



OPEN ACCESS

EDITED BY

Irene Cadime,
University of Minho, Portugal

REVIEWED BY

Paula Vagos,
University of Aveiro, Portugal
Davi Rumel,
Retired, São Paulo, Brazil
Pras Ramluggun,
Oxford Brookes University, United Kingdom
Gita Sekar Prihanti,
Universitas Muhammadiyah Malang,
Indonesia

*CORRESPONDENCE

Lisa Hellström
✉ lisa.hellstrom@mau.se

RECEIVED 15 January 2024

ACCEPTED 08 May 2024

PUBLISHED 30 May 2024

CITATION

Hellström L, Sjöman M and Enskär K (2024)
Conceptualizing adolescents' everyday
stressors to underscore areas for support.
Front. Educ. 9:1370791.
doi: 10.3389/feduc.2024.1370791

COPYRIGHT

© 2024 Hellström, Sjöman and Enskär. This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Conceptualizing adolescents' everyday stressors to underscore areas for support

Lisa Hellström^{1*}, Madeleine Sjöman¹ and Karin Enskär²

¹Department of School Development and Leadership, Malmö University, Malmö, Sweden,

²Department of Women's and Children's Health, Uppsala University, Uppsala, Sweden

Introduction: Identifying stressors in adolescents' everyday life may prevent future mental health problems and could be used to promote wellbeing in school. To be able to identify possible coping tools in a school setting, the aim of this study is to conceptualize adolescents' experiences of everyday stressors.

Method: Data was collected among 45 girls and 20 boys (aged 13–15) representing seven schools in Sweden. Participants were told to discuss everyday stressors in smaller groups and document important words/concepts. The documented notes were analyzed using a manifest linking process connected to domains and codes found in the International Classification of Functioning, Disability, and Health (ICF) framework, following established linking rules.

Results: A total of 549 documented words/concepts connected to adolescents' experiences of daily stressors were collected and revealed stressor related to the ICF domains activities and participation (42.8%), body functions (30.1%) and environmental factors (27%). Regarding activities and participation, adolescents in the study perceived demands relating to school and social life as most stressful. The demands were put on them by themselves, parents, school, and society and were combined with a lack of time to handle the demands. Further, stressors related to how they are perceived by others and comparisons with peers were stressors connected to body functions. Stressors relating to environmental factors included derogatory attitudes and a lack of support, from parents and school as well as from peers.

Discussion: The results are discussed in terms of take-aways for school's health promotive work and potential coping tools for students.

KEYWORDS

adolescents, everyday stressors, ICF, mental health, school

1 Introduction

While the experience of general stress may be a relatively common feeling in adolescence (Romeo, 2013), the number of young people reporting school-related stress and mental health problems has increased steadily over the past thirty years and mental health among youth has become a priority in public health policy (OECD, 2014). School-related stress is related to the school context and refers to perceived and real expectations from, and conflicts with, parents, teachers, and friends (Hoferichter et al., 2021), regarding for example demands and pressure of schoolwork, high expectations for success, and fear of failure (Gustafsson et al., 2010; Hellström and Beckman, 2021; Hermann et al., 2022a).

School-related stress is common in Sweden. According to the international study Health Behavior in School-aged children, 63% of 13-year-old girls and 40% of 13-year-old boys and 78% of 15-year old girls and 51% of 15-year old boys in Sweden reported feeling pressured to some extent or a lot by their schoolwork (Public Health Agency of Sweden, 2022). School-related stress can affect school performance in a negative way, which in turn is a risk factor for mental health problems (Torsheim and Wold, 2001; Kaplan et al., 2005). Along with the increase in school-related stress, self-reported mental health problems such as bad mood, difficulty sleeping, headaches or stomachache among youth are increasing and shows a worrying trend in Sweden as well as internationally (Potrebny et al., 2017; Hagquist et al., 2019). School-related stress is a multidimensional construct, including perceived emotional and physical wellbeing or illness and social support or lack of social support in different setting such as home or school (Bronfenbrenner and Evans, 2000; Yoo, 2019). According to the World Health Organization (WHO), health is a state of wellbeing in which the individual realizes his or her abilities, can cope with the normal stressors of life, can work productively and fruitfully, and can contribute to his or her community. In addition, Sartorius (2006) adds that health is a state of balance, an equilibrium that an individual has established within himself and between himself and his social and physical environment.

The International Classification of Functioning, Disability, and Health (ICF) is built on a biopsychosocial framework and highlights the dynamic interactions between a person's health and functional abilities influencing participation in everyday life. Contextual factors (i.e., environments, families) influence child factors, activities, and participation and may be considered facilitators or barriers to engagement in life experiences (WHO, 2001). For instance, a longitudinal study shows that perceived social support and pressure from parents and the educational context predict youth's stress developments during adolescence (Kulakow et al., 2021). It is, therefore, important to consider everyday stressors among youth as a multidimensional construct that includes both environmental factors, such as social support and pressure, and emotional factors, such as anxiety. Studies using ICF as a theoretical framework usually focus on children and youth with a disability, such as autism or chronic disease (Augustine et al., 2018; Madden and Bundy, 2019; Little and Schwefel, 2024). However, in this study, we used ICF as a theoretical framework to understand different dimensions of daily stressors among youth without a disability. Since the ICF provides a conceptual framework and terminology for describing health and functioning in everyday life (WHO, 2007; Klang Ibragimova et al., 2011; Adolfsson et al., 2018; Augustine et al., 2021), it could be a useful analytic tool to conceptualize everyday stressors among all adolescents to identify possible coping tools in a school setting.

While earlier research indicate that the majority of adolescents possess the capability to confront everyday stressors without encountering significant difficulties (Ebata and Moos, 1994; Gelhaar et al., 2007), the increasing academic demands among adolescents in recent years and potential coping strategies for dealing with school-related stress warrants further attention. The school-related stress experienced by students may be comparable to work-related stress in adults. However, despite the growing acknowledgment of schools as work environments with a potential influence on stress and health, there has been a notable scarcity

