

Research Article

“One of the Most Precious Experiences I Have Had as a Teacher!” Embodied Mindfulness and Compassion Nurture Addiction-Preventive and Pro-Democratic Life Skills and Relationships Between Teachers and Students - A Phenomenological Exploration

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Abstract

In this study, we present the results of a 48-hour mindfulness-based and compassion-based training for teachers (N = 59). This study included 3,250 students in two years. We strengthened the resources of teachers and students for health, especially for preventing addiction. The didactic approach was based on the concepts of embodiment and resonance. We first trained teachers and then encouraged them to teach students in the classroom. Qualitative data were collected on the presence of teachers, relationship building, teaching performance, and teaching content, as well as, on the effects on the students. The results of the qualitative evaluation suggest that potentially addiction-preventive qualities and life skills of the teachers, such as (self)compassion, self-regulation, and connectedness, were strengthened. After training, all teachers included mindfulness-based and compassion-based methods in their teaching. Feedback from the students indicated that these characteristics of the teachers had a life-skill-enhancing effect on the children. We discuss these results in the



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context of personality development, the prevention of addiction, and cultural changes for developing a healthier, more participatory, and democratic society.

Keywords

Mindfulness; (self-)compassion; addiction prevention; life skills; school; qualitative research; phenomenology; embodiment

1. Theoretical Background and the Hypothesis of the Study

In this study, we report the effects of a 48-hour training conducted with school teachers and educators, as a part of a project entitled “Mindfulness- and compassion-based prevention of addiction” in public schools. In German, the title “**Achtsamkeits- und mitgeföhls-basierte Suchtprävention in Schulen**” led to the acronym the “AmSel-Project”. The training combined theoretical approaches and practical experiences of the two project partners, which included the center for addiction prevention “update” of Caritas/Diakonie in Bonn and the lab “Prevention and Global Health” of the Evang. Clinics Essen-Mitte/University of Duisburg-Essen. The prevention of addiction, as based on the WHO Ottawa Charter and implemented by “update”, helps people to develop self-determination when dealing with risky substances and behavior [1]. It focuses on promoting life skills and developing a stable personality with an active lifestyle and the ability to succeed with age-appropriate developmental tasks. The research lab “Prevention and Global Health” promotes and evaluates methods for strengthening salutogenic resources to support a suitable and sustainable lifestyle. Its educational content, based on mindfulness and compassion, focuses on stress regulation, nutrition, exercise, communication, relationships, and cultural design.

Both cooperation partners agreed on the concept of the following core life skills, which were relevant to the aims of the training program, as defined by the WHO [2]:

1. Self-Awareness
2. Empathy
3. Creative thinking
4. Critical thinking
5. The ability to make healthy decisions
6. Problem-solving skills
7. Communicative competence
8. Interpersonal relationship skills
9. Emotional Coping
10. Stress management

Specifically, stress management, emotional regulation, communication and relationship skills, self-awareness, empathy, and the ability to make healthy decisions in everyday life at school are relevant educational goals for training teachers.

The results of quantitative research on the effects of mindfulness-based school programs showed that they promoted these life skills. The effects of such programs on life skills, especially among teachers and students, are documented, for example, for increasing concentration, working memory, logical thinking, problem-solving ability, mental flexibility [3], decreasing aggressiveness

[4], increasing resilience [5], reducing stress and controlling impulse [6], improving self-regulatory skills/impulse control [7], increasing self-regulation and prosocial behavior [8], improving the ability to regulate by perceiving the mental state [9].

Several studies have shown the importance of the value of self-compassion for health, well-being, and performance for people across different cultures [10]. A comparison of self-reported data from over 200 Australian teachers on mindfulness, self-compassion, student-teacher relationships, experiences in close relationships, and eating and sleeping patterns was made, and the results showed that self-compassion was the most significant predictor for the perceived stress of the teachers [11]. During the COVID-19 pandemic, Chen [12] interviewed American teachers who taught from preschool to the third grade. She found that self-compassion was the main facilitator of stress resilience “reflecting seemingly a transformative journey from a place of self-judgment to self-kindness, psychological isolation to psychological connectedness, and emotional rumination to emotional mindfulness”. A study conducted with 35 American preschool teachers showed that measures of self-compassion were correlated with the mental health of the teachers and facilitated their supportive relationships with challenging students [13]. The Italian and Israeli researchers Angelica Moè and Idit Katz conducted a study with over 300 teachers and found a strong correlation between their self-reported data on self-compassion, need satisfaction, personal accomplishment, and their application of autonomy-supportive and structured motivating teaching styles.

