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Article

# Levels of Hope, Stigma, Psychological Vulnerability and Positive Mental Health: a Descriptive Study in 8<sup>th</sup> and 9<sup>th</sup>-grade Adolescents

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**Abstract: Background/Objectives:** This study aimed to characterize adolescents' levels of hope, stigma, psychological vulnerability, and positive mental health, in a school context. **Methods:** A cross-sectional descriptive study was conducted in a non-probabilistic sample of 189 adolescents from 8<sup>th</sup>-9<sup>th</sup> grade in 2021. During the citizenship discipline, adolescents filled out an online self-completion questionnaire for data collection, containing all measurement instruments: Hope Thermometer, AQ-8-C, PVS, and PMHQ. **Results:** The majority were female (42%) with a mean age of 14 years. Overall adolescents have acceptable levels of hope (M=8; SD=2.58), high level of stigma (M=25,6; SD=5,23), satisfactory positive mental health (M= 118,3; SD=14,8) and moderate psychological vulnerability (M=15.2; SD=6.4). **Conclusions:** Findings support educational practices and policies that target personalized intervention to promote and improve hope and positive mental health in adolescents. These data are relevant to getting ahead and designing more positive mental health behaviour programs to reinforce adolescents' modifiable healthy aspects and positive mindsets.

**Keywords:** hope; stigma; positive mental health; nursing; adolescents; literacy

## 1. Introduction

Adolescence is a mental health vulnerable period, due to the complex physical and mental health changes that occur in adolescents during this developmental transition period [1–4]. Mental health problems prevalence in children and adolescents has increased in recent years, with one in five children showing evidence of that. Research shows that mental health problems are common among adolescents, often associated with shame and bullying [5]. Furthermore, high levels of mental health problems persistence are one of the main predictors of mental problems in adulthood [3,6].

Adolescents' well-being accomplishments and educational success are related to hope, positive mental health and psychological vulnerability [7,8]. Feeling hopeful is an important condition for adolescents' health, well-being, educational success and attainment [7]. Adolescents need to be positive and feel hopeful to achieve their developmental goals [9,10]. Also, literature shows that there is a strong association between self-esteem, positive mental health (PMH) [11] and hope [12]. Yet limited research has examined the relation of these variables in adolescence. Hope focuses on goal attainment cognition whereas behavioural hope focuses on actions required for goal attainment [9]. Besides his abstract-construct hope has been studied across various disciplines to describe, explain, and predict the association between hope and human functioning and this is seemingly vital [10,13]. A recent study shows that hope, across 6<sup>th</sup> to 10<sup>th</sup> grades, is similar but a decrease occurs before the transition to high school [7]. Furthermore, adolescents' positive mental health is particularly

important during adolescence and youth to healthy development, and in recent years experts have shown an increasing concern, not only due to the significant prevalence of mental health disorders in this population but also due to the early age onset of the first episode of these disorders-before 14 years of age [14].

Additionally, mental health disorders and their recognition are not specifically included in the school curriculum, and youth have low levels of knowledge and awareness of mental health literacy (MHL) [1–4]. The lack of MHL increases adolescents' perceived mental health stigma, which in turn is the major barrier to finding help and getting professional treatment [5,9,15,16]. Recent studies show that increasing education and awareness, being compassionate and understanding to those experiencing mental health problems and linking students to persons, were important strategies to reduce stigma-related attitudes [12,17,18]. Thus MHL programs in the school context are scarce but fundamental for the healthy development of children and young people [19,20]. Data regarding levels of hope, stigma, psychological vulnerability (PV), PMH adolescents' status and their relations is important to enlighten researchers and practitioners about their specificities. Gathering this information can offer an opportunity to design accurate interventions to improve hope, reduce stigma and promote PMH among adolescents, through a multidisciplinary approach to guaranteed youth mental health protection and positive perspectives[12]. Therefore, we start with the research question: What are the levels of hope, stigma, psychological vulnerability and positive mental health among 8<sup>th</sup> and 9<sup>th</sup>-grade adolescents?

