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What Makes Me Happy and what Worries Me? A Cross-national Comparison of Stressors and Resources for Stress Relief Among Youth

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Abstract

Numerous evidence-based programs aim to promote youth mental health. Unfortunately, however, they often fail to engage the target group and lack cultural sensitivity. The present study addresses these issues by using a participatory approach to look at variations of stressors and resources for stress relief among students (12-15 years) in three European countries. Two participatory workshops were conducted in three schools in Austria, Poland and Slovenia, with a total of 81 students participating in the first workshop, and 83 in the second. This study presents the findings derived from two distinct participatory activities wherein participants reported their stressors (Relevant Topics activity) and resources (Photovoice activity). Overall, the study revealed remarkable similarities in stressors and resources across the three countries, but differences were also identified. Stressors relating to interpersonal relationships, school, and self-concept were common themes. While concerns regarding health, future, and global issues were less frequently mentioned, they remained persistent across all countries, an indication of their growing relevance amid today's multiple crises. Animals, sports, and relationships emerged as the most frequently reported resources. Creative arts and expression, music, and calm activities like reading, and spending time in nature were also frequently cited. Notably, engagement with digital devices or social media emerged neither as a common stressor nor as a notable personal resource. The findings will be used to inform the content development of a culturally sensitive digital mental health promotion program, covering salient topics comprehensively while ensuring diversity awareness.

Keywords Participatory research · Photovoice · Youth · Stressors · Resources · Mental health

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1 Introduction

1.1 Mental Health in Youth

Scientific, political, and public health interest in mental health among youth has strongly increased since the COVID-19 pandemic. The pandemic and the associated social isolation measures had a deep impact on people of all ages (albeit with some variability in the mechanisms involved; Lep & Beyazoglu, 2020). However, it seems that it has taken an especially high toll on youth. Young people were particularly affected by the associated disruptions in their education and social lives. Social isolation resulted in a decline in mental health, heightened levels of stress, loneliness, anxiety, and depression. All of these may have long-lasting consequences (Raccanello et al., 2023). Children and adolescents have to grapple with what may be described as a mental health epidemic (Maggu et al., 2023).

Mental health, as defined by the World Health Organization (WHO) in 2022, is a state of well-being that equips individuals to effectively manage life's stressors, realize their abilities, perform well in work and learning, contribute positively to their community, and is a fundamental component of overall health and well-being. The worldwide prevalence of mental disorders for children and adolescents are reported to be 20.95% (Raccanello et al., 2023). So, around one in five young people is affected by a mental disorder (Chen et al., 2024). However, being mentally healthy goes beyond the mere absence of mental illness and may be expressed as a continuum on which factors such as stress and resilience reflect how well individuals function in their environment (WHO, 2022). And indeed, subjective well-being can vary depending on the individual's environment or on how they individually cope with stress (Lazarus, 1999). Consequently, it is crucial to examine not only the specific stressors but also the resources available for coping in a sound, theory- and evidence-based manner in order to understand the problems of youth and to develop targeted programs to improve adolescents' mental health.

1.2 Stressors for Youth

Stress, according to Boluarte-Carbajal et al. (2021), involves cognitive, emotional, behavioral, and physiological reactions to stressors that can, in certain cases, lead to adverse psychological responses such as anxiety and depression (Patel et al., 2018). Núñez-Regueiro and Núñez-Regueiro (2021) argue that when examining stressor qualities in adolescents, we should consider various dimensions, among them: frequency, intensity, or life domain.

Adolescents encounter stressors in various domains of their lives. For instance, Seiffge-Krenke (1995) identified primary stress domains based on interviews with adolescents, which encompass *school-related* stressors (e.g., performance pressure), *self-related* stressors (e.g., body image dissatisfaction), concerns about the *future* (including personal and social aspects such as unemployment and conflicts), *parental* stressors (e.g., fulfilling parental expectations), *peer-related* stressors, and stressors related *to romantic relationships* (e.g., jealousy) and *leisure time*. In contrast, Burnett and Fanshawe (1997) adopted a different approach to stress identification,

and categorized stressors from 11 scales in terms of three life domains: *self* (covering aspects of vulnerability, personal organization, independence, and future-related anxiety), *relationships* (focusing on relationships with parents), and *school* (encompassing teaching methods, student-teacher relationships, school workload, and the school environment). Núñez-Regueiro and Núñez-Regueiro (2021) combined both identification approaches by making a synthesis of salient adolescent stressors, which revealed nine negative stressors, encompassing personal welfare and that of close relatives (e.g., personal health), social relationship stressors (e.g., friendship problems), and concerns about personal value in society (e.g., future worries). Additionally, seven positive stressors were identified which indicated opportunities for personal development, academic motivation, positive peer relationships, and family identity. As the prospects of adolescents are intricately connected to their capacity to navigate such stressors, exploring the potential available for fortifying such capacity can yield significant benefits.

1.3 Resources for Coping with Stressors

As individuals do not exist in isolation, the adoption of a systemic approach in exploring the internal and external resources (for stress relief) available to young people can be very helpful. The lives of children and adolescents are embedded in different systems, their family, school, other communities and also in their culture. Thus, their level of resilience is highly dependent on the many systems of which they are a part (Southwick et al., 2014). Bronfenbrenner's bioecological model of human development, as outlined by Bronfenbrenner and Morris (2007), underscores this intricate interplay between individuals and their environments/systems across multiple levels. These environments, encompassing family, school, peer group and community and cultural contexts, significantly shape adolescents' coping abilities and provide resources for addressing stressors, highlighting the importance of considering both individual and environmental factors, and thereby facilitating comprehensive understanding even in an intercultural context (Berk, 2019; Bronfenbrenner & Morris, 2007). In addition, the transactional stress and coping model (Lazarus & Folkman, 1984) accentuates the importance of individuals' appraisal of stressors and the subsequent selection of coping strategies based on this appraisal (Biggs et al., 2017). The dynamic interplay between individual characteristics, stress appraisal, and environmental resources is pivotal in understanding how adolescents navigate stress.

Individual factors include personal traits, values, beliefs, but also the abilities and skills to manage one's health and well-being. Over time, individuals tend to develop specific coping styles for managing transitions and stress (Sawhney et al., 2020). The breadth and flexibility of these emotional control strategies have a developmental aspect, as they tend to increase notably with age, and significantly contribute to improved mental and physical well-being and overall quality of life (Campos et al., 2024). As noted above, environmental factors play a critical role in the development of young people and their ability to cope with stress and well-being. The importance of robust social support networks, including family and friends, has been underscored in mitigating stress (Bekiros et al., 2022), highlighting the protective role of

social relationships in mental health. Additionally, the availability and accessibility of mental health services stand out as vital external resources in coping with stress and mental health challenges (Breslau et al., 2022). Thus, to summarize, the increase in mental health problems and their individual variability, both serve to underscore the need for tailored, evidence-based prevention and support programs (Racine et al., 2021).

1.4 Evidence-based Digital Prevention Programs

The growing adoption of digital technologies among young people (Sevilla-Llewellyn-Jones et al., 2018) has led to the development of digital prevention programs that effectively address the mental health issues of youth to varying degrees (Wright et al., 2023b). Two recent scientific (systematic) reviews have identified 65 programs with at least a 50% digital component (e.g., online, mobile apps) that focused on preventing anxiety and depression (45 programs) and promoting mindfulness, resilience, and help-seeking behavior (20 programs; Reitegger et al., 2024; Wright et al., 2023b). Several deficiencies have been identified in such programs, such as lack of diversity-sensitive content, a high level of attrition, and relative neglect of the target group in the development process. All of these points have now been taken into account in the development of a new mental health promotion program, the me_HeLi-D (mental health literacy and diversity) program.

