

# Factors that can affect students' wellbeing – A quantitative retrospective study

**T**he World Health Organization's (WHO) definition of health is 'a state of complete physical, mental and social wellbeing, not just the absence of disease and disability.' 'Health is a human right and does not just mean the absence of disease' (WHO, 1946). Health often affects how people feel about life. A good life-rhythm helps people experience meaning and context. The meanings of health are intertwined with one another to create the overall experience of health. The feeling of vitality and meaningfulness are of great value for the experience of health (Dahlberg and Segesten, 2010).

The WHO (2007) defines mental health as the human state of mental wellbeing. Mental health is affected by each person realising their own possibilities, coping with normal stresses in life, being able to work productively and being able to contribute to the society in which the person lives. The WHO's (2019) definition of mental health indicates that mental health is not the same as the absence of mental illness, and people can experience their existence as being meaningful despite mental stress. According to Granlund et al (2021) the relationship between health and mental health is an integrated part of health and more than the absence of mental disorders or disabilities. The school health service organisation in Swedish schools includes professionals such as school physicians and nurses, psychologists, social workers, guidance counsellors and special education teachers. The aim of the school health service is to provide medical, psychological, psychosocial and special education services to support environments that promote students' learning, development and health (National Board of Health and Welfare and Swedish National Agency for Education, 2016).

From the school nurse's salutogenic perspective, to promote health and prevention, the student's wellbeing can be strengthened, and the risk of mental illness can be reduced (Swedish National Agency for Education, 2020). In Sweden, school nurses identify health risks using health surveys and scheduled health dialogues with students throughout the school years. The health dialogues are mainly focused on health promotion and reference both lifestyle habits and psychosocial health

## Abstract

In Sweden, the role of the school nurse is to promote students' health and wellbeing and also to prevent illness. Wellbeing can involve creating good relationships but also includes feelings of participation and a meaningful existence. During a health dialogue the school nurse can discover students who experience mental illness, and factors that can affect students' wellbeing. The purpose of the study was to investigate factors that may affect students' wellbeing. A quantitative method with a retrospective longitudinal approach was applied. The study was conducted using collected data based on health questions posed to students in the first year of high school's health visit during the 2013/14–2018/19 school years. The results show differences between girls' and boys' wellbeing based on their answers to health issues. Factors that may affect students' wellbeing can pose a risk of mental illness. Mental illness is increasing in students and the increased demands at school may be the cause.

## Key words

School nurse; students; stress; sleep; wellbeing

**Dr Marie Wilhsson**, associate professor, Institution of health sciences, University of Skövde, Sweden

**Linda Johansson**, school nurse in Skövde municipality, Sweden

**Ann-Sofie Bäckström**, school nurse in Nybro municipality, Sweden

**Email:** marie.wilhsson@his.se

issues (National Board of Health and Welfare and Swedish National Agency for Education, 2016). Golsäter et al (2010) highlighted the importance of being prepared for the health dialogue by letting the students answer the health questions before they meet the school nurse to have the health dialogue. This gives them an opportunity to reflect on what they want to bring up and discuss with the school nurse. The health issues in the health conversation can be seen as a tool to increase awareness and identify symptoms of mental illness. Therefore,

school nurses have an important role in meeting students' health needs (Law et al, 2017). Earlier research points out the importance of having a trusting relationship with the school nurse in a way that enables students to open up in conversations (Clausson et al, 2008; Golsäter et al, 2010; Golsäter et al, 2012). A lack of competence can lead to a lack of trust in the school nurse (Prymachuk et al, 2011).

The school's goal is to contribute with a positive environment for both boys and girls in school and maintain physical, mental and social wellbeing. This may include creating good relationships, wellbeing and security, as well as a feeling of participation and meaning in their life (Swedish National Agency for Education, 2020). A survey by the Swedish Public Health Agency shows that the majority of 15-year-olds have a high level of wellbeing, and boys report a higher level of wellbeing than girls (Public Health Agency of Sweden, 2018a). Despite this, both boys and girls in Sweden from the age of 15 report symptoms of mental illness (Public Health Agency of Sweden, 2023).

Some studies indicate that school-related stress is linked to performance and causes symptoms in the form of sleep disorders, head and stomach pain, depression and anxiety (Wilhsson et al, 2017a; Östberg et al, 2018). Stress is a subjective experience and is characterised by physical, mental and emotional strain or tension. It can also be a condition or a feeling that is experienced when an individual perceives demands as exceeding the personal and social resources that the individual can mobilise (Lazarus and Folkman, 1994).

Good sleep is crucial for the ability to manage stress and reduce the risk of anxiety and depression (Garmy, 2011; National Sleep Foundation, 2020a). Sleep can be affected by screen use, with the blue light from tablets, computers, TVs and mobile phones affecting and displacing melatonin levels in the body, which can lead to a later bedtime (National Sleep Foundation, 2020b). To enable good health, young people need routine and rhythm, which is promoted by young people making conscious choices about their sleep. Turning off screens and letting yourself unwind before bedtime can be of great importance to health. Over the past hundred years, adolescents' sleep has decreased by about one hour per night. The amount of sleep needed between the ages of 13 and 18 is 9 hours per night, but studies show that young people sleep 7 to 8 hours per night (Garmy, 2011). Less than seven hours of sleep was associated with higher odds of all psychosomatic problems (Norell-Clark and Hagquist, 2017). Adolescents' sleep can be seen as a protective factor against stress and gives the body the opportunity for recovery (Garmy, 2011). During the health dialogues, the school nurse can discover factors that can affect students' wellbeing and mental health.

