Winding down the stressed out: Social and emotional learning as a stress coping strategy with Norwegian upper secondary students

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A universal school-based intervention was developed to enhance coping with school-related stress by building students’ social and emotional competence. The intervention was carried out in six classes in three upper secondary schools in southwestern Norway, and covered mindfulness, self-regulated learning, and social competence. Three focus groups were conducted with a stratified selection of general education students (n=24) and one focus group with primary school teachers (n=6). Summative content analysis was conducted using NVivo Software. Findings indicate that the students perceived the core themes useful, and believed that the intervention increased their coping with school-related stress and to some extent improved their learning environment. Teachers’ perceptions supported these findings to some degree. Future directions for universal school-based interventions to build social and emotional competencies are suggested.

Keywords: adolescence, coping, social and emotional learning, school-related stress, universal programme

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Introduction

Recently there has been a disturbing increase in Norwegian adolescents’ reporting of symptoms of anxiety and/or depression. From 1998 to 2012, the percentage of such symptoms increased from 11% to 18% among adolescents aged 15-19 years (Skogen et al., 2015). 15%-20% of Norwegian children and adolescents aged 3 to 18 years, experience reduced functioning because of such problems, and 8% have a mental health problem (NOU, 2014:7). From 2011-2016 the number of boys reporting high levels of anxiety and depression has been stable at 6% whereas the numbers of girls has increased from 15.9% to 19.7% (Bakken, 2017). These numbers...
are supported by an additional increase in medication taken to treat such problems (Skogen et al., 2015), a development also observed in other Western countries (Bor, Dean, Najman, & Hayatbakhsh, 2014; Mykletun et al., 2009). This is concerning as no more than 13%-14% of early adolescents experiencing emotional problems have been in contact with specialist health care services (Heiervang et al., 2007; Sund, Larsson, & Wichstrøm, 2011). The prevalence of mental health disorders in Norway is similar to other European countries (Mykletun et al., 2009) and the USA (Cook et al., 2015) and the low number of adolescents who received the necessary help is also observed throughout the world (Chandra & Minkovitz, 2007; Ford, Goodman, & Meltzer, 2003; Heflinger & Hinshaw, 2010; Hunt & Eisenberg, 2010; Merikangas et al., 2010).

Reports indicate that adolescents’ mental health issues are related to the school context (e.g., grades and teachers’ expectations), and high levels of distress on an everyday basis (e.g., demands and expectations from parents and friends) (Bakken, 2016). Adolescents who struggle to fit in at school, in the family and similar social arenas, experience distress to a higher degree. Educationally, externalizing behavioral problems can have a severe negative influence on adolescents’ academic achievement, functioning at school, and dropout rates (Murberg & Bru, 2009; Sagatun, Heyerdahl, Wentzel-Larsen, & Lien, 2014). School motivation decreases due to internalizing problems (Garvik, Idsoe, & Bru, 2014), as does refusal to attend school (Kearney, 2008). Twenty percent of the dropout rate in Norwegian upper secondary schools is due to mental health problems or psychosocial difficulties (Markussen & Seland, 2012). Mental health problems can also increase the risk of economic difficulties, relational problems and drug and/or alcohol abuse (Skogen et al., 2015). Inadequate social and emotional functioning causes health problems (Jones, Greenberg, & Crowley, 2015), and there is a connection between students’ social and emotional competence and their degree of success later in life (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Heckman & Kautz, 2013).

Research indicates that universal school-based interventions in social and emotional learning improve students’ well-being, mental health and their academic performance (Clarke, Morreale, Field, Hussein, & Barry, 2015; Durlak, 2015; Durlak et al., 2011; Sklad, Diekstra, Ritter, Ben, & Gravesteijn, 2012). There are, however, no systematic scientifically-based social and emotional learning interventions with Norwegian students. Empirical evidence on how the Norwegian school system can promote mental health is limited. The present study describes an intervention carried out with Norwegian students, based on three key social and emotional learning competences, namely mindfulness, self-regulation and social competence.