As part of the Erasmus+ project me_HeLi-D, we are in the process of creating a digital program aimed at supporting the mental health and mental health literacy of adolescent. This project uses a participatory approach and involves students from Austria, Slovenia, and Poland. The primary objective of the project is to enhance students' mental health, mental health literacy, and overall well-being by placing a strong emphasis on the importance of integrating technology, addressing the specific needs of young individuals, and considering students' preferences in order to maintain a high level of adherence and thus optimize the effectiveness of digital programs (Baños et al., 2017). Digital programs not only offer flexibility, anonymity, and the possibility of engagement, they also facilitate the transfer of valuable skills into daily life (Lucas-Thompson et al., 2019). The goal of our approach is to provide a digital tool that is both tailored to, and captivating for, the target age group (12 to 15 years). We achieve this by involving students in several stages of program development (e.g. via participatory workshops in order to identify relevant life topics [stressors] and potential resources in stress relief, to co-develop the graphic design, and to pilot the activities). To effectively address the mental health of young people, it is imperative to identify their primary stressors, considering both the frequency and intensity of these stressors, as well as to explore potential sources of resilience. We examined all these factors in the current study in the three countries participating in the project.

1.5 Participation and Participatory Research Methods

One of the major shifts in the global commitment to the rights of children is the emerging view that children have a right to participate in decisions concerning their own lives, as opposed to the notion that children's rights relate only to the need for

care and protection (Sinclair, 2004). The global recognition of children's rights has also been reflected in the field of academia - particularly in children's and adults' attitudes and perceptions of the concept of children's rights within the realm of education, health, care, well-being and social care (Coyne & Carter, 2018; Sinclair, 2009). Understanding children and empathizing with how they experience the world has been central to this approach. Inclusion of young people in the decision-making process not only recognizes their right to participate, but also promotes a more democratic approach (United Nations Convention on the Rights of the Child, 1989). At the same time, this also leads to a further set of challenges and considerations, particularly in terms of ethics (Water, 2018), such as receiving parent or guardian consent as well as the child's consent, and outlining methods that minimize risk and discomfort for children. Further challenges include taking into consideration cultural, societal, and individual contexts, as well as creating contingency plans if during the study the child's welfare is discovered to be at risk. It is essential to balance the protection of young participants with respect for their right to participate, while also recognizing their potential vulnerability and developing their competencies (Vindrola-Padros et al., 2016).

One way to meaningfully engage young people in the research process, and one that was used in the current study, is to make use of the Photovoice method. Photovoice is a visual participatory research method in which participants are asked to take photographs after being prompted by a specific theme or question. Due to its inclusive and empowering nature, Photovoice offers enormous potential to experts attempting to collect data concerning the complex nature of adolescent mental health and experience (Stephens et al., 2023). It enables the researcher to record the meaningful experiences of participants on a particular subject and facilitates the development of a more critical view of the participants' local environment. Acknowledging the potential of this method, Stephens et al. (2023) indicated that "Photovoice is a research method that changes perceptions of mental health. However, there is a lack of evidence exploring how Photovoice is used in mental health research involving adolescents" (p.280). Photovoice can promote public awareness of mental health and challenge negative stereotypes. Projects based on this method are recognized by adolescents as engaging and enjoyable (Bruselius-Jensen & Nielsen, 2021). In order to achieve the desired effects within the participatory research framework, children and adolescents are considered to be competent research participants (Sinclair, 2009).

1.6 Current Study

The present study was conducted as part of a larger project aimed at developing a digital program (me_HeLi-D) for the promotion of mental health and mental health literacy among youth. Although theoretical approaches to stress and resources (e.g., Bronfenbrenner & Morris, 2007; Burnett & Fanshawe, 1997; Núñez-Regueiro & Núñez-Regueiro, 2021; Seiffge-Krenke, 1995) provide meaningful insights, and are foundational for the development of the program, it is crucial to update prevailing perspectives in light of the current converging crises related to mental and physical health, food, climate, and other global issues.

It is particularly important to include the voice of the target group in this update. Our objective is to identify the key resources and stressors experienced by students, with the intention of enhancing the program's relevance and capturing student interest. In this paper, we focus on identifying the salient stressors experienced by adolescents in terms of their frequency, intensity/relevance, and life domain (Núñez-Regueiro & Núñez-Regueiro, 2021), and their sources of stress relief. The study aimed to investigate both similarities and differences between countries, as well as possible divergences from previous research on common stressors and resources among youth. The main research questions were (1) what are the most frequently reported and most relevant stressors for students aged 12-15 in Slovenia, Austria, and Poland, and (2) what resources do young people in these countries draw on when attempting to alleviate stress? The responses to these questions will be used to ensure that emerging topics are appropriately considered in program design and development.

2 Method

The data presented in this study were collected during two participatory workshops (PWs) conducted in three schools in Austria, Poland and Slovenia as part of the project me_HeLi-D (mental health literacy and diversity). The me_HeLi-D project aims to develop a digital program for the promotion of mental health and mental health literacy among youth aged 12-15. Program development follows an iterative participatory approach and involves the target group in various stages of the project, i.e., in the concept and design, pilot, and implementation stages (Wright et al., 2023a). Wright et al. (2010) suggest nine hierarchical levels on how much or how intensively participants can be involved in a participatory research process, ranging from non-participation (1 – instrumentalization; 2 – instruction), to a pre-stage of participation (3 – information; 4 – consultation; 5 – inclusion), to participation (6 – shared decision making; 7 – partial delegation of decision-making authority; 8 – decision making authority), and finally beyond participation (9 – community-owned initiatives). The participatory research methods implemented in the me_HeLi project, including the PWs cover involvement levels four to six. The project was approved by the Ethics Committee at the University of Graz (Ethics Approval GZ. 39/32/63 ex 2023/24).

2.1 Participants

The workshops were conducted with ISCED (International Standard Classification of Education) level 2 students from three me_HeLi-D partner schools in Austria, Poland, and Slovenia. Students ranged in age from 13 to 15, with one outlier being 16 years old. In Slovenia this corresponds to 7th and 8th grade of 9-year basic school, in Austria to 3rd and 4th grade of secondary school, and in Poland to 7th and 8th grade of 8-year basic/primary school. A total of 81 students participated in PW1, and 83 in PW2. Disclosure of participant sociodemographic data is limited due to the relatively small size of the partner schools and to the fact that the protection of student identity is a primary concern. However, it can be said that in terms of gender distribution, there were clear cross-country differences. The Austrian sample included predomi-

nantly female students, while in Slovenia and Poland, the gender composition was balanced. Table 1 provides greater detail regarding the workshops and participants.

2.2 Procedure

The PWs took place at one urban and two suburban schools, were co-facilitated by researchers and teachers in each country, and their implementation complied with the ethical principles of the Declaration of Helsinki (World Medical Association, 2022). Prior to the workshops, internal and external school staff were briefed (including teachers, liaison teachers, school counselors, and school social workers). Informed and written consent was obtained from parents, as well as from each participating student by means of consent forms complying with the GDPR (General Data Protection Regulation), the EU's data protection law (Bankova & Wright, 2023). In addition, students were informed verbally of the voluntary nature of their participation and of the option to terminate participation at any point. During breaks and closing, the students received small tokens of appreciation, such as sweet treats or university merchandise (e.g. canvas bag, pencil). Participation was not graded or linked to their academic achievement in any way. At the end of each workshop, students were asked to evaluate their experience using a short evaluation form.

