



How does Mind–Body Bridging support professional identity development?

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Abstract

This narrative case study is an exploration of Mind–Body Bridging (MBB), an emerging mindfulness-based approach, and its impact on university students' professional identities. MBB was used as content and an intervention tool in a psychology course. The study provides an in-depth analysis of two students' narratives to illustrate and discuss the usefulness of MBB in the university setting. The findings demonstrate that MBB helped students develop their professional identity with regard to self-confidence, self-awareness, social relationships, and professional future. Moreover, the link between the development of students' professional identities and their abilities to cope with work-related stress is found.

Keywords Mind–Body Bridging · Professional identity · University students

Résumé

Comment le *Mind–Body Bridging* (MBB) soutient-il le développement de l'identité professionnelle ? Cette étude de cas narrative est une exploration du Mind–Body Bridging (MBB), une approche émergente basée sur la pleine conscience, et de son impact sur les identités professionnelles des étudiant-e-s universitaires. Le MBB a été utilisé comme contenu et comme outil d'intervention dans un cours de psychologie. L'étude fournit une analyse approfondie des récits de deux étudiants afin d'illustrer et de discuter de l'utilité du MBB dans le cadre universitaire.

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Les résultats démontrent que le MBB a aidé les étudiants à développer leur identité professionnelle en ce qui concerne la confiance en soi, la conscience de soi, les relations sociales et l'avenir professionnel. En outre, le lien entre le développement des identités professionnelles des étudiants et leurs capacités à faire face au stress lié au travail est constaté.

Zusammenfassung

Wie unterstützt Mind–Body Bridging die Entwicklung der beruflichen Identität? In dieser narrativen Fallstudie werden Mind–Body Bridging (MBB), ein neuer achtsamkeitsbasierter Ansatz, und seine Auswirkungen auf die berufliche Identität von Universitätsstudierenden untersucht. MBB wurde als Inhalt und Interventionsinstrument in einem Psychologiekurs eingesetzt. Die Studie bietet eine eingehende Analyse der Erzählungen von zwei Studierenden, um den Nutzen von MBB im universitären Umfeld zu veranschaulichen und zu diskutieren. Die Ergebnisse zeigen, dass MBB den Studierenden geholfen hat, ihre berufliche Identität in Bezug auf Selbstvertrauen, Selbstbewusstsein, soziale Beziehungen und berufliche Zukunft zu entwickeln. Darüber hinaus wird ein Zusammenhang zwischen der Entwicklung der beruflichen Identität der Studierenden und ihren Fähigkeiten zur Bewältigung von arbeitsbedingtem Stress festgestellt.

Resumen

¿Cómo ayuda la relación mente-cuerpo al desarrollo de la identidad profesional?

Este estudio de caso narrativo es una exploración de Mind–Body Bridging (MBB), un enfoque emergente basado en la atención plena, y su impacto en las identidades profesionales de los estudiantes universitarios. MBB se utilizó como contenido y herramienta de intervención en un curso de psicología. El estudio proporciona un análisis en profundidad de las narrativas de dos estudiantes para ilustrar y discutir la utilidad de MBB en el entorno universitario. Los hallazgos demuestran que MBB ayudó a los estudiantes a desarrollar su identidad profesional con respecto a la confianza en sí mismos, la autoconciencia, las relaciones sociales y el futuro profesional. Además, encuentra el vínculo entre el desarrollo de las identidades profesionales de los estudiantes y sus habilidades para hacer frente al estrés relacionado con el trabajo.

Introduction

This study was based on the premise that students will need to be able to cope with various work stressors when they become professionals, and a strong sense of identity has been shown to reduce occurrences of burnout or quitting a profession (Karing & Beelmann, 2019; Tarrasch, 2019). Jensen and Jetten (2016) have argued that students in all academic disciplines have a need for a stronger sense of professional identity but feel unable to develop it without assistance. Moreover, many university students experience stress related to school, their future career, or their private life (Ribeiro et al., 2018), which can complicate the process of professional identity development. Therefore, students need better stress-management skills, especially

with regard to possible future occupational stress (Gustems-Carnicer et al., 2019; Woods et al., 2013). Research has been done on various interventions that can help students cope with stress (de Vibe et al., 2013; Tarrasch, 2019), including mindfulness-based methods and interventions (Eskic et al., 2019; Hue & Lau, 2015). These have received heightened attention, particularly regarding their application to teachers (Albrecht et al., 2012; Hwang et al., 2017; Lomas et al., 2017); however, there is a gap in the research related to mindfulness-based interventions in the contexts of professional identity development (Birnbaum, 2008; Dong et al., 2017; Gockel & Deng, 2016; Park et al., 2019) and students of various academic disciplines. For example, Galles et al. (2019) pointed to a need for further studies on how mindfulness might inform career counseling and vocational decision-making. The authors (2019) found a relationship between mindfulness and various career factors including vocational identity “suggesting that greater mindfulness contributes to a clearer and more stable picture of one’s goals, interests, and talents” (p. 85). Their findings also pointed to the practical need that mindfulness practices would form a part of career counseling interventions to reduce individuals’ negative career thinking and enhance their vocational identity. Moreover, also other authors have reported that mindfulness may indeed contribute to effective career problem-solving and decision-making (Brown & Ryan, 2003; Jacobs & Blustein, 2008). Overall, there is substantial evidence showing positive views regarding mindfulness practices (Littman-Ovadia & Niemiec, 2016).