Thus this study aims to describe hope, stigma, psychological vulnerability levels and positive mental health in 8<sup>th</sup>-9<sup>th</sup>-grade adolescents in a school context.

## 2. Materials and Methods

### 2.1. Study Design

This study is comprised in the scope of the quantitative research paradigm and is a cross-sectional, descriptive design study performed in a non-probabilistic sampling method. The STROBE Statement checklist [21] was used as a guide for writing this article.

### 2.2. Setting

An online self-completion questionnaire ( Google® Forms) was used containing all the variables under study. Data collection took place over the normal teaching period of school from January to March 2021 in public schools in the North Region in Portugal, during the citizenship discipline, previously agreed with the teacher. All participants completed the questionnaire in the presence of the principal investigator(PI). During data collection, the adolescents' doubts about the instruments were enlightened by the PI of the study.

### 2.3. Participants

Participants were selected using a convenience sample of 189 adolescents enrolled in eleven classes of 8<sup>th</sup> and 9<sup>th</sup> grade from two public schools, who agreed to participate in the study. From a total population of 1200 students, adolescents were eligible to answer the questionnaires if: (a) their parents/legal tutors had previously given their permission through written informed consent; (b) agreed to participate voluntarily in the study. The exclusion criteria covered adolescents with cognitive disorders, adolescents without written informed consent given by their parents/legal tutors, and adolescents who refused to participate in the study. The measuring instruments were not applied to the students who did not consent to participate in the study.

To calculate the required size of the sample the MGH Biostatistics Center Sample Size Calculator [22] was used for a margin of error of 5% and reliability of 90%, verifying that we would need at least 138 participants for our study. From a population of 1200 adolescents, we obtained 191 completed

online questionnaires, of which 2 were eliminated since they were repeated. So, our convenience sample resulted in a total of 189 participants with complete questionnaires answered.

All ethical procedures inherent to this type of study were respected and all ethical formalities were guaranteed throughout the design of the work and during the collection and processing of data. This study followed the Helsinki Declaration and Oviedo Convention recommendations and obtained the approval of the Ethics Committee and the Board Directors of institutions involved (UI&D 01/2021-ESECVP-AT), as well as the permission of all instruments author used.

To collect data from the participants, an email was sent to the school Board Directors with a link to the informed consent form (available on Google® Forms) to be sent to the parents/legal representatives. Participants and tutors were previously informed about the purpose and implications of the study, possible risks/benefits, and ethical aspects by email and their right to withdraw at any time by not submitting the form and assured about the anonymization process of the data. All the adolescents and tutors gave written informed consent to participate and use the data for research purposes. Participants were guaranteed the anonymity of the data collected.

#### 2.4. Data Sources/Measurement

To respond to the research question outlined, adolescents were evaluated in a single moment. Concerning demographic characteristics, we used four characterization variables (sex, age, class, and nationality) and thirteen behavioural variables (mental illness, relationships, exercise, sleep, diet, medication, and substance consumption). To assess hope, stigma, psychological vulnerability and positive mental health levels we used the measurement instruments:

**The Hope Thermometer** (Fonseca, V. 2012; Querido & Charepe, 2016) to measure the level of perception of hope. Hope Thermometer is a 1 to 10-point Likert-type scale, (1= the feeling of total absence of hope and 10= the greatest hope ever felt) and higher scores indicate a higher level of hope;

The **Attribution Questionnaire (AQ-8-C)** adolescent version (Corrigan et al., 2003) was validated by Sousa, Queirós, Marques, Rocha and Fernandes (2008) to assess stigma stereotypes about mental illness. The AQ-8-C have 8 stereotype items rating on a 9-point Likert-type scale (1= *no or not at all* to 9 = *a lot or completely*). The result produces a representative score for each of the stereotypes, with stigma being directly proportional to the score value. Results greater than 1 imply the existence of stigma. In the present study, the AQ-8-C's *Cronbach alpha* was satisfactory;