2.3 Participatory Workshops

The main objectives of the workshops were to include students in the program's design process and to ascertain which mental health stressors and resources were relevant to them and their peers. The workshops followed the same concept in all three countries, although small deviations were allowed, where necessary, in order to accommodate the different cultural, situational and school circumstances. Each workshop took about two school hours, including a break. PW1 and PW2 took place on different days, so that students had time to complete the Photovoice activity (see Table 2). For Austrian and Polish students, the period between workshops was one

Table 1 Characteristics of the participatory workshops and their participants

Workshop	Country	Time (min[a])	Facilitators		n[b]	Age range
			researcher(s)	teacher(s)		
PW [c] 1						
	Austria	105	3	1	15	14-16
	Poland	100	1	2	27	13-15
	Slovenia					
	- *group A*	95	2	1	20	13-15
	- *group B*	95	1	1	19	13-15
PW 2						
	Austria	140	3	1	17	14-16
	Poland	100	1	2	30	13-15
	Slovenia					
	- *group A*	95	2	1	18	13-15
	- *group B*	95	1	1	18	13-15

[a]min= minutes; [b]n= sample size; [c]PW= participatory workshop

Table 2 Description of relevant activities, with their aims and methods, from PW1 and PW2

Part	Activity	Aim(s)	Method description
Opening PW1	Introduction	Obtain informed consent Create a safe, relaxed atmosphere	Introducing the project and the team Presenting the agenda and objectives - the what, why and how - of the workshop Explaining the voluntary nature of participation Agreeing on how to work together
	Ice-breaker	Build rapport	Playful activity to get to know each other; Allow students to contribute in a relaxed setting
Relevant Topics	Step 1: Topic collection	Inquire about stressors in this age group	Each student gets sticky notes or colored cards and a pen and is asked to write responses (anonymously) to concrete questions: *What do you think students your age might worry about?* *What are things that stress you or your peers?*
	Step 2: Clustering	Create meaningful clusters	The topics collected were clustered with the help of the students.
	Step 3: Rating	Inquire about the relevance of the topics collected	The students got the chance to rate the topics by voting with stickers. They were asked to allocate a total of 5 stickers among the various topics (according to their personal perception of relevance).
Interim period with Photovoice activity			
Transition PW1 – PW2	Photovoice	Inquire about helpful resources in times of stress, or when critical stressors are present Inquire about sources of joy	The method was explained and students were briefed on how to take safe and ethical photos. Students were asked to take pictures that are related to 2 guiding questions: *What helps you in critical/stressful situations?* *What brings you joy?*
Opening PW2	Ice-breaker	Re-establish a safe, comfortable atmosphere Build rapport	Playful activity as a warm-up; allow students to contribute in a relaxed setting
Photovoice follow-up	Step 1:[a] Picture selection		Students were asked to select at least one, and up to 3, pictures for sharing.
	Step 2:[a] Picture upload		Voluntary, optional and anonymous upload of the picture(s) and caption(s) onto a digital platform.
	Step 3: Exchange		After careful monitoring of each upload, the pictures were projected for everyone to look at; students got the opportunity to share and exchange their thoughts and questions.

[a]In Slovenia, steps 1 and 2 were completed during the interim period

week, for Slovenian students one day. Figure 1 depicts the approximate structure of both workshops.

Table 2 provides an overview of the activities relevant to the current study, with the *Relevant Topics* and *Photovoice* activity at its core. For a detailed description of all activities undertaken in PW1 and PW2 please see Wright et al. (2023a).

The main objective of the Relevant Topics activity was to identify and prioritize topics related to the program's content. Students were asked to write down any stressors, worries or concerns they or their peers were experiencing. Collecting, clustering and prioritizing the topics followed a proven method utilized in mediation and

Fig. 1 Approximate workshop structure, with an interim period

counseling, both within and outside of schools (Ballreich & Glasl, 2010; Lindemann, 2017). Owing to the sensitive nature of the topic, written responses were collected on sticky notes, anonymously and voluntarily. The students were free to decide if they wanted to share or discuss their personal experiences with others. The preservation of their personal boundaries and freedom was of great importance in order to ensure that they did not feel under pressure to provide answers. The collected stressors were then clustered, using student assistance, and then assigned to larger, cross-cutting categories. Finally, students rated the relevance of the stressors by placing up to five stickers on the topics they deemed most important.

While it was necessary to elicit in a guided and safe environment that allowed for immediate support and intervention, the resources for stress relief could be safely collected in a more creative and nonverbal way. It was therefore decided to employ the Photovoice method to explore students' sources of joy and resilience. This allowed the documentation of a diverse array of stress-relieving resources in settings beyond the school premises without the need for external guidance. In the interim between PW1 and PW2, and after having been trained in ethical and safe photography, students were asked to photograph the resources available to them, that means anything – objects, places, people, animals – that brought them joy and/or helped them through stressful situations. In PW2, students had the opportunity to select up to three of their favorite photos, upload them to the digital platform *Padlet* and, in order to stimulate discussion, share them with the group, all on a voluntary basis. This allowed students to have control over what to share and which pictures most adequately expressed their thoughts, feelings and/or views. This underlines the methodological plasticity of the Photovoice method as participants directly shape and tailor what information is gathered and consequently analyzed (Asaba et al., 2015). In Slovenia, the photos were uploaded during the interim period to comply with the school's policy of prohibiting students from using their phones in the classroom. The digital platform *Padlet* was used to upload and display the photos, including a short caption to help interpret their meaning. Padlet was chosen because the platform does not require user registration, and allows anonymous uploads and monitored content sharing. Each photo was approved digitally by the researcher prior to sharing via Padlet.

2.4 Analysis

MAXQDA 2022 software (VERBI Software, 2021) was used for data analysis of the two activities (Relevant Topics and Photovoice). Data were analyzed using qualitative content analyses in accordance with Kuckartz (2018), and Rädiker and Kuckartz

(2019). Five reviewers, including at least one representative from each country, were involved in the deductive and inductive development of the joint coding systems and in the coding of the material. Each national dataset was translated into English and coded by two independent reviewers (lead author and national reviewer).

For the Relevant Topics activity, categories were initially formed closely following the clusters that were created with the students. This resulted in six deductively generated overarching categories: (1) school, (2) interpersonal relationships, (3) self-concept, (4) mental and physical health, (5) future and global concerns, and (6) leisure time. At least one reviewer from each country then coded their national dataset and the joint coding system was completed with inductively created main categories and subcategories. The final category system consisted of six overarching categories and 13 main categories (Fig. 2): (1) school; (2) interpersonal relationships - 2a) parents and family, 2b) relationships with friends and peers, 2c) intimate relationships/love; (3) self-concept - 3a) self-concept (excl. body)/relationship to self, 3b) body/appearance; (4) mental and physical health – 4a) sport, 4b) intra-psychological issues and behavioral concerns, 4c) health/death; (5) future and global concerns - 5a) respect/injustice, 5b) current global problems, 5c) future; (6) leisure time;. Lastly, 71 subcategories were formed and assigned to the corresponding main category (Online Resource 1). Intercoder reliability was high among all three data sets ($Kappa_{AUT}$ = 0.91%; $Kappa_{POL}$ = 0.88%; $Kappa_{SLO}$ = 0.77%) indicating substantial to almost perfect agreement (Cohen, 1960).