## Aim

The purpose of this study was to investigate factors that affect students' wellbeing.

## Methods

### Design

A quantitative method with a retrospective longitudinal approach was applied. The study was conducted using collected data based on health questions posed to students during their health visit in the first year of high school. Data were collected during the academic years of 2013/14–2018/19. The study followed the ethical regulations and guidelines delineated in Swedish law (Svensk författningssamling [SFS], 2003:460) and the code of ethics of the Declaration of Helsinki (World Medical Association, 2013). Approval from an Ethics Committee was not required for this type of study as it could not be traced to individual participants, did not process sensitive personal data according to the General Data Protection Regulation (GDPR) (The Swedish Authority for Privacy Protection, 2016), and did not affect the participants physically or mentally (The Swedish Ethical Review Authority, 2021).

### Sample and setting

Among other things, student health records are used in Sweden to document health dialogues. School nurses in Sweden have documentation obligations and must document all health issues in the student health records. Inclusion criteria for the present study were municipal upper secondary schools. Private schools were excluded because they may use different systems of health records and health issues could be formulated in different ways. Different health issues can be used for statistical studies at the group level. The sample consisted of two high schools in a mid-sized city in southern Sweden. Upper secondary school in Sweden is a free and voluntary school form, which adolescents can choose to attend after completing compulsory school. In this study the schools have both practical and theoretical orientations which means that the student can choose practical studies that alternate with theoretical studies or only theoretical studies. Students' age range was 15–17 years old. The number of girls and boys in year 1 of upper secondary school varied between 623 and 784 during the academic years 2013/14–2018/19.

### Measures

Data were collected from student health records using Västernorrland's model to formulate health issues (Västernorrlandsmodellen, 2019). Data selected for further analysis were 5 of 38 health questions from the municipality's health record system, PMO. PMO is a documentation system where different professions can easily and securely document a student's contact opportunities and efforts that are carried out together with the student over time (PMO, 2020). First, the students answer the health questions and then they meet the school nurse and discuss their answers, which are then put into the health journal system by the school nurse. Collected data material with the five selected questions was taken from the academic years

2013/14–2018/19. Questions such as: Have you felt sad/depressed? How many hours do you sleep/night? Do you feel stressed at school? and Do you enjoy school? The answer options were based on a 3- or 4-point scale. Questions are updated and reformulated over time, and therefore not all questions from the health questions could be used. Data collected from student health records were analysed at the group level. The data collected corresponded to the purpose of the study and could be traced back 6 years.

### Data analysis

Descriptive analysis using IBM SPSS Statistics software, Version 25 (2017) was performed and results were presented as frequency, mean and range. The significance level is a hypothesis test, and the p-value <0.05 has been considered significant (Polit and Beck, 2017). The

level of statistical significance was set at 0.05. Student's T-test was used to see differences between the mean values of two different groups. Relationship analyses in the following study were performed with the support of Spearman's rank correlation test on the variables of health issues. Significant correlations were assessed using Cohen's guidelines, which means that the correlation coefficient (Rho) has different degrees of correlation. Rho=±0.1 corresponds to a weak relationship, Rho=±0.3 corresponds to a medium-strength relationship and Rho=±0.5 corresponds to a strong relationship. The health questions in the study have answer alternatives according to a Likert scale consisting of different scale steps (Polit and Beck, 2017), which in this study involves summing up points on a set of factors. The respondent estimates their response on a scale from completely agree to completely disagree.

