



**STUDENTS' NEEDS**

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# PORTUGUESE REPORT

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## Students' needs: Portuguese Report

2022

### ERASMUS+ Project

POSITIVE: Prevention Of Stress by exploitING an Innovative Virtual Environment  
KA220-SCH - Cooperation partnerships in school education

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Funded by  
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# 1. INTRODUCTION

The main goal of this national report will be to characterize the **school stress of Portuguese adolescents**. In this sense, a brief theoretical review will be presented, about the state of mental health of Portuguese students, as well as their perception of school.

Additionally, national programs/interventions that were developed with the aim of providing Portuguese students with socio-emotional skills, which in turn can help them to manage stress, will be mentioned and described.

Moreover, the results regarding data collection will also be presented, which took place at two different moments. The first concerns to the application of the needs assessment questionnaire to students. The second refers to the holding of the focus group with teachers and specialized technicians from the partner school in Portugal.



## 2. DESK RESEARCH

### a) The background, expertise and role of ISMAI in Positive project

University of Maia – ISMAI is a private non-profit higher education institution (HEI) located in Maia, near to Oporto. The university campus occupies an area of 70,000m<sup>2</sup> and provides students with excellent infrastructures and leading-edge technological equipment, being the second largest private HEI in Portugal.

ISMAI has a highly specialized teaching staff and a productive research team (with several published papers) on the area of Educational and School Psychology (ESP). The teaching/research staff specialized in ESP has experience in working with students, teachers and families (in areas such as home-school collaboration, academic achievement, socioemotional learning, inclusion), as well as in supervising academic/professional internships in ESP, which allows them to have an extensive knowledge of the specific features of working in school/educational context, as well as the needs of Portuguese students.

Regarding POSITIVE Project, ISMAI team will be responsible for the tasks mentioned bellow:

- Execute the Project Plan;
- Redact the Partnership Agreement;
- Outline and develop the Project website;
- Write the Progress Report;
- Study the feasibility of the POSITIVE Project;
- Present the Closure Report.

Also, ISMAI will contribute to the Project Result 1 (PR1) “Students’ needs, Game scenarios, Educational Material” lead by eMundus. For that, the present desk research aims to provide essential information about (1) the current state of mental health policies for young people in Portugal and (2) national and international interventions and programs on the field of POSITIVE Project.

## 2. DESK RESEARCH

### b) Country level data on secondary education students' stress

According to World Health Organization, “good mental well-being is critical to ensuring healthy transitions to adulthood, with implications for overall well-being, growth and development, and social and educational outcomes” (Inchley et al., 2020a, p.23). In this sense, it seems essential to perceive the mental health status of the Portuguese adolescents and the impacts of that on school achievements and learnings.

In 2014 and 2018 were conducted two national studies, in the scope of the Health Behaviour in School aged Children (HBSC) studies, aimed to explore the adolescence in Portugal (Matos, Simões, Camacho, Reis & Equipa Aventura Social, 2015; Matos & Equipa Aventura Social, 2018; Foundation Francisco Manuel dos Santos [FFMS], Sagnier & Morell, 2021). These researches provide a general view of different aspects about the Portuguese adolescent's life, such as their family context, habits, lifestyles, hobbies, relationships and, more importantly, their mental health. On the following paragraphs, we will explore the adolescent's mental health evolution.

Regarding the life satisfaction, in 2014, 85,4% of Portuguese adolescents considered themselves as happy with their lives (Matos et al., 2015). Just four years later, this percentage have decreased to 81,7% and 21,8% of the adolescents admitted to have an intense feeling of worry, which they can't control (Matos & Aventura Social, 2018).

Additionally, there were significant differences between genders and ages. Girls have higher anxiety and stress results, as well as more physical and psychological symptoms. With regard to age, students from secondary education are the ones with the higher anxiety and stress results (Gaspar et al., 2019). Also, according to World Health Organization latest report (Inchley et al., 2020b), comparing the results from 2014 with the results from 2018, Portuguese adolescents have an increasing tendency to feel low, irritable, nervous and have sleep problems more than once a week.

## 2. DESK RESEARCH

### b) Country level data on secondary education students' stress

More recently, a different study showed that, at the age group of 15-19 years old, 36% adolescents referred that they weren't happy with their lives, and 37% of youths feels high pressure to be successful (at work or school) and considerable pressure to not disappoint their families (FFMS et al., 2021).

The numbers are concerning and it is important to explore possible causes for the decreasing levels of adolescent's mental health. Costa and colleagues (2020) tried to understand if 2008 global crisis could have an impact on the children mental health. According to this investigation, children's which families have changed their habits have higher mean on depressive, anxiety and stress symptoms scales. Another investigation was carried to explore the impact of COVID-19 pandemic on Portuguese adolescents' and young adults' mental health (Branquinho, Santos & Matos, 2020). Although youths were happier because they liked to have online classes, the truth is that the symptoms of depression, anxiety, irritability and loneliness increased.

There are a lot of international investigations that seek to study the impact of adolescence stress, depression and anxiety on school results. For example, according to Fergusson and Woodward (2002), adolescents who have experienced depression at the age of 14-16 years old, have more risk on school failure, don't want to pursuit superior education and have more difficulties on being employed. Another study states that secondary school students, who experience school-related stress, may have more difficulties in learning process. Additionally, school-related stress has a negative impact on both the physical and mental health. This study even suggests that interventions should be implemented aimed to promoting self-regulation skills (Pascoe, Hetrick & Parker, 2020).

Approaching now the Portuguese scholar context over time, in 2014, 73,1% of Portuguese students considered that they like school. However, a quarter of students also admitted to feel pressure about school work and secondary students were the ones with highest results in this parameter.

## 2. DESK RESEARCH

### b) Country level data on secondary education students' stress

About the concentration levels, only 13,1% of students referred that have difficulties in being concentrated (Matos et al., 2015).

Four years later, the school satisfaction among Portuguese adolescents have decreased to 70,4%. Additionally, 35,8% of the students doesn't like classes and 45,1% reveals to feel moderate to high pressure from school works (Matos et al., 2018).

Also, according to HBSC report (Inchley et al., 2020b), Portugal is on the bottom eight countries when it comes to school satisfaction and on the top ten countries with the highest school work pressure. So, considering all the information that have been collected so far, it seems that Portuguese students are less happy with their lives and simultaneously, school pressure is increasing and school satisfaction is decreasing.

### c) Country's current measures to tackle stress in secondary education

At global level, there are a lot of policies, strategies and plans that were implemented to promote children's and adolescents' mental health. Considering the information presented on the "Mental Health Atlas 2020" (World Health Organization [WHO], 2021), Europe is above the global average in terms of policies or plans aimed to promoting mental health in children and adolescents.