Mindfulness-based treatments for addiction can increase physical regulation skills and decrease drug use [14, 15]. Neuroscientific studies have shown that abstinence from addictive behaviors is promoted by the prefrontal cortex-mediated executive control and self-regulation of feelings, thoughts, and behavior (e.g., [16]). The deficit in the regulation of emotions is a transdiagnostic risk factor for substance-related disorders and several other mental disorders [17]. Early and preventive training in mindfulness can strengthen executive and socio-emotional competencies relevant to addiction ([18], p. 284).

Based on these findings, we hypothesized the expected effects of the AmSel-training as follows:

1. Through mindfulness-based and compassion-based training, teachers strengthen their life skills and personality traits, such as being attentive and compassionate toward themselves and their students.
2. The resulting changes in their personality, relationships, and teaching behavior can strengthen the life skills of their students with potentially preventive effects on their prospective vulnerability to addiction.

2. Training Teachers

Although neurobiological and clinical studies have shown the benefits of mindfulness-based and compassion-based methods for strengthening executive regulatory and relationship skills, the application of this knowledge in preventing addiction is limited [18]. The AmSel-project was developed to address this problem. Based on the one-day prevention workshop entitled "Mindfulness in School" by the addiction prevention center "update" and the six-month multiplier training "GAMMA - Health, Mindfulness, and Compassion in School Life" (strongly based on MBSR) by the lab "Prevention and Global Health", the two project partners designed the training program for the teachers. Along with the content from "Mindfulness in School" and "GAMMA" including the MBSR content, educational input on the basics of the prevention of addiction was also included. The

training integrated experience-based methods to promote mindful body awareness, self-compassion, the regulation of emotions, and (self)compassionate communication with psychoeducational input on the interaction of the body, mind, and self-regulation. Performing long sessions of meditation for up to 45 min was an essential part of the modules. Additionally, the age-appropriate and trauma-sensitive teaching of mindfulness and compassion-based exercises were taught, and their integration into regular school life was promoted. The experienced trainers, who were either certified MBSR teachers or experts on the prevention of addiction, embodied and modeled the skill of establishing and maintaining safe, trusting, friendly, and participatory cooperation during the entire teaching period. We not only wanted the participants to hear and read about mindfulness and (self)compassion but also experience them and contribute to a mindful and compassionate learning culture.

The training consisted of four modules of 12 h, conducted over a day and a half each. These four modules were taught in 2020, 2021, and 2022 from March to November. Two modules were taught before and two after the summer break. During the COVID-19 pandemic in 2020 and 2021, the training was conducted in the virtual room of the Zoom software program. Between modules, the participants received further input and material via the Moodle online platform for self-study and planning and implementing what they learned in their regular activities at school.

We trained the teachers in a didactic three-step process of

1. **Embodying:** living and embodying mindfulness and (self)compassion,
2. **Relating:** developing mindful and (self-)compassionate relationships and teaching styles, and
3. **Teaching** methods to promote mindfulness and (self)compassion among the students.

This approach was based on the perception that the personality of pedagogues and the way they shape their relationships strongly influence educational processes. This project was based on the tradition of humanistic pedagogy, for which the formation of personality is necessary [19]. In their historical analysis of the development of concepts regarding attitude and personality among teachers, Fiegert and Solzbacher ([20], 38 f.) described how in international educational science, since 2000, *“after years of a rather technocratic professional understanding... the importance of teacher personality came again in view... Under the motto 'Education needs relationship', interest in the teaching attitude returns vehemently, mainly influenced by findings from neuroscientific research, which can now prove that an appreciative, empathetic, and authentic attitude of the teacher encourages and promotes learning in the students.”* Through this project, we aimed to further develop the tradition of the humanistic culture of personality development and the conscious shaping of relationships. The notion that we remember how we felt about a particular teacher better than what we heard them say, illustrates the importance of embodied teaching and learning. Our phenomenological approach to qualitative research focused on capturing various aspects of the lived experiences of the participants. By “midwifing” preconscious and preverbal notions and insights into language through our interview format of the “embodied phenomenological dialogue”, we aimed to promote self-attention and introspective insights of the teachers into their lived experiences, which might facilitate the exploration of their inner developments. In the following sections, we first presented the methods of data collection, followed by the research results.

3. Methods

3.1 Mindfulness and the Phenomenological Evaluation Method

Besides training teachers and implementing mindfulness-based and compassion-based prevention of addiction in schools, we collected qualitative data on feasibility, self-perceived changes, and effects on the students. Applying the format of embodied phenomenological dialogues [21], we conducted interviews that focused on the lived experiences expressed in bodily and emotional phenomena not only in the interviewee but also in the interviewer. As visual data were restricted because telephone and Zoom video calls were made to conduct the study, the interviewers focused particularly on somatic markers in their own organism. E.g. might the interviewer experience, while listening to a teacher tell about her self-doubt, a tightening chest and restricted breathing and use these sensations to explore further by voicing this sensation. This dialogic interview might be considered to be a practice-in-action of mindfulness and compassion, as the interviewer tried to embody them while communicating with the interviewee. Similar to a mindful meditation session, the interviewers intentionally focused their attention with “open awareness” on the sensation of the present moment and abstained from mental activities that commented, analyzed, or conceptualized them.