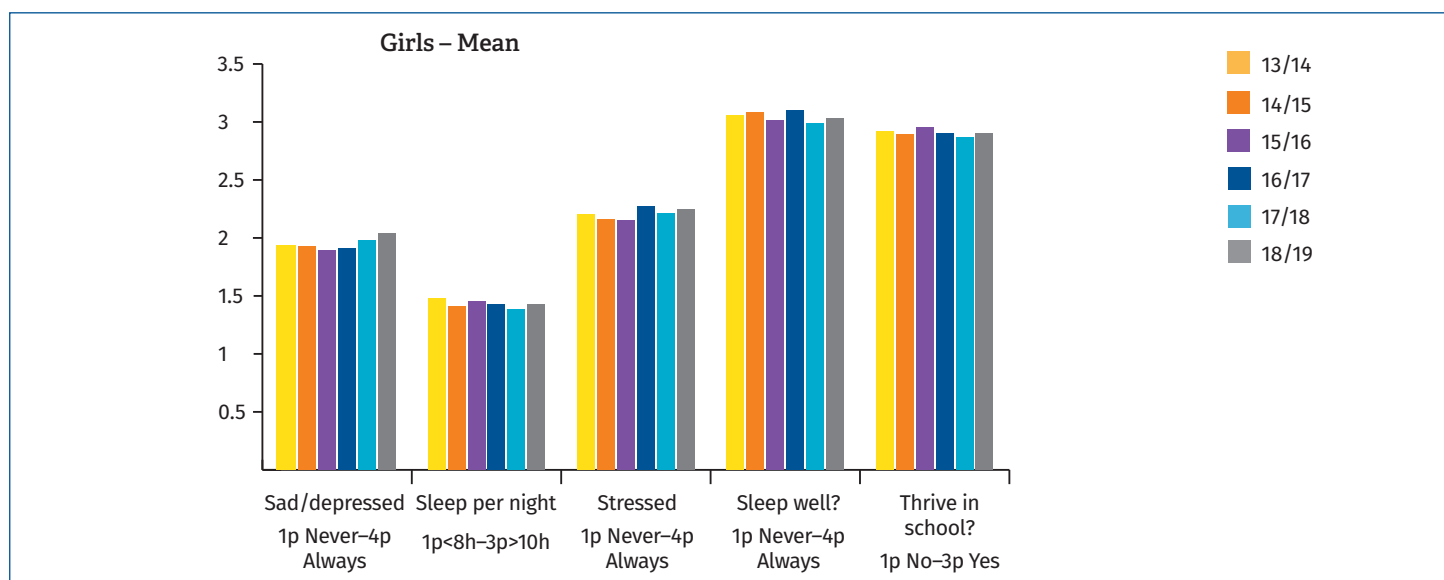


Figure 1. Girls' average value of the answers to the health questions based on a Likert scale

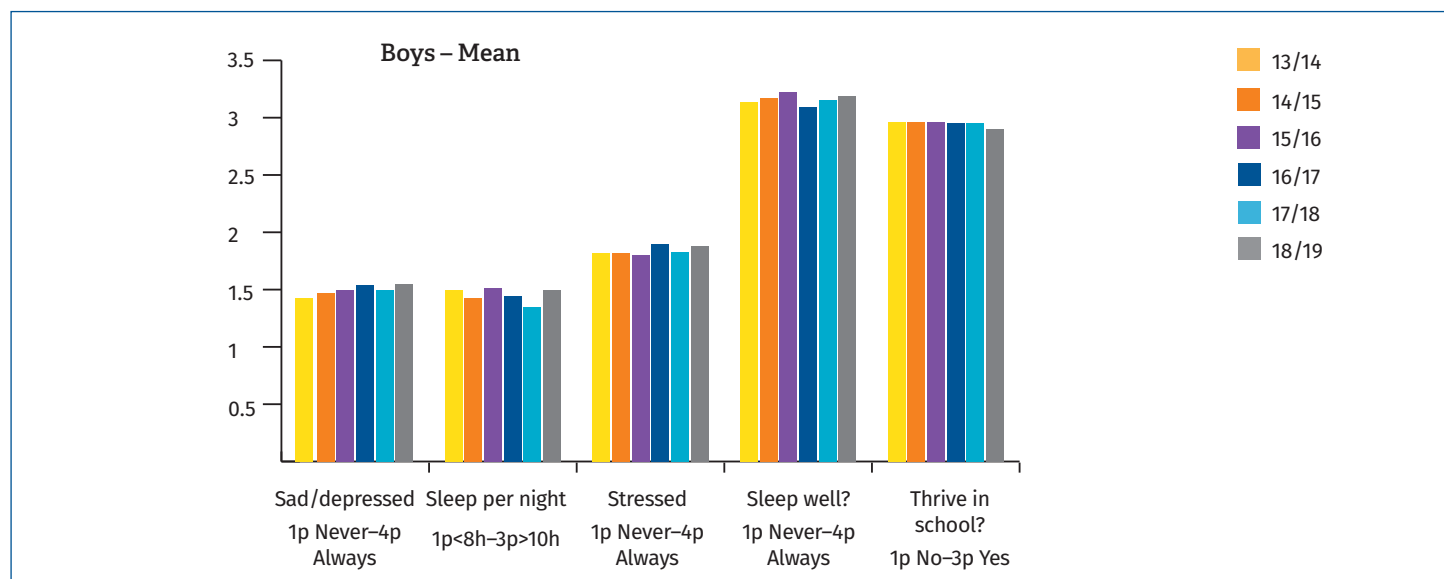


Figure 2. Boys' average value of the answers to the health questions based on a Likert scale

**Table 1. Difference between girls and boys on the question of whether they feel sad / depressed for each year.**

**Question 1. Sad/depressed**

(1p=Never, 2p=Sometimes, 3p=Often,4p=Always).