of research on this topic (Modin et al., 2011). The significance of workplace conditions for the adult population is widely recognized, particularly concerning the connections between the psychosocial work environment, stress, and overall health. Although workplace demands are an inherent aspect of professional life, an excessive burden of stress-inducing responsibilities and obligations can ultimately jeopardize an individual's overall wellbeing. This is particularly applicable to individuals who lack the resources and coping mechanisms to effectively manage such stressful circumstances. An individual's level of control, or their decision-making authority over their working conditions, is contingent on the extent of task diversity and the autonomy inherent in their job role (Modin et al., 2011). The demand/control model, as proposed by Karasek (1979), which posits that the coexistence of high job demands and low control over one's work significantly escalates the likelihood of stress-related health issues, has garnered broad acceptance. Adolescent's ways of coping with school-related stress show high cultural variability (Gelhaar et al., 2007). Recent global accountability reforms in education have necessitated a greater emphasis on measuring and quantifying performance (Au, 2008). In Sweden, the increased emphasis on high-stakes testing, assessment and grading due to recent school reforms have arguably led to increased school-related stress among adolescents, but these reforms have only put limited focus on health-related outcomes (Högberg et al., 2021). In contrast to adults' working environment, students' school environment is not self-chosen or something they can opt out of. Examining the interplay between stress from school-related work and the stress-relieving resources available within the school environment is a crucial research area for understanding the school's role in promoting student health (Modin et al., 2011). A large-scale European study found that control (autonomy), demands (measured as reasonable expectations) and teacher support are of great importance when it comes to young people's wellbeing (Samdahl, 1998). A Swedish study showed that students experiencing a high level of demands in combination with a low level of control demonstrated significantly worse health and weaker school-related sense of coherence compared to students in less strained working conditions in school (Modin et al., 2011). Considering school as a work environment, the demand/control model (Karasek, 1979) could also be applied to students' everyday situation to understand their perceived everyday stressors (Modin et al., 2011) and where a high sense of control and the resources and support available could be viewed as potential coping tools.

Adolescence is a period that involve many changes in different areas of life such as increasing academic demands and academic competition, a decrease in teacher-student relationship closeness or school safety, rearrangement of relationships with parents and peers including an increase in social comparison, identity issues, as well as thoughts about the future (Brown and Larson, 2009; Bremberg, 2015; Juvonen, 2016; Tetzner et al., 2017; Cappella et al., 2019). In addition, disturbances in the developing teenage brain might play a role in the rise of stress-related mental issues like anxiety and depression (Romeo, 2013). Studies show that when adolescents and young adults put it into their own words, the most pronounced everyday stressors include academic failures, relationship problems, negative self-evaluations through social comparisons, other performance-oriented tasks, social media (Gustafsson et al., 2010; O'Reilly et al., 2018;

Hellström and Beckman, 2021) and stigma (Hermann et al., 2022a). These perceived demands could be understood by taking into consideration the level of control and the resources and support available to handle these demands. The main sources of support for children and adolescents are family, friends and school personnel (Malecki and Demaray, 2003). Social support may contribute to wellbeing by providing positive emotions, fostering a sense of self-worth, introducing predictability in life, and by functioning as a buffer against stress (Cohen and Wills, 1985). Chu et al. (2010) stated that the support provided by teachers and school personnel holds greater influence on wellbeing compared to support from family and friends. They mean that relationships with family and friends are susceptible to conflicts, whereas relationships within the school environment tend to be more consistent. A study by Malecki and Demaray (2003) showed that perceived emotional support and supportive behaviors from teachers are associated with an increase in students' social skills, academic competence and school adjustment (Malecki and Demaray, 2003). Further, family support has shown associations with higher levels of behavioral school engagement and personal adjustment (Malecki and Demaray, 2003; Estell and Perdue, 2013), while peer support has shown associations with higher levels of affective school engagement (Estell and Perdue, 2013). While numerous studies have shown that perceived social support has a protective effect on mental health during times of stress (Khan et al., 2021), fewer studies have studied direct mental-health effects resulting from a perceived lack of support. Considering the importance of social support for children's health together with the increase in perceived school stress (Potrebny et al., 2017; Hagquist et al., 2019; Public Health Agency of Sweden, 2022), it is feasible to assume that lack of support by teachers, family and peers could be a potential stressor for school children.

The increase in self-reported mental health problems in Northern Europe could reflect a shift in how young people perceive everyday stressors and report health complaints (Potrebny et al., 2017). Recent research indicates that there is uncertainty among children as well as among adults of where to draw the line between everyday stressors and mental health problems (Beckman et al., 2023), that could indicate a need for a conceptualization of adolescents' experiences of everyday stressors to identify possible coping tools in a school setting. Previous research also shows an uncertainty about their role and a lack of confidence among different professionals such as teachers, school counselors and healthcare professionals, as well as parents, in caring for students' wellbeing, mental health, and daily stressors emphasizing the ambiguity surrounding mental health terminology and support (Ramritu et al., 2002; Thomas, 2017; Beckman and Hellström, 2021; Beames et al., 2022). A lack of tools for communication can discourage children and adolescence from seeking help (Anderson et al., 2017). It has been suggested that current diverging understandings of mental health between research and practice not only create an obstacle for effective communication but also impedes the effectiveness of efforts to influence public policy (Davey, 2010; Kendall-Taylor, 2012). Analyzing adolescent's understanding of everyday stressors may provide schools and teachers with tools and confidence to support wellbeing.

The ICF framework provides a great analytic tool for conceptualizing everyday stressors expressed by adolescents. Indicators of mental wellbeing frequently stem from underlying concepts, typically elucidated in the explanation purpose. Aligning

these concepts with the ICF enables users to encompass a wide array of aspects pertinent to the daily functioning of teenagers facing adolescents' everyday stressors (Augustine et al., 2018). Hence, the ICF can serve as a common framework for developing comparable concepts and a common language, making it easier for school personnel, professionals in different disciplines and parents to offer support, interact, discuss, and plan health interventions based on young people's perspectives. To be able to identify possible coping tools in a school setting, the aim of this study is to conceptualize adolescents' experiences of everyday stressors. The findings are expected to raise awareness about the concept of everyday stressors to discuss take-aways for school's health promotive work and to underscore support based on young people's needs.

2 Materials and methods

2.1 Participants

This study is a part of a wider project aiming to test and evaluate an intervention to enhance mental wellbeing using an experience-based co-design. The sample includes 65 adolescents (45 girls and 20 boys) between 13 and 15 years of age (in grades 7–9) at seven schools in Sweden. Participants demographics are presented in Table 1. Data collection took place in the students' schools during the autumn of 2020. Youth with an interest in discussing everyday stressors were identified through a purposive sampling procedure (Polit and Beck, 2021), by a gatekeeper assigned by the principal at each school, with the intention of obtaining a wide distribution of experiences to gain transferability of the results. Exclusion criteria were not speaking Swedish and having severe mental ill health. The reason for the latter criterion was to limit the risk of participants disclosing information about their own health that they might have regretted later, and it was also part of the ethical approval for the study. Written informed consent were collected from the participants and from the legal guardians for those under the age of 15. In this study, involving seven schools, 14 focus group interviews were held—i.e., seven groups and two interviews per group, in southern Scania in Sweden, during the autumn of 2020. At each school, eight to 12 participants were included, which, according to Polit and Beck (2021), is the optimal number in focus group interviews when the subject is not considered to be of a sensitive nature. Each focus group included between four to 11 participants.

2.2 Data collection and procedure

Data collection took place in conjunction with focus group interviews built around everyday stressors. The focus groups were conducted at the participants' schools during school hours, with a mix of students from grade 7 to grade 9, which meant that participants potentially knew some, but not all, of the other participants in the group. The socioeconomic conditions varied between schools, but there were fewer schools with a lower socioeconomic status. The proportion of students with a foreign origin ranged between 10 and 92% at the included schools. The participants were told to discuss perceived everyday stressors related to the body, school environment, workload, relationships,

TABLE 1 Demographics of participants.