“*Back to the things*” was proposed by Edmund Husserl as the main intention of phenomenology. He argued that human perception of “reality” is unconsciously shaped and biased by preconceived beliefs, conventions, and concepts to a large extent. To perceive things in a less distorted way, phenomenologists try to be aware of and temporarily abandon their preconceptions. The practice of phenomenological epoché, reduction, and bracketing resembles the cognitive “work” in mindful meditation. Patrick ([22], p. 40) found that “*the phenomenological reduction... bears some resemblance to the discipline of maintaining open awareness, which is developed in various meditation practices.*”

Our research method was phenomenologically inspired and embodied, because, in our conversation with the participants regarding the experiences they had while engaging in mindful self-practice and compassionate teaching, we temporarily suspended our analytical thinking process to listen openly, to physically sense and empathize into their situation, and inquire into the experiences and perceptions of the students. A study [23] provided examples of such “*contemplative listening*” for authentic and transformative interfaith teaching and learning.

Phenomenological cognitive research methods, such as the “microphenomenological interview” [24], focus on the identification and sequencing of cognitive microgestures during specific phenomena, for example, an epileptic seizure [25] or the experience of fibromyalgic pain [26]. In both methods, i.e., the phenomenological dialogue and the microphenomenological interview, two people converse with each other in order to explore inner preconscious cognitive phenomena of one person. Since these phenomena are preconscious, they have not been put into words yet. The vocalization of inner phenomena is a primary goal of both methods. However, while a microphenomenological interview helps to gain generalized knowledge about cognitive phenomena, in our version of the phenomenological dialogue, the interviewer assisted the vocalization of inner phenomena of the interviewee for the sake of the development of that person and as a means of gaining insight into their learning process. During the AmSel-course the participating teachers were encouraged to experiment with such embodied phenomenological inquiries into experiences during

meditation. Some then also adopted this approach for their own teaching. They then invited their students to describe their inner experiences in “*moments of intense shared attentionality*” ([27], p. 34). This requires a safe, trustful, personally interested, and nearly symmetrical relationship between the individuals communicating. Thus, phenomenological dialogue is a method of self-discovery and self-development. However, in this paper we report on it primarily as a tool for conducting qualitative research.

The interviews were conducted by making zoom or telephone calls which lasted between 30 and 45 min. We transcribed relevant passages from the recordings of all interviews. Subsequently, subject clusters were formed based on content analysis, and these subjects were summarized under overarching themes; finally, representative original statements were noted. All research ethics and data protection guidelines were observed throughout the evaluation process. To protect the privacy of individuals, we refrained from using abbreviations that might reveal their identity in the following quotations. Similar to other qualitative studies, our study did not include a control group.

3.2 Number of Participants, Interviews, and Students Reached

In the first two years of the three-year project, 59 educators and teachers started training and 53 participants (including nine men) completed it. The participants included teachers, school principals, and educators from twelve elementary, secondary, and special schools, from junior high and comprehensive schools, as well as, grammar schools in the cities of Bonn, Cologne, and the rural Rhein/Sieg district of Northrhine-Westfalia in Germany. Five addiction counseling specialists also participated in the first year, and then, co-trained in Cologne and Troisdorf in the second and third years. Another 45 teachers from nine schools (three in each location) participated in the third year. In the first year, two participants dropped out of the training program for health reasons and one for professional reasons. In the second year, the trainers asked a participant to leave the training program prematurely for group dynamic reasons, and two participants went on maternity leave. In the first year, 38 pre-, midterm- and post-interviews were conducted with 17 participants. After the second year, six more post-interviews were conducted. In the second year, the willingness to participate in the interviews was significantly lower than that in the first year. The main reason given by the teachers included high workloads among the teachers due to several months of uncontrollable and very demanding COVID restrictions. Thus, many participants did not read or reply to emails, which was the only way for us to communicate with them. Our results of the training program are based on 44 interviews conducted up to May 2022, half of which were post-interviews that were conducted after the completion of the training program. One group interview conducted with 22 students from a primary school was also included in this evaluation.

When estimating the number of students reached, we assumed that each participating teacher interacted with at least two classes of 25 students per year, i.e., around 50 children. This suggested that in the first and second years of the project, the 12 participating pedagogues reached around 600 children per year. In the second year of the project, 41 fresh educators were included, who reached around 2,050 children in the year of the training. Thus, we assumed that around 3,250 students were reached in the first two years of the project. Establishing AmSeL teams within each school might increase the long-term effectiveness of the project.