For the Photovoice activity, analysis was based on both visual data and narrative data (captions), as recommended in the literature (Vaughan & Khaw, 2021). Thus, an identification of more than one resource per picture was possible. In PW2, when all pictures were shared and discussed, students were able to provide more detailed explanations on their uploads. In the absence of captions, the researchers present were able to elicit, collect and document the intended meanings of the pictures. If images contained neither a caption nor verbal information, the image was taken face value. The formation of categories followed a two-step approach in which students

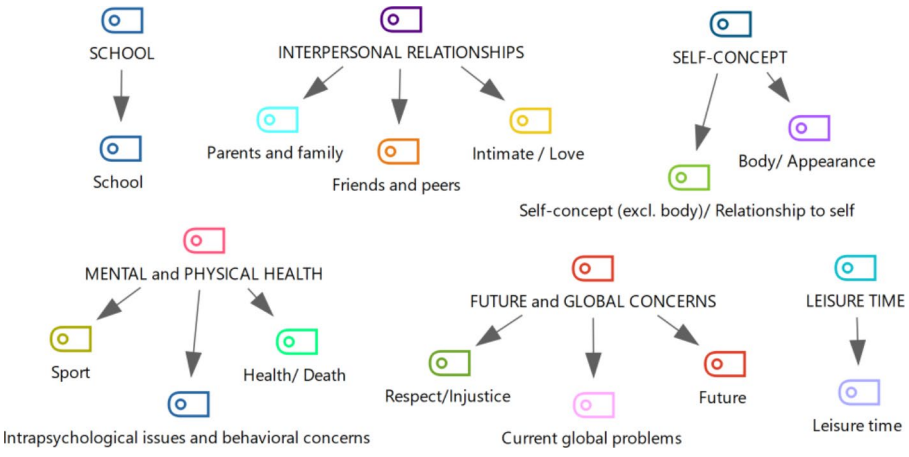

Fig. 2 Inductively and deductively generated joint category system for stressors

were not involved. Firstly, each national reviewer proposed categories and subcategories based on the national data material. Secondly, the lead author summarized the suggestions into a joint coding system. The adjustment of the categories went through several feedback loops during the coding process. Main and sub-categories were only adjusted after agreement had been reached between all reviewers. This resulted in a final category system of 11 main categories: (1) animals, (2) sports/movement, (3) relationships, (4) creative arts/expression (e.g. drawing, dancing), (5) music (e.g. listening to music), (6) calm/quiet activities (e.g. reading, sleeping), (7) nature (e.g. sunset, a walk in the woods), (8) computer, (9) food, (10) travel/vacation, 11) motorbike (moped), and 54 subcategories (Fig. 3). The complete category system can be retrieved in Online Resource 2.

Nonparametric tests were conducted in R (version 4.1.2; R Core Team, 2021) to further investigate the observed differences between countries. Chi-squared tests for proportions were performed as they are a robust method for comparing categorical data with unbalanced sample sizes (Field et al., 2012). Testing for proportions was done, taking the number of responses per country as a reference in order to assess whether observed differences in proportions were likely to be significant.

3 Results

3.1 Stressors

A total of 353 valid responses were collected regarding the things or topics that cause stress, bother, or worry among students. Out of these, 88 responses were collected in Poland, 79 in Austria, and 186 in Slovenia. Figures 4, 5 and 6 provide insight into the data collection process, responses, and votes (stickers).

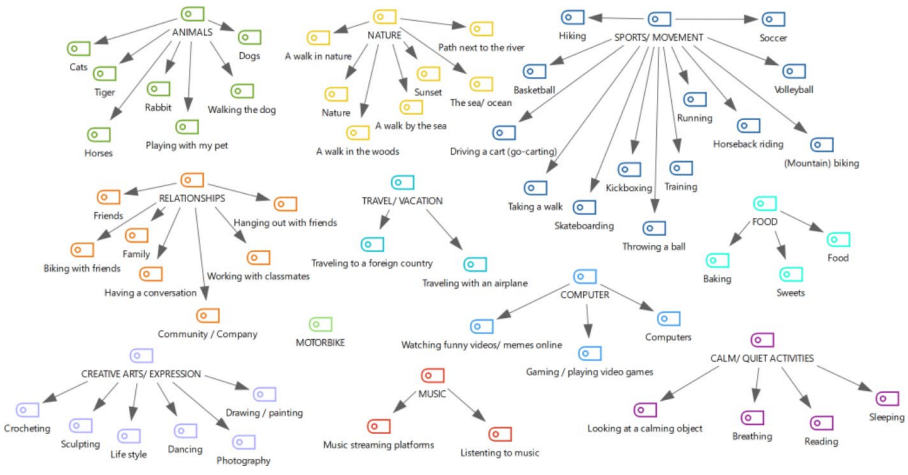

Fig. 3 Inductively generated joint category system for resources

Fig. 4 Collecting responses on sticky notes in Slovenia

3.1.1 Most Common Stressors

Overall, responses showed a lot of overlap and, with respect to the overarching categories, students identified several common stressors in their lives and the lives of their peers. It is important to note that these factors, with the exception of leisure time, were consistently mentioned in all countries surveyed (see Fig. 7). However, there were significant differences between countries in the frequency and types of stressors mentioned in the overarching and main categories. These differences were also observed in the non-parametric tests: school ($\chi^2(2) = 7.93$, $p < 0.05$), intimate/ romantic relationships ($\chi^2(2) = 7.64$, $p < 0.05$), self-concept (excl. body; $\chi^2(2) = 6.60$, $p < 0.05$), intra-psychological issues and behavioral concerns ($\chi^2(2) = 6.04$, $p < 0.05$), health/ death ($\chi^2(2) = 7.51$, $p < 0.05$), sports/ performance ($\chi^2(2) = 8.29$, $p < 0.05$), future and global concerns ($\chi^2(2) = 9.96$, $p < 0.05$), current global problems ($\chi^2(2) = 8.85$, $p < 0.05$), and respect/ injustice ($\chi^2(2) = 13.52$, $p < 0.05$). For a more detailed overview, please refer to Online Resource 3.

Across countries, school was identified as the most common stressor, with more than a third (36%) of all responses related to school. It was by far the most commonly reported stressor in Slovenia (42%), and Slovenian students mentioned it significantly more often than Polish students ($\chi^2(1) = 5.25$, $p < 0.05$). In contrast, in Austria and Poland, interpersonal relationships were reported almost as frequently as school. The school category encompassed all school-related issues, including stress associated with school or exam stress, academic performance, graduation or finishing

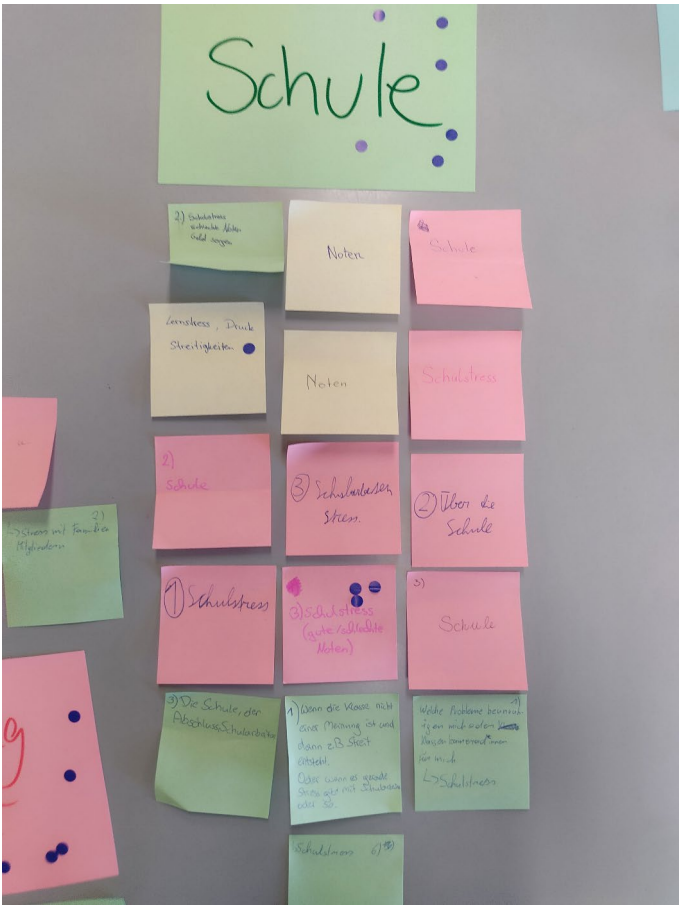

Fig. 5 Responses from Austrian students for the category "School" [Ger.: Schule]

school, and the general school experience. It included any school factors that might induce pressure in students, such as studying and fulfilling school commitments during periods of leisure, fear about getting bad grades, achieving academic goals, and notably, the capacity to perform effectively in oral examinations, particularly in front of their peers. Teachers, missing the bus to school, PE lessons or parents' reaction to poor grades were also mentioned in this category, but only by individual students.