**The Psychological Vulnerability Scale (PVS)** Portuguese version [24] was used to assess psychological vulnerability which is an inadequate cognitive pattern (perfectionism, dependence, need for external sources of approval, widespread negative attributions). PVS is a six-item self-administered onedimensional structure instrument that rates on a 5-point Likert scale from 1 = *does not describe me at all* to 5 = *describes me very well*. Total scores range from 6 to 30, with higher scores indicating greater PV and values above 15 indicating psychological vulnerability. Portuguese version internal consistency was adequate (*Cronbach alpha* = 0.73), and 5-week stability was excellent (Test-retest,  $r = .88$ ,  $p < .0001$ ) [24]. Adolescents took an average of nineteen minutes to complete the questionnaire.

The **Positive Mental Health Questionnaire (PMHQ)** [25] was used to assess positive mental health. The PMHQ is a 39-item self-administered instrument on a 4-point Likert-type scale (1 = *Always or almost always* to 4 = *Rarely or never*). Nineteen items stated negatively, and twenty items stated positively. PMHQ has six factors: F1 Personal Satisfaction; F2 Prosocial Attitude; F3 Self-control; F4 Autonomy; F5 Problem-Solving and Personal Achievement; F6 Interpersonal Relationship Skills. PMHQ's total score is the sum of all items, ranging from 39 to 156 points. Higher scores correspond to better PMH status. The Portuguese PMHQ shows a very good internal consistency (total *Cronbach alpha* = 0.92 and *Cronbach's alpha* of six factors varying between 0.60 and 0.84), and test-retest (two months interval) revealed strong stability (0.98) (Sequeira et al., 2014). The PMHQ's qualitative analysis scores follow the criteria: *languishing* (score 39–78), *Intermediate* (score 79–117), and *Flourishing* (score 118–156), with higher values representing better PMH (Kuettel et al., 2021);

## 2.5. Data Analysis

Data statistical analyses were performed using IBM SPSS Statistics Version 27 (IBM Corp., Armonk, NY, USA) for Windows. The rule for a maximum of 10% of missing values was established to exclude questionnaires. Descriptive and exploratory statistical analysis techniques were performed (absolute and relative frequencies, mean and standard deviation) to describe the variables according to their typology (qualitative/quantitative). Measures of central tendency (mean, mode) to provide insights into the central or typical values in data, and measures of dispersion (minimum and maximum values, variance, and standard deviation) to study an indication of the spread or variability of the data [26]. We performed a prior test of the distribution of the variables and verified that our sample does not present normality (Shapiro Wilks test  $p < 0.001$ ). In terms of inferential statistics, we used non-parametric tests to evaluate the association between nominal variables and the instruments used. The Spearman's correlation coefficient was calculated to assess the relation between the sociodemographic quantitative variables. Cronbach's alpha coefficients were based on standardized items and calculated to assess internal consistency. Cronbach's alpha ranges from 0 to 1, and a higher alpha value indicates greater internal consistency. Results with a  $p < 0.05$  were considered statistically significant [27].

## 3. Results

### 3.1. Participant's Characteristics

The sample consisted of 189 adolescents, mostly male (44.9%), with an average age of 13.97 years ( $SD = 2.5$ ), ranging from a minimum age of 12 years to a maximum of 18 years attending 8th–9th grade (Table 1). The majority are Portuguese (97%) and attend the 9th grade (56.4%). Regarding health behaviour, the majority reported positive health behaviour and had no prior psychological or psychiatric follow-up (69.6%), nor relatives with mental illnesses (88.4%). Adolescents reported that they sleep a sufficient number of hours per day ( $M=7.99$ ;  $SD=6.5$ ), the majority report practising physical exercise, and eating fruits and vegetables every day in their diet, but they report eating a low average of meals per day ( $M=3.96$ ;  $SD= 1.3$ ;  $Mode=4$ ). The majority report recreational activities (62.3%), and 17.4 % have an affective relationship with pets. As expected, the most significant affective relationships mentioned by participants were friends, followed by family members. Less than 5% admit smoking and less than 10% admitted alcohol consumption. Table 1 summarizes the participants' characteristics and details.