4. Results

4.1 Experiences of the Participants During and After Training

4.1.1 Feasibility

Despite the COVID-19-related restrictions, it was possible to design a virtual training, which was accepted, valued, and implemented by the participants. However, some participants expressed surprise and reservations regarding the personal level of the training program. They expected exposure to the content only at a cognitive level. The invitation to jointly perform physical and mental exercises, shared silence and presence, self-reflection, and moderated sharing in the group, followed by implementing the content in school was unexpected for them and affected them at a personal level. However, as the training exercises were voluntary, the participants could find a feasible balance on the continuum of closeness and distance. Many participants perceived the warm and personal atmosphere of the training as very supportive.

4.1.2 Kindness

In the interviews about their experiences during the training sessions, the participants repeatedly expressed their appreciation for the friendly work environment. The trust and solidarity in the training groups were highlighted as particularly touching. One educator described the aspects that were important to her as follows:

It was very nice to experience how positively one was received by everyone and how - despite the distance and my joining the group late - a bond developed and that our common space was filled with so much friendliness, sincere interest in each other, appreciation and inspiration - that felt so good!

4.1.3 Self-Awareness and Self-Care

The connection and support among individuals were also central to the cooperation in the AmSel school teams. The invitational nature of the training and the friendliness and presence embodied by the trainers and conveyed through the mindfulness and compassion exercises were particularly helpful. Participants reported that this combination of high (self-)awareness, the trustful atmosphere, and the invitational nature of the training program helped in developing a more self-aware and self-caring attitude. One participant said (on behalf of many):

I would like to specifically discuss one aspect: self-friendliness and self-care. This particularly appealed to me and touched me, because it is something that I have neglected in recent years - especially since I started my career.

Practicing friendly and compassionate self-awareness and self-care in school during the COVID period was stressed as important for many individuals. It helped the participants to strengthen their self-regulation ability. One participant described it as follows:

What I have also noticed and am very thankful for is that I am listening more clearly to signals from my body. When I am under stress, I sometimes feel an uncomfortable ringing in my ears. I

used to continue working in such situations and was very lucky that these noises disappeared eventually. I am now more sensitive to these signals. A few months ago, when such a situation occurred, although I had a lot of work pending for the day, I paid attention to this noise. I stopped working and practiced body scans. I spent the rest of the evening doing only things that are good for me. I liked the fact that there was so much room in the training to ask ourselves what is good for us, what our little everyday islands of self-care are, and that we could experiment in our "homework" with this and were able to experience how the conscious practice of small things can make a big difference and help to cope with stressful days in a completely different way. Having an appointment every day with myself has changed my life.

4.1.4 Presence and Attention of the Teachers Affect Students & Colleagues

When teachers practice mindful presence daily and perceive their inner being as self-compassionate, it also affects their students and colleagues. One participant said:

Through the AmSel-training, I have realized how extremely valuable it is to make time for myself every day, regardless of how little time there is and how much still needs to be done and accomplished. Loving and caring for myself, I believe, has changed something in me and that also has affected my students and colleagues.

4.1.5 Consciously Friendly Relationships

Many teachers mentioned how intentionally cultivating a friendly, compassionate, and caring outlook also affected the perception of the students and helped in shaping their relationship with the students in school. One participant described it as follows:

In my grade 6 and grade 7 classes, I became aware of how important such breaks and "everyday islands of self-care" are for students at school. The students also need to share their experiences with others. I am concerned about how I can make this possible within the tight framework of the school curriculum. The feedback from the students has increased my awareness regarding the demands they are confronted with every day and I now - although this has always been a concern of mine - pay even more attention to how they "are here" at that moment.

Another participant remarked that the strategies of self-awareness and self-regulation learned in the training sessions helped her to remain open to the mood and needs of the students, especially in stressful situations:

The performance and well-being of my students and the mood and atmosphere in a class are important to me. After getting trained, I became even more aware of how important it is to perceive this and that this perception depends to a large extent on the state of awareness in which I am present. This is especially true for situations in which you and transition from one lesson and group of students to the next. During such instances, it is important to pause for a moment, perceive, breathe, and re-anchor yourself. Consciously living these moments has become important to me, because my perception and presence are central to perceiving the emotions of my students... School is way more than imparting knowledge and evaluating performance. This

holistic view of our students is extremely important and, unfortunately, often neglected. This is why it is so good and important that the training focuses on exactly that.

Another participant described how she now affects the students not only through her actions but also through her presence and attitude:

I perceive the children very closely and feel what they need. I also provide first aid, and if a child gets injured, I tell them to take three deep breaths with me before I do anything. They then calm down, and things get much better. We practice that, and our fourth graders are already able to pause, perceive, feel, and then, express how they feel. And when I'm calm, the children sense this and my friendly composed mood is passed onto them. They enter it with me.