Focus group nr.*	Number of participants	Boys	Girls	School year 7	School year 8	School year 9	Students with foreign background on school level
School 1	10	7	3		10		92%
School 2	10	2	8	3	7		73%
School 3	8	6	2	1	4	3	29%
School 4	10	2	8			10	15%
School 5	11	0	11	3	4	4	10%
School 6	4	1	3	4			18%
School 7	12	2	10		8	4	25%
Total	65	20	45	11	33	21	10–92%

*Two focus group interviews per group was held.

and social norms, based on previous reports of young people's definitions of everyday stressors (Public Health Agency of Sweden, 2018). The participants were asked to discuss the given themes in pairs/smaller groups and document words/concepts from the discussion on post-it notes. After about 30 min of discussion in smaller groups, the participants posted their notes on a whiteboard and presented what they had talked about to the whole group. The documented words/concepts from the adolescents' discussions (written on post-it notes) constitute the empirical basis for this study. The data collection was carried out by four experienced researchers, two of whom participated in each interview. The researchers made their own brief notes and recorded the interviews in their entirety using a dictaphone. The interviews lasted about 1.5 hours each.

2.3 The ICF

The International Classification of Functioning, Disability, and Health (ICF) is built on a biopsychosocial framework and was developed by the WHO and belongs to the "family" of international classifications for application to various aspects of health (WHO, 2001). Authorized by the WHO, ICF is updated on a yearly basis, based on suggestions of including new categories or change existing categories. Since 2017, the ICF classification system covers all ages. According to ICF, participation is defined as involvement in life situations promoting health and wellbeing (WHO, 2001). The ICF defines components of health included as domains described from the perspectives of the body, the individual and society. These domains are (1) Body Functions, (2) Body Structures, (3) Activities and Participation and (4) Environmental Factors (WHO, 2001, p. 3). The hierarchical classification structure of ICF includes different chapters and codes under each domain that cover different life areas. The model describes health by illustrating how body functions, body structures, activities, and participation are under influence of the context defined by environmental and personal factors. The coding system can provide essential information about a health condition in terms of its' impact on functioning. The intended use of ICF is as a conceptual framework and a common language for professionals, children/adolescents, and parents for

recording both strengths and weaknesses in relation to the social and physical environment.

2.4 Data analysis

The data material for this study consists of post-it notes written by the adolescents on what they perceive to be stressful in their everyday lives. A data analysis with both manifest and latent elements, inspired by a deductive reasoning approach has been adopted. We have aimed to stay close to the text, describe what the adolescents actually say and describe the visible and obvious in the text (Bengtsson, 2016). To make the manifest linking processes systematic and consistent, the process of coding the documented words/concepts to ICF codes followed established linking rules based on the ICF (Cieza et al., 2005). To ensure that the latent interpretation could lean on a multidisciplinary background knowledge about child functioning, two authors with different professional backgrounds conducted individual coding (Fayed et al., 2012). Any potential disagreements were discussed by all three authors until consensus was reached.

Step 1: The data material, i.e., the content on the post-it notes, were transferred to an Excel file by the second author and were thereafter read through by all the authors separately.

Step 2: Two authors each conducted a manifest linking process, in accordance with Cieza's rules (Cieza et al., 2005), linking the content on the post-it notes to codes on the 2nd ICF-level. One exception was deemed suitable for this study, i.e., the items were assigned one single code and not divided into several meaningful concepts (Specific linking rule "a" according to Cieza et al., 2005). Meaningful units that could not be linked to the ICF were assigned to categories of non-definable content.

Step 3: In cases where the authors' linking processes resulted in different ICF codes, a latent procedure with interpretation of the underlying meaning of the content on the post-it notes were conducted by all authors. The meaning of the content on each post-it note were thoroughly discussed until consensus was achieved. 39 number of linkages were discussed in relation to the coding scheme. When consensus was obtained, the exact agreement was 94 percentage inter-coder agreement on the 2nd ICF-level.

TABLE 2 Examples of everyday stressors according to the participants, linked to the different ICF domains, chapters, and codes.

Domain	Chapter	Code	Examples from the empirical data
(d): Activities and participation (n = 236)	(2): General tasks and demands (n = 184)	(d240): Handling stress and other psychological demands (n = 184)	"Parents put pressure on you," "Parents have high demands," "stress because of tests," "Stress because of homework," "groupwork," "performance anxiety," "High demands on yourself," "worrying about bad grades," "Tests every week," "No time to hang out with friends"
	(5): Self-care (n = 11)	(d570): Looking after one's health (n = 11)	"Narcotics," "Alcohol," "Gambling issues"
	(6): Domestic life (n = 2)	(d660): Assisting others (n = 2)	"Being enough at home"
	(7): Inter-personal interactions and relationships (n = 35)	(d710): Basic interpersonal interactions (n = 29)	"Making friends," "Being left out," "Arguing with parents," "Arguing with siblings"
		(d720): Complex interpersonal interactions (n = 6)	"Negative comments," "Bullying"
(8): Major life areas (n = 4)	(d860): Basic economic transactions (n = 4)	"Money"	
(b): Body functions (n = 164)	(1): Mental functions (n = 155)	(b114): Orientation functions (n = 4)	"Not fitting in," "Not being able to understand," "Compare yourself to others," "Forced to be someone else," "Lonely," "Group pressure," "Relationships," "Ideal," "Being cool," "Loosing motivation," "Difficulty sleeping," "Tired," "Loud," "No work in peace," "Fear of making a mistake," "Depression," "Sadness," "Anxiety," "Groupwork," "Social media," "Insecurity," "Shy," "body complex," "Looking down on oneself," "Being different"
		(b117): Intellectual functions (n = 1)	
		(b122): Global psychosocial functions (n = 60)	
(b126): Temperament and personality functions (n = 4)			
	(b130): Energy and drive functions (n = 5)		
	(b134): Sleep functions (n = 4)		
	(b140): Attention functions (n = 5)		
	(b152): Emotional functions (n = 44)		
	(b160): Thought functions (n = 28)		
	(5): Functions of the digestive, metabolic and endocrine systems (n = 4)	(b530): Weight maintenance functions (n = 1) (b555): Endocrine gland functions (n = 3)	"Eating disorder," "Puberty," "Adolescence"
	(6): Genitourinary and reproductive Functions (n = 5)	(b640): Sexual functions (n = 3) (b650): Menstruation functions (n = 2)	"Sexual orientation" "Menstruation"
(e): Environmental factors (n = 148)	(3): Support and relationships (n = 46)	(e310): Immediate family (n = 38) (e330): People in positions of authority (n = 8)	"Parents love siblings more," "Problem at home," "Divorce," "Teachers," "Disabilities," "Yelled at for no reason," "Hard for students to understand teachers"
	(4): Attitudes (n = 102)	(e425): Individual attitudes of acquaintances, peers, colleagues, neighbors, and community members (n = 38) (e445): Individual attitudes of strangers (n = 22) (e455): Individual attitudes of other professionals (n = 11) (e460): Societal attitudes (n = 31)	"Prejudice," "Rumors," "Laughing during presentations," "Skin color," "Ethnicity," "Laughing behind the back," "Bullying in school," "Social media," "Grown up forces children to do things," "Teachers favors certain students," "Teachers singles out," "Norms," "Dress codes," "Different background," "Attitudes," "Interests"
(s): Body structures (n = 1)	(1): Structures of the nervous system (n = 1)	(s150): Structure of parasympathetic nervous system (n = 1)	"May lead to depression"

For descriptions of the relevant domains, chapters, and codes, see WHO (2001).

