Embodied learning through mindfulness: Encouraging a holistic approach to adult learning

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ABSTRACT

Adult education and learning is a field of study devoted to transformation, both for the individual and for society at large. The academic literature related to adult education and learning reveals the dominance of a cognitive, rational approach to how learning takes place in Western culture. A holistic approach to adult learning, which includes the body and emotions, is often marginalised despite there being growing support for inclusion of the latter. This article reports on a research study that examined learning during a mindfulness-based stress reduction (MBSR) programme for adults offered in Cape Town, South Africa. Semi-structured interviews were used to collect the data and they were analysed using transformative learning theory. It was found that mindfulness inspires embodied learning, which creates a new awareness of the body and emotions. The data showed that embodied learning often motivated new actions among adult learners, indicating transformation. The findings suggest that embodied learning through mindfulness should be included in adult learning settings to complement rational, cognitive knowledge. This article proposes that embodied learning should be more prominent in theory-building related to adult education and learning. This will promote a more holistic approach to adult education and learning.

KEYWORDS

embodied learning; mindfulness; transformative learning; adult education and learning

Introduction

Adult education and learning is a field of study devoted to transformation, both for the individual and for society at large. Social justice is a prominent theme in adult education and learning and the academic literature reveals that social justice in adult education addresses questions such as: 'What growth?; Access for whom?; and Access to what?' (Boyadjieva & Ilieva-Trichkova, 2017:100). To answer these questions, authors compare factors such as education level, occupation status, gender and age to measure access to adult education settings (Boyadjieva & Ilieva-Trichkova, 2017). Boeren, Nicaise and Baert (2010:57) expand this view to include sociocultural and psychological factors such as attitudes, confidence and motives. They refer to these sociocultural and psychological factors as factors that influence social justice in adult education and learning.

Supporting this perspective, John (2016) illustrates how emotions such as trauma and fear can impede the learning process. This can be interpreted as a barrier to learning, particularly in an African context, and highlights the need to include emotions in adult education and learning settings, which this article aims to advance with the examination of embodied learning through mindfulness. Furthermore, it aims to expand the view of equity, fairness and social justice in adult education by proposing that there is an inequity in how learners are being taught in adult education and learning settings, an inequity which needs to be examined. In these settings, the focus is often on activities of the mind rather than those of the body and emotions, resulting in an imbalanced and narrow approach to adult education and learning. This prominence of the mind over the body indicates a Western perspective of the process of learning and marginalises other approaches to learning, such as embodied learning.

This article sets out to show that a more holistic approach to adult education and learning, which includes both the body and the mind, is necessary to promote a more inclusive approach to adult education and learning. Qualitative data were collected through semi-structured interviews and transformative learning theory was used to analyse and theorise the data.

Literature review

Mindfulness

The concept of mindfulness and the MBSR programme were introduced to, and made popular in, Western society by Jon Kabat-Zinn in 1979 (Kabat-Zinn, 2013). Kabat-Zinn (2013:xxxv) defines mindfulness as 'the awareness that arises by paying attention on purpose, in the present moment, and non-judgementally'. Mindfulness can be a difficult concept to grasp, but, essentially, it may be described as a particular way of paying attention, without judgement, to what is arising in both the mind and the body at a given moment. It is examining oneself in the spirit of enquiry and understanding (Newman, 2008).

Kabat-Zinn (2013) confirms that, when fostering mindfulness, a learner is encouraged to observe their own experience, including their thoughts and emotions. Usually, meditation and yoga practices are used to foster mindfulness and, fundamentally, mindfulness is based on Buddhist principles. Unfortunately, according to Kabat-Zinn (2011), the Buddhist origin of these practices alienated many people in Western society; therefore the secular identity of mindfulness as taught during the MBSR programme was intentionally developed to ensure its appeal to people from a variety of cultural and religious contexts.