At national level, in 2017, the Portuguese Directorate-General of Health published the "National Programme for the Mental Health" (Carvalho et al., 2017). The four main goals of this document were: (1) increase in 25% the register of mental perturbations on primary care facilities, (2) decrease the pharmacological prescriptions, (3) create 1500 places for adults and 500 for children/adolescents in integrated mental health continuing care and (4) increase in 30% the number of programmes aim to promoting mental health and preventing mental illness.

## 2. DESK RESEARCH

### c) Country's current measures to tackle stress in secondary education

Despite the goals set by the Directorate-General for Health in 2017, the truth is that the **response to the Portuguese mental health needs remains insufficient**. This fact is evident when we assess to the ratio of psychologists per inhabitant. In health contexts, although the Assembly of the Republic (Resolution of the Assembly of Republic no. 158/2021) recognizes the ideal ratio of 1 psychologist for every 5000 inhabitants, the real value is very insufficient. On the context of the national health system, the ratio is 1 per 9687 inhabitants and on the context of primary care it is 1 for every 19 465 (Portuguese Psychologists Association [PPA], 2021).

In the **scholar context**, it's possible to observe the same phenomenon. Despite the fact that studies suggest the ideal ratio of 1 psychologist per 500 students (National Association of School Psychologists, 2020), the **Portuguese Government suggests 1 per 750 students** (Resolution of the Assembly of Republic no. 158/2021). About the real numbers, in 2021, there was 1 psychologist for every 694 students (from pre-school to secondary education) and 1 for every 3238 students in higher education (PPA, 2021).

Although previously information, in Portugal it is possible to observe a **growing interest on socioemotional interventions in school and educational contexts**. Since it is impossible to fully respond at an individual level, Portugal is betting on **promotion and prevention interventions**, that can be implemented in group and with different publics. Therefore, the PPA recognize over 15 socioemotional interventions target to different groups present on scholar context (e.g., students, professionals or/and parents).

Briefly, according to Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020) Framework, Social and emotional learning (SEL) is described as a process in which children's and adults can develop (in a healthy way) their identities by applying skills and achieving goals. SEL has five main axes: (1) self-awareness – capacity of identifying emotions, feelings and thoughts, (2) self-management – the ability of manage emotions and feelings

## 2. DESK RESEARCH

### c) Country's current measures to tackle stress in secondary education

according to different situations, (3) social-awareness – competence to be emphatic, to understand the others perspective and emotions, (4) relationship skills – capacity to establish and maintain quality relationships and solve problems, (5) responsible decision-making – ponderation of advantages and disadvantages of which decision (CASEL, 2020). Recent researches support that SEL can be helpful for every student, regardless his/her background, can promote the academic performance (Taylor, Oberle, Durlak & Weissberg, 2017), can lower the stress levels and conduct problems (Durlak & Mahoney, 2019).

Although several interventions were found that can promote the acquisition of socio-emotional skills and, consequently, help to reduce stress levels, no Portuguese interventions were found in this context that use gamification. So, it's important to explore at an international level, to see what have been done regarding gamification. Ioannou (2019) and Stefanidis and colleagues (2019) present two distinct interventions that aim to promote socio-emotional skills through gamification. However, the interventions were designed to act more in terms of social-awareness, problem-solving skills and decision making.

Interventions developed to effectively address adolescent stress, also using gamification, often include mindfulness practices. A recent study with university students suggests that when they practice mindfulness for four weeks, through a mindfulness app, they after present lower levels of stress and depression (Lathtien, Aaltonen, Kaakinen, Franklin & Hyönä, 2021).

### 3. NATIONAL GOOD PRACTICES ON STRESS MANAGEMENT'S AND STUDENTS' WELLBEING PROMOTION

	GENERAL DESCRIPTION OF THE GOOD PRACTICE	
NAME OF THE PROJECT /COURSE	"Projeto Sarilhos do Amarelo: Auto-regulação em crianças sub-10"	
DESCRIPTION OF THE PROJECT/COURSE	<p>The "Sarilhos do Amarelo Project" uses a narrative to promote learning self-regulation in children, through the exploration of different learning strategies. The theoretical base model of this project is the PLEA Model, which means planning, execution and evaluation.</p> <p>Briefly, in the planning phase children should think about what they want to achieve and set goals and plans for it. In the execution phase, children must put their plans and strategies into practice, as well as monitor and control their effectiveness. Finally, in the evaluation phase, children should compare what they planned and the goals they set against what they achieved. They must also understand the reasons for their results and start this three-phase cycle again (Rosário, Núñez &amp; González-Pienda, 2007).</p>	
TARGET GROUP	Children's aged between 4 and 10 years, psychologists, teachers and caregivers.	
GENERAL AIM	Promote learning self-regulation in children.	
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> <li>• Teach children strategies and processes involved in self-regulation of learning;</li> <li>• Facilitate the practice/training of these strategies, as well as promote children's reflection on the results achieved by themselves.</li> </ul>	
LEARNING MODULES/OUTCOMES ASSOCIATED	1.	Promoting children's understanding of the processes inherent in learning
	2.	Promoting children's school success through the implementation of learning regulation strategies.
SOURCES/REFERENCES	Rosário P. S., Núñez, J. C., & González-Pienda, J. (2007). <i>Projeto Sarilhos do Amarelo: Auto-regulação em crianças sub-10</i> . Porto: Porto Editora.	

### 3. NATIONAL GOOD PRACTICES ON STRESS MANAGEMENT'S AND STUDENTS' WELLBEING PROMOTION

	GENERAL DESCRIPTION OF THE GOOD PRACTICE	
<b>NAME OF THE PROJECT /COURSE</b>	"Projeto Dream Teens"	
<b>DESCRIPTION OF THE PROJECT/COURSE</b>	The present project created a national network of adolescents, in which they discussed issues and policies in the areas of health, well-being, education and citizenship. The young people, together and through social media groups, read a series of materials provided by the investigators involved in the project, and produced reflections and policy suggestions to improve the areas mentioned above. In addition, adolescents also developed actions in their communities and participated in seminars to disseminate their ideas, suggestions, findings and needs (Matos & Equipa Aventura Social, 2016).	
<b>TARGET GROUP</b>	Adolescents	
<b>GENERAL AIM</b>	Create a support network in which adolescents can share their ideas, promoting their active participation in political contexts in the areas of health, well-being and citizenship.	
<b>SPECIFIC OBJECTIVES</b>	<ul style="list-style-type: none"> <li>• Give voice to teenagers;</li> <li>• Promote adolescents' participation in democratic society;</li> <li>• Promoting teen activism;</li> <li>• Promote personal, social and community development.</li> </ul>	
<b>LEARNING MODULES/OUTCOMES ASSOCIATED</b>	1.	Personal resources and wellness: Mental health and quality of life.
	2.	Social capital: Violence, interpersonal relations, friends and family.
	3.	Love and sexuality: Parenting and pregnancy.
	4.	Dependence, consumption and accidents.
	5.	Lifestyle: Health, leisure, physical activity and body image.
	6.	Citizenship and social participation: School, society and the future.
<b>SOURCES/REFERENCES</b>	Matos, M. G., & Equipa Aventura Social. (2016). Relatório: Projeto Dream Teens. Available <a href="https://www.ordemdospsicologos.pt/ficheiros/programas_prevencao/jxltlg6n-relatorio_dteens_dez2016.pdf">https://www.ordemdospsicologos.pt/ficheiros/programas_prevencao/jxltlg6n-relatorio_dteens_dez2016.pdf</a>	