**Mindfulness as social-emotional competence**

Mindfulness practices are acknowledged as effective interventions for both psychological and somatic symptoms. Mindfulness-based interventions in schools are also recognized (Zenner, Herrleben-Kurz, & Walach, 2014) and mindfulness is core element in universal school-based social-emotional curriculum for adolescents (Mazza, Dexter-Mazza, Miller, Rathus, & Murphy, 2016). The underlying processes of mindfulness, namely attention regulation, body awareness, emotion regulation, and change in self-perception, work interchangeably and a contribute to a framework of mindfulness practices (Hölzel et al., 2011), such as breathing exercises, yoga and body scan. Mindfulness practices are also likely to reduce affective disturbance

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by generating more constructive cognitions, which decrease the risk of rash or impulsive reactions, thereby allowing for more adaptive coping (Tang, Hölzel, & Posner, 2015).

**Self-regulated learning**

Self-regulated learning (SRL) is a process that helps students to manage their thoughts, behaviors, and emotions to adequately guide their learning experiences, entailing the directing of actions and processes to acquire information or skills (Zumbrunn, Tadlock, & Roberts, 2011). The three primary phases of the self-regulated process are goal-setting, self-monitoring and self-evaluating (Zimmerman & Schunk, 2001). In the first phase, students analyze the learning task at hand and establish the necessary goals to complete the task (Zumbrunn et al., 2011). In the second phase, students conduct the chosen strategies and observe their effectiveness (Zumbrunn et al., 2011). In the third phase, the students evaluate their own performance on the learning task, which again influences their future goal setting so that the self-regulating process can begin again (Zumbrunn et al., 2011). This process predicts both students’ achievement track in school and their scores on achievement tests (Zimmerman & Schunk, 2001). Students with higher academic achievement benefit from the greater range of self-regulatory skills more often than lower achievers, and use skills associated with self-directed, self-initiated processes more frequently whereas lower ranked students prefer skills associated with social sources (Effeney, Carroll, & Bahr, 2013).

**Building social competence**

Social competence involves the ability to complete tasks, manage responsibilities and develop skills to address social and emotional experiences (Jones et al., 2015). To navigate adequately in the social settings in school, it is crucial that students learn interpersonal skills (Jones et al., 2015). Loneliness is a factor contributing to dropout rates (Frostad, Pijl, & Mjaavatn, 2015) and a risk factor for truancy, which is itself a significant risk factor for dropping out (Maynard, McCrea, Pigott, & Kelly, 2012). Feelings of being included in a social environment influence student completion of upper secondary school (Frostad et al., 2015). Learning and development are practiced in all types and forms of relations that students share (NOU, 2014:7). How students interact with one another significantly influences students’ well-being at school (Lillejord et al., 2015).

**The current study**

The primary objective of the present study was to explore whether mindfulness practices, self-regulated learning techniques and/or social skills were perceived to be important elements for coping with school-related stress among Norwegian upper secondary school students. Mindfulness practices, self-regulated learning techniques, and social skills provided a foundation for an early development of a complex school-based intervention called “Balance in Life” (BIL) with upper secondary school students in Norway. Complex interventions contain several components that interact, and are widely used also in areas such as education (Craig et al., 2008). An overview of BIL is provided in Figure 1. Experiences of BIL were explored through students’ perceptions and experiences of the intervention and utilization of the skills taught. Primary school ISSN: 2073 7629
teachers also provided their perceptions on the same topics. The study’s primary research questions were: How do upper secondary school students and their teachers perceive the BIL intervention? Which elements were perceived as beneficial in helping students to cope with school-related stress? Which were perceived as less useful and/or unnecessary? How did the students and the teachers perceive the implementation of the intervention?