Mind–Body Bridging (MBB) is an emerging mindfulness-based approach used to address stressful experiences and trauma. The method involves mindfulness practices coupled with written free-association (Lipschitz et al., 2016) and somatic awareness activities directed at understanding one’s internal sensations (Tollefson et al., 2009). MBB practices enhance changes in an individual’s awareness skills by strengthening consciousness of body, thoughts, and emotions, and also in an individual’s understanding of one’s own thought processes, i.e., metacognitive processes (Block et al., 2020). As a result, symptoms of stress are expected to be reduced. Research on the impact of this intervention is still scarce, and MBB has not yet found its application or been researched in educational settings. Given that a strong sense of professional identity is needed to navigate the complexities of professional life (Lindquist et al., 2006), we were compelled to examine whether the application of MBB during university studies would have an impact beyond stress management and would provide holistic support for the development of students’ professional identities.

This study addresses student-narrated experiences of MBB in a psychology course in response to the scarcity of research regarding the role of mindfulness-based interventions in university students’ professional identity development. We designed an MBB intervention for undergraduate and graduate students from various academic disciplines, including those attending Open University. The intervention included students’ reflections on various matters pertaining to their professional identity. The study contributes to the body of knowledge by exploring two students’ narratives of their personal and professional history and possible future in-depth to determine the impact of MBB on their professional identities. Fredrickson’s (2001) positive psychology framework, which has seldomly been applied in studies of

professional identity development, was used for our interpretations (see e.g., Lutovac et al., 2017). The guiding research question was *What role does Mind–Body Bridging play in the development of university students’ professional identity during a psychology course?*

Professional identity development and the role of mindfulness in this process

Professional identity, which is also referred to as career, occupational, or vocational identity (Skorikov & Vondracek, 2011), can be looked at from a psychological or sociological viewpoint. The former links identity to individuation, self-actualization, and gaining better self-awareness, while the latter refers to an individual’s identification within certain groups or communities or to aspects of their being that have been identified by others (Kreber, 2010; Vähäsantanen et al., 2008). The socialization into the profession plays an important role in professional identity development (Lindquist et al., 2006), and this socialization begins during the studies and continues in one’s profession. While the issues of professional identity and its development have been acknowledged as undoubtedly important by much research in a wide array of disciplines, the obvious challenge in creating a definition of students’ professional identity is the fact that students are becoming professionals of different disciplines. To conceptualize their professional identities, one must be aware of the distinct characteristics of each profession and professional qualities needed to pursue it.

However, building on Gee (2000), we understand students’ professional identity as emerging from their professional status, their interactions with others, and their interpretations of their own experiences. Moreover, borrowing from Kelchtermans (2009) who addressed the concept in the context of the teaching profession, we define professional identity ‘as a lens through which teachers look at their job, give meaning to it and act in it’ (p. 260). Similarly, Holland (1997) argues that vocational identity (or professional identity) refers to “the possession of a clear and stable picture of one’s goals, interests, personality, and talents” (p. 42). Arguably, this holds true for any other profession or even multiple professions students may pursue or be engaged in. Professional identity can also be seen as encompassing attitudes, values, knowledge, beliefs, and skills shared with others within a professional group (Adams et al., 2006). Arguably, the central aspects in operationalizing the professional identities of students are the following: (a) their prior experiences (Lutovac & Kaasila, 2014; Wong & Trollope-Kumar, 2014); (b) their views of themselves in the profession, including their self-confidence (Birnbaum, 2008; Lutovac & Kaasila, 2018); (c) their self-awareness and relationships with others (Park et al., 2019); and (d) their views of their professional future (Lutovac & Kaasila, 2014).

Mindfulness has been defined as creating awareness by intentionally and non-judgmentally paying attention in the present moment (Kabat-Zinn, 1994). Components of a mindfulness practice are awareness, attention, intention, and attitude (Shapiro et al., 2006). Mindfulness-based interventions have been implemented in various contexts, including education (Albrecht et al., 2012; Hwang et al., 2017; Lomas et al., 2017); however, few studies have investigated the context of students’ professional identity development. Prior findings in the contexts of social work and

early childhood education might help us understand the development of students' professional identity. For example, Birnbaum (2008) showed that mindfulness can help social work students acquire knowledge about themselves, experience autonomy in learning self-containment and regulation, and gain insights regarding their professional self-concept. In addition, Gockel and Deng (2016) observed that mindfulness training was successfully used to support social work students' self-care, facilitate critical reflection and dialogues around challenging topics, and help students develop direct practice skills. Furthermore, Park et al. (2019) found that pre-service early childhood teachers identified their strengths, weaknesses, and areas for improvement through mindfulness meditation, and their self-confidence increased as a result. While these studies have demonstrated that mindfulness-based approaches seem to impact professional identity, they have not specifically examined the impact of mindfulness-based approaches on professional identity development.