4.1.6 Implementing Mindfulness and Compassion Exercises in the Classroom

All participants interviewed after the training reported that they regularly incorporated moments of mindful pausing into their lessons or regular school life. Most participants also conducted presence and compassion exercises with the students. Others preferred mindful movement or imagery. With practice and experience, the colleagues gained confidence in didactic aspects like timing, modulation of voice, choice of words, and duration. Some participants reported that they felt insecure and needed encouragement when they first started practicing guiding exercises with the students. One participant described it as follows:

I had conflicting thoughts and feelings when I started practicing mindful exercises with the students. However, I am now hopeful and excited about sharing my perception of self-care and its importance in my life. On the other hand, I also wondered what if the students are not interested. What if they are irritated by my invitation to try out these exercises because they are not used to anything like this in school (...).

But what I experienced still amazes me. I was touched by how readily the students got into this practice! And when I later asked if anyone wanted to share something, I was very surprised by the fact that many students felt the need to say something, and was touched and excited that they felt so comfortable sharing their personal experiences with the class.

Conducting exercises and listening to the experiences that the students shared after performing the exercises were especially valuable to some teachers. One teacher expressed her impressions as follows:

It was and is such a gift to be able to share these moments with the students and learn about their lived experiences. Getting into and doing these exercises felt quite organic and natural. Seeing that the students felt so comfortable, that they knew they were accepted and valued, and that they shared their perceptions and feelings with such confidence is one of the most precious experiences I have had as a teacher!

4.2 Student Feedback

Several participants reported that their students enjoyed these moments of pausing and conscious sensing, and they regularly asked for such interactions. Some participants reported the following:

- *The students enjoy the silence and ask for quiet when things get loud.*
- *I have offered my students a mindfulness exercise at the beginning of some of my religion classes. My sixth course now demands them in every class.*
- *The students are very open, and the class atmosphere has improved.*
- *There is spontaneous clapping after an exercise!*
- *I get very positive feedback with thumbs up from the students.*

A primary school teacher described her experiences with the teaching of breath-focused mindfulness exercises during the afternoon care time session:

With COVID, we have very fixed and restricted break times out in the yard. And when the students do their homework at five past two, I can set my clock, when two or three boys are already sitting by the window looking longingly outside, because they can run out soon. Sometimes I sit with them, and we consciously take a few deep breaths. They enjoy that and do not get cranky at all. One of the boys used to lick his mouth so much that he got a lot of rashes. But since we started practicing this conscious breathing in the last few weeks, his rashes have decreased significantly. And he has had them for years. When I asked him about it, he said, "Yeah, that's true, and it's just very nice to breathe like this... (pause)... It's fun!"

A participant stated the following based on the feedback from her sixth and seventh-grade students, who shared their experiences after an exercise in which the students were invited to visualize pleasant experiences:

- *That felt so good. I could relax.*
- *I realized how stressed I am and how busy my school day is; a real rat race!*
- *I have been thinking about things I do not normally think about.*
- *It was so nice just to think of something nice.*
- *It was so beautiful, like in a dream palace.*
- *It was so good to only think of something nice, I do that far too seldom. It is often more the case that one criticizes oneself and is dissatisfied.*
- *That felt good. And it is only now that I realize how tired I am.*
- *I feel relaxed now. Can we do this every Thursday, please?*
- *That just felt good.*
- *It was so beautiful. There should be more of that at school.*

The same participant also shared these statements made by her students after performing the compassion exercise "Sending Good Wishes":

- *I was thinking about someone I fought with. It was weird at first, wishing him something nice.*
- *It felt nice to send good wishes.*

- *I wished for the person what I also wish for myself.*
- *It was not easy to focus on these wishes.*

Several participants mentioned that it was not easy for the children to send good wishes to someone who they have been annoyed with until recently. Although some described this exercise as challenging, it became clear in the ensuing conversation that many were intrigued by this change of perspective and, in some cases, also reconsidered their opinion of the person who they thought of during the exercise.

In a group discussion with students of a primary school about their experiences with the mindfulness exercises, several students appreciated the variety of choices the teacher offered them:

At the end of the exercise, Ms. R always says, now we can end in a way that we know is good for us. I like this very much that I can finish at my own pace.

While performing mindfulness meditation the teacher asked us to reply to our questions like does it tingle in your hands? Is it warm or normal? I enjoy finding my own answers to these questions.

4.3 The Relevance in Preventing Addiction

In this excerpt from an interview between a teacher (S) and the researcher (A), S drew parallels between potentially addiction-preventing aspects of (self-)compassionate presence and mindfulness practice for herself and the children:

S: It took me a while to understand how mindfulness and addiction prevention are related. It is very interesting to understand what happens in the brain of my fourth graders when they shift from the default mode of reacting and doing to pausing mindfully. It motivates them to pause, take a deep breath, and consciously decide what they want to do. At some point, they can make a conscious decision not to smoke or drink. I am thinking a lot about that at the moment.