Year	Total (N)	Girls* Mean (n =)	Boys ** Mean (n =)	p-value
13/14	624	1.94 (330)	1.43 (294)	<0.001 ***
14/15	653	1.93 (348)	1.47 (305)	<0.001 ***
15/16	673	1.89 (358)	1.50 (315)	<0.001 ***
16/17	790	1.91 (389)	1.54 (401)	<0.001 ***
17/18	773	1.98 (391)	1.50 (382)	<0.001 ***
18/19	731	2.04 (355)	1.55 (376)	<0.001 ***

(SD) Girls\*0.054 Boys\*\* 0.044

**Table 2. Difference between girls and boys on the question of how many hours they sleep per night for each year**

**Question 2. Sleep / night**

(1p=< 8h per night, 2p=8h–10h per night, 3p > 10h per night)

Year	Total (N)	Girls* Mean (n=)	Boys ** Mean (n=)	p-value
13/14	623	1.48 (329)	1.50 (294)	<0.001 ***
14/15	652	1.41 (347)	1.43 (305)	<0.001 ***
15/16	673	1.45 (358)	1.51 (315)	<0.001 ***
16/17	791	1.43 (389)	1.44 (402)	<0.005 ****
17/18	773	1.38 (381)	1.35 (382)	<0.001 ***
18/19	732	1.43 (355)	1.50 (377)	<0.001 ***

(SD) Girls\* 0.034 Boys\*\* 0.062.

## Results

The compilation of the results of the health questions showed that girls consistently rate their answers to the health questions lower than boys do, indicating that girls struggle with mental health to a greater extent. *Figures 1 and 2* show the answers for girls and boys, respectively, if

**Table 3. Difference between girls and boys on the question of whether they feel stressed for each year.**

**Question 3. Stressed at school**

(1p=Never, 2p=Sometimes, 3p=Often, 4p=Always)

Year	Total (N)	Girls* Mean (n=)	Boys ** Mean (n=)	p-value
13/14	624	2.20 (330)	1.82 (294)	<0.001 ***
14/15	653	2.16 (348)	1.82 (305)	<0.001 ***
15/16	673	2.15 (358)	1.80 (315)	<0.001 ***
16/17	792	2.27 (390)	1.90 (402)	<0.001 ***
17/18	773	2.21 (391)	1.83 (382)	<0.001 ***
18/19	730	2.25 (354)	1.88 (376)	<0.001 ***

(SD) Girls\* 0.048 Boys\*\*0.039

they feel sad/depressed, how many hours they sleep per night, if they feel stressed at school, if they sleep well and if they feel comfortable at school.

*Table 1* shows that girls answer more frequently that they feel sad/depressed than boys do. It can be seen in the table that the number of boys who often feel sad/depressed has slowly increased throughout the period of data collection, while girls have had a more even level until the academic years 2017/18–2018/19. In the academic years 2017/18–2018/19, an increase in girls who answered that they often felt sad/depressed can be seen. Until the academic year 2016/17, there was an increase in girls who answered that they were never sad/depressed (*Table 1*).

Girls' sleep trend shows that girls have more even development than boys. The table shows that most girls sleep under 8 hours per night. Boys' sleep trends are more varied than girls, whereas girls' night sleep decreases over time. During the academic year 2017/18, boys slept worse than the other years. Which shows that boys often sleep fewer than 8 hours per night (*Table 2*).

The majority of girls and boys answered that they are sometimes stressed at school. Girls are more stressed than boys according to the table. During the academic year 2016/17, the table shows that boys are more stressed than other years for boys. In the same year 2016/17 the table shows that girls are also more stressed at school (*Table 3*).

Most students, among both girls and boys, stated that they usually slept well. *Table 4* shows that girls sleep slightly worse than boys do over the years. In 2016/17,

boys slept worse than girls, which differs from other years (Table 4).

The majority of both girls and boys seem to thrive in school. The proportion of boys who thrive in school has had a positive steady trend since the 2013/14 school year, while girls' wellbeing in school has seen greater variation (Table 5).

### Correlation analyses

In the present study, the results show that there are strong correlations between several variables for both girls and boys. The result for girls of always being sad/depressed and sometimes enjoying school shows a strong correlation that is statistically significant ( $Rho(6)=0.971, p=0.001$ ). The results for boys of sometimes being sad/depressed and sometimes enjoying school shows a strong connection, and it is statistically significant ( $Rho(6)=0.928, p=0.008$ ). The results show a positive strong correlation for boys sometimes being stressed at school and often being sad/depressed ( $Rho(6)=0.812, p=0.050$ ). Furthermore, for girls it shows a strong correlation with sleeping fewer than 8 hours per night and always being sad/depressed, which is also statistically significant ( $Rho(6)=0.812, p=0.050$ ). Another strong positive significant association for boys is seen between sleeping fewer than 8 hours per night and sometimes being stressed at school ( $Rho(6)=0.886, p=0.019$ ). There is a stronger significant relationship is to sleep under 8 hours per night and never sleeping well for boys ( $Rho(6)=0.986, p=0.000$ ). The results for girls show a strong connection between often being sad/depressed and never having good quality of sleep, which is also statistically significant ( $Rho(6)=0.812, p=0.050$ ).