Positive psychology framework: broaden-and-build theory

Positive psychology framework, which suggests a need for cultivating positive emotions to reduce negativity and stress and to increase positive emotional experiences (Fredrickson, 2001; Garland et al., 2010), provides a framework within which to understand and interpret students' experiences of MBB and their impact on their evolving professional identity. Positive emotions are important as they increase individual's optimal functioning (Fredrickson & Joiner, 2002). Fredrickson's (2001) broaden-and-build theory suggests that emotions are self-organising systems and views them as spirals, meaning they can influence and activate other emotions. In broaden-and-build theory, focus is placed on thought–action repertoires, which can be either broad or narrow; positive emotions broaden one's attention, thoughts, and actions, while negative emotions narrow them (Fredrickson, 2001; see also Fredrickson & Joiner, 2002). These broadening and narrowing have been described as upward and downward emotional spirals. Another component of this theory is the building aspect; positive emotions induce psychological broadening, which expands one's mind-set and actions (Fredrickson & Joiner, 2002), increases one's openness to positive events (Fredrickson, 2001), and may stimulate more positive emotions (Garland et al., 2010). In short, as noted by Fredrickson (2000), positive emotions are important as they build individual's enduring personal resources. The author points out that the effect of positive emotions on one's personal resources such as intellectual, social, psychological, and physical is long-lasting, which allows individual to use these resources in times of adversity. Furthermore, Fredrickson (2000) also argues that positive emotions are meaningful on an individual level, having power to transform people, but also on the organizational level (e.g., in workplaces).

Emotions and emotion-laden experiences are also central to identity development, including professional identity development (Winkler, 2018). For example, a downward emotional spiral resulting from culminating stress can be damaging, as it can reinforce one's negative self-beliefs and negatively impact one's professional development (Lutovac et al., 2017). Conversely, positive emotional experiences contribute to one's sense of self and professional identity. Given that we are concerned

here with students' professional identity development, what broaden-and-build theory teaches us is that over time, positive emotions help individuals be more effective and socially integrated in their workplace (Staw et al., 1994). Because stressful and repetitive thoughts can be consuming and debilitating and can render one's state of mind and body into "the powerless self (Block et al., 2012), it is essential for students to be able to cope with occupational stress and the emotions surrounding stressful experiences and generally increase their positive emotions. MBB approach with its premise to enhance individual's optimal functioning can therefore help us assist the development of students' professional identity though enhancing positive emotions.

Mind–Body Bridging as a mindfulness-based approach

Little has been written about MBB (see e.g., Nakamura et al., 2013, 2015). This approach, which falls into the family of mind–body medicine that explains the mechanisms underlying the mind–body relationship (Block & Block, 2007), focuses on how emotional, mental, social, spiritual, and behavioral dimensions affect physical and mental health (Gilbert, 2003), ultimately stimulating self-knowledge and self-care. Arguably, self-knowledge and self-care are important aspects of professional identity.

MBB differs from other mindfulness applications due to a system called I-System, a holistic mind and body system that works by maintaining an understanding of what the world and we should be like at each moment. These thoughts, called requirements, are the mental rules that the individual's I-System creates. By accepting that these requirements are not external stressors and by resting overactive I-System, enhanced functioning is possible for the individual while being connected to a source of healing, goodness, and wisdom in a state of natural functioning. Indeed, "it is not the stressors in our life that make us stressed out" (Block et al., 2012, p. 2), it is an overactive I-System. Therefore, MBB practices help control the I-System, so one can place their efforts and attention where and when they are necessary; the I-System is put to rest, and its activity is lessened. Block et al. (2012) have explained that the I-System affects both mind and body. MBB practices, therefore, target both stressful and repetitive thoughts and physical tensions and sensations. The authors speak of "the powerless self" on one end of the spectrum, while on the other is "the powerful self", which is the state of mind and body that converts stress into self-power; thus, MBB can be understood as a set of power-building tools (Block et al., 2012).

Method

Participants

This study is situated in the course *Psychology Applications I—Health and Mental Health*. The course is part of the compulsory undergraduate studies in psychology,

but it can also be taken as an optional subject in minor studies and for open university students. Sixty-five students participated in the course. Of these, the majority were majoring in educational sciences, but some came from other study disciplines, such as health and business sciences. Most part of the participants were first year students and students minoring in psychology whose age was between 20 and 25 years. Open university students were a little older, on average 25–30 years old. Participation in the study was voluntary; while all students had to produce portfolios as part of the course, they did not have to give consent for the use of the data.

We obtained 35 written consents, therefore, our data consisted of 35 students' portfolios. The 35 student portfolios served a pool in which the two cases, Leo and Anna, were selected for more careful analysis. We chose these two because their reflections were articulate, expressive, and revealing experiences that made us feel that we knew the storytellers. Leo was an older, part-time student with a long experience of working in security. Anna was a full-time student who had prior to the course only had short-term jobs, not all of which were linked to her future profession. To adhere to the anonymity requirements, we purposively do not reveal their study disciplines and their age.

Procedure

In the *Psychology Applications I—Health and Mental Health* course, that lasted for 10 weeks, the students were familiarized with the theoretical framework and practices of MBB during both in-person and online lectures. The course was taught by the fourth author of this study. Virva is a middle-aged university lecturer teaching the psychology courses in one Finnish university context. In addition, she has been working as a certified MBB practitioner for 5 years, as well as a psychotherapist for 20 years.