Figure 1: Flow chart of the subjects, objectives and contents of the intervention «Balance in life» with SEL-competencies as foundation.
Methodology

Seven schools from a list of upper secondary schools in southwestern Norway with medium to high grade requirements for enrollment were contacted to participate in the study, but only three showed interest. Information meetings were arranged with leaders and/or teachers at each of the three schools. During the phase of intervention development, two representatives from each school were invited to a joint meeting with the primary researcher and a fellow researcher, to discuss the intervention, including topics, number and structure of sessions and who was to be involved. The number of intervention sessions was set to six, with each session lasting 45 minutes. For practical reasons, the sessions were held two at a time in a two weeks interval, followed by two booster sessions. Each session contained both lectures and student activities, such as physical exercises, role plays and group discussions. The students received a booklet containing the main content of each of the sessions. The mindfulness sessions contained breathing exercises and lecture on rumination and awareness of thoughts. The sessions on self-regulated learning included strategies in enhanced learning processes, how to balance demands with own needs, and strategies for in-depth learning. In the social skills sessions, students learned about the importance of social relations and communication skills. Additionally the students learned about the psychological mechanisms and the physiological effects of stress. They were given practical assignments as homework after each session. A website was also developed as a resource for the teachers.

Participants

The participating schools were public upper secondary schools located in two municipalities in southwestern Norway, with medium to high grade intake requirements. One school had approximately 555 students whereas the other two had approximately 850 students each. Two schools had previously offered stress management courses. Only one school selected intervention classes randomly. The others selected classes according to practicality issues. Purposeful sampling procedures were carried out in both the student and teacher participants.

Seven general educational classes participated initially (n=137). One class experienced significant dropouts as students preferred to participate in support classes; this class was removed from the study. The primary researcher conducted the intervention in the remaining classes (n=109). Informants who experienced higher levels of stress were strategically selected to participate in interviews. Hence, prior to data collection, the students were requested to fill out an adjusted version of a scale measuring perceived school stress (Murberg & Bru, 2009) to identify the students’ stress level. Five students from each class reporting high levels of stress were selected and invited to participate in focus group interviews. Eight students participated in each interview (n=24). Seventeen students were girls and seven were boys, all 16-17 years of age. One student chose not to participate. Student sample selection is presented in Figure 2. The primary teacher of the student classes participated in a focus group interview (n=6). Two teachers were male, and four female. All taught general educational courses and had taught their respective class during the past two years.
Figure 2: Flow diagram of the selection process of student informants

**Data collection**

A semi-structured interview guide was developed covering areas such as experienced stress, use of coping strategies prior and post intervention, general experiences with the BIL-intervention, components perceived useful or less useful, whether BIL influenced coping with school-related stress, the learning environment, the social environment at school, and intervention feasibility. The interviews were conducted six weeks after the last ordinary session of the intervention. The student interviews were held in a private location on school grounds during school hours. The teacher interview was held at the local University Campus during work hours. The student interviews were conducted by a female researcher and female student both experienced in qualitative methodology. The teacher interview was carried out by the female primary researcher who is experienced in qualitative methodology with assistance from the female researcher who carried out the students’ interviews.

A member check (Miles, Huberman, & Saldana, 2013) where informants were provided with feedback on the initial results, to increase the trustworthiness and validity of the data (Berg, Lune & Lune, 2004; Miles et al., 2013). None of the informants provided any negative feedback or wished to change initial results. The study was formally approved by the Norwegian Social Science Data Services (NSD). Consistent with ethical guidelines, voluntary informed consent was gathered prior to data collection.

**Data analysis**

The student and teacher data were analysed separately but using the same procedure. An abductive approach was chosen and direct content analyses (Hsieh & Shannon, 2005) was performed. The findings were discussed between the primary researcher and a fellow researcher. With the assistance of NVivo Software, the main categories were identified and predefined codes and inductive themes developed. Each subject was categorized within the code in which it fit the best. Both researchers agreed on the analysis of the data and the dimensions that the data generated.
Results

The data from the focus group interviews could be categorized into three main dimensions: “Stress”, “intervention evaluation”, and “future directions”. In order to increase transparency, quotes from each main dimension from the students’ focus groups are presented after each finding. As mentioned earlier, the teacher data is used to discuss findings from the student data. Anonymity was adhered to by excluding names and gender.