Interpersonal relationships were identified as another important stressor in all countries, with just over a quarter (27%) of all student responses relating to relationships. Relationships to friends and peers were commonly mentioned, most frequently in Poland, and contained many references to the general experience of maintaining relationships with friends or peers. Some students indicated that they found particularly low-quality relationships to be a source of stress, citing examples such as "poor relationships with classmates", and "bad relationships with some friends". Evidently, conflicts and disagreements were also attributed to this category ("conflict with friends", "to quarrel"). Additionally, the category encompassed unfavorable conduct from friends and peers,

Fig. 6 Workshop scene from the Polish partner school

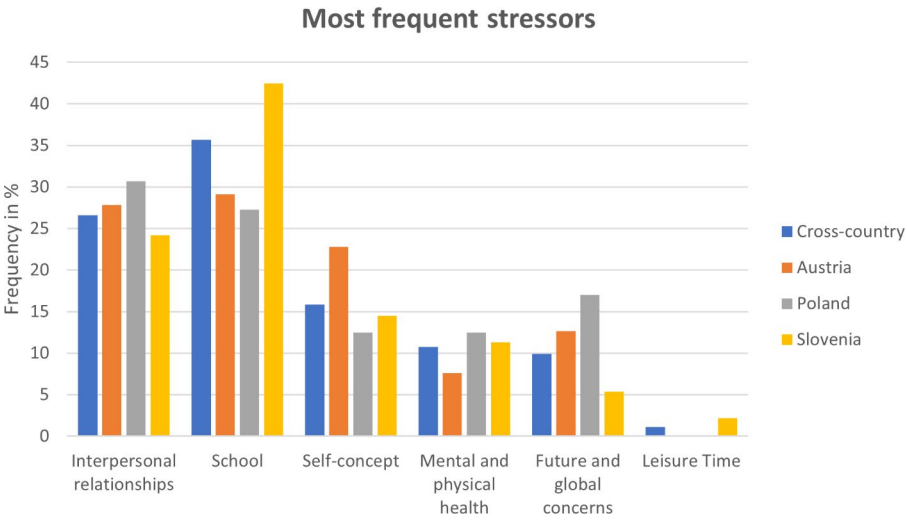

Fig. 7 Most frequent stressors within and across countries

which was grouped under unpleasant behavior ("it bothers me when someone laughs at another person's pain), and instances of abusive behavior, such as "mobbing", "hate", "bullying", and "insults". Alongside friend and peer relationships, intimate and love

relationships were also identified as stress-triggering and included experiencing love or sex for the first time, having a crush, or loosing love. However, these aspects were only referenced in the Austrian and Slovenian responses, while Polish students did not mention them at all. A significant difference was observed between Austria and Poland ($\chi^2(1) = 6.08$, $p < 0.05$). Finally, issues relating to relationships with parents and family were frequently cited as a cause of emotional strain. Small and non-significant differences were found between the countries. While they were hardly mentioned in Austria, they played a greater role for Slovenian and Polish students. Similar to relationships with peers and friends, relationships with parents as a whole were mentioned as a cause of stress. However, some referenced specific problems, such as feeling disregarded by their parents ("parents do not take you seriously"), or conflicts ("fighting at home with parents") and pressure to live up to them ("family expectations").

Other commonly identified stressors in all countries pertained to self-concept (16%), with Austrian students mentioning them slightly more often than their Slovenian and Polish peers (but insignificant differences). The self-concept category included all elements relating to students' relationship with themselves, i.e., students' perceptions and attitudes towards their appearance and abilities, as well as their self-esteem. Many responses related to body and looks, including weight ("to be skinny enough"), make-up ("to run out of lipstick) and general appearance ("when you think your body doesn't look nice". Almost as many mentions concerned the relationship to oneself on a psychological or mental level (self-concept, excl. body). The prevalence of this was significantly higher in Austrian responses compared to Poland ($\chi^2(1) = 5.27$, $p < 0.05$). It contained references to the need to be perfect and to the fear of failure or making mistakes ("if I will achieve, if I set a goal"), and Slovenians in particular stated that they were worried about what others thought of them. In addition, this category included references to self-love, shame and lack of self-confidence ("you think you're not good enough"). It is worth noting that social media-induced stress was only mentioned once in the entire sample.

On a cross-country level, 11% of responses related to concerns about their own and others' mental and physical health. This included references to psychological problems, unhealthy behaviors, worries about death, and stressors related to physical activity. Although students in all countries mentioned intra-psychological issues and behavioral concerns, these were significantly more prevalent in Austria than in Slovenia ($\chi^2(1) = 4.36$, $p < 0.05$). They contained references to rumination ("to think too much about unnecessary things"), self-harm ("cutting"), drug use, eating disorders and mood swings or disorders ("anxiety [anxiety disorder] or panic"; "bad mood"). In contrast, the Austrian sample did not report any issues related to death or physical health, with results between Austria and Poland becoming statistically significant ($\chi^2(1) = 5.68$, $p < 0.05$). Concerns about death and illness only came up in the Polish sample ("I'm worried about death"), and responses concerning sleep, one's own health or the health of others ("grandparents health", "health of my family and friends") were only found for Slovenia. Additionally, sports or performance-related topics were only reported in the Slovenian sample ($\chi^2(2) = 8.29$, $p < 0.05$). The students stated that they were worried about not being able to show everything they could do, that they feared defeat or that they were stressed due to the high expectations during a competition, particularly before an important game.

Future and global concerns (10%) accounted for another common stressor across countries and were significantly more often reported by Poland compared to Slovenia ($\chi^2(1) = 8.45$, $p < 0.05$). Uncertainties relating to the students' personal future development, as well as social and environmental developments, were allocated to this category. Concerns about their own future were mentioned most frequently by all countries, including worries about money and finances, the possibility of adequate future planning and worries about what they might become ("what I will be like in the future"). In addition to these materialist concerns, Austrian and Polish students also mentioned issues of respect or injustice ("be treated unfairly", "that LGBTQ+ people are being favored"). A significant difference was observed for Austrian and Slovenian responses ($\chi^2(1) = 8.82$, $p < 0.05$). Current global problems, such as "war" were only mentioned by Polish and Slovenian students, and the mentioning of "pollution" and "racism" was specific to Poland.

Lastly, not enough leisure time was mentioned several times by Slovenian students (2%), in relation to "lack of free time" and "if I manage to cope with all my commitments", as well as "work schedule is too full". Neither Polish nor Austrian students explicitly reported a lack of leisure time as a stressor ($\chi^2(2) = 3.77$, ns.).

3.1.2 Most Relevant Stressors

Since the initial clustering and category definition was done together with the students, some of the main categories differed between countries. In order to take this into account, the relevance analysis was performed at the level of the overarching categories. A total of 404 (out of a possible 405) stickers were distributed by the students (Austria: 69, Poland: 150, Slovenia: 185). Across countries, the most relevant of the common stressors were those related to interpersonal relationships, with almost a third (31%) of all votes cast for them. School stressors ranked second in relevance (23%), followed by mental and physical health issues (19%) and self-concept/ relationship with self (15%). Less relevance was attached to future and global concerns (8%) and leisure time (1%). No significant differences were found between countries, except for leisure time ($\chi^2(2) = 7.21$, $p < 0.05$), with the latter only being prevalent in the Slovenian sample. Figure 8 gives an overview of the differences in country voting.