MBB was chosen as a stress-management intervention with the aim of enhancing students' self- and body-awareness. In addition to teaching MBB and implementing it into students' lives, the course provided information on health, mental health, mental disorders, and various applications that support wellbeing. Students' portfolios included MBB practices (mapping and thought labeling, bridging awareness practices, and charts and evaluation scales); reflections on MBB maps; and reflections on professional identity, stress management, and the future from both the beginning and end of the course. Reflections produced after the course also included experiences of MBB and its meaning for each student. Some of the questions used to prompt these reflections were: Consider your existing and/or future work/occupation and your own professional identity now; how do you feel? Describe the development of your professional identity. How has your learning so far affected your professional development? How did your participation in the course affect stress management in your professional identity? How do you see yourself as a future professional?

Mind–body mapping involving two simple maps was the central MBB exercise that was used. In the first, students mapped out one stressful situation in their lives; this map often revealed an overactive I-System. In the second, students were asked

to do the same after engaging in awareness practices during which they were asked to focus on ambient sounds and their body's sensations for a few minutes. When the two maps were compared, it was common that the second map displayed a student's powerful self; the resting I-System increased their sense of self-power and resources to cope with stress, even when the stressful situation had not been eradicated. Instructions for the mapping were given orally, and the students completed the practices independently. Students' experiences of the MBB practices were discussed throughout the course both in the lectures and by e-mail.

Analysis of the students' portfolios

In determining how helpful MBB was for the students, we performed content analysis of students' reflections in their portfolios. We especially looked for those utterances that point to how useful they thought the MBB-based course was for the development of their professional identity and for their coping with stress. After identifying these utterances in each portfolio, we divided them in three categories, i.e., as very useful, useful, or not useful. For example, statements such as "During the course, I have examined myself *more profoundly and intensively than ever before* in relation to my professional identity" and "The course has given me *enormously* in terms of coping with stress" were categorized as *Very Useful*. Other statements, such as "I found drawing the MBB-maps *useful*; it was interesting to notice how fast my stress levels decreased after a short relaxation exercise" we categorized as *Useful*. We then calculated the frequencies for these values. We present the outcome of this analysis in Results section.

Narrative analysis

This study is predominantly a narrative case study. Narrative analysis (Polkinghorne, 1995; Lieblich et al. 1998) was used to analyze Leo's and Anna's (selected from a larger pool of students) reflections upon the course and particularly their reflections on the use of MBB in the course. We apply Polkinghorne's (1995) understanding of narrative analysis, where experiences, such as events and happenings, are collected as data and then analyzed to produce explanatory stories. Our analysis therefore yielded two narratives or stories. As Polkinghorne, we define narrative as a story, which is brought together by a plot by '(a) delimiting a temporal range which marks the beginning and end of the story, (b) providing criteria for the selection of events to be included in the story, (c) temporally ordering events into an unfolding movement culminating in a conclusion, and (d) clarifying or making explicit the meaning events have as contributors to the story as a unified whole' (Polkinghorne, 1995, p. 7). Similarly, Ricoeur (1990) argued that 'by means of the plot, goals, causes and chance are brought together within the temporal unity of a whole and complete action' (p. ix). The narratives constructed and analyzed here are therefore both first- and second-order accounts (Carr, 1997), consisting of the participants' accounts that are significant to them and their audience (Denzin, 1989) as well as researchers' explanations of these accounts.

We used Polkinghorne's guidelines as outlined above in plotting the two narratives which we present in the Results section. First step of the analysis was performed by the third and fourth author who carefully read all 35 portfolios. From these, exemplary data excerpts about the meaning of MBB were chosen. Second, all the authors looked at all of the data excerpts and performed a thematic analysis of the data; these findings will be discussed elsewhere (Siira et al., 2022). In this step of the analysis, two cases stood out for the reasons described previously, and the decision was made to analyze these two portfolios in more detail.

The first and second authors continued with the next steps of narrative analysis, which involved careful, holistic reading of the selected portfolios (Lieblich et al., 1998). As our aim was to present plotted narratives for each participant, we selected data excerpts from the portfolios that captured their experiences in informative and interesting ways. After all the data excerpts had been obtained, we plotted them into a narrative (Polkinghorne, 1995) to present the students' thoughts in a somewhat chronological order and with the outcome of the story, which was the impact of MBB, in mind. In plotting the two narratives, we highlighted the meaning of MBB and the course on each of the main aspects of professional identity, i.e., (1) prior experiences, (2) their views of themselves in the profession and self-confidence, (3) their self-awareness and relationships with others, and (4) their views of their professional future. Given that people construct their identities in narratives they tell (Polkinghorne, 1991; Ricoeur, 1991), arguably, when students reflected upon their learning experiences and MBB applied during the course, and constructed narratives of their professional experiences, they also began to construct and understand their own professional identities. The narratives were then interpreted and intertwined with the theoretical frames of MBB, and broaden-and-build theory (Fredrickson, 2001; Fredrickson & Joiner, 2002); both provided a relevant vocabulary for understanding why MBB was significant for the students. Finally, the third and fourth authors read the interpretations and provided comments. All authors formed individual interpretations, which were discussed until consensus was reached.

Results

In this section, we first present the overall impact of the MBB-based course on 35 students' professional identity development. Next, we highlight two cases and present Leo and Anna's narratives about the impact of MBB on the development of their professional identities. Each narrative begins prior to the MBB-based course and continues to describe the happenings during the course, highlighting how MBB affected these students' ability to cope with stress and their overall professional identity development. The data excerpts presented were extracted from their portfolios.