Stress

The majority of the students perceived the first year of high school to be stressful. They experienced three primary stressors: a new context (e.g., new school, new teachers, new courses), high expectations and/or demands of themselves and/or others, and schoolwork pressure (e.g., tests, hand-ins):

I coped pretty badly. Lots of stuff happened at once, new school, new city, new learning environment, and new demands (…). In addition, I placed very high demands on myself, which I was not able to meet” (School 2)

At least for me, it was all the expectations, definitely. Both from teachers and others.” (School 1).

The teachers also perceived high expectations as a main stressor for the students:

It is the expectation pressure (…), I have some students (…) that have so high expectations to themselves that they get sick.

Students were asked to discuss how they coped with stressors. Few students seemed to be aware of using coping strategies or how those strategies may have influenced them: “I just let it run its course, I don’t know” (School 1). The more cognizant emphasized two strategies, preparing work plans for their schoolwork and leisure activities: “To make a plan (...) and check off one by one, to get it done” (School 1) and “when I played soccer I only thought about that, nothing else” (School 3). Other coping strategies were linked to avoidance: “I agree with both [name] and [name] that I postponed it until the last minute” (School 3). Making plans were also mentioned by the teachers: “I have several girls that make a concrete plan for every day.”

Intervention evaluation

Findings indicate that the students perceived all three BIL-subjects to be useful to some degree. Breathing exercises and trying to be in the present moment was emphasized:

Not thinking about (...) the future and the past, but think more about what happens right now, was pretty important. And that you don’t focus too much on what you have done or what you are going to do, but more on what you can do now. It helps you to concentrate a bit (…), just be in the present moment” (School 2).

Strategies involving work plans for schoolwork were also perceived as useful:
For me as well, it is, to make a plan. I have seen now how important this really is. And how much it helps, too, that you find out (…) the time you have available. Instead of doing it all in one day (School 1).

Students found it useful to learn more about the importance of social inclusion. They also valued the knowledge that other students are more similar them in experiencing school-related stress:

We talked about how you can open up for others, because you don’t always think about how you stand or behave, that you might block people out [physically] without thinking about it (School 3).

Student also found stress theory useful:

We got confirmed that everybody is stressing, that it is something everyone is struggling with, and therefore it should not be a big deal for anyone to hide it. As everyone is stressed out, we might as well be open about it (School 3)

and

A lot of people think ‘I don’t need help, I can fix it myself’. ‘Cause many want to believe that they can fix it themselves (…) But I think that talking more about it can make stress less threatening because we’ve actually never talked about stress” (School 1).

Furthermore, students mentioned that mindfulness practices and SRL-strategies were compatible:

[Thinking about] one thing at a time is kind of the most important thing I’ve learned. Both if you combine it with making a work schedule with actually carrying it through by taking one task at a time, it gets quite easier (School 3).

Teacher data supported breathing exercises and making plans as useful strategies: “If anything worked, it is the breathing exercises” and “having a plan on it [the school work].” The teachers also emphasized the importance of having a good social environment at school: “If you thrive [socially] at school, you learn more.”

When asked about any changes in thoughts and/or behavior following the intervention, the students emphasized coping strategies linked to mindfulness and self-regulated learning:

I think that the part on breathing exercises was very ok
I’ve had a tendency to always read for a test the day before the test, but now I think more about reading less over several days so that I don’t do it all in once, ‘cause then it gets so heavy (School 1).