However, removing mindfulness from its cultural context has been criticised in the academic literature. One of these criticisms of mindfulness is that, in Western culture, cognitive knowledge is emphasised, whereas mindfulness as propagated by Kabat-Zinn comes from a culture where subjective experience is regarded as a source of knowledge (Chiesa, 2013). Panaïoti (2015) concurs with this view and postulates that, although mindfulness is a valuable practice for modern society, strong Western ideological roots have a propensity to disregard alternative types of knowledge. Rapgay and Bystrisky (2009:150) validate this view by stating: 'In the field of research [into] mindfulness, there is an increasing attempt to modify the concept of mindfulness to configure with cognitive theories and models.'

Since the introduction of mindfulness to Western society, it has inspired hundreds of research papers and more than a thousand books (Kabat-Zinn, 2011; 2013). Kabat-Zinn (2013) notes that there were 1 500 books about mindfulness in 2013, and that this number was growing. Furthermore, the literature review also revealed that research focused on mindfulness is mostly quantitative in nature, with very few qualitative studies to be found. Kerrigan et al. (2011) report similar findings. Therefore, the present study, with its qualitative focus, generates the type of knowledge that is uncommon in academic papers focused on mindfulness.

In addition, although mindfulness is a widely researched concept, the literature review showed that mindfulness is generally not explored and analysed in terms of adult education and learning. Only a few studies consider mindfulness in education; these include Hyland (2009), who investigates the 'therapeutic turn' in adult learning, while Orr (2002), Berila (2014), and Wagner and Shahjahan (2015) explore mindfulness through the theoretical lens of critical pedagogy. Others, such as Shapiro, Brown and Astin (2011), illustrate the potential for mindfulness to inform transformative learning theory. The literature review showed that, although there has been some exploration of mindfulness in education, the academic literature is very limited and points to the need for further research and theory-building.

In support of theory-building focused on mindfulness in adult education and learning, the study that this article is based on explored mindfulness in terms of transformative learning theory, as suggested by Shapiro et al. (2011). The academic literature, as referred to in this section, indicated clearly that observation and awareness of experience is central to mindfulness and also prominent in transformative learning theory. Consequently, mindfulness has the potential to inform transformative learning theory.

Mindfulness and transformative learning theory

At present, there are many approaches to, and theories on, adult education and learning. One of the prominent theories on adult education and learning is the theory of transformative learning as developed by Mezirow (1981). Since its formulation, as highlighted in the academic literature, the theory has inspired numerous research articles that further explore and analyse the theoretical assumptions related to this approach to adult education and learning.

In transformative learning theory, Mezirow (1994:222–223) defines learning as 'the social process of construing and appropriating new or revised interpretation of the meaning of one's experience as a guide to action'. The premise of the theory is that it is the experience of the adult learner that becomes the foundation for cognitive processes of reflection and transformative learning, which will then inspire new actions, thus indicating transformation (Mezirow, 1993; 1995). Mezirow (1981:7) believes that adults have a natural predisposition to proceed to new perspectives, judged to be a 'quest for meaning', which he likens to the learning process. Mezirow acknowledges the influence of emotions, but the primary focus of the learning process is on cognitive, rational processes of reflection (Mezirow, 2000; Taylor, 2000; Ntseane, 2011).

Meaning is considered an interpretation of experience, and, to shape meaning, Mezirow (1991) considers that meaning schemes and meaning perspectives are engaged. 'Perspective transformation' refers to the manner in which these meaning schemes and perspectives are adjusted and changed. 'Meaning schemes' signifies specific beliefs, value judgements, knowledge and emotions that regulate the way in which individuals interpret specific experiences and their behaviour and opinions. Meaning schemes are modified regularly and, combined, they form meaning perspectives that represent an individual's beliefs, theories, viewpoints and evaluations. Meaning perspectives can be equated to habitual expectations, inspired by beliefs, assumptions, cultural and social norms as well as ideologies; they are used to control what is observed, comprehended and memorised (Mezirow, 1991; Taylor, 1998). Meaning perspectives are employed to organise, interpret and give meaning to an experience. If an experience is integrated into the perspective, it strengthens the perspective or slightly alters it should there be some discrepancy from preceding experiences. If an experience cannot be integrated into the meaning perspective, it is either rejected or it transforms the meaning perspective to include the new experience (Taylor, 1998).