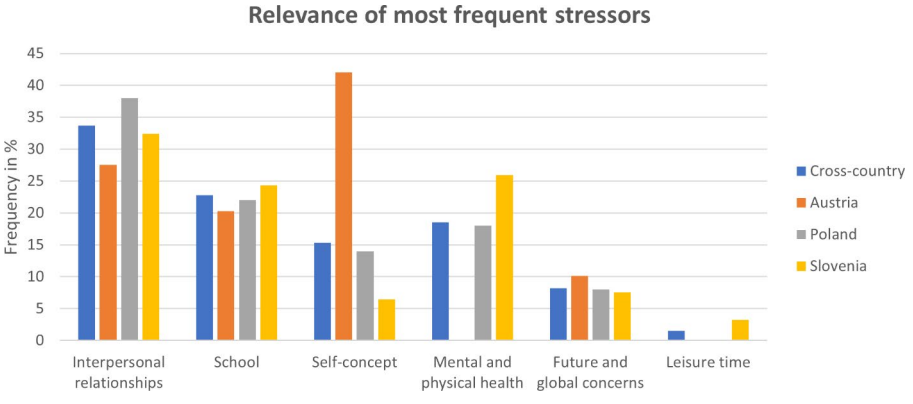

Fig. 8 Relevance of most frequent stressors within and across countries

3.2 Resources

Overall, students shared and uploaded 123 pictures ($n_{AUT} = 26$, $n_{POL} = 20$, $n_{SLO} = 77$), depicting 141 resources ($n_{AUT} = 36$, $n_{POL} = 27$, $n_{SLO} = 78$), in response to the questions: "What helps you in critical/stressful situations? What brings you joy?". An example for each country can be seen in Figs. 9, 10 and 11 together with a short caption that students were asked to add to their pictures. For some pictures, no caption was shared ($N = 16$), in these cases only visual data was available for analysis.

While there were some notable distinctions, the students from the three countries shared many similarities in the resources they depicted, consistent with the findings on stressors. For a comprehensive overview of non-parametric tests, see also Online Resource 4. By analyzing the photos (participant's voice), as well as the narrative (captions), the resources captured were allocated to 11 distinct categories, as shown in Fig. 12: animals (21%), sports (18%), relationships (13%), creative art or expression (11%), music (10%), calm or quiet activities (9%), nature (8%), computer (4%), food (2%), travel or vacation (2%), and motorbike/moped (1%). Students from all countries took photos of animals, relationships, sports, activities of creative art or expression, and listening to music. Notably, Austrian students did not take pictures of travel, computers or calm/quiet activities. In Poland, no photographs were taken of nature, motorbikes/mopeds, or food. In Slovenia, the only category without any photos was travel or vacation.

Fig. 9 "Things that help me relax - manga and sculpting, reading comics, playing basketball and skateboarding" [Poland]

Fig. 10 "When I feel stress, I go to our pets, they help me relax." [Austria]

As mentioned above, the three most frequently depicted resources in all countries were related to animals, sports and relationships. Notably, animals were significantly more often depicted in Austria than in Slovenia ($\chi^2(1) = 5.03$, $p < 0.05$). In relation to animals, having a pet as a companion, such as a cat, dog or rabbit, was found to be a stress-relieving factor. Additionally, time spent with pets, such as taking the dog for a walk or playing with them, was found to be nurturing. Sporting activities also

Fig. 11 "I enjoy football the most." [Slovenia]

included animals when it came to horseback riding, otherwise skateboarding, biking or general training were mentioned as activities. Friends and family and spending time with friends ("hanging out with my friends"), or being in a community and appreciating the company of others were mentioned in the context of relationships.

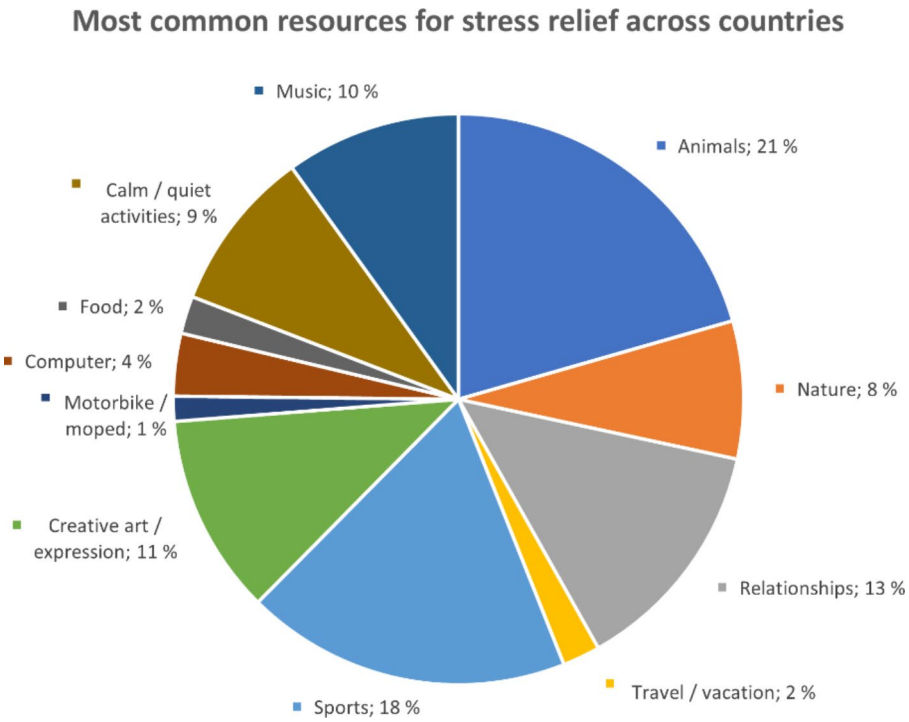

Fig. 12 Categories of resources mentioned most frequently (%) across countries

In Austria over a third of the pictures illustrated animals, followed by relationships and creative art or creative expression. These forms of creative expression included drawing or painting pictures, taking photographs with a real camera (and not a mobile phone), or dancing. The captions for pictures of animals and relationships made their relevance even more apparent, for example, "Two of my tomcats – two of my reasons for living. No matter if they are here or far away. I will always live for them.", or "I am grateful for my best friends because they are always there for me". In Slovenia, almost a quarter showed a sport, followed by animals, and relationships. The importance of sports was also underlined by certain captions, such as "when I sit on a horse I immediately feel better and it gives me joy", "I enjoy football the most". Polish students most frequently photographed calm/ quiet activities (30%). These were leisure activities that they could do alone to relax and be calm, such as reading, breathing, sleeping and looking at a calming object. They also frequently depicted animals, sports and creative art/ expression. When comparing across countries, calm and quiet activities were found to be significantly more frequently mentioned in Poland, compared to Austria ($\chi^2(1) = 9.69$, $p < 0.05$) and Slovenia ($\chi^2(1) = 7.94$, $p < 0.05$).

Music as a source of joy or relaxation was most frequently depicted in Slovenia, but played a role in all countries. Students depicted it by photographing headphones, earbuds or by mentioning it in their captions (e.g. "music helps me in stressful situations", "listening to good music", "listening to music relaxes me"). It is worth noting that Polish students were the only ones to mention travel or vacation as a resource,

and compared to Slovenia, the difference was statistically significant ($\chi^2(1) = 5.37$, $p < 0.05$). Nature was an important resource for Austrian and Slovenian students, which was reflected in pictures showing natural landscapes, the see or the ocean, a river or a path, accompanied by captions such as "when I'm stressed out, I like to go out into nature", "while walking all my thoughts fly away",

In a country comparison, students shared the fewest photos for the categories: food, computers and motorbikes. The food category included pictures of sweets, baked goods and a student's favorite dish. Interestingly, computers only played a role in Poland and Slovenia, where pictures were uploaded of students playing a video game. Besides gaming, this also included watching funny videos or memes, made apparent by the captions "funny things and the media make me happy" or "funny things". Lastly, food and motorbikes/mopeds were identified as anti-stress resources in Slovenia and Austria. Although the category motorbike had very few photos, its relevance was made visible through the caption: "a sense of freedom – even if it is only a 'means of transport' it is one of the only things that give me a sense of freedom".