The students also emphasized exercises demonstrating the ability to place stressors in perspective:

Grades are not everything (…) the intervention confirmed this (…). Before, grades were everything, and then I suddenly got a really bad grade in a final-year course, and I’m just ‘ok, what now?’ kind of. And then I started to think that ‘Well, I’m still alive! I’m not dead!’ So I was a bit more kind toward myself (School 2).
Only one of the students’ focus groups referred to a perceived change of the social climate and school motivation:

I feel that we talk more together, (…) you talk to someone you normally don’t talk with, (…) about tests and what’s on your mind, (…) because you know how they feel about school as well.

I actually feel it has helped me a lot with my motivation. That focusing on one thing at a time and take whatever comes. It helps a lot when I’m reading for a test (…) and I have another test the following day. So I just take that one (School 3).

The students deemed it slightly early to determine the value of the elements from BIL:

I don’t think I’ve used much of this until now, but it might be that I can benefit from it later (School 3).

The teachers did not perceive any instant changes in their class environments, however; also they expressed that it may not be possible to recognize the potential influence of the coping skills at this point in time:

It takes time to incorporate and it takes time to see that it actually works.

The context for practicing mindfulness exercises was the only strategy mentioned as challenging, but this finding was mixed:

I find it easier to do when I’m home in my room than sitting there in class (School 2)

It is easier when you have, well, when you had [name of primary researcher] sitting there, talking you through it, kind of guiding you through it (School 2).

The teachers mentioned similar perspectives:

Just sitting down, breathing, was easy [and] it is not always cool to sit in class saying ‘this was very useful to me’.

Other challenges mentioned by the students were related to the timing of the intervention (e.g., school-related and other pressures during the intervention period) and feeling unprepared for intervention participation:

I just don’t think we were prepared, because it was held at a time when we really had time off, and, it’s silly that people think like that, but I understand it. It’s often during that time you think that ‘I’m gonna study for that test’ or ‘now I could’ve been home’ or… (School 1).

Future directions

The students found the subjects and exercises from BIL relevant:

Now we have more tools to work with. And especially the part about making work schedules (…), but also the part about the social… (School 3)
Courses like this could only be positive. So it either has a positive influence or it’s like ‘ok, we already knew this, ok, we’ve already done this’, so I feel that it can only be positive (School 2).

This was supported by the teachers: “There is definitely a need for such tips and advices”. The students provided suggestions on the implementation of school-based interventions, such as conducting interventions during school hours and implementing them during the first year of high school:

If we had it during a regular school hour (…), then I think that people would’ve had a better attitude toward the course (School 1)

Yes, I agree with [name], but maybe, if they began with this earlier, during the first year of high school perhaps (School 1).

The teachers stated similar perspectives: “They [the students] were very enthusiastic in the first grade, but it decreases in the second grade.” and “it is in the second grade there is most pressure regarding school, depression, anxiety for not to be good enough”. They also referred to the timing of the interventions: “it was a bit too long between each sessions” and “if you only have one hour on a more frequent interval (…), that could be an idea”. They also suggested to “explain to a higher degree why we do the different exercises”, to implement the intervention in “cooperation with the primary teachers” and “rooting it within the school’s administration” to ensure higher implementation quality. One suggestion to motivate teachers in the implementation of school-based interventions was to offer websites as was part of BIL, as web-resources are amazing” and “the more, the better because you can find, gather, download, share resources”.

The students suggested continuous reminders of the coping strategies and wanted to learn more about stress, sleep and learning strategies:

It would’ve been nice if our teacher reminded us about it, or someone else, that we could’ve been regularly reminded that we should remember to breathe and not just stress. (…) use two minutes before a test or something. That would’ve been nice. Just total quiet, ‘Now just breathe and relax’, right (School 3)

It would’ve been a bit ok to get tips on (…) what to do when you can’t sleep (School 2)

I think that learning more about it [stress] in the same way as we learn about learning strategies would’ve made it [stress] less threatening (School 1).