A strong significant association is also seen for boys with sometimes being sad/depressed and sometimes having good quality of sleep ( $Rho(6)=0.943, p=0.005$ ). A positively significant strong association for girls was also shown between sometimes enjoying school and sleeping fewer than 8 hours per night ( $Rho(6)=0.899, p=0.015$ ). The results for boys show that never sleeping well and sometimes being stressed at school has a significant positive relationship ( $Rho(6)=0.841, p=0.036$ ). Furthermore, a significant association is shown for girls between sometimes being stressed at school and not enjoying school ( $Rho(6)=0.870, p=0.024$ ). Between always being stressed at school and sometimes enjoying school for boys, a strong connection is shown and is significant ( $Rho(6)=0.939, p=0.005$ ). For boys there is also a strong significant relationship between sometimes enjoying school and sometimes being stressed at school ( $Rho(6)=0.812, p=0.050$ ). A significant association for girls between often feeling stressed at school and never having good quality of sleep could be discerned ( $Rho(6)=0.841, p=0.036$ ). Furthermore for boys, it appears that sometimes being stressed at school and sometimes being sad/depressed shows a strong, statistically significant relationship ( $Rho(6)=0.886, p=0.019$ ). The results for boys also show that sometimes being sad/

**Table 4. Difference between girls and boys on the question of whether they sleep well for each year.**

**Question 4. Sleep quality**  
(1p=Never, 2p=Sometimes, 3p=Often, 4p=Always)

Year	Total (N)	Girls * Mean (n=)	Boys ** Mean (n=)	p-value
13/14	624	3.06 (330)	3.14 (294)	<0.001 ***
14/15	653	3.08 (348)	3.17 (305)	<0.001 ***
15/16	672	3.01 (357)	3.22 (315)	<0.001 ***
16/17	791	3.10 (390)	3.09 (401)	0.001 ****
17/18	773	2.99 (391)	3.15 (382)	<0.001 ***
18/19	732	3.03 (354)	3.19 (378)	<0.001 ***

(SD) Girls\* 0.042 Boys\*\* 0.045

**Table 5. Difference between girls and boys on the question of whether they thrive in school for each year.**

**Question 5. Enjoying school**  
(1p=No, 2p=Sometimes, 3p=Yes)

Year	Total (N)	Girls* Mean (n=)	Boys ** Mean (n=)	p-value
13/14	624	2.92 (330)	2.96 (294)	<0.001 ***
14/15	653	2.89 (348)	2.96 (305)	<0.001 ***
15/16	673	2.95 (358)	2.96 (315)	<0.001 ***
16/17	793	2.90 (391)	2.95 (402)	<0.001 ***
17/18	673	2.87 (391)	2.95 (382)	<0.001 ***
18/19	731	2.90 (355)	2.96 (376)	<0.001 ***

(SD) Girls\* 0.027 Boys\*\* 0.005

depressed and sometimes enjoying school have a strong connection that is statistically significant ( $Rho(6)=0.928, p=0.008$ ). There is a significant association with enjoying school sometimes and always being stressed for boys ( $Rho(6)=0.939, p=0.005$ ).

### Discussion

In this study, the results show that the majority of

students thrive well in school over time. This is consistent with the Public Health Agency's of Sweden Surveys (2018a; 2018b) which shows that wellbeing at school for 15-year-old students is good, while they continue to report symptoms of mental illness (Public Health Agency of Sweden, 2023). The results of the present study show that there is a strong connection for girls between always being sad/depressed and sometimes enjoying school, and it is significant.

In the Swedish Public Health Agency's surveys, it shows that girls state that they experience lesser wellbeing to a greater extent than boys (Swedish Public Health Agency, 2019). This is in line with the results from the study, which indicates that girls feel sadder/more depressed than boys. However, Rosvall and Nilsson (2016a) showed that boys' mental illness can be more difficult to detect and that it is often underreported. Radez et al (2022) highlight gender expectations of society such as being a boy and that this can influence seeking help for mental illness. Statistics show that there is a greater incidence of suicide among boys aged 15–24 than girls of the same age (Junuzovic et al, 2022). The health dialogue gives the school nurse the opportunity to promote students' wellbeing and prevent mental illness (Kostenius, 2021; National Board of Health and Welfare and National Agency for Education, 2016).

The results of the present study show that the majority of both girls and boys sleep under 8 hours per night and for girls there were a strong correlation of being sad/depressed. The results also indicate that the majority of girls answered that they were sometimes or often stressed at school and this correlated with feelings of being sad/depressed. This can be explained by previous research showing that sleeping fewer than 8 hours is associated with poorer self-reported health (Garmy et al, 2019). The connection between sleep problems and depression in young people is noticed and can be attributed to the fact that sleep problems can lead to depression, just as depression can lead to sleep problems (Moore and Meltzer, 2008). The school nurse's health promotion and preventive efforts are therefore important, and the school nurse can identify these students through the health dialogue (National Board of Health and Welfare and National Agency for Education, 2016). Hedin et al (2020) described that young people strive for a feeling of wellbeing linked to a good night's sleep. After a strenuous day at school, young students described that a strategy to relax was to sleep for a while, which negatively affected the night's sleep, and thus wellbeing. It can therefore be important to create good sleep routines in an early stage of development, and school nurses can contribute to increased awareness by supporting students and parents (Willgerodt and Kieckhefer, 2013).