2.5 Ethical consideration

Research with young people requires procedures to ensure that the research design and the protocols are suitable, prioritizing the safety and security of the participants. The present research was conducted based on the ethical principles set out in the Declaration of Helsinki (WMA, 2018). The principles of informed consent, voluntary participation, confidentiality, and anonymity were therefore honored throughout the study. Thus, young people were given the opportunity to express their views on issues that concerned them, in a safe context. The study was approved by the

Swedish Ethical Review Authority (reg.no. 2019-06430 / 2020-04-07).

3 Results

The results of the study revealed that most statements (98.2%) described as words or sentences that revealed information about the young people's everyday stressors could be linked to the ICF framework. The total number of statements (n = 549) were linked to a total of 12 different chapters and 27 different ICF codes on level two. The total number of statements linked to each

code can be found in [Table 2](#). In the results section below, the codes representing the greatest everyday stressors, as expressed by adolescents ($n > 35$) are presented.

In [Table 1](#), the results show that of the 549 statements, 42.8% could be linked to the domain Activities and participation, 30.1% could be linked to the domain Body functions and 27.0% could be linked to the domain Environmental factors.

3.1 General tasks and demands

By conceptualizing adolescents' experiences of everyday stressors according to the ICF framework, what adolescents experience as most stressful in their everyday life is connected to the domain activities and participation, where most of the statements could be related to chapter 2 "general tasks and demands." That is, carrying out single or multiple tasks, organizing routines and handling stress. All the statements in this chapter ($n = 184$) were connected to the code Handling stress and other psychological demands (d240), The stress and psychological demands that are mentioned by the adolescents are those by *parents* ("parents want you to perform well," "Parents put too much pressure," "demands from parents"), *teachers and school* ("pressure due to tests," "pressure due to homework," "grades," "too long schooldays," "presentations," "pressure to perform from teachers"), *themselves* ("high demands on yourself," "worrying about bad grades," "plans for the future," "not being social enough"), *Society/leisure time* ("pressure to perform in sports," "adapt to the surroundings," "being judged," "friends outside of school") and by *not having enough time* ("no time to hang out with friends," "no time to participate in life," "no freedom," "time pressure," "no time to spend with your family").

3.2 Mental functions

Everyday stressors, as expressed by the adolescents, are connected to the domain body functions, where most of the statements ($n = 155$) was connected to chapter 1, "mental functions," that is the functions of the brain, both global mental functions, such as consciousness, energy and drive, and specific mental functions, such as memory and language. Of the total amount of statements, 60 were linked to the code Global psychological functions (b122), including cognitive processes and interpersonal skills evolving throughout one's life. The most visible global psychosocial functions that are experienced as everyday stressors by the adolescents are how they are perceived by others and comparisons with others ("think about what others will think," "forced to be someone else," "nobody likes you," "stand out," "group pressure," "comparisons with others," "worse knowledge than others"). Further, 44 of the statements were linked to the code Emotional functions (b152), relating to the feeling and affective components of the processes of the mind. Specific emotional functions that were expressed and everyday stressors, according to the adolescents were related to feelings of fear and anxiety ("fear of failure," "fear of saying the wrong thing on a lecture," "fear of doing wrong," "depression," "anxiety," "tough things happening on social media").

3.3 Attitudes

Connected to the domain environmental factors, most statements could be found in chapter 4, "attitudes" ($n = 102$), that is attitudes that are observable consequences of external people's norms, practices and beliefs, on individual behavior and social life. Of the total amount of statements, 38 could be linked to the code Individual attitudes of acquaintances, peers, colleagues, neighbors, and community members (e425), including opinions and beliefs about the person, that influence individual behavior and actions. The attitudes were mostly connected to attitudes among peers in school ("people laughing during presentations," "rumors," "bullying," "body shaming in school," "mean comments about looks," "people laughing behind your back," "getting weird looks").

3.4 Support and relationships

Further, within the domain environmental factors, support and relationships, chapter 3, were of great concerns in the statements ($n = 46$). That is, people that provide practical or physical or emotional support, nurturing, protection, assistance, and relationships to other persons. For example, the practical physical or emotional support (or lack thereof) were identified as challenging according to the adolescents. 38 of the statements could be linked to the code Immediate family (e310). Lack of support and challenging relationships were mostly connected to parents and siblings and stated as "parents love siblings more than they love you," "divorced parents," "parents who are fighting," "fights with siblings," "mean comments from parents," "problems at home."

4 Discussion

This study investigated how adolescents' experiences of everyday stressors can be conceptualized and understood through the ICF framework to underscore areas for support in a school setting. The ICF defines components of health included as domains described from the perspectives of the body, the individual, and society (WHO, 2001, p. 3). In the current study, the perspective of the body is represented by the domain "body functions" as perceived by the adolescents. The perspective of the individual is represented by the domain "activities and participation," while the perspective of the society is represented by the domain "environmental factors." The ICF framework describes health by illustrating how body functions, activities, and participation are under influence of the context defined by environmental and personal factors. Children and young people's own experiences are crucial to widening the understanding of their situation and the aspects that contribute to their everyday functioning (Kellet, 2005). That is, listening to the experiences of young people and their understanding of everyday stressors could be a way to identify the support needed to deal with these stressors (Fattore et al., 2009; Hellström and Beckman, 2021; Hermann et al., 2022a). The analysis showed that everyday stressors among adolescents can be conceptualized as stress related to general tasks and demands, mental functions, attitudes and support and relationships. The

results will be discussed based on these conceptualizations and then summed up as implications for school's health promotive work.

