareness* and *Goals and aspirations*. The researchers decided to measure the score of each dimension from 0 to 100 score which reflect the minimum and maximum values respectively that can be obtained in each dimension. Ethical requirements were safeguarded. Firstly, the measuring protocol was submitted to the Portuguese General Direction of Education (DGE) for approval. After that, the permission from the school’s administrative board was requested and the informed consent from parents was obtained. Statistical analysis was performed using the Statistical Package for the Social Sciences® (SPSS - version 24.0), allowing descriptive and inferential statistics.

## 6. Findings

### 6.1. Children’s socio-demographic characterization

The sociodemographic characterization variables used in this study comprised age, sex, schooling, and living situation (household members).

In the sample, girls had a slightly lower mean age ( $M = 12.38$ ;  $SD = 1.571$ ) compared to boys ( $M = 12.41$ ;  $SD = 1.615$ ). Most were between 12-13 years old (38.4%) followed by those under 11 years old (33.5%), with very similar values between boys and girls. In school terms, the majority attended the 9th and 8th grade (22.8% and 21.5% respectively), followed by those attending the 6th, 7th and 5th grades, respectively 21.0%, 17.8% and 16.9%, with no statistically significance differences between sexes. Of the sample, 77.4% lived with their parents, while 18.5% lived only with their mother, with no significant differences in regarding gender, and with one sibling (82.2%) or with two or more siblings (17.8%).

## 6.2. Level of resilience

In order to answer the first research question, firstly we analyzed the sub-scale using the descriptive statistics. The resilience level was classified using the percentile rank (the cut-off points obtained below, between and above the 25th and 75th percentiles) as low, moderate and high level of resilience.

Regarding the statistics of the sub-scale and its dimensions, and from Table 1, we see that the total resilience show that the internal assets, that is the resilience traits of the children/adolescents of the study can be considered to be at a good level, seeming to show ability to build a resilient life path. For the six dimensions, the minimum values range from 0.0 for Self-Efficacy, Problem solving and Self-awareness dimension, 33.33 on Goals and aspirations and maximum of 100.0 in all dimensions, with averages ranging from 70.48 (sd = 19.73) to 88.32 (sd = 16.25), in a moderate dispersion around the mean for all dimensions (c.f. table 1). These results indicate that the dimensions that contribute most to the resilience process are Goals and aspirations and Self-awareness, with respective mean values of 88.32 (sd = 16.25) and 78.95 (sd = 18.77). Also, Palma's study (2010) indicated positive global values in this sub-scales, but the dimension with the higher scores was the Cooperation and Communication, followed by the Problem solving dimension and the smaller contribution by Empathy, which the authors related to the immaturity of the sample as the children were only in the 3rd and 4th grades.

Based on the cut-off groups, resilience was classified for the majority as Moderate (47.8%), High for 31.2% of the sample and Low in 21.0% of the children/adolescents.

**Table 01.** Statistics of the six dimensions and total resilience of the sub-scale internal assets

Dimensions	Min	Max	Mean	SD	CV (%)
<i>Cooperation and Communication</i>	11.11	100.0	75.60	18.85	24.93
<i>Self-Efficacy</i>	0.00	100.0	70.48	19.73	27.99
<i>Empathy</i>	11.11	100.0	74.79	20.24	27.06
<i>Problem solving</i>	0.00	100.0	75.26	22.23	29.53
<i>Self-awareness</i>	0.00	100.0	78.95	18.77	23.77
<i>Goals and aspirations</i>	33.33	100.0	88.32	16.25	18.39
<i>Total Resilience</i>	20.37	100.0	77.23	14.23	18.42

## 6.3. Relationship between resilience and socio-demographic variables

In response to the second research question, with regard to sex, the T-test analysis for independent samples revealed that the means of resilience level are higher for females in all sub-scale dimensions, except for *Self-efficacy* and *Self-awareness* dimensions, but only statistically significant in the *Cooperation and Communication dimension* ( $t = -2.194$ ;  $p = 0.029$ ) and *Empathy* ( $t = 4.637$ ;  $p = 0.00$ ).