Awareness of the experience of the body and emotions as encouraged through mindfulness training and the MBSR programme can be useful when exploring transformative learning theory and the transformation of meaning perspectives. Scholars such as Orr (2002) remark that intellectual insight alone is not enough to break the attachment to previous meaning perspectives, but experiential awareness of false assumptions and views creates the opportunity for transformation. Duerr, Zajonc and Dana (2003) support the view that transformation that is pursued through cognitive methods alone will not result in a deep level of transformation. In addition, they reason that transformative learning is too focused on rational thought. Awareness of the body and emotions through mindfulness training creates

the aperture to address this critique, and Orr (2002) asserts that cultivating mindfulness can encourage this experiential awareness.

The academic literature calls for a more holistic approach to transformative learning theory to be explored further. For instance, Taylor (2001:220) states that 'much more attention needs to be given to the emotional nature of transformative learning' and asserts that emotions are a prerequisite for rationality to occur. The present study responds to this call and sets out to expand further the scope of transformative learning theory to include other forms of knowing by promoting an awareness of experience. Furthermore, the study explores whether mindfulness promotes conditions that can aid in transformative learning through embodied learning.

Mindfulness and embodied learning

It is evident from both the academic literature and the MBSR programme curriculum that, during mindfulness training, much of the focus is on fostering a new awareness of the body and emotions (Kabat-Zinn, 2011). Cebolla et al. (2016) confirm that body awareness is central to mindfulness, but is also central to embodied learning. Embodied learning is described by Merriam, Caffarella and Baumgartner (2007:190) as 'learning through the body'. Others, such as Freiler (2008:40), assert that 'embodied learning involves being attentive to the body and its experiences as a way of knowing'. Emotions are included in embodied learning and, according to Merriam et al. (2007:195), 'emotions are embodied and thus are an integral component of this type of learning'. Since the academic literature shows that both mindfulness and embodied learning focus on an awareness of the body and emotions, it is concluded that these types of learning are closely associated.

The current debates in the academic literature on adult education and transformative learning theory reveal that, although alternative perspectives are present in the literature, a more holistic approach to adult education and learning continues to be marginalised. Embodied learning is often absent from adult education and learning, and embodied experience is frequently ignored. Merriam et al (2007) confirm that, in Western society, adult education and learning focus on cognitive processes. However, feminist and anti-racist theorists such as Michelson (1996; 1998) explore the domination of cognitive processes in learning. Michelson (1996; 1998), for instance, examines learning through the body and suggests that the moment of learning is located in the bodily and emotional experience, not in the cognitive processes pertaining to experience, which is often reflected in adult education and learning theories. This focus on cognitive processes of learning is regrettable in a field of practice focused on fairness, equity and social justice – in particular because authors such as Orr (2002), Wagner and Shahjahan (2015), and Channon, Matthews and Khomutova (2018) posit that embodied learning can empower people and challenge dominant ideological beliefs pertaining to learning.

In the light of the views expressed by these authors, it can be argued that a Western perspective on learning has oppressed the body and emotions, prompting an inequality in how learning takes place in adult education and learning settings. This is also evident in the theoretical

framework based on transformative learning theory. In transformative learning theory, the emphasis is mostly on reflection and rational reasoning that will inspire new actions, revealing a Western perspective on learning. Yet, embodied learning is re-emerging in adult education and learning. Scholars such as Clark (2001), Amann (2003), Cohen (2003), Dirkx (2008), Shahjahan (2015), Wagner and Shahjahan (2015), and Channon et al. (2018) acknowledge the connection between the body and learning.