**Table 1.** Demographic characteristics of the sample (N=189).

Variables		N	%
Sex	Men	47	55.1
	Female	42	44.9
Age	M= 13.97; SD=2.5		
Class	8 <sup>a</sup> grade	40	43.5
	9 <sup>a</sup> grade	49	56.5
Nationality	EUA	1	1.4
	Brazil	1	1.4
	Canada	1	1.4
	Portugal	85	94.2
	Senegal	1	1.4
Have you ever had any psychological or psychiatric follow-up?	No	58	69.6
	Yes	31	30.4
Do you have relatives with mental illnesses?	No	81	88.4
	Yes	8	11.6

Hours of sleep per day		M=7.99; SD=6.5	
Do you sleep enough hours for your needs?	No	10	14.5
	Yes	79	85.5
Do you take any sleeping medication?	No	89	100.0
	Yes	0	0
Do you take medication regularly for any mental health issues?	No	88	98.6
	Yes	1	1.4
Do you exercise regularly?	2 times per week	35	46.2
	3 times per week	31	40.4
	No practice	24	23.4
Do you consider your diet healthy?	No	6	8.7
	Yes	83	91.3
Do you eat fruits and vegetables daily?	No	6	8.7
	Yes	83	91.3
Do you have any recreational activities?	No	36	37.7
	Yes	53	62.3
Do you have an affective relationship?	Pet	12	17.4
	Family	33	34.8
	Friends	40	43.5
	Boy/girlfriend	4	4.3
Are you satisfied with your affective relationship?	No	4	5.8
	Yes	85	94.2
Do you smoke?	No	86	97.1
	Yes	3	2.9
Do you consume alcoholic beverages?	No	83	92.8
	Yes	6	7.2

Results from the descriptive analysis of the measures Hope Thermometer, Attribution Questionnaire (Stigma), Positive Mental Health Questionnaire levels, and Psychological Vulnerability Scale in the sample are summarised in Table 2.

**Table 2.** Descriptive analysis of Hope Thermometer, AQ-8-C, Total PMHQ and sub-scales and PVS in the sample n= 189.

Hope Thermometer	Min	Max	Mean	SD
With 1 being the feeling of total hopelessness and 10 being the most hopeless you have ever felt, how do you feel today?	1	10	8.00	2.58
<b>AQ-8-C items</b>				
1. I would feel sorry for John?	1	9	6.41	2.35
2. I would think John is dangerous?	1	9	1.96	2.23
3. How afraid would you be of John?	1	9	1.74	1.82
4. I think João is to blame for his mental illness.	1	9	1.43	1.46
5. I think John should be in a special class for children with problems, not a normal one like mine.	1	9	3.09	1.51
6. How angry would you feel with John?	1	9	1.58	2.61
7. How likely are you to help John with his schoolwork?	1	9	7.09	1.48
8. Would I try to stay away from John after school?	1	9	2.32	2.33
<b>Total AQ-8-C</b> <b><math>\alpha = .497</math></b>	<b>1</b>	<b>7</b>	<b>25.6</b>	<b>5.23</b>
<b>PVS items</b>				
1. If I don't achieve my goals, I feel like a failure as a person	1	5	2.55	1.13
2. I feel entitled to better treatment from others than I generally receive	1	5	2.52	1.218
3. I am frequently aware of feeling inferior to other people	1	5	2.23	1.41