The impact of the MBB-based course on students' professional identity

Table 1 shows students' views of the usefulness of MBB-based course.

Table 1 Students' views of the usefulness of MBB-based course

	Very useful	Useful	Not useful
<i>How useful was MBB-based course in helping me actively work on my professional identity?</i>	<i>N = 19 (54.3%)</i>	<i>N = 15 (42.85%)</i>	<i>N = 1 (2.85%)</i>
<i>How useful was MBB-based course in helping me cope with stress?</i>	<i>N = 22 (62.85%)</i>	<i>N = 12 (34.3%)</i>	<i>N = 1 (2.85%)</i>

Most of the students found the MBB-based course significant for both professional identity development and coping with stress. Only one student felt the course did not impact their professional identity development: "I feel that the things that I have learnt in this course did not have any bigger impact to my professional identity" (#15). Our data further demonstrated that MBB had a positive impact on the students' overall professional identities: "The concrete MBB exercises and the theory of the course have been useful for developing my professional identity. Especially the MBB maps have been very useful" (#31).

Many students reported that MBB was particularly significant to the subdomains of their professional identities, such as their self-confidence, self-awareness, and future orientation; they gained insight about themselves and became more aware of their thoughts and bodily sensations:

At the beginning of the course, I was a little sceptical about the portfolio, but right now I feel like this has been a journey into myself. I see myself differently than before. I listened to my body and looked at my body sensations in a totally different way than before (#2).

Other students reported increased self-confidence and minimized anxiety:

My professional identity has grown tremendously. I had little courage in January to bring out my own views and opinions, not nearly as much as I dare now...Before I started meditating, I was especially familiar with the story chains; I could think about some past situation or different variations of the future situations for hours. I see that the tools that I have learned in the course are extremely important for my working life (#5).

The MBB also influenced students' future orientation by guiding them to imagine themselves as professionals in their future work, which allowed them to deal with fears and insecurities:

During the course I have abandoned many fears I have had towards the future. Through the practices I have profoundly pondered the expectations, requirements and fears related to my future. With MBB-techniques I have been able to face my fears and notice that many thoughts that make me uncertain are only thoughts. I can now face my future with confidence. I am sure that has had the biggest effect on my professional development (#22).

Narratives of Leo's and Anna's professional identity development in the MBB-based course

Leo: "I trust more in my future now. This will influence my professional development the most."

Leo has prior experience working in security for a long time. His workplace has established social norms and a clear hierarchy, which he often highlighted in his story as having shaped his identity. The culture of his organization is based on "commandment and orders," and this has had a big impact on Leo's behavior. For example, Leo is goal-oriented and strives to be efficient in everything he does. His weakness is insufficient flexibility, as he has grown accustomed to his routines. As a professional, Leo's ultimate goal is to develop himself as a leader, and he recognises that "understanding psychology will add possibilities to become a successful leader." Leo described the stressors at his workplace as including an "inner pressure to excel," the need to "respond to the change at any time," and "making the right decision in the circumstances where there are only bad alternatives." Leo explained that he wants to develop his coping skills further: "From the professional viewpoint, in my work, handling stress is part of identity."

After the course, Leo reflected on the mechanisms behind MBB and discovered that the identification of requirements, which is a key aspect of MBB mapping, was important for his ability to cope with stress; mapping helps identify the requirements so that the stressors do not have the same power they otherwise might. As he engaged in this process, Leo realized that simply thinking about these matters in a guided and more focused way reduced his stress:

I have learnt that stress is not due to external stressors; instead, stress is the result of breaking the requirements of the mind. People who are more stressed, set for themselves more requirements. The more you break the rules of your mind, the more stressed you are. It is possible to cope with stress by identifying these requirements and triggers of the stress. MBB offers a tool to identify the sources that influence stress. MBB is a good tool to handle the burning tasks for such people who have many responsibilities and duties that are stressful. . . It has been relieving to notice how I can drop stressful things from my mind by simple thinking.

In addition, Leo described other key components of MBB, including connecting the mind and body, paying attention to bodily senses, and thought labeling, that helped him cope better:

I am now better able to cope with stress. Finding tools to identify the source of stress makes my professional life easier. The MBB exercises also allow for a fast mind-body connection even when I am sitting at my workstation. While doing those exercises, I have reflected upon the expectations, demands and fears towards my future in more depth. I have been able to face my fears and learnt that many of my thoughts that make me insecure, are only thoughts.

MBB was especially helpful for Leo in terms of coping with fears and self-doubt. Understanding thoughts as being just thoughts was one of the central principles of MBB that allowed Leo to not give his thoughts as much relevance. Leo saw that more positive views of his professional future developed through MBB could play an important role in his professional development:

I trust more in my future now. I think that this will influence my professional development the most. The idea to live one day at a time gives the feeling of freedom from the extra stress. This trust (in God) guides the requirements of the identity system, makes depressor and fixer silent. . . . I can't even be afraid of the future anymore. My trust in the future is based on my trust in God. I see that in the same way, the MBB is based on the trust in freedom . . . I feel that MBB exercises are partially spiritual exercises.