### 3. NATIONAL GOOD PRACTICES ON STRESS MANAGEMENT'S AND STUDENTS' WELLBEING PROMOTION

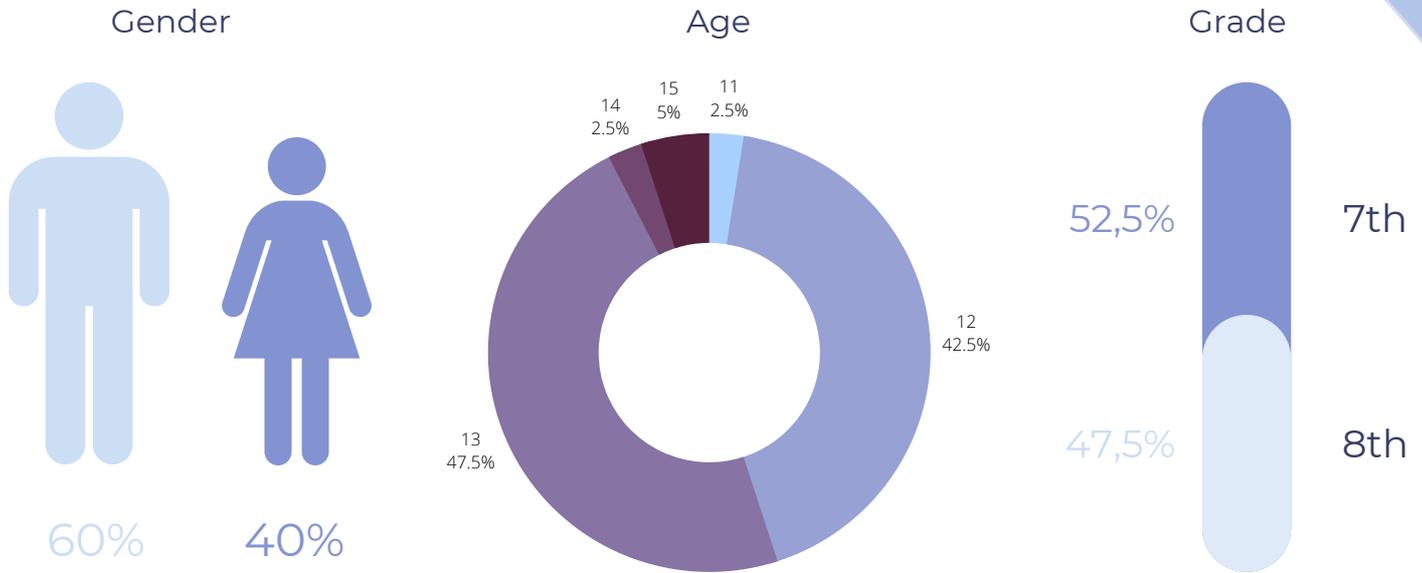
	GENERAL DESCRIPTION OF THE GOOD PRACTICE	
<b>NAME OF THE PROJECT /COURSE</b>	"Mindserena - Projeto de aprendizagem socioemocional – mindfulness em contexto educativo"	
<b>DESCRIPTION OF THE PROJECT/COURSE</b>	<p>"Mindserena" project aims to develop students' and teachers' socioemotional skills, more specifically attention skills, self-management skills, prosocial behaviours and nature respect.</p> <p>This project was created to act with two different scholar groups:</p> <ol style="list-style-type: none"> <li>1. Teachers – this target group has two workshops. One of eight weeks about self-development through mindfulness, and another with three sessions about the capacity of applying mindfulness on class context.</li> <li>2. Students – this target group will develop their socioemotional skills on three different contexts: (1) classes, (2) sessions of the project and (3) at home, through oriented practices developed by "Mindserena" team.</li> </ol> <p>Regarding the project implementation in class, first it was important to train teachers to be capable of implementing mindfulness strategies with their students and on their classes. Second, "Mindserena" Project has a total of eight sessions with students. Each one address different topics of socioemotional learning, such as compassion, gratitude or self-care (Oliveira et al., 2019).</p>	
<b>TARGET GROUP</b>	Students from middle school and their teachers.	
<b>GENERAL AIM</b>	Promote school success through socioemotional learning, more specifically attention skills, self-management skills, prosocial behaviours and nature respect.	
<b>SPECIFIC OBJECTIVES</b>	<p>The specific objectives have to be divide considering the target groups.</p> <ul style="list-style-type: none"> <li>• Teachers: (1) Improve socioemotional skills as well as attention skills; (2) Promote an attitude of openness to experience, curiosity and trust; (3) Promote focused attention; (4) Promote attitudes of empathy and kindness with themselves and with others; (5) Improve training skills related to corporal posture and breath; (6) Develop skills related to implementing mindfulness strategies and exercises at class context; (7) training self-management strategies that should be implemented with students; and (8) Improve the competence of leading with challenging situations on classes.</li> <li>• Students: (1) Improve attention and focus on scholar activities; (2) Reduce anxiety and improve reassurance answers; (3) Increase interoceptive and proprioceptive awareness; (4) Recognize emotions, feelings and thoughts; (5) Increase prosocial behaviours (Oliveira et al., 2019).</li> </ul>	
<b>LEARNING MODULES/OUTCOMES ASSOCIATED</b>	1.	Autopilot & Mindfulness
	2.	The neurobiology of the brain and emotions
	3.	The sustainable development goals
	4.	The optimism
	5.	Resilience and courage
	6.	Generosity and compassion
	7.	The gratitude
	8.	Self-care and we
<b>SOURCES/REFERENCES</b>	Oliveira, A. L., Quadros, C., Mano, P., Nunes, R., Pinheiro, R., Castilho, P., & Marques, A. (2019). <i>Mindserena – presente do presente: O Projeto.</i> <a href="https://www.mindserena.org/">https://www.mindserena.org/</a>	