Regarding age, the ANOVA test analysis found that the total value of the sub-scale had higher mean values in children / adolescents aged 11 years and lower in those at or older than 14 years of age, with significant statistical differences ( $p = 0.000$ ). This trend occurred in all dimensions of the sub-scale, with statistical significance, except in the dimension *Goals and aspirations* ( $F = 1.857$ ;  $p = 0.157$ ). The gender differences in individual characteristics and protective factors are also found in the Sun & Stewart

(2012) study, where female students were more likely to report higher levels of communication, empathy, and goals and aspirations and a decline in scores for age; however, the authors suggest that these results deserve further investigation, in view of their potential implications for mental health prevention and promotion.

Analyzing the level of resilience in relation to the year of schooling, we found that, for total resilience, mean values indicate a higher level of resilience respectively in children of the 6th and 5th grades and lower in the children / adolescents of the 9th grade, with statistical significance ( $F = 9.872, p = 0.000$ ). This trend is confirmed in all dimensions, indicating a reduction of the level of resilience with the increase of schooling, with significant statistical differences, except in the dimension Goals and aspirations ( $F = 1.222; p = 0.300$ ).

The Kruskal-Wallis test was used to determine the relationship between the level of resilience and the type of child / adolescent cohabitation. Higher mean ordering values for the total resilience and in all dimensions, in children living with both parents were revealed, but only with statistical significance in the Cooperation and Communication (Chi-Square= 15.122;  $p = 0.002$ ), Self-Efficacy (Chi-Square= 8.877;  $p = 0.031$ ), Self-awareness (Chi-Square= 8.526;  $p = 0.036$ ) and Total Resilience dimensions (Chi-Square= 11.816;  $p = 0.008$ ).

## 7. Conclusion

This study aimed to classify the resilience level in a group of children / adolescents and to analyze their relationship with sociodemographic variables, allowing a profiling of their capacity to use individual strengths and resources, as well as all those available in their closest context, to overcome risks and adversity. It was verified that the children / adolescents in the study have, in average, traits of resilience considered to be good, evidenced in the global, good capacities with respect to their internal resources for the construction of a resilient life course. This results are promising since previous studies suggests that high levels of resilience may prevent the development of mental health problems in children/adolescents and the school can be an important and opportune setting in which interventions to reduce the risk of mental health problems and to promote the resilience may take place (Patton et al., 2006). It was found that the dimensions with the greatest contribution to the resilient process of these students are *Goals and aspirations* and *Self-awareness*; important dimensions for the ability to dream and believe in the self-ability to set goals for life (Martins, 2007). The level of resilience was higher for females, decreasing with age and level of schooling. These characteristics have been found in other studies (Sun & Stewart, 2012) and seem to indicate some relationship with the greater vulnerability linked to the developmental transition and identity building that characterizes adolescence and that exposes them in particular to different risk factors. The results also revealed greater resilience in children cohabiting with parents, underlying the importance of the family for the development of personal skills and resources to protect and promote resilience.

It is recognized that the school and educators are increasingly faced with particularly challenging tasks, trying to respond to the student diversity with different profiles and needs, which is an obstacle to adapt strategies to such multiple diversities. However, some authors (Lecompte, 2004), cited by Biscaia, 2007) point out the important role of the teachers as resilience tutors who should act to involve the child

in what they call the founding triangle of resilience: links, laws and meanings for life. So, in this context, this *MaiSaúdeMental* Project could be the first step to providing evidence for an assessment protocol focused on mental health and resilience in children and adolescents, which would support the subsequent development of preventative interventions. These should be based on interventions for the promotion and building of resilience and strengths among children and adolescents to prevent mental health problems. The results of this study allow us to better characterize our student population in this scope.

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