Leo combined MBB and his faith to reap the benefits of both. He linked God with the I-System, explaining that trust in God helps bring an overactive I-System to rest in a way similar to MBB mapping. This helped him stay focused on the present moment, which is another element highlighted in MBB practices, and it also helped him have more faith in the future. Leo further highlighted aspects he learnt during the course that he found essential for his professional identity:

I have learnt to better understand people's reactions and thinking in such events where I earlier have wondered what is going on. Understanding the human mind is a capital that I can utilise in my future career.

In the above excerpt Leo says that he is now better able to understand others, contributing therefore to better relationships with others as part of his professional identity. Leo also realized that coping with stress is a useful skill for his professional development and future work:

Coping with stress will help me in my future work-related tasks. In addition, I can teach my subordinates to handle stress in a better way because I understand the sources of stress. . . I can help them by asking and putting into words such events the mental help is needed. . . In a professional sense, I want to be a better leader and foreman. MBB gives me the opportunity to develop myself and my profession through a better understanding. . . In the exercises, I have had to formulate my thoughts in a written way and to think about the reasons why I am struggling with some things. I am confident that I have enough skills to do my work. I trust that I will manage to pass yet more demanding education related to my future career based on the new things that I have learnt at uni.

MBB not only helped Leo cope with stress, but also it boosted his self-confidence, particularly related to his professional future. Moreover, Leo revealed that the course and the application of MBB triggered some thoughts related to possibly changing his profession:

During my [psychology studies], it came to my mind that I could work in some other organisation. . . I feel that I am completely ready for work life. I

have high confidence regarding my future. . . My goal is to act as a teacher in the institute that is educating leaders.

As can be seen, many of the aspects Leo wrote about are vital parts of his professional identity that underwent changes during the course.

Anna: “During this course, I have recovered my belief in my work-related identity”

At the time of data collection, Anna was a full-time student who only had short-term jobs in business and service sector, not all of which were linked to her future profession. Anna felt motivated in her field of study. As her professional goal, Anna wanted to “learn to do things as well as possible and become an expert in [her] field.” Anna reported on a previous experience with burnout, which was a turning-point in her professional and personal life and after which she “learnt to say ‘no’.” Anna claimed that stress was a part of her profession and “being late or not dutiful enough is not accepted.” The main challenge for her professional development, Anna said, was her “shyness to speak English,” which was why she wanted to go on a study exchange. Anna narrated her development thus far and set her own expectations for the psychology course; she wanted to have “better coping skills with stress after the course.” She emphasized wanting to learn about tools to help her cope with stress at work to avoid “the second burnout and possible more serious illnesses.”

Anna wrote that MBB allowed her to reflect upon herself, thereby gaining self-awareness of her own thoughts and emotions:

This course has helped me handle my emotions towards my work very much, and also with the things that are related to my life in general. Participating in this course has been an excellent example for how exploring myself and facing my fears have activated my emotions. Often when I did the maps and analysed them, tears came into my eyes. Doing these exercises and exploring myself have promoted my mental growth. In a short time, I have noticed that I have better self-confidence, and I have better trust towards my life. I have earlier experienced burnout, and through that I have weaker tolerance towards stress, and lower self-confidence.

This shows that MBB had a significant impact on Anna’s self-confidence and promoted her growth. Anna also realized that the process of overcoming stress is a long one and was empowered to potentially seek help with handling stress:

These MBB maps have dealt with important topics that have made me think deeply about many issues. I even started thinking if I should talk to some expert [about my challenges]. It has been useful to notice how much time it takes before I can feel myself again, as strong as earlier. Overcoming stress is not obvious.

Anna was of the opinion that the course had impacted her professional development:

As part of my professional skills, I have better stress coping skills. . . After the burnout, I noticed that I have tried to be perfect in my work and maybe also too hard working. Now I have begun to understand that it is ok to experience failures sometimes; to be human at work. Doing the maps for this portfolio has been the toughest experience and has brought tears to my eyes. On the other hand, crying has a cleansing effect, and I let tears come when it is time. When I had burnout, I realised that my tolerance towards stress isn't as good as I thought. Stress crept step by step, and I did not understand it immediately. After I left the job, I understood how tired and ill I was. I feel that during this course I have recovered my belief in my work-related identity while doing the maps and have, little by little, improved my health. MBB maps have provided me with an opportunity to think more profoundly about my life. That is why I started thinking that I could go to talk to the therapist.

Via MBB and the course, Anna realized that she had perfectionist tendencies in her work that caused her to feel stressed and overworked. Engaging in the MBB practices led her to remember prior experiences, and she found herself reliving the same emotions. She emphasized that while the map she created at the end of the course looked a lot like the earlier one, she was “now more relaxed” and her “self-confidence [was] recovering.” Moreover, she said, “I also feel that I will develop professionally during the next few years, and it is not reasonable to expect that my professional development would be at its best now.” The previous extracts display the impact of MBB as part of the course on several aspects of her professional identity, particularly in terms of engagement with her prior experiences, which further resulted in Anna becoming more self-confident and forming more positive views of her professional future. She further linked the course work to her professional identity in what follows:

My professional identity has developed during this course. Doing the portfolio has helped me trust myself more and has given me permission to be softer towards myself so that I feel that I am good enough the way I am. I have been earlier, and sometimes still am, too critical towards myself. My professional goal is that I want to create a good professional future alongside of actualising my potential and skills. . . My professional identity is slowly developing, but I don't think it will be entirely formed in the following years. . . I think I am strong, dutiful, have good organisational skills and will remain so also in the future. I only wish that I will never again get any mental issues.