The teachers supported some of these perspectives: “They need a refill, a reminder [after the intervention]”. It was also emphasized that students need to learn to take responsibility: “The bottom line is that it is you [the student] who has to (…) make things easier, make things better. I cannot do it for you, but I can help you.”, “they have a [social] responsibility for each other” and “they are the ones who should include one another”. Finally, the teachers believed that the intervention reached some, but not all, students: “I don’t think that the class has improved overall, but perhaps one or two.”
**Discussion**

The findings of the present study indicate that the students found the three topics of the intervention useful and utilized elements from each component. Learning about stress was also valued. Most findings were supported by the teacher data as well. The students found the breathing exercises and awareness of one task at a time to be useful mindfulness practices. This finding supports the previously promising results regarding mindfulness in school settings (Burke, 2010; Harnett & Dawe, 2012; Weare, 2013; Zenner et al., 2014). However, despite these promising findings it is difficult to document the specific mechanisms that activates the positive change that is observed and which components of the mindfulness-based interventions actually produce this change (Havermans, 2011; Hölzel et al., 2011; Schroevers, Snippe, Bas, Tovote, & Fleer, 2011). Additionally, the results indicate that mindfulness practices can be also beneficial when used alongside other strategies such as planning school-work. Making work schedules aided the students in prioritizing and planning tasks, and hence reduce the possibilities of feeling overwhelmed by school-work.

It appears that the students used the three main phases of self-regulated processes; namely goal-setting by developing plans, self-monitoring by checking off each performed task, and self-evaluating by reflecting on how realistic the plan was (Zimmerman & Schunk, 2001). They also found social competence building a valuable learning experience as they learned that their peers also experienced school-related tasks as stressful, and, that they have a responsibility to include both themselves and others in social settings. Research indicates that relationship skills provide a fruitful contribution to building social competence (Weissberg, Durlak, Domitrovich, & Gullotta, 2015) which can improve students’ social climate at school and hence increase well-being and academic performance (Durlak et al., 2011; Frostad et al., 2015; NOU, 2014:7).

The students also acknowledged that learning more about stress was useful. Learning about how stress ‘works’ may have increased the students’ awareness of own and peers’ stress experiences, and contributed to more openness and understanding regarding stress experiences in the learning environment. Adolescents usually find it difficult to be open with peers about mental health and/or stressful events (Tharaldsen, Stallard, Cuijpers, Bru, & Bjaastad, 2017).

Only students in one focus group experienced changes in their learning environment and increased motivation in school-work. This finding may be due to the fact that these students had not previously attended stress management courses and/or SRL-courses and hence perceived the intervention as something new and exciting.

The teachers were also present during the intervention, and as teacher support is important, the teachers’ presence may have influenced the students’ perception of the intervention positively. Furthermore, the intervention was carried out during school hours at this school, which was positively seen by both teachers and students as crucial for adequate implementation and a more positive attitude toward the intervention.

Finally, the findings suggest that only some students in each class benefited from the intervention. It is not unusual that universal programs may have less influence than targeted programs in the case of students experiencing stress and emotional difficulties (Weare & Nind, 2011). However, given that in any given class
in Norwegian secondary schools, five students experience mental health problems (Bru, Idsøe, & Øverland, 2016) the influence of such programs may be important.

In conclusion, there is reason to believe that the mindfulness practices, self-regulated learning processes and social skills can be valuable elements in a universal school-based program promoting social and emotional competencies among upper secondary students, and, that the BIL-intervention may contribute in adolescents’ coping with school-related stress. However, some considerations regarding implementation are necessary, such as issues about timing, interval of sessions and regular booster sessions. It would be interesting to follow the students for a longer time-period to reveal potential long-term use of the coping strategies. Further research that measures the potential effects of these three elements on students’ mental health and ability to cope with school-related stress is needed. This study was based only the perceptions of students and teachers and was not an evaluation of the programme, which would require a randomized control trial.

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