### 3. NATIONAL GOOD PRACTICES ON STRESS MANAGEMENT'S AND STUDENTS' WELLBEING PROMOTION

	GENERAL DESCRIPTION OF THE GOOD PRACTICE	
<b>NAME OF THE PROJECT /COURSE</b>	"Devagar se Vai ao Longe"	
<b>DESCRIPTION OF THE PROJECT/COURSE</b>	<p>"Devagar se Vai ao Longe" is a universal program that seeks to promote socioemotional skills and increase scholar success in primary and middle school children. Also, this project aims to prevent and reduce behavioural and emotional issues on the target population.</p> <p>"Devagar se Vai ao Longe" was developed considering the SEL model (Social Emotional Learning) and has a total of 21 sessions, with the duration from 45 minutes to one hour, distributed in five modules: (1) self-awareness, (2) self-management, (3) social-awareness, (4) relationship skills and (5) responsible decision-making. This project uses different pedagogical strategies, such as brainstorming, role-playing, social reinforcement, constructive feedback, etc. (Raimundo, 2019).</p> <p>It is important to inform that this project was mentioned on the Report of European Union about international evidence on socioemotional education.</p>	
<b>TARGET GROUP</b>	Children's from primary and middle school.	
<b>GENERAL AIM</b>	Promote socioemotional skills.	
<b>SPECIFIC OBJECTIVES</b>	<ul style="list-style-type: none"> <li>• Develop self-awareness, self-management, social-awareness, relationship skills and responsible decision-making;</li> <li>• Increase psychological adjustment and reduce behaviour and emotional issues;</li> <li>• Promote academic achievement.</li> </ul>	
<b>LEARNING MODULES/OUTCOMES ASSOCIATED</b>	1.	Self-awareness
	2.	Self-management
	3.	Social-awareness
	4.	Relationship skills
	5.	Responsible decision-making.
<b>SOURCES/REFERENCES</b>	Raimundo, R. (2019). <i>Devagar se Vai ao Longe</i> . Lisboa: Ideias com História.	

# 4. THE ANALYSIS OF THE STUDENTS' QUESTIONNAIRE

## a) The respondents' profile

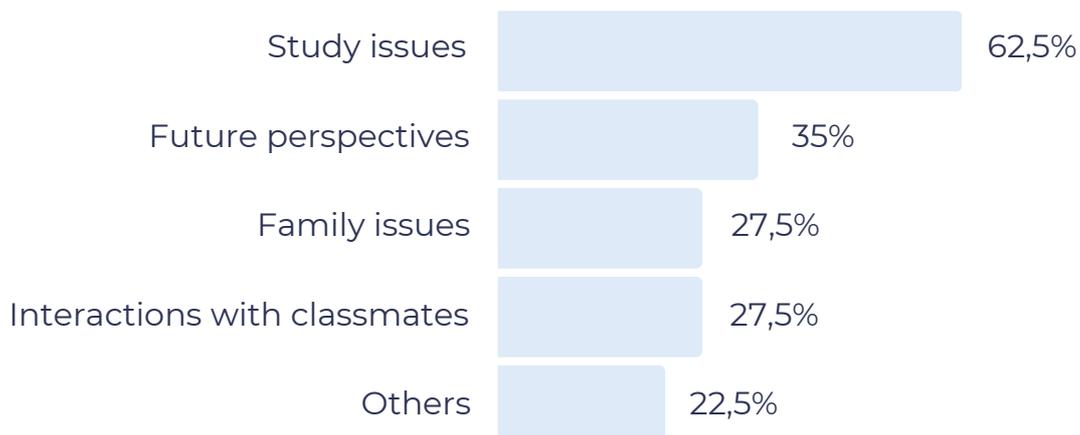


## b) Collected data about stress and stressful situations

**47,5%** of the students have moderate to high levels of stress daily

**55%** of the students feel confident to deal with stress

### Main sources of students' stress

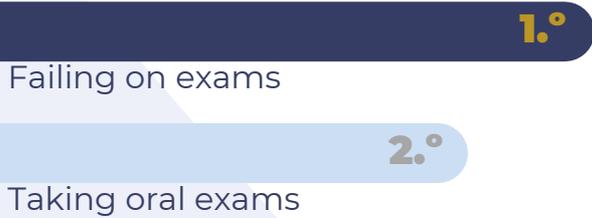


## 4. THE ANALYSIS OF THE STUDENTS' QUESTIONNAIRE

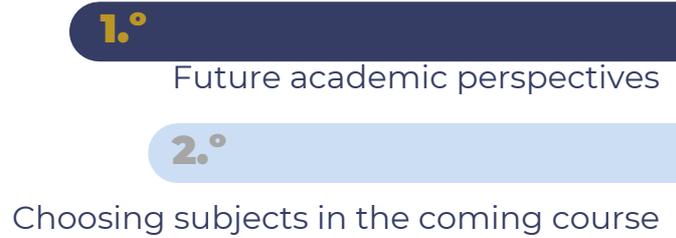
### b) Collected data about stress and stressful situations