It is evident that young people today are finding it stressful to handle demands surrounding them in their everyday lives. These demands and the perceived stress may influence their possibilities to participate in socially valued decision-making processes (Modin et al., 2011). According to the adolescents in the current study, it includes demands that they put on themselves but also that are put on them by parents, school and by society. The demands are often connected to performing well in school or in social contexts and are amplified by a perceived lack of time to handle all the demands. Similar sources of stress have been found in previous research (Bremberg, 2006; Gelhaar et al., 2007). When underscoring areas for support related to general tasks and demands it appears as important to consider the actual demands put on adolescents and young people as well as how they handle the stress to manage the perceived demands. Swedish research has shown that recent educational reforms, including a growing emphasis on testing, assessment and grading, has resulted in increased stress and reduced academic self-esteem among students, indicating a true increase in actual demands (Högberg et al., 2021). When considering educational reforms and policies including increased testing and grading, the potential negative side-effects on health and non-academic consequences need to be considered (OECD, 2017; Högberg et al., 2021). Pressure at school may also be related to students' self-evaluated satisfaction with learning (Holfve-Sabel, 2014), and the extra sensitivity that is common during adolescence (Romeo, 2013). This needs to be taken into consideration when promoting wellbeing and preventing stress among adolescents. In addition to an increase in actual academic demands, the experiences of stress and negative feelings can be related to the gap between a person's own ability to adapt in different situations and demands relating to surroundings' expectations. While demands are an essential part of school work, parental support, high levels of control and a strong school-related sense of coherence can protect against the more detrimental effects on health that high demands at school may cause (Modin et al., 2011; Hoferichter et al., 2021). Looking at the learning environment in school as students' working environment, it becomes clear that the balance between demands, control, and support is disproportionate (Karasek, 1979). A heavy workload such as a disproportionate level of stress-inducing requirements and obligations may in combination with insufficient freedom of action, or time-restraints, to cope with the situation cause feelings of hopelessness and stress that may endanger an individual's wellbeing (Modin et al., 2011). The perceived demands and lack of strategies to handle the demands could be further understood considering available support by family, friends, and school personnel.

Another significant stressor in the everyday lives of young people in this study is related to mental functions including how they are perceived and compared by others. It also includes emotional functions such as feelings of fear and anxiety. Relationships with peers become increasingly important for the social life when children grow older (Brown and Larson, 2009). Perceived demands are increasing in adolescence at the same time as social support and interpersonal relationships seem to deteriorate (Rudolph, 2002). The increased importance by peers and an increase in social comparisons may lead to a strive to always achieve and perform on top socially as well as academically

(Hellström and Beckman, 2021). However, the strong association between peer acceptance and academic achievement that can be found in early adolescence are not as salient among older adolescents (Juvonen, 2016), indicating that behaviors that are high in social value varies across ages (Galván et al., 2011). Taken together, social comparisons can be seen as a part of identity development and formation by providing tools for self-evaluation, self-improvement and self-enhancement (Corcoran et al., 2011; Noon et al., 2021). Adolescence and young adulthood is a time to reflect on who you are and who you wish to become (Crocetti, 2017), social comparisons seem to be more common amongst those who lack clear and well-defined beliefs and perceptions about oneself (Saadat et al., 2017). The chapters represented in the domain environmental factors included attitudes and support and relationships. Derogatory attitudes directed at them as individuals, mainly from peers and in the form of bullying or victimization were expressed as common everyday stressors by the adolescents in this study. These results are in line with previous research emphasizing the increasingly important role of relationship with peers in adolescence (Brown and Larson, 2009) and the impact of social feedback by peers on self-esteem (Tetzner et al., 2017). Connected to the chapter on support and relationships, the adolescents in this study reported a lack of physical and mental support and challenging relationships, mainly by parents and siblings manifested as direct actions such as mean comments or fights in the home environment but also as indirect actions such as parents fighting and divorce. However, many of the results in this study can be discussed as support (or lack thereof) from family, peers, and school. This will be further developed as implications for school's health-promotive work in the next section.

4.1 Implications for school's health-promoting work

In line with the demand/control model, examining the interplay between stress from school-related work and the stress-relieving resources available within the school environment is a crucial research area for understanding the school's role in promoting student health (Modin et al., 2011). Since the perceived emotional support and supportive behaviors provided by teachers and school personnel have shown associations with an increase in students' social skills, academic competence and school adjustment, an increase in present and available adults that takes the time to see and hear the adolescents could be such a stress-relieving resource (Malecki and Demaray, 2003; Hellström and Beckman, 2021). Respecting youth by acknowledging their presence and perspectives can validate their emotions and demonstrate an understanding of their circumstances. Showing genuine interest without judgment, and being open to learning from them, signifies an approach adults, including school personnel and parents, could adopt. Enhancing adults comprehension of mental health and equipping them with effective communication tools would significantly improve their capacity to engage with young individuals in a positive and meaningful manner (Beckman and Hellström, 2021). Based on the perceived levels of psychological demands by adolescents, it is of importance to developing an understanding of what causes stress among young people as well as adults with a particular focus

on stress-reducing coping strategies. Research has shown that a strong sense of coherence is of importance to remain healthy in stressful situations (Mc Gee et al., 2018). A sense of coherence can be strengthened by life experiences featuring predictability, underload/overload balance, and participation in socially valued decision-making (Antonovsky, 1987). Hence, schools need to be focused on support that will enhance students' individual adaptability as well as strategies to tackle real and perceived demands.

As parental support and engagement are imperative regarding children's wellbeing, academic achievements, behavioral school engagement and personal adjustment (Malecki and Demaray, 2003; Estell and Perdue, 2013; Wang and Sheikh-Khalil, 2014; Boonk et al., 2018), helping parents developing greater knowledge and support skills when it comes to demands related to school and social relationships are of great importance and area for support. Previous research has shown that many parents have limited knowledge about mental health and stress, which reduces their ability to provide support (Jorm, 2012). At the same time, young adults express a need for acceptance and respect by adults, including being able to meet them in their worries and talk to them in a respectful way (Hellström and Beckman, 2021; Hermann et al., 2022b). Even though peers may be of greater importance for their social relations, parents still play an important role in providing support when it comes to adolescents' academic demands. Hence, to promote wellbeing and reduce stress among adolescents the support given by parents and other important adults in their surroundings must be considered.

While social comparisons inherently may be regarded as something negative in relation to wellbeing, social support can be regarded as helpful in coping successfully with life's adversities and actively pursuing life opportunities for growth and development (Feeney and Collins, 2015). In addition, social support in terms of close relationships are tied to wellbeing also in the absence of adversity or specific stressors (Lakey and Orehek, 2011). Hence, social support can be considered as the supply of both psychological and material resources, aiming to promote optimal wellbeing as well as assisting recipients in managing stress and adversity (Cohen, 2004; Feeney and Collins, 2015). As peer support has shown positive effects on different school factors (Estell and Perdue, 2013), actively working to promote a socially supportive climate among young people could possibly work to reduce negative social comparisons. However, this needs to be investigated further. Research on social support from teachers and school personnel suggest that social support may have a stronger influence on wellbeing than on mental health problems (Stewart and Suldo, 2011). Considering the robust correlation between perceived social support and life satisfaction, especially when compared to internalizing and externalizing symptoms, along with the predictive value of subjective wellbeing for future student achievement (Suldo and Shaffer, 2008), fostering positive, supportive relationships within schools can potentially prevent academic issues and bolster mental wellbeing. Initiatives toward prevention might commence by conducting school- or classroom-wide assessments to gauge students' perceived support from various sources, aiding in identifying individuals with inadequate social support. Subsequently, efforts could involve organizing training sessions to heighten teachers' understanding of the significance of cultivating robust social support in their classrooms, along with

outlining general tactics to enhance students' perceived support levels (Stewart and Suldo, 2011). This could be a strategy for enhancing teachers' preparedness and lack of confidence working with health promotion.