The results of the present study show that there is a strong association for boys with often being stressed and sometimes sleeping well, which is also significant. The result shows that there is a strong connection between often feeling stressed and sleeping fewer than 8 hours

per night, but it is not significant. Furthermore, the results of this study show that being stressed at school always gets a higher score among girls than among boys, which is confirmed by surveys of perceived school stress showing that it has increased mainly among girls (Swedish National Agency for Education, 2018; Public Health Agency of Sweden, 2018b; Public Health Agency of Sweden, 2023). Surveys among young people show that the hours of the day were not enough because the pressure to succeed in school was high, especially for girls (Wilhsson et al, 2017b). The Swedish Public Health Agency's surveys show, as previously mentioned, that girls estimate school stress as being higher now than a few years ago. The surveys also show that boys' school stress has increased by about 7% in recent years (Public Health Agency of Sweden, 2018b). This is in line with the results of the present study, which show that the last 3 years have shown an increasing trend of boys feeling stressed at school. The school nurse can help students find strategies for dealing with stress (Golsäter et al, 2010).

The results of the present study show that there is no association for boys between always feeling sad/depressed and sometimes thriving in school. A comparison with girls' results of the same variables shows that it is markedly different. In girls, these variables have a strong association that is statistically significant. This may be because boys and girls express themselves in different ways, which could result in different responses (Peate, 2011).

In a study done by Wilhsson et al (2017b), girls felt pressured to succeed in school and get good grades, while many boys in the study believed that the pressure was mainly about maintaining an athletic body and succeeding in sports. This is also confirmed in a study by Randell et al (2016), which shows that boys' norm is about being strong when it comes to feelings of not showing weakness or suffering from mental illness. Earlier studies show that girls often visited the school nurse for psychosomatic disorders and social problems, while boys sought the school nurse for sports injuries and wounds (Ellertsson et al, 2017). The pressure to achieve good grades manifested in psychosomatic disorders, where girls often blamed their failures on themselves, while boys blamed defeat on circumstances (Wilhsson et al, 2017b). School nurses strive to make girls aware of their own health and situation by toning down today's norms and ideals that can negatively affect girls' wellbeing (Larsson et al, 2014). The school nurse's important task is therefore to draw attention to factors that differ between genders with regard to how mental illness can manifest itself (Rosvall and Nilsson, 2016).

### Limitations

The internal dropout rate was low, between 1–16 students per academic year, and is therefore not considered to have affected the result in its entirety. The internal lack of response may be due to individual students not

stating any answer alternative or that they did not want to answer the question during the health interview. According to Västernorrland's model (2019), this should not be possible, as the school nurse must still register the answer when the student does not know. Individuals can still 'disappear' in the dropout analysis for various reasons (Swedish Research Council, 2017). No free text was analysed because no free text was included in the collected data that was extracted at the group level. This is to protect individual confidentiality (The Swedish Ethical Review, No date). The instrument for student health records has been used for a long time to investigate and get an idea of students' wellbeing (Västernorrlandsmodellen, 2019). However, it is not possible to ensure that students answer the health questions truthfully.

### Implications for school nurses

Results from the current study provide new information relevant to school nursing practice about factors that can affect students' wellbeing and are something school nurses should be aware of when conducting the health dialogue. Bringing the results from the health questionnaires into the health dialogue could help involve the student in their health process. Another important finding from the study is the need to systematically identify girls' and boys' sleep habits and experiences of stress and sadness as a way of preventing mental illness and promoting wellbeing in both the short and long term.

### Conclusions

The results show that there are several factors that can affect students' wellbeing. Adolescents sleep on average about an hour less per night than they previously have. Students experience a higher degree of school stress, which has a negative impact on health and wellbeing. The result contributes to increased knowledge about differences between girls and boys. These differences may be due to girls and boys expressing themselves in different ways. The research indicates that mental illness is increasing among young people, which leads to major challenges for the school nurse. In connection with the health dialogue, the school nurse can identify students who may suffer from mental illness. The school nurse needs to have the skills to detect problems and guide students toward better wellbeing. The school nurse's primary task is to work on health promotion and prevention, but accessibility can be put to the test when mental illness among students increases. The school nurse can contribute to security and wellbeing by being available. School settings and the education sector may need to review why students experience more stress at school now than before. **CHHE**

*Conflict of interest:* None declared

*Funding:* Financial support for the manuscript preparation was provided by University of Skövde, Institution for Health Sciences research milieu DHEAR and research

group FamCeH.

*Acknowledgements:* The authors would like to thank the adolescents who participated in this study.