4. I need approval from others to feel good about myself	1	5	2.12	1.40
5. I tend to set goals too high and then become frustrated trying to reach them	1	5	2.80	1.26
6. I often feel resentful when others take advantage of me	1	5	3.00	1.49
<b>Total PVS</b>	<b>1</b>	<b>5</b>	<b>15.2</b>	<b>6.4</b>
<b>PMHQ Sub-scales</b>				
F1: Personal Satisfaction	11.00	32.00	26.1	5.2
F2: Prosocial attitude	13.00	20.00	17.5	2.0
F3: Self-control	8.00	20.00	15.0	3.1
F4: Autonomy	6.00	20.00	15.0	3.3
F5: Problems Solving	20.00	36.00	28.8	4.1
F6: Interpersonal relations	13.00	26.00	19.9	2.2
<b>Total PMHQ</b>	<b>86.00</b>	<b>147.00</b>	<b>118.3</b>	<b>14.8</b>
<b>PMH Global Levels:</b>	<b>High level (<i>flourishing</i>)</b>	<b>144 (76.2%)</b>		
	<b>Intermediate level</b>	<b>41 (21.7%)</b>		
	<b>Low level (<i>languishing</i>)</b>	<b>4 (2.1%)</b>		
$\alpha$ = Cronbach alfa; <b>AQ-8-C</b> - Attribution Questionnaire (adolescent version); <b>PVS</b> - Psychological Vulnerability Scale; <b>PMHQ</b> - Positive Mental Health Questionnaire				

### 3.2. Hope Thermometer Levels

Adolescents perceived their hope levels as satisfactory ( $M=8$ ;  $SD=2.58$ ), with the majority scoring above the possible midpoint for the Hope Thermometer.

### 3.3. Attribution Questionnaire AQ-8-C – Stigma

Results also show a high score at AQ-8-C ( $M=25.6$ ;  $SD=5.23$ ), since all items scored up to one, indicating high levels of stigma in the sample. The lowest levels of AQ-8-C were obtained at *Segregation*, *Avoidance* and *Shame* items. AQ-8-C's Cronbach alfa in the sample was acceptable although low (Table 2).

### 3.4. Psychological Vulnerability Scale

The results obtained from the PVS show moderate psychological vulnerability ( $M=15.2$ ;  $SD=6.4$ ) in the sample. PVS's Cronbach alfa in the sample was good. Details are presented in Table 2.

### 3.5. Positive Mental Health Questionnaire levels

Concerning the PMH, the results from PMHQ display that adolescents report good levels of PMH ( $M= 118.3$ ;  $SD=14.8$ ) indicating a state of *flourishing* in the sample. The higher levels were recorded at sub-scales F1: *Personal Satisfaction* and F5: *Problems Solving*. The sub-scales F3: *self-control* and F4: *Autonomy* obtained the lower levels. As shown in Table 2, participants' global levels of PMH were majority *flourishing* (scores 118 to 156), followed by *intermediate* (scores 79 to 117), and 4 at *languishing level* (scores 39 to 78). PMH's Cronbach alfa in the sample was excellent (Table 2).

## 4. Discussion

This study aimed to describe hope, stigma, positive mental health, and psychological vulnerability levels in a sample of 8<sup>th</sup>-9<sup>th</sup>-grade adolescents. Overall, participants report perceptions of positive behaviours regarding sleep, physical exercise, and diet (eating fruit and vegetables every day), and this result must be interpreted as a positive health behaviour as reported in previous studies [3,28,29]. Also, participants reported low levels of tobacco and alcohol consumption, a tendency in line with a recent study that shows that 90.8% of participants stated that they do not consume alcoholic drinks or smoke (96.5%). This behaviour is a good and important sign, once healthier behaviours are significant positive correlates in adolescents' better mental health outcomes [11,30].

As expected, the most significant affective relationships mentioned by adolescents were friends, followed by family members [31]. Affective relationships increase self-esteem and strengthen the experience of social inclusion which has a stronger association with adolescents' mental well-being [11]. Furthermore, friendships with peers can provide a unique developmental context in which adolescents learn how to manage conflicts, negotiate, develop empathic concern, as well as develop skills. The evidence highlights the important contributions of friendship, strong peer relationships and family support in preventing adolescents' mental health problems [11,32]. For adolescents, the main role of friendship is predominantly an important psychological schema that satisfies important social needs, companionship and intimacy [33]. Schemas are mental frameworks (efficient or inefficient mechanisms) that help individuals organize and interpret experiences and information about the world [34]. The findings robust the need to disseminate this knowledge in school contexts to promote a positive and safe environment to stimulate and grow these relationships at this particular stage of adolescence [33].