Taylor (2001; 2008) and Dirkx (2008) propose that a holistic approach to education should include emotions in learning and represent ways of knowing that can challenge the dominance of reason as represented in a Western perspective on learning. Similarly, Clark (2001) mentions that embodiment is the most complete way to engage people in the learning experience, but that recognising the body as a source of knowledge is not in line with the Western approach to education. This acknowledgement in the academic literature of the need to challenge Western perspectives on learning indicates a need for theoretical work and the creation of new knowledge, with which the present article converges. In addition, including embodied learning through mindfulness in transformative learning theory has the potential to constitute a more holistic approach to adult education and learning.

Research design and methods

Research site: A South African mindfulness-based stress-reduction programme

The eight-week MBSR programme was an appropriate research site for a study focused on mindfulness in adult education and learning because, according to Kabat-Zinn (2011), the MBSR programme was developed as an educational programme. Its educational orientation and the adult participants support the view that the MBSR programme can be included in the field of adult education and learning. Furthermore, it has a curriculum and specialised content focused on cultivating mindfulness, which further supports this perspective.

At the time when the data for this study were collected, MBSR was the only mindfulness-based programme to be offered regularly in South Africa. The participants in the study were recruited from Cape Town and surrounding areas because there were more facilitators in this area at the time. This meant that more MBSR programmes were being offered and, as a result, more potential participants were available for the study. After permission was given by the chairperson of the Institute for Mindfulness South Africa (IMISA), the four facilitators who were based in Cape Town at the time were approached for permission to collect data from the groups that they were facilitating. Three facilitators gave their consent, while one facilitator refused.

The participants

Data were collected from 30 adult learners who voluntarily participated in a semi-structured interview process. The participants were presented with an information sheet about the research study and asked to sign a consent form prior to participation. Pseudonyms were used to ensure

the anonymity of the participants. A limitation of this study was that adult learners were educated and middle-class, which limited the potential of this study to be applicable to the wider field of adult education and learning in a South African context. This is partly because many adult learners could not afford to participate in the MBSR programme, as the programme fees varied between R4 000 and R5 600. At present, MBSR is a private adult education programme managed by the individual facilitators. No bursaries were available at the time that the research was conducted. Another limitation of this study was the fact that the majority of the participants were white, with only two Asian participants. There were no black participants. Therefore, the adult learners on the programme were not a representative example of wider South African society.

Methods and methodology

Pre- and post-course questionnaires were distributed to the participants in order to collect their demographic details and enable purposive sampling in respect of the interviews. Fifty-five participants completed the pre-course questionnaires, but only 49 completed the post-course questionnaire. Only participants who completed both the pre-course and post-course questionnaires and indicated that they had completed six out of the eight weekly sessions were considered for an interview. A qualitative approach was used to collect the data which provided the basis for the findings in this article, because (as highlighted in the literature review) there is a need, in the academic literature related to mindfulness, for more qualitative data about mindfulness.

Semi-structured interviews were used to collect the data. A semi-structured interview schedule was developed, guided by a thorough literature review, the theoretical framework, and a review of interview schedules used in previous studies on mindfulness, such as those of Hunter and McCormick (2008) and Duerr (2004), who also used semi-structured interviews to collect data for studies focused on mindfulness. All the interviews were digitally recorded and transcribed for analysis. A substantial amount of data was collected; consequently, an analysis method that could incorporate this was required. A thematic analysis was identified as suitable for working with such large sets of data. The analytic process involved the identification of themes, which were then employed to theorise the data in terms of mindfulness in relation to embodied learning and transformative learning theory.

Findings and discussion

Embodied learning: The body

The findings revealed that 15 adult learners were not aware of their bodies prior to mindfulness training, and eight became more aware of their bodies during mindfulness training. This lack of awareness suggests that adult learners either did not notice the body before attending the MBSR programme or did not deem it important to pay attention to their bodies. This confirms the view of authors such as Kabat-Zinn (2011) and Freiler (2008:38), who assert that 'most

humans, in general, have become inattentive to the potentiality of learning through the body'. One of the participants, Werner, echoed this statement, saying:

> What I did find is that we are so conditioned not to pay attention to our bodies, but when I do a meditation I become more aware, physically, of strains on my body. I realised I don't pay enough attention to my body. I learned to pay attention to my body.