- Clausson EK, Köhler L, Berg A. Schoolchildren's health as judged by Swedish school nurses -- a national survey. *Scand J Public Health*. 2008;36(7):690-697. doi:10.1177/1403494808090671
- Dahlberg K, Segesten K. Hälsa och vårdande i teori och praxis. [Health and caring in theory and praxis]. Stockholm: Natur & Kultur; 2010
- Ellertsson AS, Garmy P, Clausson EK. Health Among Schoolchildren From the School Nurse's Perspective. *J Sch Nurs*. 2017;33(5):337-343. doi:10.1177/1059840516676876
- Garmy P. Sömn, TV och datorvanor hos skolbarn. *Nord J Nurs Res*. 2011 Sep;31(3):45-47.
- Garmy P, Idecrans T, Hertz M, Sollerhed A-C, Hagell P. Is sleep duration associated with self-reported overall health, screen time, and nighttime among adolescents? *J Int Med Res*. 2019. doi:10.1177/0300060519892399
- Golsäter M, Lingfors H, Sidenvall B, Enskär K. Health dialogues between pupils and school nurses: A description of the verbal interaction. *Patient Educ Couns*. 2012 Nov;89(2):260-266. <http://doi.org/10.1016/j.pec.2012.07.012>.
- Golsäter M, Sidenvall B, Lingfors H, Enskär K. Pupils' perspectives on preventive health dialogues. *British Journal of School Nursing*. 2010 Feb;5(1):26-33.
- Granlund M, Imms C, King G, Andersson AK, Augustine L, Brooks R, Danielsson H, Gothilander J, Ivarsson M, Lundqvist LO, et al. Definitions and Operationalization of Mental Health Problems, Wellbeing and Participation Constructs in Children with NDD: distinctions and Clarifications. *Int J Environ Res Public Health*. 2021 Feb 09;18(4):1656.
- Hedin G, Norell-Clarke A, Hagell P, Tønnesen H, Westergren A, Garmy P. Facilitators and barriers for a good night's sleep among adolescents. *Front Neurosci*. 2020 Feb 7;14:92.
- IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.
- Junuzovic, M., Lind, K. M. T., & Jakobsson, U. (2022). Child suicides in Sweden, 2000–2018. *European journal of pediatrics*, 181(2), 599-607.
- Kostenius C. School nurses' experiences with health dialogues: A Swedish case. *Journal of School Nursing* 2021;39(5): <https://doi.org/10598405211022597>
- Larsson M, Björk M, Ekebergh M. Striving to make a positive difference: School nurses' experiences of promoting the health and wellbeing of adolescent girls. *Journal of School Nursing*. 2014;30(5):358-365. <https://doi.org/10.1177/1059840513505223>
- Law WC, McClanahan R, Weismuller PC. Depression Screening in the School Setting: Identification of the Depressed Adolescent. *NASN Sch Nurse*. 2017;32(6):364-370. doi:10.1177/1942602X17726095
- Lazarus RS, Folkman S. *Stress, Appraisal, and Coping*. 1984. New York: Springer Delite
- Moore M, Meltzer LJ. The sleepy adolescent: causes and consequences of sleepiness in teens. *Paediatr Respir Rev*. 2008 Jun;9(2):114-121, quiz 120-121.
- National Sleep Foundation. How to help a child with school anxiety sleep well. 2020a. <https://www.sleepfoundation.org/articles/how-help-child-school-anxiety-sleep-well>
- National Sleep Foundation. How blue light affects kids and sleep. 2020b. <https://www.sleepfoundation.org/articles/how-blue-light-affects-kids-sleep>
- Norell-Clarke A, Hagquist C. Changes in sleep habits between 1985 and 2013 among children and adolescents in Sweden. *Scand J Public Health*. 2017;45(8):869-877. doi:10.1177/1403494817732269
- Östberg V, Plenty S, Låftman S, Modin B, Lindfors P. School demands and coping resources—Associations with multiple measures of stress in mid-adolescent girls and boys. *Int J Environ Res Public Health*. 2018 Sep 29;15(10):2143.