5 Methodological limitations

This study has specific limitations. Since this study focused on perceived stressors, it cannot say anything about the true effect of these perceptions on the adolescents' wellbeing. One advantage with this study was the strategic selection of participants, ending up in varying stressors and an even distribution between gender and age. In comparison with individual interviews that focus more in-depth, this kind of focus groups can provide a greater breadth and allow several of the adolescents to actively participate and state their opinion (Hsieh and Shannon, 2005; Elo and Kyngäs, 2008). An advantage of the choice to use focus groups when adolescents are interviewed is that the power relationship between adult-child and researcher-participant is minimized (Peterson-Sweeney, 2005). However, there is a risk of group thinking and that participants do not dare to express dissent, which is why it is important to have a skilled researcher carrying out the data collection. Before the interview started, a brief introduction including mental health issues in adolescence, defined as everyday stressors related to the body, school environment, workload, relationships, and social norms were presented. This introduction might have influenced the content of the interviews. However, given that the different topics were mentioned to different extents (stressors related to the body was not mentioned at all), and the linking process captured how many statements could be linked to each ICF-code, it is still possible to conclude which everyday stressors are experienced as the most challenging. The data collection in the study were conducted using a procedure where the participants themselves were allowed to state their own stressors on the post-it notes. The data collection was conducted at the schools in an environment that the participants knew, which according to Elo and Kyngäs (2008), can give the participants an advantage in relation to the researchers and influence the group dynamics in a positive direction. In this case this process might have led to a greater openness to give information to someone outside their own class/group (Elo and Kyngäs, 2008).

The information from the post-it notes proved limited information about the participants views of everyday stressors. Hence, the linking process may be biased due to overinterpretation of the word/concepts on the post-it notes. Further, the coding and linking process was time- and labor intensive, which complicates the feasibility of using this process in larger samples. To handle the risk of bias, two coders conducted the linking process independently of each other and then compared the interpretation of the notes as well as the linking to the ICF-code. Disagreements were discussed among all three co-authors. Additional coders for some portion of the empirical material could have been added to enhance the reliability of the data extraction and coding process. Strategies to enhance the reliability of these processes and the validity of the results in this study included continuous dialog within the research group with include expertise related to mental health as well as in applying the ICF framework.

6 Conclusion

The adolescents in this study expressed high psychological demands in combination with a lack of support from parents, teachers and peers, and a lack of resources, mainly time restraints as great stressors. These demands can most often be related to performing well in school or in social contexts. Demands and their effect on wellbeing are essential aspects in the lives of young people during a sensitive period of their life. School personnel needs to consider adolescents' experiences of everyday stressors to provide supportive actions. For parents, school personnel or other adults this could mean talking to adolescents and young people about overwhelming demands and help them sort out what demands they can influence and what demands are hard for them to tackle alone. Here, the relation between demand, control and support may be a useful theoretical framework and efforts to strengthen a sense of coherence could be a useful coping strategy providing adolescents and young people with a greater sense of control. In addition to demands, how they are perceived by others and how they compare to others are other sources of stress among the adolescents. Social comparisons can function as tools for self-evaluation, self-improvement, and self-enhancement in young people's identity development. However, parents, school personnel or other adults need to be aware and focus on the risk factors as a means to reducing social comparisons when these comparisons become stressful and potentially harmful.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by the Swedish Ethical Review Authority. The studies were conducted

in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

LH: Conceptualization, Data curation, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing. MS: Conceptualization, Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing. KE: Conceptualization, Data curation, Funding acquisition, Methodology, Project administration, Validation, Writing – review & editing.

Funding

The authors declare that financial support was received for the research, authorship, and/or publication of this article. This work was supported by Malmö University.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Adolfsson, M., Sjöman, M., and Björck-Åkesson, E. (2018). ICF-CY as a framework for understanding child engagement in preschool. *Front. Educ.* 3:36. doi: 10.3389/feduc.2018.00036
- Anderson, J. K., Howarth, E., Vainre, M., Jones, P., and Humphrey, A. (2017). A scoping literature review of service-level barriers for access and engagement with mental health services for children and young people. *Child Youth Serv. Rev.* 77, 164–176. doi: 10.1016/j.chidyouth.2017.04.017
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco, CA: Jossey-Bass.
- Au, W. W. (2008). Devising inequality: A Bernsteinian analysis of high-stakes testing and social reproduction in education. *Br. J. Sociol. Educ.* 29, 639–651.
- Augustine, L., Lyngegård, F., Adolfsson, M., and Granlund, M. (2021). The utility of the international classification of functioning construct as a statistical tool-operationalizing mental health as an indicator of adolescent participation. *Disabil. Rehabil.* 44, 4220–4226. doi: 10.1080/09638288.2021.1884295
- Augustine, L., Lyngegård, F., Granlund, M., and Adolfsson, M. (2018). Linking youths' mental, psychosocial, and emotional functioning to ICF-CY: Lessons learned. *Disabil. Rehabil.* 40, 2293–2299. doi: 10.1080/09638288.2017.1334238
- Beames, J. R., Johnston, L., O'Dea, B., Torok, M., Boydell, K., Christensen, H., et al. (2022). Addressing the mental health of school students: Perspectives of secondary school teachers and counselors. *Int. J. Sch. Educ. Psychol.* 10, 128–143.
- Beckman, L., and Hellström, L. (2021). Views on adolescents' mental health in Sweden—a qualitative study among different professionals working with adolescents. *Int. J. Environ. Res. Public Health* 18:10694. doi: 10.3390/ijerph182010694
- Beckman, L., Hassler, S., and Hellström, L. (2023). Children and youth's perceptions of mental health—a scoping review of qualitative studies. *BMC Psychiatry* 23:669. doi: 10.1186/s12888-023-05169-x
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open* 2, 8–14.
- Boonk, L., Gijsselaers, H. J., Ritzen, H., and Brand-Gruwel, S. (2018). A review of the relationship between parental involvement indicators and academic achievement. *Educ. Res. Rev.* 24, 10–30. doi: 10.1016/j.edurev.2018.02.001
- Bremberg, S. (2006). *Ungdomar, stress och psykisk ohälsa – Analyser och förslag till åtgärder [Young people, stress, and mental health – analyses and suggested measures]*. Stockholm: Socialdepartementet, SOU.