A: You said that it took you a while to understand how mindfulness, compassion, and self-compassion are related to addiction prevention. What is the central element for you? Can you describe that, not so much in terms of the concept, but as how it worked for you?...

S: For me, the key is that I develop strategies that are nourishing for me, a walk out in the open or a phone call with my girlfriend. When I'm not feeling well, I can do that instead of eating a bag of chips. It is not alcohol for me. I can then consciously say to myself, nope, I will not eat this bag of chips, but I will call my girlfriend instead. I can now perceive myself very precisely and know when the crucial moment has come. Grabbing the bag of chips happens rather subconsciously. That is the point for me that I got to know myself well... I know what inspires me and what anchors me. I know that when I need it, my family and friends will anchor me. Going for a walk can inspire me because it is uplifting for me.

The topic of conscious and health-promoting decisions is relevant and considered by the WHO to be a part of life skills. S very precisely described how an attentive and compassionate presence supports her in making resource-enhancing decisions. Another teacher who had experience with teaching addiction prevention summed up her conclusion of the connections between mindful compassionate personality development and the strengthening of addiction-preventive qualities and abilities in children as follows:

The happier the children are with themselves and the more they feel that they are okay and that they are accepted along with their strengths and weaknesses, the lesser the chances for them to develop an addiction. We can assume that addiction is a form of escapism and substitute gratification for something they could not develop. It somehow struck me during the training that not being mindful of oneself was related to addiction. It is this connection with oneself that is often missing, and this question of "What do I want? What is good for me?"... Based on these questions, we now try to work with the students and no longer only inform them about the effects of the addictive substances. The main focus is now on "What do I need?" Yes, their personal development is more of a focus now in our approach to addiction prevention.

4.4 Consolidation and Continuation

After the training was completed, all participants wished to continue to integrate mindfulness and compassion exercises into their work. All AmSel-teams gave presentations to their colleagues to involve them and integrate the contents of the training into everyday school life. Each AmSel-school-team developed concrete plans and took the first steps to integrate the training content into life at school. For example, the AmSel-team at a special needs school formed a group with other teachers on mindfulness and self-compassion. The team in a high school started offering a weekly AmSel-club to students in the afternoon. A primary school purchased a mindfulness box for each class with materials for exercises. One primary school sent teachers to the AmSel-training program in all three years of the project.

5. Discussion: Mindful and Compassionate Relationships Nourish Life Skills

As summarized in table 1 the themes and insights expressed in the 44 interviews indicate that the mindfulness-based and compassion-based AmSel-training encouraged interested educators and teachers to develop various aspects of their personality and pedagogical skills, including kindness, (self)care, and presence, i.e., consciously paying attention to self and students. Being kind, caring, and present allowed the teachers to be more receptive to the needs of the students and fostered friendly and supportive relationships with students and colleagues, as reported by many participants. Our findings from participants in a German population thus confirmed the results of studies conducted with participants from Angol-Saxon, Italian, Israeli, and Chinese teacher populations, as mentioned above. Based on these findings, we argue that mindful and compassionate teachers embody humanistic and pro-democratic values in regular school life, where students often experience a hierarchical, authoritarian, and competitive environment [28].

Table 1 The main didactic themes and the insights of the teachers.

Didactic Themes	Core Insights
Feasibility of teaching program	Participants accepted and valued the program and implemented the content in their teaching.
Kindness and trust	The trust and solidarity in the training groups were perceived as valuable.
Compassionate self-awareness and self-care	The practice of compassionate self-awareness and self-care first during training and then in school life, strengthened self-regulation and the relationship of the teachers with themselves.

Relationships of teachers with themselves affected others	Mindfully present and compassionately attentive relationships of teachers with themselves affected students and colleagues.
Teachers' attitudes, perceptions, and relating affect students	When teachers consciously cultivated attentive, friendly, compassionate, and caring attitudes, it affected their perception of the students, shaped their relationship with the students, and conveyed these attitudes to the students.
Implementing new teaching methods	After overcoming initial hesitation, all participants reported regularly incorporating mindful and compassion-based methods into their teaching. Seeing positive effects on children who shared their personal experiences with the teachers was described as very precious.
Student feedback	Students enjoyed and valued the exercises, especially their calming and stress-regulating effects. They asked for more such sessions. A compassionate perspective was challenging for some students. They appreciated the freedom of choice.
Relevance in preventing addiction as perceived by teachers	Accepting and loving relationships can reduce the need for self-harming, potentially addictive behaviors. Fostering self-knowledge and developing personality can reduce the risk of addiction. Understanding, experiencing, and practicing friendly and caring self-regulation can strengthen self-efficacy in both teachers and students.