- Peate I. Understanding male health and wellbeing needs. *British Journal of School Nursing*. 2011 Oct;6(8):393–396.
- PMO. PMO – Elevhälsa. 2020. [https://www.cgm.com/se/product\\_\\_solutions/elevhaalsa/pmo\\_2/pmo\\_1.se.jsp](https://www.cgm.com/se/product__solutions/elevhaalsa/pmo_2/pmo_1.se.jsp)
- Polit DF, Beck CT. Nursing research: Generating and assessing evidence for nursing practice. 2017. Lippincott Williams & Wilkins.
- Pryjmachuk S, Graham T, Haddad M, Tylee A. School nurses' perspectives on managing mental health problems in children and young people. *J Clin Nurs*. 2012 Mar;21(5-6):850–859.
- Public Health Agency of Sweden. Varför har den psykiska ohälsan ökat bland barn och unga i Sverige? 2018a. <https://www.folkhalsomyndigheten.se/contentassets/628f1bfc932b474f9503cc6f8e29fd45/varfor-psykiska-ohalsan-okat-barn-unga-18023-2-webb-rapport.pdf>
- Public Health Agency of Sweden. Utvecklingen av psykosomatiska besvär, skolstress och skoltrivsel bland 11-, 13- och 15-åringar. 2018b. <https://www.folkhalsomyndigheten.se/contentassets/f9d75a62b8c944eab0d73df4515e287e/utvecklingen-psykosomatiska-besvar-skolstress-skoltrivsel-11-13-15-aringar-18043.pdf>
- Public Health Agency of Sweden. Statistik om psykisk hälsa bland barn och unga. 2019. <https://www.folkhalsomyndigheten.se/livsvillkor-levnadsvanor/psykisk-halsa-och-suicidprevention/statistik-psykisk-halsa/barns-psykiska-halsa/#psykisk-16-24>
- Public Health Agency of Sweden. Skolbarns hälsovanor i Sverige 2021/22. 2023. <https://www.folkhalsomyndigheten.se/contentassets/48b881b57779498595394ca05525d5d8/skolbarns-halsovanor-sverige-2021-2022-nationella-resultat.pdf>
- Radez J, Reardon T, Creswell C, Orchard F, Waite P. Adolescents' perceived barriers and facilitators to seeking and accessing professional help for anxiety and depressive disorders: a qualitative interview study. *Eur Child Adolesc Psychiatry*. 2022 Jun;31(6):891–907.
- Randell E, Jerdén L, Öhman A, Starrin B, Flacking R. Tough, sensitive and sincere: how adolescent boys manage masculinities and emotions. *Int J Adolesc Youth*. 2016 Oct 01;21(4):486–498. <https://doi.org/10.1080/02673843.2015.1106414>.
- Rosvall PÅ, Nilsson S. Gender-based generalisations in school nurses' appraisals of and interventions addressing students' mental health. *BMC Health Serv Res*. 2016 Dec;16(1):451.
- Svensk författningssamling [SFS] (2003) Act on Ethical Scrutiny of Research Involving Human Beings [om etikprövning av forskning som avser människor].
- Swedish National Agency for Education. Attityder till skolan. 2018. <https://www.skolverket.se/download/18.2a23c2b1698641e369b10/1556019071499/pdf4138.pdf>
- Swedish National Agency for Education. Främja barns och elevs hälsa. 2020. <https://www.skolverket.se/skolutveckling/inspiration-och-stod-i-arbetet/stod-i-arbetet/framja-barns-och-elevs-halsa>
- Swedish Research Council. Good research practice. 2017. Accessed 20 July 2023. Available from: [https://www.vr.se/download/18.2412c5311624176023d25b05/1555332112063/God-forskningssed\\_VR\\_2017.pdf](https://www.vr.se/download/18.2412c5311624176023d25b05/1555332112063/God-forskningssed_VR_2017.pdf)
- The National Board of Health and Welfare and the Swedish National Agency for Education. Vägledning för elevhälsan [Guidance for school health services]. 2016. Stockholm, The Swedish Authority for Privacy Protection [Integritetsskyddsmyndigheten]. *Dataskyddsförordningen [The General Data Protection Regulation]*. [Internet]. Stockholm: Integritetsskyddsmyndigheten; 2016. Available from: <https://www.imy.se/verksamhet/dataskydd/det-har-galler-enligt-gdpr/introduktion-till-gdpr/dataskyddsförordningen-i-fulltext/> Accessed 28 July, 2023.
- The Swedish Ethical Review [Authority Etikprövningsmyndigheten]. Vanliga frågor [Frequently Asked Questions]. [Internet]. Stockholm: Integritetsskyddsmyndigheten; Accessed 28 July 2023. Available from: <https://etikprovningmyndigheten.se/vanliga-fragor/>
- Västernorrlandsmodellen. Manual hälsosamtal i skolan-Västernorrlandsmodellen. 2019. [Elektronisk]. Hämtad: 2020-04-15. Tillgänglig: [https://www.rvn.se/contentassets/d352b82efc2547fc9e45355b64765e79/samtalsmanual-vasternorrland\\_ht2019.pdf](https://www.rvn.se/contentassets/d352b82efc2547fc9e45355b64765e79/samtalsmanual-vasternorrland_ht2019.pdf)
- Wilhsson M, Svedberg P, Carlsson IM, Högdin S, Nygren JM. Handling demands of success among girls and boys in primary school: A conceptual model. *J Sch Nurs*. 2017b Aug;33(4):316–325.
- Wilhsson M, Svedberg P, Högdin S, Nygren JM. Strategies of adolescent girls and boys for coping with school-related stress. *J Sch Nurs*. 2017a Oct;33(5):374–382.
- Willgerodt MA, Kieckhefer GM. School nurses can address existing gaps in school-age sleep research. *J Sch Nurs*. 2013 Jun;29(3):175–180.
- World Health Organization. Constitution of the World Health Organization. 1946. [Elektronisk]. Hämtad: 2019-12-20. Tillgänglig: [https://treaties.un.org/doc/Treaties/1948/04/19480407%2010-51%20PM/Ch\\_IX\\_01p.pdf](https://treaties.un.org/doc/Treaties/1948/04/19480407%2010-51%20PM/Ch_IX_01p.pdf)
- World Health Organization. Mental health: Strengthening mental health promotion. 2007. <https://mindyourmindproject.org/wp-content/uploads/2014/11/WHO-Statement-on-Mental-Health-Promotion.pdf>
- World Health Organization. Mental health. 2019. <https://www.who.int/news-room/facts-in-pictures/detail/mental-health>
- World Medical Association. WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. 2010. <https://www.wma.net/policies-post/wmadeclaration-of-helsinki-ethical-principles-for-medicalresearch-involving-human-subjects/>