- Bremberg, S. (2015). Mental health problems are rising more in Swedish adolescents than in other Nordic countries and the Netherlands. *Acta Paediatr.* 104, 997–1004. doi: 10.1111/apa.13075
- Bronfenbrenner, U., and Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Soc. Dev.* 9, 115–125.
- Brown, B. B., and Larson, J. (2009). "Peer relationships in adolescence." in *Handbook of adolescent psychology*, eds R. M. Lerner and L. Steinberg (Hoboken, NJ: John Wiley & Sons, Inc).
- Cappella, E., Schwartz, K., Hill, J., Kim, H. Y., and Seidman, E. (2019). A national sample of eighth-grade students: The impact of middle grade schools on academic and psychosocial competence. *J. Early Adolesc.* 39, 167–200.
- Chu, P. S., Saucier, D. A., and Hafner, E. (2010). Meta-analysis of the relationships between social support and well-being in children and adolescents. *J. Soc. Clin. Psychol.* 29, 624–645.
- Cieza, A., Geyh, S., Chatterji, S., Kostanjsek, N., Ustun, B., and Stucki, G. (2005). ICF linking rules: An update based on lessons learned. *J. Rehabil. Med.* 37, 212–218. doi: 10.1080/16501970510040263
- Cohen, S. (2004). Social relationships and health. *Am. Psychol.* 59:676. doi: 10.1136/sextans-2018-053935
- Cohen, S., and Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychol. Bull.* 98:310. doi: 10.1037/0033-2909.98.2.310
- Corcoran, K., Crusius, J., and Mussweiler, T. (2011). "Social comparison: Motives, standards, and mechanisms," in *Theories in social psychology*, ed. D. Chadee (Hoboken, NJ: Wiley-Blackwell), 119–139.
- Crocetti, E. (2017). Identity formation in adolescence: The dynamic of forming and consolidating identity commitments. *Child Dev. Perspect.* 11, 145–150. doi: 10.1111/cdep.12226
- Davey, L. (2010). *How to talk about children's mental health: A FrameWorks MessageMemo*. Washington, DC: FrameWorks Institute.
- Ebata, A. T., and Moos, R. H. (1994). Personal, situational, and contextual correlates of coping in adolescence. *J. Res. Adolesc.* 4, 99–125. doi: 10.1177/1557988316630304
- Elo, S., and Kyngäs, H. (2008). The qualitative content analysis process. *J. Adv. Nurs.* 62, 107–115. doi: 10.1111/j.1365-2648.2007.04569.x
- Estell, D. B., and Perdue, N. H. (2013). Social support and behavioral and affective school engagement: The effects of peers, parents, and teachers. *Psychol. Sch.* 50, 325–339.
- Fattore, T., Mason, J., and Watson, E. (2009). When children are asked about their well-being: Towards a framework for guiding policy. *Child Indic. Res.* 2, 57–77. doi: 10.1186/s12884-018-1686-4
- Fayed, N., Cieza, A., and Bickenbach, J. (2012). Illustrating child-specific linking issues using the Child Health Questionnaire. *Am. J. Phys. Med. Rehabil.* 91, S189–S198. doi: 10.1097/PHM.0b013e31823d53cf
- Feeny, B. C., and Collins, N. L. (2015). A new look at social support: A theoretical perspective on thriving through relationships. *Pers. Soc. Psychol. Rev.* 19, 113–147. doi: 10.1177/1088868314544222
- Galván, A., Spatzier, A., and Juvonen, J. (2011). Perceived norms and social values to capture school culture in elementary and middle school. *J. Appl. Dev. Psychol.* 32, 346–353. doi: 10.1016/j.appdev.2011.08.005
- Gelhaar, T., Seiffge-Krenke, I., Borge, A., Cicognani, E., Cunha, M., Loncaric, D., et al. (2007). Adolescent coping with everyday stressors: A seven-nation study of youth from central, eastern, southern, and northern Europe. *Eur. J. Dev. Psychol.* 4, 129–156.
- Gustafsson, J.-E., Allodi Westling, M., Alin, Åkerman, B., Eriksson, C., Eriksson, L., et al. (2010). *School, learning and mental health: A systematic review*. Stockholm: Kungl. Vetenskapsakademien.
- Hagquist, C., Due, P., Torsheim, T., and Välimaa, R. (2019). Cross-country comparisons of trends in adolescent psychosomatic symptoms—a Rasch analysis of HBSC data from four Nordic countries. *Health Qual. Life Outcomes* 17, 1–13. doi: 10.1186/s12955-019-1097-x
- Hellström, L., and Beckman, L. (2021). Life challenges and barriers to help seeking: Adolescents' and young adults' voices of mental health. *Int. J. Environ. Res. Public Health* 18:13101. doi: 10.3390/ijerph182413101
- Hermann, V., Durbeej, N., Karlsson, A.-C., and Sarkadi, A. (2022a). Feeling mentally unwell is the "new normal". A qualitative study on adolescents' views of mental health problems and related stigma. *Child. Youth Serv. Rev.* 143:106660. doi: 10.1016/j.childyouth.2022.106660
- Hermann, V., Durbeej, N., Karlsson, A. C., and Sarkadi, A. (2022b). Feeling down one evening doesn't count as having mental health problems—Swedish adolescents' conceptual views of mental health. *J. Adv. Nurs.* 79, 2886–2899. doi: 10.1111/jan.15496
- Hoferichter, F., Hirvonen, R., and Kiuru, N. (2021). The development of school well-being in secondary school: High academic buoyancy and supportive class-and school climate as buffers. *Learn. Instruct.* 71:101377.
- Högberg, B., Lindgren, J., Johansson, K., Strandh, M., and Petersen, S. (2021). Consequences of school grading systems on adolescent health: Evidence from a Swedish school reform. *J. Educ. Policy* 36, 84–106. doi: 10.1080/02680939.2019.1686540
- Holfve-Sabel, M.-A. (2014). Learning, interaction and relationships as components of student well-being: Differences between classes from student and teacher perspective. *Soc. Indic. Res.* 119, 1535–1555. doi: 10.1007/s11205-013-0557-7
- Hsieh, H.-F., and Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qual. Health Res.* 15, 1277–1288. doi: 10.1177/1049732305276687
- Jorm, A. F. (2012). Mental health literacy: Empowering the community to take action for better mental health. *Am. Psychol.* 67:231. doi: 10.1037/a0025957
- Juvonen, J. K. (2016). "School based peer relationships and achievement motivation," in *Handbook of motivation at school*, eds K. R. Wentzel and D. B. Miele (Milton Park: Routledge).
- Kaplan, D. S., Liu, R. X., and Kaplan, H. B. (2005). School related stress in early adolescence and academic performance three years later: The conditional influence of self expectations. *Soc. Psychol. Educ.* 8, 3–17.
- Karasek, R. A. Jr. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Admin. Sci. Q.* 24, 285–308.
- Kellett, M. (2005). Children as active researchers: a new research paradigm for the 21st century? Available online at: www.ncrm.ac.uk/publications (accessed 16 May, 2024).
- Kendall-Taylor, N. (2012). Conflicting models of mind: Mapping the gaps between expert and public understandings of child mental health. *Sci. Commun.* 34, 695–726.
- Khan, S., Jung, F., Kirubarajan, A., Karim, K., Scheer, A., and Simpson, J. (2021). A systematic review of interventions to improve humanism in surgical practice. *J. Surg. Educ.* 78, 548–560. doi: 10.1016/j.jsurg.2020.07.032
- Klang Ibragimova, N., Pless, M., Adolfsson, M., Granlund, M., and Björck-Åkesson, E. (2011). Using content analysis to link texts on assessment and intervention to the international classification of functioning, disability and health-version for children and youth (ICF-CY). *J. Rehabil. Med.* 43, 728–733. doi: 10.2340/16501977-0831
- Kulakow, S., Raufelder, D., and Hoferichter, F. (2021). School-related pressure and parental support as predictors of change in student stress levels from early to middle adolescence. *J. Adolesc.* 87, 38–51. doi: 10.1016/j.adolescence.2020.12.008
- Lakey, B., and Orehek, E. (2011). Relational regulation theory: A new approach to explain the link between perceived social support and mental health. *Psychol. Rev.* 118:482. doi: 10.1037/a0023477
- Little, L. M., and Schwefel, L.-L. (2024). Flourishing and functional difficulties among autistic youth: A confirmatory factor analysis. *Children* 11:325. doi: 10.3390/children11030325
- Madden, R. H., and Bundy, A. (2019). The ICF has made a difference to functioning and disability measurement and statistics. *Disabil. Rehabil.* 41, 1450–1462. doi: 10.1080/09638288.2018.1431812
- Malecki, C. K., and Demaray, M. K. (2003). What type of support do they need? Investigating student adjustment as related to emotional, informational, appraisal, and instrumental support. *Sch. Psychol. Q.* 18:231.
- Mc Gee, S. L., Höltge, J., Maercker, A., and Thoma, M. V. (2018). Sense of coherence and stress-related resilience: Investigating the mediating and moderating mechanisms in the development of resilience following stress or adversity. *Front. Psychiatry* 9:378. doi: 10.3389/fpsy.2018.00378
- Modin, B., Östberg, V., Toivanen, S., and Sundell, K. (2011). Psychosocial working conditions, school sense of coherence and subjective health complaints. A multilevel analysis of ninth grade pupils in the Stockholm area. *J. Adolesc.* 34, 129–139. doi: 10.1016/j.adolescence.2010.01.004
- Noon, E. J., Schuck, L. A., Guţu, S. M., Şahin, B., Vujović, B., and Aydın, Z. (2021). To compare, or not to compare? Age moderates the relationship between social comparisons on instagram and identity processes during adolescence and emerging adulthood. *J. Adolesc.* 93, 134–145. doi: 10.1016/j.adolescence.2021.10.008
- OECD (2014). *Making mental health count: The social and economic costs of neglecting mental health care*. Berlin: OECD Publishing.
- OECD (2017). *PISA 2015 results (Volume III): Students' well-being*. O. P. PISA. Berlin: OECD Publishing.
- O'Reilly, M., Dogra, N., Whiteman, N., Hughes, J., Eruyar, S., and Reilly, P. (2018). Is social media bad for mental health and wellbeing? Exploring the perspectives of adolescents. *Clin. Child Psychol. Psychiatry* 23, 601–613. doi: 10.1177/1359104518775154
- Peterson-Sweeney, K. (2005). The use of focus groups in pediatric and adolescent research. *J. Pediatr. Health Care* 19, 104–110. doi: 10.1016/j.pedhc.2004.08.006
- Politi, D., and Beck, C. (2021). *essentials of nursing research: Appraising evidence for nursing practice*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Potrebny, T., Wium, N., and Lundegård, M. M.-I. (2017). Temporal trends in adolescents' self-reported psychosomatic health complaints from 1980-2016: A systematic review and meta-analysis. *PLoS One* 12:e0188374. doi: 10.1371/journal.pone.0188374