Above, Anna returned to discuss how the course and MBB work helped her let go of some of her perfectionism. She recognized that her self-demands were too high and that she was and would be good enough as a professional. She ended on a positive note and with the hope that she would not experience burnout again.

Discussion

This study explored the role of MBB as a mindfulness-based approach to support the development of university students' professional identity during a psychology course. The study contributes to the body of knowledge on mindfulness by addressing its effects on the professional identity development of students from various academic disciplines. Our findings showed that MBB had a significant impact on most of the students with regard to the active role they played in the development of their professional identity (see Table 1). The students recounted numerous benefits of MBB, especially in terms of strengthening their overall professional identity, gaining self-awareness and self-confidence, and developing a positive future orientation toward themselves as professionals and regarding their future work. Building on our findings and Galles et al.'s (2019) observation of the increasing complexity of career development and a need for more holistic career counseling approaches, we claim that MBB has the potential to respond to this need. We explored the experiences of two university students, Leo and Anna, in detail. They were from different fields of study, and the impact the course had on them and their professional development was different. We have highlighted their authentic voices and personal experiences.

Leo and Anna had very different personal and professional backgrounds. Leo had much more work-life experience. The culture of his organization has had a big impact on Leo's behavior. Anna was a full-time student, but she also had some prior working experiences. Still, both reported that the psychology course with MBB was beneficial to them and their professional development. The following aspects of their professional identity developed: First, they had the opportunity to reflect on prior experiences of work-related stress and were able to cope with these. Second, as their professional views of themselves developed, they became more self-aware of central issues that could impact their future work, acquired new knowledge about themselves, and reported feelings of enhanced self-confidence. Our findings are aligned with the findings of Birnbaum (2008) and Park et al. (2019) who reported that mindfulness improved self-awareness and enhanced professional self-concept but their study did not include students of different academic disciplines. Also, similarly to the studies of Birnbaum (2008) and Dong et al. (2018), this study shows that mindfulness is linked to professional identity through reflective and transformative processes. Third, MBB impacted how they saw their futures as professionals, making them both more confident and optimistic. Finally, Leo's case displayed how MBB helped him with his professional relationships; he learnt to better understand people's reactions and thinking and felt a need to help others in his profession. On the other hand, Anna's case displayed how MBB helped her cope with work-related emotions; she felt she had been granted permission to experience failure at work, and this helped her let go of some of her perfectionism (see also James & Rimes, 2018).

Following, we explain how MBB as a mindfulness-based approach may contribute to the development of students' professional identities by linking the MBB framework with the broaden-and-build theory of positive emotions (Fredrickson,

2001; Fredrickson & Joiner, 2002). Arguably, the theoretical premises of MBB and broaden-and-build theory complement each other and together provide a solid basis that accounts for why the method works. While the MBB framework highlights an individual's functioning in the present moment, Fredrickson's (2001) theory provides a longer-term perspective resulting of culminating experiences and emotions. Based on our data, when students perceive their work circumstances as stressful, these perceptions tend to be accompanied by strong emotions. If unresolved, strong negative emotions can culminate in a downward spiral over time and hinder the development of professional identity. The students' attention, thoughts, and actions become significantly narrowed, and it may be particularly difficult for them to find a solution or a way out of such a situation. Like Anna, some can suffer harsh consequences, such as burnout, while others will find ways of coping that may temporarily distract them from or alleviate the negative emotions but not address the root cause of the problem, as in Leo's case.

In such downward spiralling (Fredrickson, 2001), the MBB method may help, as its central aim is to assist individuals in reaching an understanding of their own thought processes and gain self-knowledge (Gilbert, 2003). While we do not dismiss the stressful nature of many professions (Lomas et al., 2017), what leads individuals to spiral down or up is a matter of each person's own interpretation of a situation and their thought processes, what Fredrickson and colleagues (Fredrickson, 2001; Fredrickson & Joiner, 2002) call "thinking repertoires," that follow these interpretations. For example, in a study on university lecturers' coping with student feedback (Lutovac et al., 2017), the lecturers who were in a downward spiral did not receive a greater amount of negative feedback, nor was their feedback more negative than others', they simply placed greater significance on the feedback, which led to negative emotions. Similarly, Leo and Anna both experienced difficult work demands, which were due in part to how they made sense of these demands. This resembles Galles et al.'s (2019) findings that mindfulness is associated with fewer negative career thoughts among university students and higher vocational identity.

The MBB framework underscores one's own mental requirements rather than external stressors as the root cause of stress. This is the point where Leo and Anna's narratives display the importance of the MBB work that was done during the course; MBB gave them opportunities to identify and become aware of their mental processes or requirements that led their I-Systems into overdrive (Block & Block, 2007; Block et al., 2012). The process of understanding these helped calm their I-Systems; led to more positive emotions, including relief; and broadened their attention, thoughts, and actions. Anna's case was eye-opening; she realized that she may need professional help in the long run and was willing to seek it. In addition, Leo's positive orientation toward the future and his desire to help others in his profession shows how positive emotions may generate an upward spiral and enhance professional identity development.