4 Discussion

To identify common and current stressors and resources among young students aged 12-15, participatory workshops were conducted with the target group in schools across three European countries: Austria, Poland, and Slovenia. The objective was to encourage the students' thinking and to explore their experiences concerning their stressors and resources for stress relief. Although examples were provided, follow-up questions about additional potential stressors were not asked, unlike in an interview. The findings revealed a large overlap between countries in terms of what students perceive as stressful or helpful in their lives. The stressors most frequently identified, in order of relevance, were interpersonal relationships, school, issues related to self-concept (such as appearance, body image, self-confidence, and fear of failure), concerns about mental and physical health, worries about the future and global concerns (such as pollution and war), and lack of leisure time. When asked about personal resources that help them in stressful situations or bring them happiness, students from all three countries commonly mentioned animals, sports, and relationships as personal resources. Creative arts and expression (such as drawing, sculpting, or dancing), music, calm activities such as reading, and spending time in nature were also frequently cited. Additionally, some students mentioned finding joy or happiness in activities such as playing computer games, watching funny videos, food, traveling, and riding their motorbikes. In addition to cross-national similarities, differences between the countries were also identified. Despite the fact that the participating schools were comparable in terms of size, infrastructure and culture, disparities between countries could potentially be attributed to their differing geographical locations (urban vs. suburban). Higher levels of stress and lower levels of wellbeing have been reported for urban youth in comparison to their suburban counterparts (Yeresyan & Lohaus, 2014). The current sample did not include rural youth, but findings of this study could still apply to them. While adolescents who live in rural

areas generally face structural disadvantages and less access to mental health services (Elgar et al., 2003; Quine et al., 2003; Robinson et al., 2017), research findings on the comparison of rural and urban stress experiences are inconclusive. For instance, higher stress levels were observed among rural compared to urban youth in Turkey and Germany (Yeresyan & Lohaus, 2014). Conversely, reported feelings of stress and psychological distress were found to be lower for youth living in rural as compared to urban Swedish areas (Jonsson et al., 2019). Additionally, no differences were identified in self-reported stress in Canada for urban and rural youth (Elgar et al., 2003). However, there is a consensus that factors such as family dynamics, social support, socio-economic status, educational and recreational opportunities play a pivotal role in mediating young people's stress levels (Jonsson et al., 2019; Yeresyan & Lohaus, 2014; Quine et al., 2003). This emphasizes the necessity of providing comprehensive support to young people independent of their location and at all levels of their experience (Bronfenbrenner & Morris, 2007).

4.1 Stressors

The stressors identified in this study align with those reported in previous research. The primary stress domains found by Seiffge-Krenke (1995), including stressors related to school, self, relationships, and leisure, were also observed in the present study. Additionally, worries about one's own and others' mental and physical health, as introduced by Núñez-Regueiro and Núñez-Regueiro (2021), and issues related to the self, as suggested by Burnett and Fanshawe (1997), were also found. However, this study offers an updated and expanded view of these stressors by drawing on the voices of the target group. School emerged as the most frequently mentioned stressor, especially in Slovenia. Interestingly, when relevance was attributed, the ranking changed and relationships were identified as the most relevant source of stress. Interpersonal relationships, including friendships and interactions with peers, were highlighted as critical stress factors in all three countries. This finding supports previous reports of the large and significant impact of relationships on youth mental health, as they either promote and alleviate stress or inflict it (Mak et al., 2018; Moore et al., 2018). And even though school was the more common stressor, positive relationships can act as a buffer and mitigate their negative effects, making problems in their social context more relevant as they then miss this resource while experiencing other stressors (Uink et al., 2017). Notably, intimate relationships were mentioned in Austria and Slovenia, but not in Poland. Issues related to self-concept, including body image and psychological concerns, were identified as stressors in all countries, with a clear emphasis in Austria.

Social media and smartphone use were found to be neither common nor salient stressors. This finding was particularly surprising given the repeated finding of the potential negative effects of these behaviors on the well-being of young people (e.g., Odgers & Jensen, 2020; Twenge et al., 2022). However, potential negative effects do not necessarily mean that young people perceive this as a source of stress for themselves. Equally surprising was the finding that other internet-related stressors, such as cyberbullying, overabundance of information (infodemic), or the pressure of establishing and maintaining an online presence, did not appear to be a source of

stress in the current sample. This may in part be attributed to the fact that the participating students were digital natives, i.e., as they have grown up surrounded by digital technology and are very familiar with online activity (Prensky, 2009), they are so accustomed to its presence that its negative impact has either been neutralized or is a blind spot for them.

Future and global issues, such as war, pollution, racism and injustice, were mentioned in the responses from all three countries, with significantly more mentions in Poland compared to Slovenia. In previous research, stressors that affect society as a whole were not generally addressed as salient stressors for young people (Núñez-Regueiro & Núñez-Regueiro, 2021). However, global issues are becoming increasingly relevant, as the negative impact of climate change, for example, becomes more visible and directly affects young people, potentially contributing to their stress and other mental health concerns (Berry et al., 2010). It is worth noting that at the time of the study (June 2023), the war in Ukraine was ongoing and there were many refugees in Poland. As a result, war, hatred and injustice were very present stressors in the life experience of Polish students in particular.

Countries varied in their reported topics of concern. Poland was the only country to report death or illness as a concern, which may again be attributed to its closer proximity to Ukraine and the higher level of awareness of the dangers of war. Slovenia was the only country to report leisure or sports as stressful factors. These factors could be closely linked in the sample, possibly due to the heavy involvement of Slovenian students in extracurricular competitive sports activities, which was not the case in the other countries. And even though sport was mentioned as an important resource in Slovenia, this could explain the perceived lack of free time and lead to additional stress due to pressure to perform (at matches) and fear of possible injury. Finally, Austrian students did not share concerns about current global problems (such as war, pollution, or racism), and Slovenians did not mention any issues regarding respect or injustice. However, the absence of a certain issue does not mean that it was not relevant to the adolescents in the respective country. Individuals often find it challenging to discuss emotionally charged topics (Pennebaker & Seagal, 1999), which means that stressors may have been left out because they were difficult to articulate and discuss. They mainly reported stressors that bothered them the most in their daily lives.

Significant differences in the cross-country frequencies of the identified stressors were observed. However, it is important to interpret these results carefully due to the unbalanced and small sample sizes. In Austria, stressors related to self-concept, such as shame, fear of failure, self-confidence, self-love, and the need for perfection, were more frequently mentioned than in Poland. In comparison to Slovenia, Austrian students also reported a higher incidence of intra-psychological issues and behavioral concerns, such as anxiety or eating disorders. Additionally, mentions of intimate or love relationships were more prevalent among Austrian students than Polish students. One reason for this could be the slightly older age of Austrian students. However, this does not necessarily imply that Polish students did not find such relationships stressful. It is plausible that the school environment played a role as a mediator. Discussing love in the classroom is likely to be a sensitive topic, and students may have felt uncomfortable disclosing their experiences in some classes. On the other hand, ado-

lescent romantic relationships and heartbreaks are often short-lived in nature (Collins et al., 2009) and may not have been present at the time of the study. Although school was a significantly more common stressor in Slovenia than in Poland, it still ranked among the top three stressors in all three countries. For students, school is their work environment and is linked to performance and assessment. The workshops were held at school at the end of the school year, which may have contributed to the fact that school was such an obvious stressor for them. However, school-related issues have consistently been identified as common, intense and salient stressors throughout the literature (e.g. Núñez-Regueiro & Núñez-Regueiro, 2021).