- Public Health Agency of Sweden (2018). *Skolbarns hälsovanor i Sverige 2017/18 [The public health agency. health behaviour in school-aged children, Swedish report 2017/18]*. Solna: Public Health Agency of Sweden.
- Public Health Agency of Sweden (2022). *Skolbarns hälsovanor i Sverige [Health behaviour in school-aged children, Swedish report 2021/22]*. Solna: Public Health Agency of Sweden.
- Ramritu, P., Courtney, M., Stanley, T., and Finlayson, K. (2002). Experiences of the generalist nurse caring for adolescents with mental health problems. *J. Child Health Care* 6, 229–244.
- Romeo, R. D. (2013). The teenage brain: The stress response and the adolescent brain. *Curr. Dir. Psychol. Sci.* 22, 140–145.
- Rudolph, K. D. (2002). Gender differences in emotional responses to interpersonal stress during adolescence. *J. Adolesc. Health* 30, 3–13.
- Saadat, S. H., Shahyad, S., Pakdaman, S., and Shokri, O. (2017). Prediction of social comparison based on perfectionism, self-concept clarity, and self-esteem. *Iran. Red Cresc. Med. J.* 19:8. doi: 10.5812/ircmj.43648
- Samdahl, O. (1998). *The school environment as a risk or resource for students' health-related behaviors and subjective well-being university of Bergen*. Bergen: University of Bergen.
- Sartorius, N. (2006). The meanings of health and its promotion. *Croat. Med. J.* 47, 662–664.
- Stewart, T., and Suldo, S. (2011). Relationships between social support sources and early adolescents' mental health: The moderating effect of student achievement level. *Psychol. Sch.* 48, 1016–1033.
- Suldo, S. M., and Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. *Sch. Psychol. Rev.* 37, 52–68.
- Tetzner, J., Becker, M., and Maaz, K. (2017). Development in multiple areas of life in adolescence: Interrelations between academic achievement, perceived peer acceptance, and self-esteem. *Int. J. Behav. Dev.* 41, 704–713.
- Thomas, L. (2017). Nursing children and young people: What mental health training is required? *Br. J. Nurs.* 26, 234–237.
- Torsheim, T., and Wold, B. (2001). School-related stress, school support, and somatic complaints: A general population study. *J. Adolesc. Res.* 16, 293–303.
- Wang, M. T., and Sheikh-Khalil, S. (2014). Does parental involvement matter for student achievement and mental health in high school? *Child Dev.* 85, 610–625. doi: 10.1111/cdev.12153
- WHO (2001). *International classification of functioning, disability and health*. Geneva: World Health Organization.
- WHO (2007). *International classification of functioning, disability and health for children and youth (ICF-CY)*. Geneva: World Health Organization.
- WMA (2018). *Declaration of Helsinki*. Ferney-Voltaire: World Medical Association.
- Yoo, C. (2019). Stress coping and mental health among adolescents: Applying a multi-dimensional stress coping model. *Child. Youth Serv. Rev.* 99, 43–53. doi: 10.1016/j.childyouth.2019.01.030