The present study adds knowledge about hope, a variable that has been little studied in adolescents but is of great relevance to better understand these adolescents and design interventions that are better suited to this population. Also, allowed us to underline that regarding hope, the results show that adolescents' levels of hope are satisfactory and we highlighted that this is good news. In fact, during school transitions, students experience disturbances in various domains of development (cognitive and socio-emotional), often leading to difficulties in adaptation [10], with hopeful future expectations playing an important aspect that helped them to transition positively through the period of adolescence [35]. Finding good levels of hope in the sample is important once the evidence shows that hope is a protective factor against depressive and anxiety symptoms in adolescents [7] and hope is associated with better mental well-being in transversal and longitudinal design studies [36]. Thus, adolescents' hope may bolster their abilities to negotiate the demands associated with systematic change and therefore ameliorate some of the difficulties associated with educational transitions [36]). Knowledge regarding hope levels could help educators know when to capitalize on goal-setting behaviours because hope is a teachable, malleable construct, hope may help with the middle-to-high school transition once it presents opportunities for positive adjustment [7]. Namely adjusting the environments during school transition through a multidisciplinary approach in guaranteed hope, expectations and positive perspectives facing mental health problems [7,9]. Our results can be interpreted as positive support for the reinforcement of hope in the school's context. Future studies must investigate, in larger samples, the relations between hope, positive mental health and adolescent adaptation through the school path to add robustness to these results.

Results show high levels of stigma in the sample which is quite disturbing once stigma discourages individuals from seeking and obtaining informal and professional help [18,37,38]. Adolescents' stigma towards mental health problems is a stronger predictor of help-seeking intentions, and this behaviour is a vital matter because adolescents highly value what friends and peers think about their behaviour [17]. Adolescents with limited or inaccurate mental health information (low literacy) held more stigmatizing attitudes about individuals with mental health disorders [5,9,16]. However, in Portugal, little is known about stigma in adolescents, and this knowledge is essential for engaging adolescents in education programs to reduce stigma. Evidence also shows that a comprehensive psychoeducational mental health promotion intervention in a school context improves the student's ability to recognise mental health problems and reduce stigma [5]. This evidence systematically emphasizes the importance of deepening knowledge about stigma in broader and longitudinal studies, for instance, to understand how adolescents deal with stigma, shame and positive mental health [18,37].

In the sample, *Segregation*, *Avoidance* and *Shame* parameters were the lowest levels of stigma, and we consider this data important for designing young people more personalized interventions in the future to increase their knowledge, understanding and open-mindedness regarding mental health prejudices, once younger adolescents have higher stigma rates and low levels of MHL [3]. Some authors recommend that MHL promotion interventions are needed in schools for young people with

and without mental disorders, must include younger students and be focused on increasing their ability to understand and engage in their mental health issues self-care [5,20]. Additionally, interventions to promote young people's good mental health have the potential to increase knowledge and skills in maintaining a healthy lifestyle in adulthood [5,20] once the level of MHL increases with age [3]. Thus five themes are pointed out: "mental health literacy training", "integration and coordination of stakeholder organizations", "resources and facilities", "continuous assessment" and "provision of information" [38].

The results obtained from the PVS show a moderate PV, and that girls reported higher levels of PV than boys. These findings are in line with recent findings showing that PV increases with age, with late adolescents reaching high levels of PV [6,32]. PV is an idiosyncratic structural characteristic of individuals [39] and higher PV is associated with a lower level of knowledge about the factors that promote good mental health [3]. Thus, because adolescents are a vulnerable group, our findings add novel data to support more accurate and tailored interventions focused on this particular age to promote adolescents' MHL. Innovative approaches are a key responsibility of the health services, schools as well as the entire society [40], so our results can contribute to and reinforce the progressive worldwide focus on adolescent mental health promotion.