TOP situations in which students feel stressed inside each main source

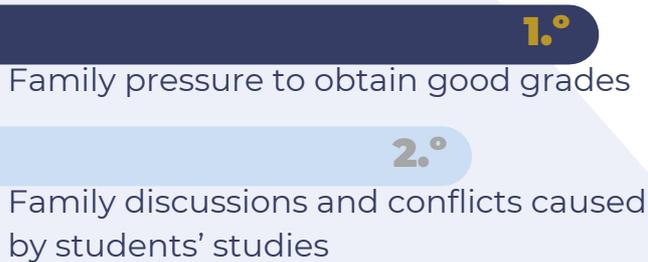
#### Study issues



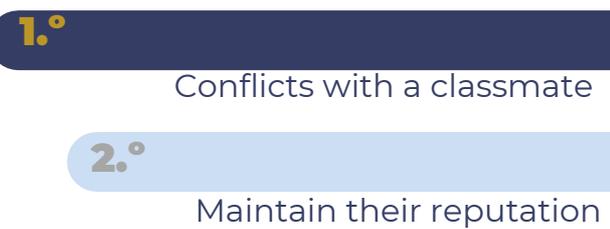
#### Future perspectives



#### Family issues



#### Interactions with classmates

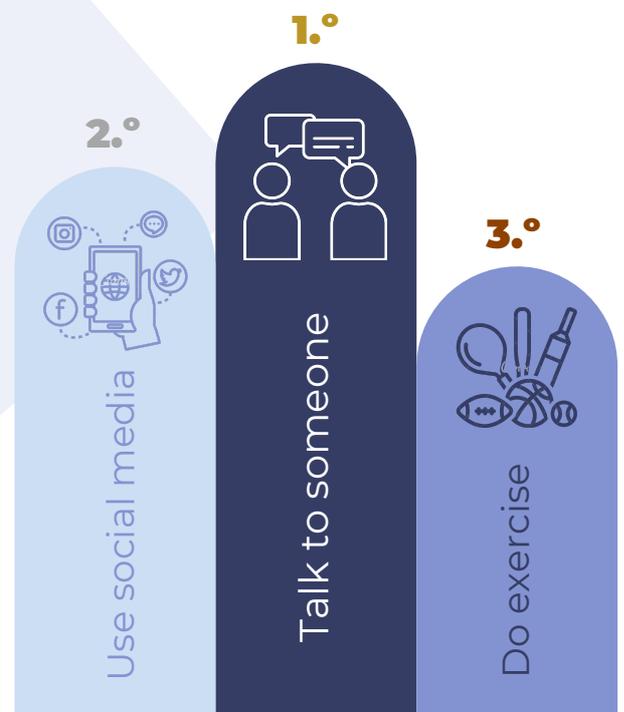


#### Emotional effects of stress

Our students revealed that when they are stressed, they feel **sadness and moodiness** (60%), **insecurity** about your abilities (57,5%), **helpless** (47,5%), **irritability or anger** towards others (45%) and **pessimism** about their future (42,5%).



#### Students' personal methods to relieve stress



## 4. THE ANALYSIS OF THE STUDENTS' QUESTIONNAIRE

### c) Collected data about the “3D Virtual World Learning Environment” (3D VWLE)

Portuguese adolescents are familiarize with video-games and 60% of them plays video-games more than once a week. We ask students which game features and mechanism they would like to find in our 3D VWLE and the answer was:

- awards and points
- character development
- mini games
- role-play
- missions and tasks

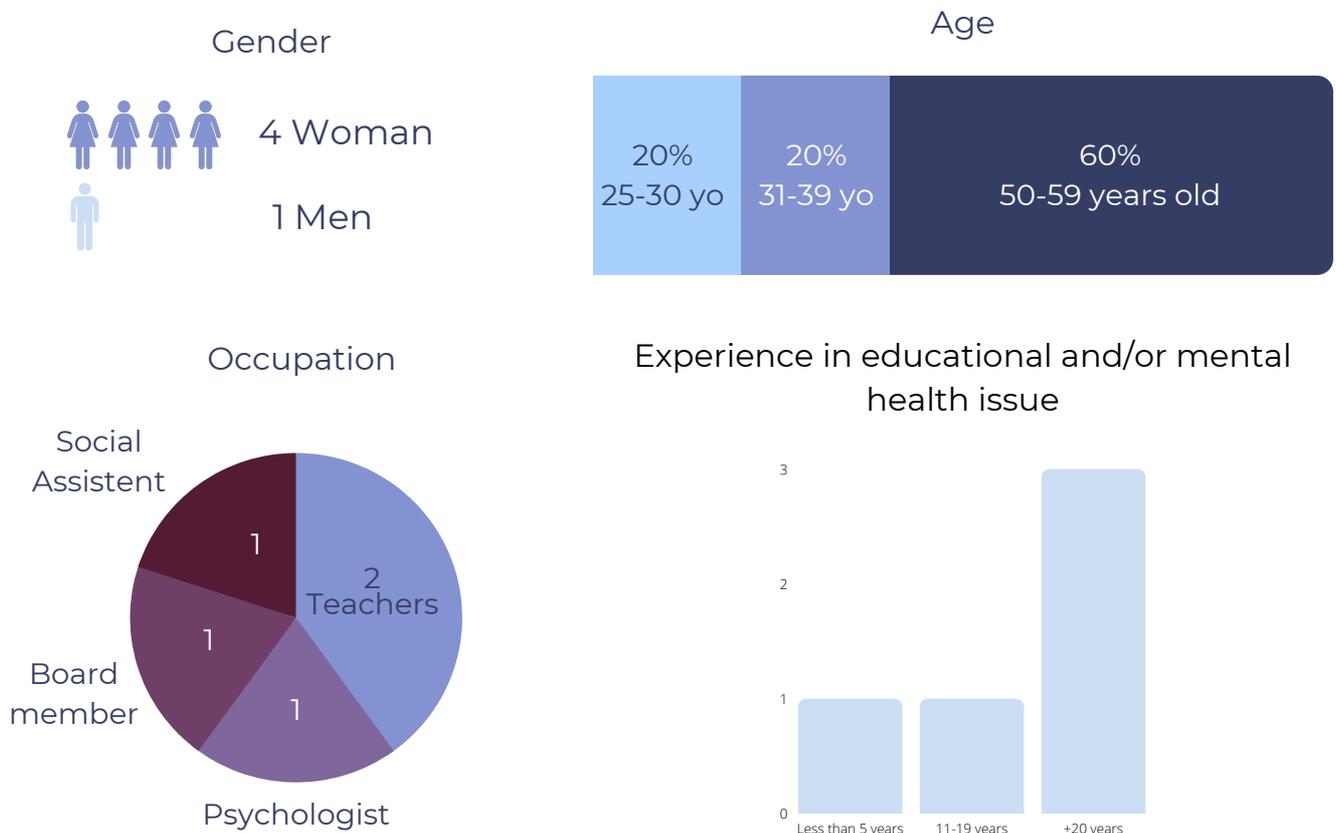
### d) Insights and main findings

Although several Portuguese students report experiencing moderate to high levels of stress, the vast majority also feel capable to deal with it. A relevant data refers to the formal evaluation, both written and oral tests are stressful situations for youths. Additionally, the time that students have to complete schoolwork also seems to be a stressor, which is congruent with the literature presented above. Family pressure also seems to be a cause of stress in students, which is also congruent with what Portuguese investigations refer to in terms of the feeling of pressure to succeed.



# 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

## a) The participants' profile



## b) Topics addressed, insights and main findings

The purpose of the focus group was to understand the perceptions of the participants regarding 3rd cycle basic education (CEB) and secondary school students' stress (e.g., causes, consequences), to perceive what are the most efficient strategies that can be used to reduce students' stress and to apprehend what role can gamification and simulation play in relieving students' stress.

Participants considered that the main situation of stress in 3rd cycle basic education (CEB) and secondary school students is formal evaluation. Participants mentioned that students seem to feel stress during formal assessments (e.g., writing and oral tests), and during public presentations,

## 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

### b) Topics addressed, insights and main findings

*"And not only... If it's oral too... I think anything that's assessment, those kids who care... right?"*

With regard to stress during assessments, some participants highlighted that this varies according to the profile of the student, namely whether or not they are interested in school and in school learning.

*"And in relation to assessment, I don't happen to feel that it's only those who care. That I feel that, regardless of whether they care or not, the moments of assessment are... I don't know, I'm not even sure if this is transmitted by the teachers, maybe not. But it is the perception they have of the moments of evaluation"*

However, some pointed out that there are also many students who are committed but that do not show the stress they are feeling.