In recent years, especially in the highly stressful environment imposed by the pandemic restrictions and under high workloads due to the shortage of skilled pedagogues, adhering to these values became even more challenging. The German “Youth Survey Summer 2022” showed that most young individuals between the ages of 14 and 29 felt emotionally burdened by the war in Ukraine, the climate crisis, social segregation, and economic threats. They experienced “*a loss of control in their daily activities, in their relationships, and in regard to their plans for life*” [29]. In this stressed and stressful school system, unfortunately, the technocratic and meritocratic characteristics of “professionals without spirit and hedonists without heart” (cf. Max Weber [30], 161), still prevail in many places. For example, a mother described to us her seven-year-old daughter’s early school experiences as follows:

My daughter started first grade in September, and it was a huge disappointment for her. She was looking forward to it, but in all seven years of her life, she has never cried as much as in the last two weeks. The teacher is okay, I guess, but, unfortunately, she is not very relational, and it seems to me that my child feels like a number with her.

The British psychologist and activist Sally Weintrobe [31] found that in many countries, the neoliberal “*culture of uncare*” is the root cause of unbridled consumption that has accelerated the climate crisis. The AmSel-training has succeeded in reminding and enabling teachers to cultivate a friendly caring attitude toward themselves and the children they work with. Based on the statements made by the participants, we confirmed our two initial research hypotheses by showing that through the AmSel-training the pedagogues developed a sense of caring attention first toward themselves, and then, toward the children and colleagues. From the perspective of a technocratic

understanding of intellectual education, this might seem irrelevant or, at best, "nice to have", but the findings of trans-cultural researchers, like Moè and Katz [32], indicate a causal relationship between "cold", self-deprecating, and self-harming relationships of teachers toward themselves and a controlling and demotivating teaching style. Critical analysts of disastrous social phenomena, such as T.W. Adorno ([33], p. 133), described the "*cold indifference to the fate of others*" as the main cause and a cultural side effect of fascist inhumanity, which in the case of German history led to collective atrocities like Auschwitz.

The German artist Joseph Beuys was a soldier in the Nazi air force who suffered terrible burns but survived World War II. In 1980, he was involved in establishing the German Green Party. He stated the "warmth principle" as a central quality of his socially extended art concept. In his art installations and performances, he used "warm" materials like fur, felt, fat, and honey. He stated that he intended to convey a connecting "*warm energy that includes the viewer*" in his artworks to help overcome human isolation ([34], p. 76). In the tradition of humanistic education, mindful and compassionate (i.e., "warm" and loving) relationships are necessary for successful education [35]. Long-term observational studies over 12 years, from grades 1–12, identified the absence of teacher-student warmth as a predictor for the conduct problems of students [36]. Parental warmth was found to discourage substance use in another longitudinal study conducted for 12 years [37]. A three-year prospective study on the development of problematic internet use (PIU) in 12–15-year-old teenagers found that "*a combination of maternal authoritarian and paternal neglectful parenting was associated with PIU probability as high as 20.9%*". When paternal parenting was more connected, PIU was found in only 3.21% of the children [38].

After receiving the AmSel-training, pedagogues in our interviews described the connections between the cultivation of friendly, conscious, and caring mindfulness and the formation of life skills that have an addiction-preventing effect on themselves and also potentially on their students. The participants focused less on "cold" functional skills, such as self-control, willpower, or self-discipline, and more on "warm" relational qualities, such as knowing oneself well and being friendly and alert to one's beneficial and harmful emotions and behavioral impulses. Emotional regulation through friendly self-care strengthened their ability to first withdraw from (self-)harming behavioral impulses, like unconsciously devouring a bag of chips after a stressful day. With a friendly and sometimes humorous perspective on such inner drives, a mindful teacher can notice these options, ignore them, and then, focus on more wholesome decisions. Ludwig et al. [15] described these abilities as competencies of "*self-regulation without force*". They have a non-violent quality because people do not need to force themselves away from a desired but unhealthy choice. Instead, the practice of mindfulness and self-compassion can strengthen their awareness and ability to gently and firmly make wholesome choices like spending time in nature or calling a friend. Self-regulation can be conducted more often by consciously choosing beneficial behavior rather than forbidding oneself the indulgence in unhealthy choices.