The PMH levels of the sample are good. The majority scored at *flourishing* global levels of PMH and 4 adolescents scored at *languishing levels*, in line with previous studies in similar populations [39,41]. This positive result may be related to healthy positive health behaviours (sleep, physical exercise, and diet) reported by participants, despite COVID-19 confinement [3]. Recent studies show that a higher level of PMH is significantly associated with well-being, higher self-esteem, higher levels of character strength, hope and kindness, and social inclusion [2,3,11]. Onnela and colleagues found that providing mental health promotion interventions to young people has the potential to increase knowledge and skills in maintaining a healthy lifestyle in adolescence and adulthood [5]. Students recognised the symptoms of mental health disorders well after the intervention, and the intervention improved boys' ability to recognise conduct disorder and experienced the intervention as beneficial, increasing their knowledge, understanding and open-mindedness concerning mental health. The mental health of both, children and young people must be a key area for policymakers and health workers to reinforce strategies to promote PMH and to reduce stigma [5]. Renwick defends that adolescents can identify how they pursue PMH and well-being by developing age and culture-appropriate community mental health strategies. Therefore, it is important to highlight that training adolescents on how to obtain and maintain good mental health is an asset and should be an integral component of adolescents' school education[42].

Mental health promotion interventions aim to increase the ability of individuals to understand mental health issues and engage in self-care. Interventions must reinforce adolescents' modifiable healthy aspects and positive mindsets, through workshops about mental health issues (sleep hygiene; stress; aggressiveness; well-being and relaxation strategies) to strengthen resiliency, and mental health literacy and decrease barriers to help-seeking behaviour. Also, inclusive assistance, counselling, pedagogical support and sports programs, and our results can contribute to increasing awareness of the imperative need to promote the mental health of adolescents, through a comprehensive approach involving the whole of society. Psychiatric nurses can collaborate with school nurses to provide school-based educational interventions to increase adolescent mental health resilience, reduce stigma and increase help-seeking behaviours [43]. Finding innovative approaches to improving mental health among adolescents in a school context is a key responsibility of the health services, schools as well as the entire society [40], so our results can contribute to and reinforce the progressive worldwide focus on adolescent mental health promotion.

Some limitations that may constrain the interpretation of the results must be addressed. Firstly, the sample size limits the representativeness and the generalizability of the findings. Secondly, the social desirability bias is introduced by the effect of the self-completion instruments used. Therefore, future studies should include regression analysis or structural equation modelling to explore predictive relationships between hope, stigma, and mental health outcomes in adolescents.

## 5. Conclusions

The research showed that adolescents report perceptions of positive behaviours regarding sleep, physical exercise, and diet, and mention friends and family as the most significant affective relationships. Also report satisfactory levels of hope, high levels of stigma, a good level of positive mental health and moderate psychological vulnerability.

These data are particularly relevant to getting ahead and designing more positive mental health behaviour programs that can be used to develop tailored intervention strategies and psychological support to maintain or increase adolescents' positive mental health, prevent stigma attitudes and minimize emotional suffering.

Findings support educational practices and policies that target student hope, stigma and positive mental health before the high school transition to potentially buffer student stress and promote high school achievement. Further studies are needed to verify and to robust these results, mostly focused on deepening knowledge on the relations between hope, stigma and mental health with larger samples.

**Author Contributions:** The authors have equally contributed to all dimensions of the study and manuscript. Booth read and agreed to the published version of the manuscript." Please turn to the [CRediT taxonomy](#) for the term explanation. Authorship must be limited to those who have contributed substantially to the work reported.

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**Institutional Review Board Statement:** The study was conducted following the Declaration of Helsinki, and approved by the Institutional Review Board and Ethics Committee (UI&D 01/2021-ESECVP-AT).

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study and their legal representatives.

**Data Availability Statement:** Data Availability Statements are available in the section "MDPI Research Data Policies" at <https://www.mdpi.com/ethics>.

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