*"And a lot of them worry and don't express it, right? They don't share as much"*

In fact, most of participants recognized that students don't know how to lead with stress.

At the same time, stress in these specific moments can also be signal of bad/misaligned study methods, that can also lead to higher levels of stress and anxiety.

*"We sometimes in tutorials have to have this... this work with them to understand that "you have to study two, three days before and not on the day itself". That they can't have... Some of them can't have this capacity"*

By not applying themselves properly, by having insecurities about their real abilities, the fear of failure, and/or by pressure from others (e.g., teachers, family, classmates) students feel many times judged, pressured, which has an emotional impact with clear behavioral repercussions.

*"Because maybe, because there would be more tendency for judgement"*

Most participants reveal that students' anxiety and stress levels that comes by exposure to others occurs not only in the classroom setting but also in the playground.

*"I think in all. We are more present within a classroom and we realize that more and more, even at the level of student assessment, we increasingly ask for more situations in which they have to be exposed"*

## 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

### b) Topics addressed, insights and main findings

Teachers feel that they are often primarily responsible for this.

*"I think we are often the ones who cause them stress"*

They assume that many professors demand too much and expose the students too much.

*"I'm sure I was under the table, panicking. I think often, don't I? And I don't even... Just the fact that they can get out from under there and come across the room, come... Isn't it? In front of the others and talk is already a..."*

Learning is often seen as difficult, challenging and painful for many students which is not supposed to,

*"Learning should be something that would cause us even tranquility...The possibility to know more, curiosity, enjoy learning. That would be the ideal world"*

*"Nor assessment, right? Assessment itself doesn't have to be something dramatic either"*

Participants felt that the demands of school can create stress such as grades, homework, and tests because they know how important it is for their future.

The participants also consider that professors do not have the necessary time to respect the students' timings and that they often do not recognize the students' effort and attention.

They point out that in terms of families there are two different situations. By one hand, some kinds of families are very demanding with their son/daughters' academic results, by other hand there are families that don't believe in their children's capacities, manifesting a discouraging speech.

*"I think we have mountains of them daily and... I can give an example, that last week the grades came out, more precisely on Wednesday and on the day itself, I had a carer, right? Hm... talking about her son's grades, that she thought... She was upset, because her son had to have a higher grade at I don't know what and she said "here the difference is a 1%". A... A mother who tells me about a 1% difference, right?"*

High levels of stress and anxiety have many consequences. Most of participants considered physical/emotional consequences, such as crying, stomach ache, agitation which often leads to emotional blockages.

## 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

### b) Topics addressed, insights and main findings

*"They block. There are many kids who block, they don't move forward and you have to be there with them, very calmly, very patiently"*

They also pointed out pupils who self-harm, as well as school absenteeism, or the decrease of academic results.

*"We have also had serious situations of absenteeism because of stress"*

Participants reveal that in their opinion the pandemic situation configures a risk factor for stress and anxiety, with clear impact in the socioemotional skills of the students.

For many participants it's clear that many students say that they do not like school. According to their perceptions, students often feel emotionally supported in the school context but not so much in terms of their learning process, considering learning as a difficult challenge.

*"Because deep down they like school. But if we drill down a little bit, they don't like school inside the classroom"*

Stressful situations are very visible.

*"We notice. Sometimes I notice that... I don't give tests, but they come in... The way they come into the room, I can tell right away if they're going to have a test that day, if they've already had one..."*

Participants consider that most students seek out teachers or psychologists, social workers, when they feel situations of greater stress and anxiety.

*"They seek a lot. There are many who do!"*

Participants try to use different strategies to help their students relieve stress and anxiety. Most of them assume to have a support attitude, give physical support and work with their student's families, trying to promote positive parenting.

*"I think that's the secret, the basis of everything. It's when they feel that person is there to help and not to judge or..."*

And others use relaxation exercises and humor,

## 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

### b) Topics addressed, insights and main findings

*"When I see them very confused I tell them to take a deep breath. And hold their breath. "Come on! Now, fill your lungs" and I don't know what. I also say that sometimes as a joke, also to make them distracted..."*

The participants claim that much can be done to help this kind of situations. They formulate several recommendations regarding the organization of teaching in ways that consider the students' psychosocial functioning to a greater range. They pointed out that it would be necessary to normalize formal evaluation, that is crucial to reconstruct the meaning of learning, that schools need more psychologists in the context in order to invest in prevention programs focusing on emotional self-regulation from an early age, an effective student reduction per class, more fluid and adjustable curricular programs, a more effective work with families with the allocation of social workers in schools,

*"And having a social worker is fundamental, because there's no point in trying to solve issues at the top of the pyramid when the basic needs are not guaranteed"*

They also mention that professors need more training in these issues so that they can help students to handle these situations both physically and mentally. And also that can give them tools for a good assessment of students needs and appropriate intervention (e.g., study methods),

*"So that, like for example... I see a lot now, that I'm with the tutorials and we talk about study methods and I notice that even in seventh grade there are students who don't even know how to study, what's the best way to study and it makes them anxious. Because nobody has taught them. Sometimes, especially those who don't have a family background, that background too may not have knowledge about this, right?"*

At the same time participants make reference to the importance for children to feel that they have control over the demands they face, both now and in the future. For that it's important to develop students' strategies for coping with stress such as: develop socioemotional and communicational skills, develop autonomy, study and problem solving strategies and develop the sense of respect and empathy for others.

When it is questioned What role could gamification and simulation play in relieving students' stress? What are their advantages and drawbacks? most participants considered that even though they do not have many information about it, it is highly recommended because it is a world they know, that stimulates them.

## 5. THE FOCUS GROUP FOR TEACHERS AND MENTAL HEALTH EXPERTS

### b) Topics addressed, insights and main findings

*"It's stimulating"*

And it could create a new psychopedagogical and social world with higher levels of motivation. In other hand, it can perpetuate student's isolation.

*"Exactly. The risk is that they isolate themselves"*

Participants indicated that could be interesting that a 3D Virtual Learning Environment (3D VLE) created to help students relieve stress could promote challenges (e.g., bullying, dating violence situations),

*"Challenges! They like challenges. For example... Challenges: "In the next 7 days you have to do I don't know what..."*

Could promote collaborative tasks, group activities, memory games, create the possibility of contact with other students of other countries, makes possible to contact technical professional school services (e.g., psychology) and support. For them this 3D VLE could also present self-reflection questions for students,

*"And I think the self-reflection questions are also very important... "How did you feel in this situation?", "What did you learn?", "What can you do to improve next time?", "From 0 to 10 how comfortable were you?"*

Participants reveal that 3D VLE could be a place of freedom for the expression of student's identity such as gender, race, ethnicity, sexual orientation, gender identity and cultural.