4.2 Resources

Most responses made reference to the students' immediate environment, or what Bronfenbrenner called the microsystem (Bronfenbrenner & Morris, 2007), including references to nurturing relationships with people, their pets, activities of creative expression, or sports. This was inherent in the nature of the activity, as students were asked to relate to their personal experiences and actively seek sources of strength, support, and joy in their daily lives. Thus, it was only to be expected that the responses would mainly refer to things or people with whom the students had direct interaction and who played a role in their daily experiences. However, resources and activities depicted by the students may be influenced by multiple systems, especially considering the age of the participants. For instance, by the exosystem, as the parents' jobs may affect how much time or financial resources they can allocate to their children's recreational activities (Bronfenbrenner & Morris, 2007). It is also important to emphasize that sources of strength and resilience differ from person to person based on various factors such as personality, specific challenges, economic and social resources available, and the environmental context (Southwick et al., 2014).

Environmental factors, such as strong social support networks including family and friends, are a well-established source of resilience for young people (Bekiros et al., 2022). This is supported by the findings of the present study as relationships were frequently depicted as a top resource. It is also possible that the importance of relationships may even have been underreported due to privacy concerns. The briefing on data protection may have increased students' awareness of privacy concerns in photography, and may have made them hesitant to take and share pictures of their family and friends. This concern does not apply to animals. Students may have felt more at ease when depicting their animals, which were the most frequently depicted resource across all countries. Austrian students depicted them significantly more often than their Polish peers. Conversely, Polish students depicted calm or quiet activities, such as reading or breathing, significantly more often than Austrians or Slovenians. It was noticeable that Austrians did not mention these activities at all. In addition, only Polish students reported perceiving travel as a means of stress relief. It is important to recognize that travel and vacation are not necessarily a resource that students can rely on in their daily lives, and the age group observed was still to some extent dependent on adults in shaping and providing travel experiences. The relative lack of responses here in Austria and Slovenia may therefore simply be due to students failing to make

an immediate connection to their daily lives, even if they enjoy traveling and have already traveled a lot.

When confronted with the question about their personal resources, digital devices (computers, smartphones, tablets) or social media seemed to play a minor role for the students. Computer-related activities, such as playing video games or watching funny videos online, were only mentioned five times in the overall sample, and none of them in Austria. This was a surprising finding, as adolescents frequently use social media as a source to seek information about mental health (O'Reilly et al., 2019), and on average, over half of 15-year-old Austrians (m: 53%, f: 57%), Poles (m: 65%, f: 64%), and Slovenians (m: 57%, f: 50%), spend two or more hours on their screens per day (Health Promotion Knowledge Gateway, 2020). Additionally, the 2017/18 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada found that a significant amount of adolescent communication occurs online. Specifically, 35% of girls and boys reported intensive use of social media, meaning they communicate with others almost constantly throughout the day (Inchley et al., 2020). Although high internet and app usage is consistently reported for this age group, the results for mental health apps differ (Grist et al., 2018). Compared to app use in general (Grist et al., 2018), and compared to the use of mental health apps by adults (Aziz et al., 2022), a lower use of mental health apps is reported for this age group, which seems to be also the case of the current sample. And although much of young people's communication is mediated by digital devices, we interpret the lack of reporting in the current sample to mean that they may have attributed this to the resource of social (peer) support and relationships, rather than seeing the digital device or social media platform as the resource. Alternatively, it is possible that they perceive only face-to-face communication (not mediated by technology) as a valid source of stress relief. This is corroborated by another HBSC survey finding, which revealed that the majority (86%) of school-aged children preferred face-to-face communication over online interaction for emotional topics, worries, or concerns (Inchley et al., 2020). The present study specifically asked 'What helps you in critical situations?'. The responses given comply with a perception among young people that when they are in need, the offline world is a preferred place compared to the online world. In addition, the school-based setting of the workshops may have influenced the results to some extent, as all participating schools restrict personal smartphone use during school hours in their policies, and as teachers co-led the workshops, students may have (consciously or unconsciously) refrained from citing digital devices as a resource for stress relief. Having said that, great emphasis was placed on creating an open and trusting atmosphere and students commented positively on this and expressed their appreciation for the opportunity to express their opinions openly and truthfully in the evaluation forms at the end of each workshop. Of course, a certain degree of social desirability cannot be completely ruled out.

4.3 Conclusion

The aim of this study was to investigate common and current stressors and resources for students (aged 12-15) in three European countries. The findings are to be used to inform the content of a digital mental health promotion program me_HeLi-D in order

to make it more relevant and target-group specific. In general, in terms of stress-inducing and stress-relieving factors, the present study found greater similarities than differences between the countries. The most relevant and common stressors across countries were related to interpersonal relationships, school, and self-concept. Concerns about health, worries about the future, and global issues were only mentioned relatively infrequently, but they were nevertheless persistent in all countries and are expected to gain in prevalence in times of polycrises. The most common resources involved animals, sports, and relationships. Frequently-mentioned stress-reducing activities also included creative arts and expression, music, and calm activities such as reading, and spending time in nature. An intriguing finding was that the use of digital devices or social media was neither a common nor a relevant stressor or personal resource.

4.4 Limitations of the Study

The present study has several limitations. Firstly, the sample size varied across countries, and the Austrian sample consisted predominantly of female students. The results thus need to be interpreted with a certain degree of caution. Secondly, the data for the two activities were collected exclusively in written and visual form. In order to protect the well-being and personal boundaries of the students, oral questioning was intentionally excluded due to the sensitive nature of the topic. We also thought it desirable to avoid instilling any sense of discomfort among students since this may have produced biased responses as a result of perceived ridicule or stigmatization. Thirdly, there may have been a bias in the results obtained from the Photovoice activity regarding the category of relationships/people. Owing to privacy concerns, students may have depicted people less frequently. Moreover, the shorter interim period between the two workshops in Slovenia, and thus the lesser time available to complete the Photovoice activity, may be regarded as a potential limitation, as students had less time than the others to reflect on their resources for stress relief. Finally, the final category system of major stressors was formed without the involvement of students. However, this was necessary in order to arrive at a joint category system that included responses from all three countries.

4.5 Implications and Directions for Future Research

Thus, although the generalizability of the results cannot be assumed, the present study provides highly relevant insights into young people's perceptions of actual stressors and resources. These insights from all three countries are directly incorporated into the content development of the digital mental health promotion program me_HeLi-D by weaving all the aforementioned stressors and resources for stress relief into the exercises, examples, and vignettes used therein. This ensures that there is greater cultural awareness and appropriate sensitivity to diversity of content, that all potentially stressful topics are addressed and that students are provided with guidance on how to manage them effectively, thereby enhancing the program's overall relatability and efficacy. In addition, the study provided valuable pointers for additional investigation, particularly with regard to the impact of digital technologies and

social media, as well as global and future concerns, as important emerging stressors for young people. So, further research is still needed, ideally making use of a mixed methods approach in the context of stressors, resources, and psychoeducational interventions. Such research provides a significant opportunity to deepen understanding of how participatory approaches can enhance awareness and engagement, and foster the development of self-efficacy in managing stress and change.

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Declarations

Ethical Approval The project was approved by the Ethics Committee at the University of Graz (Ethics Approval GZ. 39/32/63 ex 2023/24).

Competing Interests The authors have no competing interests to declare that are relevant to the content of this article.

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