In both cases, past downward spiralling was hindering the development of the participants' professional identities; their confidence was impaired, and their self-awareness was limited. MBB helped the participants develop their professional identities by addressing the obstacles that were challenging them, such as stress and subsequent negative emotions. Arguably, the primary contribution

of MBB to their professional identities was increased self-awareness; gaining self-awareness, meaning knowing one's self, strengths, weaknesses, needs, and emotions, has been found to be a necessary precursor to a successful professional life (Kondrat, 1999). Self-aware individuals are more likely to seek to improve and grow in their profession, which is something both of the students expressed after the application of MBB. Arguably, even just the reflection that MBB invited is sufficient for the method to merit inclusion in university studies in order to prepare students for their professional lives.

Due to the small-scale and specialized nature of this study, these findings cannot be generalized. We know little about the ways MBB can assist professional learning and development, and this study is difficult to compare with the existing body of knowledge. Our findings portray a positive picture of MBB and its impact on students; however, the impact might be different for students with different backgrounds, experiences, and future professions. Moreover, it may not be sufficiently clear at this point which aspect(s) of the course had the most influence on the students: the application of MBB itself, the reflective work of the portfolio, the overall design of the course, or a combination of these. These factors were difficult to separate, and we based our interpretations on the personal experiences of the two participants. However, the two cases we presented are somewhat typical in the sense that they could be found in any other university psychology course, and they importantly communicate what MBB could offer university students with regard to helping them cope with stress and develop their professional identities. Further studies are needed to determine the extent to which the findings of this study can be attributed to MBB.

The students' narratives show a strong link between their developing professional identities and their abilities to cope with work-related stress. While one of the aims of the psychology course was to encourage students to reflect on stress and professional identity via MBB, the students were not directly asked or taught to relate the two themes. However, both students identified the ability to cope with stress as being an essential component of their professional identity and something they wanted to develop. While most studies linking stress management and professional identity have addressed individuals at work as opposed to students, our findings highlight the need to further investigate these constructs in a higher education context. Stress can threaten one's professional identity (Berjot et al., 2013), and effective stress-management skills are critical in professional development (Dyrbye et al., 2006). Indeed, Woods and Carlyle (2002) examined teachers' identities under stress and noted that times of stress cause teachers to undergo an identity passage. The authors explained, "The identity passage is navigated through the emotions. Extreme, profound, and unsettling emotions are experienced at times of stress" (Woods & Carlyle, 2002, p. 170). Arguably, emotions here are being understood as those experienced when coping with stress and professional identity, which is why we believe that the broaden-and-build theory provides added value for explaining the links between stress management, professional identity, and the role MBB may play in both.

Implications for practice

While it is not always possible to change the demands of one's work, we can change how individuals perceive and interpret these demands. Therefore, it is essential that students are given opportunities to reflect on possible stressors related to their future professions and become familiar with tools that can help them cope with these stressors. However, enhancing resilience is not the only benefit of MBB. With regard to the shame that often accompanies stress and mental health issues, familiarizing students with methods such as MBB can improve their immediate stress responses and can shape them in terms of who they are as professionals. Thus, MBB is a mechanism that can assist students in their development. Overall, our MBB intervention showed that MBB application in a higher education context yields promising benefits, such as equipping students with better coping skills and strengthening their professional identities. In addition, for students pursuing a degree in psychology or psychotherapy, MBB and similar tools could be used in future practices with clients.

We see that the narratives of Leo and Anna presented here are also relevant for educational practice. For example, these narratives could be used in psychology courses as course reading to stimulate students' professional identity development and to illustrate the impact that mindfulness approaches and specifically MBB can have on an individual. Elsewhere, we have explored the use of bibliotherapy for the development of professional identity in the context of teacher education (Lutovac & Kaasila, 2011, 2020). Bibliotherapy evolves around the power of a third person narratives to trigger readers' reflection and allow for identification with a character as well as interpretation of own experiences in a non-threatening manner. This process of therapeutic reading, which is both cognitive and affective, can possibly alter one's interpretations of own experiences and lead them toward emotional release but also personal development and growth (Cornett & Cornett, 1980; Lenkowsky, 1987). The narratives we presented here are relatable, which would help students who read them relate their experiences and understand and cope with their negative emotions, therefore positively contributing to the development of their professional identity.

Conclusion

This study illustrated the impact of MBB approach on the development of students' professional identity. The narratives of Leo and Anna we presented here demonstrate that MBB, when applied in the university psychology course, has a positive impact of the on students' self-confidence, self-awareness, social relationships, and their professional future. These are important factors of professional identity that go hand in hand with students' abilities to cope with work-related stress. While earlier research has suggested that mindfulness-based approach be included in the career counseling and vocational guidance (Galles et al., 2019), our findings extend this notion, suggesting that MBB approach could be applied already in the initial education and training of those who will be working in psychology or related fields to prepare them for their future careers.

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Data availability The data obtained are sensitive and not openly available; however, the information about the data can be obtained upon request.

Code availability Not applicable.

Declarations

Conflict of interest Sonja Lutovac's research was supported by the Academy of Finland (Grant numbers 307672 and 332232). Academy of Finland exercised no oversight in the design and execution of the research or the writing of this article. Virva Siira is affiliated with the Finnish Association for Mental Health and has a professional collaboration with Department of psychology education and educational science at the University of Utah and founders of Mind–Body Bridging. These institutions and their members have exercised no oversight in the design and execution of this research or the writing of this article. The authors declare they have no conflict of interest.

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