With regard to game scenarios, participants suggest that they could provide different school scenarios such as classroom, playgrounds, and the access to professional settings like psychology and multidisciplinary support office.

### c) Evaluation of the focus group and feedback received

According to the Focus Group evaluation questionnaire, all participants gave good feedback and seemed satisfy about this moment. In general, in a 5-point scale, organization has an average score of 4,89 points and content has an average of 4,9 points. Given the results, almost all participants gave to all parameters the highest score. Those parameters which don't have the total score, had the second-best score. So, the parameters average ranges from 4,6 points to 5 points and the one with less score was "By participating in the training, I deepened my knowledge about workshops' topics." Annex I of this document provides some more in-depth analysis of the results. ★★★★★

## **6. GUIDELINES FOR THE DEVELOPMENT OF THE “3D VIRTUAL WORLD LEARNING ENVIRONMENT” (3D VWLE)**

Main stressors for Portuguese students:

- Pressure for school success:
- Family and teachers' expectations;
- Pressure due scholar activities and tasks;
- Formal evaluation:
- Written exams;
- Oral exams;
- Oral presentations;
- Interpersonal relationships:
- Judgment of peers and teachers;
- Public exposition;
- Ask for academic help;
- Lack of study methods.

Main characteristics of the 3D VWLE

- Functionalities:
  - Awards and points;
  - Character development;
  - Mini games;
  - Role-play;
  - Missions and tasks;
  - Cooperative challenges and social interactions;
- Scenarios:
  - Classroom;
  - Playgrounds;
  - Professional settings like psychology and multidisciplinary support office.
- Situations:
  - Bullying;
  - How to ask for help;
  - Creative class;
  - Educate for solidarity;
  - Socialization;
  - LGBT.

## 7. CONCLUSIONS

Considering the literature review carried out, it is possible to affirm that there is a currently growing interest in adolescents' mental health. This interest occurs not only at the national level, but also at the European and Mundial levels. Although Portugal still needs more state measures that act in the prevention of problems related to mental health, the truth is that our effort is notorious and proof of that are the intervention programs created by different technicians/psychologists and recognized by the PPA. However, anxiety and stress continue to increase, as well as dissatisfaction with school. This last data seems to explain the relevance of the present Erasmus+ project.

According to the information collected from both teachers/ technicians and from students, assessment (formal and oral tests) seems to be the biggest source of stress. Another curious result is about interpersonal relationships. Despite the fact that in the students' questionnaires this is a parameter with the lowest score, when compared to others, the teachers emphasized several times the difficulty that students have in public speaking, in presenting a work, much for fear of being judged by the teachers and, above all, by their peers. Teachers recognize that presentations have not been made since primary school and that it is an assessment method that students are not used to. However, they also agree that the difficulties in exposing themselves may be related to the lack of socio-emotional skills, since students criticize each other, which, in their view, promotes and reinforces the fear of being in public. So, educate for solidarity and promoting socio-emotional skills, more specifically relationship skills, through the 3D VWLE could be an interesting option. Even to prevent bullying as teachers mentioned.

Regarding the 3D VWLE, teachers and technicians agree that is essential to have diversity on the avatars. They believe that students could feel integrated and part of a group if they perceive themselves as represented. Also, both students and teachers/technicians would like to see cooperative tasks or missions. Teachers even asked to not include competition or rankings between students.

## 8. REFERENCES

- Branquinho, C., Santos, A. C., & Matos, M. G. (2020). A COVID-19 e a voz dos adolescentes e jovens em confinamento social. *Psicologia, Saúde e Doenças*, 21(3), 624-632. <http://dx.doi.org/10.15309/20psd210307>
- Carvalho, A., Xavier, M., Domingos, P., Almeida, C., Pires, P., & Szabzon, F. (2017). Programa nacional para a saúde mental 2017. Direção-Geral de Saúde. Available at [http://nocs.pt/wp-content/uploads/2017/11/DGS\\_PNSM\\_2017.10.09\\_v2.pdf](http://nocs.pt/wp-content/uploads/2017/11/DGS_PNSM_2017.10.09_v2.pdf)
- Collaborative for Academic, Social, and Emotional Learning [CASEL]. (2020). CASEL'S SEL FRAMEWORK: What Are the Core Competence Areas and Where Are They Promoted?. CASEL. Available at <https://casel.org/casel-sel-framework-11-2020/>
- Costa, D., Cunha, M., Ferreira, C., Gama, A., Machado-Rodrigues, A. M., Rosado-Marques, V., Nogueira, H., Silva, M. R., & Padez, C. (2020). Children mental health after the 2008 global economic crisis: Assessing the impact of austerity in Portugal. *Children and Youth Services Review*, 118, 105332. <https://doi.org/10.1016/j.childyouth.2020.105332>
- Duncan, K. J. (2020). Examining the effects of immersive game-based learning on student engagement and the development of collaboration, communication, creativity and critical thinking. *Tech Trends*, 64, 514-524. <https://doi.org/10.1007/s11528-020-00500-9>
- Durlak, J. A. & Mahoney, J. L. (2019). The practical benefits of an SEL program. CASEL. Available at <https://casel.s3.us-east-2.amazonaws.com/Practical-Benefits-of-SEL-Program.pdf>
- Fergusson, D. M., & Woodward, L. J. (2002). Mental health, educational, and social role outcomes of adolescents with depression. *Archives of General Psychiatry*, 59(3), 225-231. <https://doi.org/10.1001/archpsyc.59.3.225>
- Fundação Francisco Manuel dos Santos, Sagnier, L., & Morell, A. (2021). Os jovens em Portugal, hoje: Quem são, que hábitos têm, o que pensam e o que sentem. Fundação Francisco Manuel dos Santos. Available at <https://www.ffms.pt/publicacoes/grupo-estudos/5938/os-jovens-em-portugal-hoje>
- Gaspar, T., Tomé, G., Gómez-Baya, D., Guedes, F. B., Cerqueira, A., Borges, A., & Matos, M. G. (2019). O bem-estar e a saúde mental dos adolescentes Portugueses. *RPCA*, 10(1), 17-27. <https://doi.org/10.34628/j0mr-s915>
- Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jåstad, A., Cosma, A., Kelly, C. & Arnarsson Á.M. (May 2020a). Findings from the 2017/2018 Health Behaviour in school-aged children (HBSC) survey in europe and canada international report volume 1. Key findings spotlight on adolescent health and well-being. Available at: <https://apps.who.int/iris/handle/10665/332104>
- Inchley, I., Currie, D., Budisavljevic, S., Torsheim, T., Jastad, A., Cosma, A., Kelly, C., Arnarsson, A. M. & Samdal, O. (2020b). Spotlight on adolescent health and well-being: Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada International report volume 2. Available at <http://www.hbsc.org/publications/international/>