In their meta-analysis of 19 studies with 1,981 participants on "*the impact of mindfulness on the well-being and performance of educators*" Lomas et al. ([39], p. 137) identified emotional regulation as "a meta-skill that subserves multiple health and well-being outcomes (conversely, poor emotion regulation skills are a transdiagnostic factor underlying diverse psychopathologies)." As an explanation, they suggested the causal chain that mindfulness might positively affect well-being in the following ways: (a) mindfulness involves introspection that facilitates the development of attention and awareness skills; (b) the development of these skills leads to enhanced emotional

regulation; (c) emotional regulation is a powerful meta-skill. They suggested that “future work may help to elucidate these hypothesized causal chains further, e.g., through longitudinal studies deploying regression analyses”. With our dialogue-based phenomenological first-person and second-person investigation, we utilized the increase in introspective attention and self-awareness, which the teachers gained through our mindfulness training program, for their personal development. As suggested by Lomas et al., this self-investigation supports the causal chain and adds the relational element of personal warmth, both in the relationship with oneself and others, as an important developmental factor. This emotional warmth seems to be the key to cultivating embodied care for oneself and others.

When pedagogues embody caring mindfulness and compassion in warm and connected human relationships, students and colleagues feel invited and like to resonate with these qualities, as reported by the teachers in our interviews. Mindful and compassionate-warm connectedness is experienced as "contagious". However, stressed and disconnected educators also increase stress among their students. Thus, stress and the fight-flight-or-freeze responses are also contagious. Similar transmission phenomena were observed in other studies also, for example, in studies by Oberle et al. [40] and Rosa et al. [41].

The concepts of embodiment and emotionally warm resonance can explain why educators affect children not only through their actions but also their attitudes, presence, and relationship with themselves. When pedagogues conducted exercises based on mindfulness and compassion in a classroom that had a warm, safe, and trusting atmosphere, the children enjoyed being present, mindful, and compassionate, as reported by the participants. The students liked these experiences so much that they often requested more of such sessions. In a group interview with primary school students, some of them reported that they also performed mindfulness exercises at home with their younger siblings or alone, when they felt agitated or before falling asleep. We found that children were willing to share their experiences with their peers and teachers. Some teachers perceived this trustful sharing and communication with their students as deeply meaningful to them and as very nurturing in these stressful and depleting times.

Teachers and students liked the voluntary and participatory nature of the exercises. Our didactic approach to designing the teacher training program with as much freedom of choice as possible followed the insights of a trauma-sensitive delivery of mindfulness-based and self-compassion-based teaching. Explicitly addressing the freedom to not perform an exercise or to adapt it to one's needs and preferences is also motivated by the humanistic values of self-responsibility and self-efficacy. By building trust and creating space for participation, we aimed to reduce the risk of teachers and students being overpowered and re-traumatized. Instead we intended to promote their abilities of self-regulation and self-responsibility. The AmSel-training provided opportunities for self-oriented and self-shaped experiences within the otherwise highly regulated school culture. School still seems mainly focused on high-stake testing, i.e., on reproducing content and following the rules of the “system”. We consider these elements of freedom, creativity, and self-determination as contributions to the development of a participatory and empowering culture that consciously fosters pro-democratic skills among teachers and students. When these skills of individualization are taught in a safe and trustful atmosphere of warm relationships and a caring community, individuals feel invited to freely use their skills for the common good of the class or group of peers or colleagues, as inferred from the interviews.

6. Summary and Outlook

Regarding the list of "core life skills" proposed by the WHO and mentioned at the beginning, most participants in our study became stronger after the training. To prevent addiction, the "*ability to make constructive decisions*" is important. Receiving funding for a long-term study to support and follow the teachers and students who participated in our project for several years might help to further sustain their regulatory and decision-making skills and monitor their behavior regarding whether they follow a healthy lifestyle or succumb to addiction. The former and long-standing head of the German "Ginko Foundation for Prevention", Jürgen Hallmann [2], commented on the formation of life skills and said:

However, due to their complexity, the skills that are subsumed under the construct of life skills cannot be developed directly, but only indirectly. Thus, coping strategies for building competence cannot be communicated in an abstract manner, but are linked to the communication of concrete content.

In this sense the evaluation of the effects of the AmSel-training provided substantial evidence to support our research hypotheses.

1. Teachers and educators strengthened their life skills and their addiction-preventive resources through hands-on and concrete mindfulness-based and compassion-based AmSel-training, and
2. Through the embodied aspects of their mindful and compassionate personal development, their warm relationships, and their pro-democratic and empowering teaching skills, they can nurture life skills among their students. These skills might strongly influence the lifestyle and health of the students and prevent the development of addiction.

Author Contributions

Jasmin Friedrich initiated and conducted the project and contributed passages to life skills and prevention. Dr. Altner was responsible for the qualitative evaluation and the composition of the text. Both collaborated in the project development and fund-raising. We would like to thank the following colleagues for their contributions and support: Bettina Adler, Marion Ammelung, Sandra Bohlscheid, Henrike Berners, Sarah Diener, Dagmar Heß, Dr. Ayscha Lucas-Gesing, Tabea Luetters, Dr. Anna Paul, Stefanie Schlegel, Tatini Petra Schmidt, Kerstin Schneider and Antonia Torras-Vives.

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Competing Interests

The authors have declared that no competing interests exist.

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