## 8. REFERENCES

- Ioannou, A. (2019). A model of gameful design for learning using interactive tabletops: enactment and evaluation in socio-emotional education classroom. *Educational Technology Research and Development*, 67, 277-302. <https://doi.org/10.1007/s11423-018-9610-1>
- Kaplan, D. S., Liu, R. X., & Kaplan, H. B. (2005). School related stress in early adolescence and academic performance three years later: The conditional influence of self expectations. *Social Psychology of Education: An International Journal*, 8(1), 3-17. <https://doi.org/10.1007/s11218-004-3129-5>
- Lahtinen, O., Aaltonen, J., Kaakinen, J., Franklin, L., & Hyönä, J. (2021). The effects of app-based mindfulness practice on the well-being of university students and staff. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01762-z>
- Lucas-Thompson, R. G., Broderick, P. C., Coatsworth, J. D., & Smyth, J. M. (2019). New avenues for promoting mindfulness in adolescence using mHealth. *Journal of Child and Family Studies*, 28, 131-139. <https://doi.org/10.1007/s11423-018-9610-1>
- Matos, M. G., Simões, C., Camacho, I., Reis, M., & Equipa Aventura Social. (2015). A saúde dos adolescentes Portugueses em tempos de recessão: Dados nacionais do estudo HBSC de 2014. *Aventura Social & Saúde*. Available at [https://aventurasocial.com/dt\\_portfolios/a-saude-dos-adolescentes-portugueses-em-tempos-de-recessao-ii/](https://aventurasocial.com/dt_portfolios/a-saude-dos-adolescentes-portugueses-em-tempos-de-recessao-ii/)
- Matos, M. G., & Equipa Aventura Social. (2016). Relatório: Projeto Dream Teens. Available [https://www.ordemdospsicologos.pt/ficheiros/programas\\_prevencao/jxltltg6n-relatorio\\_dteens\\_dez2016.pdf](https://www.ordemdospsicologos.pt/ficheiros/programas_prevencao/jxltltg6n-relatorio_dteens_dez2016.pdf)
- Matos, M. G., & Equipa Aventura Social. (2018). A saúde dos adolescentes portugueses após a recessão: Dados nacionais do estudo HBSC 2018. *Aventura Social & Saúde*. Available at [https://aventurasocial.com/dt\\_portfolios/a-saude-dos-adolescentes-portugueses-em-tempos-de-recessao-2018/](https://aventurasocial.com/dt_portfolios/a-saude-dos-adolescentes-portugueses-em-tempos-de-recessao-2018/)
- National Association of School Psychologists (2020). The professional standards of the National Association of School Psychologists. EUA: NASP.
- Oliveira, A. L., Quadros, C., Mano, P., Nunes, R., Pinheiro, R., Castilho, P., & Marques, A. (2019). *Mindserena – presente do presente: O Projeto*. Available at <https://www.mindserena.org/>
- Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International Journal of Adolescence and Youth*, 25(1), 104-112. <https://doi.org/10.1080/02673843.2019.1596823>
- Pereira, N. M. S. & Pinto, M. A. P. M. (2016). “Viver as emoções”: Planeamento e avaliação de um programa de aprendizagem sócio-emocional com dança educacional. [PhD thesis]. [https://repositorio.ul.pt/bitstream/10451/25148/1/ulsd729672\\_td\\_Nadia\\_Pereira.pdf](https://repositorio.ul.pt/bitstream/10451/25148/1/ulsd729672_td_Nadia_Pereira.pdf)
- Portuguese Psychologists Association [PPA]. (2021). PAA Opinion: Ratio of psychologists. PPA. Available at [https://recursos.ordemdospsicologos.pt/files/artigos/parecer\\_opp\\_r\\_cio\\_de\\_psic\\_logos\\_2021.pdf](https://recursos.ordemdospsicologos.pt/files/artigos/parecer_opp_r_cio_de_psic_logos_2021.pdf)
- Raimundo, R. (2019). *Devagar se Vai ao Longe*. Lisboa: Ideias com História.
- Resolution of the Assembly of Republic no. 158/2021. <https://dre.pt/dre/detalhe/resolucao-assembleia-republica/158-2021-164590040>

## 8. REFERENCES

Rosário P. S., Núñez, J. C., & González-Pianda, J. (2007). Projeto Sarilhos do Amarelo: Auto-regulação em crianças sub-10. Porto: Porto Editora.

Snehlata D. G. (2017). Academic stress among higher secondary school students: A review. *International Journal of Advanced Research in Education & Technology*, 4 (1), 38-41.

Stefanidis, K., Psaltis, A., Apostolakis, K. C., Dimitropoulos, K., & Daras, P. (2019). Learning prosocial skills through multiadaptive games: A case study. *Journal of Computers in Education*, 6(1), 167-190. <https://doi.org/10.1007/s40692-019-00134-8>

Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development*, 88(4), 1156-1171. <https://doi.org/10.1111/cdev.12864>

Tisza, G. & Markopoulos, P. (2021). FunQ: Measuring the fun experience of a learning activity with adolescents. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01484-2>

World Health Organization [WHO]. (2021). Mental Health Atlas 2020. WHO. Available at <https://www.who.int/teams/mental-health-and-substance-use/data-research/mental-health-atlas>

# **ANNEXES**

## ANNEX 1. FOCUS GROUP EVALUATION QUESTIONNAIRE'S RESULTS

Statement	Score					
	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Average
1. The information you received before the focus group were exhaustive and facilitated your participation.	5	4	5	5	5	4,8
2. The duration of the focus group was adequate.	5	5	5	5	5	5
3. The rooms used for the focus group were adequate (I could hear and see well) and the digital/technological tools worked properly (e.g. projector, internet).	5	5	5	5	5	5
4. The focus group was well structured.	5	5	5	5	5	5
5. The participation of all people was active.	5	4	5	5	5	4,8
6. You felt heard during the focus group.	5	5	5	5	5	5
7. By participating in the training, I deepened my knowledge about workshops' topics.	4	4	5	5	5	4,6
8. The topics addressed during the focus group were in line with your expectations.	5	5	5	5	5	5
9. An adequate amount of time and attention was dedicated to each topic.	5	5	5	5	5	5
10. The focus group helped make you reflect on student's stress topic.	4	5	5	5	5	4,8
11. You learn something new about students' stress in school setting during the focus group.	4	5	5	5	5	4,8
12. The topics addressed were interesting and engaging.	5	5	5	5	5	5
13. The topics addressed during the focus group were innovative.	5	4	5	5	5	4,8