By recognising 'that we are so conditioned not to pay attention to our bodies', it seems that Werner, albeit unconsciously, identified a meaning perspective as described by Mezirow (1991) which controlled what he perceived, understood and remembered. Rochelle was another participant who was oblivious of her body before the MBSR programme. She described the process of attending to the body through mindfulness as 'coming back to my body', stating:

> For me (pause) what I took from the eight weeks and that I keep bringing into my life and reminding myself of in my day-to-day moments, was definitely the sense of coming back to my body.

Other participants, such as Garth and Michaela, did not provide detailed accounts of their newfound body awareness. Garth simply commented:

> I would say I am more aware of my body.

Michaela noticed:

> There was this massive shift back to the body.

Yet, other participants also experienced an awareness of bodily pain, which created a sense of concern that they were not focused on what their bodies were communicating. Sharon, for instance, was so disconnected from her body that she did not even realise that she experienced pain. This is what she said:

> During the body scan I realised that I have lower back pain. I never noticed it before.

Ciska had a similar experience:

> I realised that my body hurt a lot. I realised that after the first session. I became aware of the pain.

Unlike these two participants, who realised that they had been ignorant of their body prior to the MBSR programme, Nadia thought she had always been aware of her body. Yet, during the MBSR programme, she learnt what body awareness really entails. In her words:

> I was not very aware of my body before. After mindfulness I just realised I thought I was in touch with my body but I wasn't at all.

These extracts indicate embodied learning through mindfulness. They further show that knowledge is available through the body, and that, as Norris (2001) proposes, is in itself valuable. It suggests that it is not necessary to subject this kind of knowledge to cognitive processes for it to be deemed knowledge. Yet, cognitive processes of reflection and new actions are central to transformative learning theory as developed by Mezirow (1981; 1995; 1998). Consequently, it was important to explore how embodied learning and a new awareness of the body, as described in this section, triggered reflection and new actions.

Embodied learning: Reflection on the body

The findings revealed evidence that embodied learning through mindfulness, and more specifically a new awareness of the body, had the potential to initiate cognitive processes of reflection. Fifteen adult learners, for instance Ida, recognised that there was a connection between the body and the mind. She observed:

> Whatever takes place in your body. You must look at that. There is a mind–body connection.

Lydia made a similar remark:

> I realised you have to be very conscious of what is happening in your body. And through awareness, you will have physical symptoms, which will trigger this conversation within you.

Michaela related:

> [W]hat started to grow within me is to see and to start feeling what I am feeling in my own body. And to pause then and to figure [it] out.

The statements above indicate that embodied learning through mindfulness has the potential to encourage a new awareness of the body and to inspire cognitive processes of reflection. Yet, Mezirow (1993:146) argues that transformative learning is fully realised only when there is evidence of new actions that emanate from learning. There was in fact evidence of new actions that were related to reflection on embodied learning, particularly when adult learners became aware of pain. Monique, for instance, became aware of pain in her back and said this about it:

> I realised how skew I hold myself and how much less pain I will have in my back if I just think about it and adjust my posture. That was quite useful. You just learn to ground yourself and that was quite amazing to me that I could get

> rid of my back pain by just noticing that I was holding myself very strangely. I was always vaguely aware of my back pain but I didn't do anything about it.

In this extract, Monique describes how, prior to the MBSR programme, she was holding herself in a way that caused her pain without even realising it. Learning to be aware of the physical body and its experiences stimulated a process of reflection pertaining to the pain. Once she determined the reason for the pain, she was able to adjust her posture, indicating that she took action to ease the pain.

Willem's experience was similar to Monique's. He said:

> I realised that because of the way I sit at work my back is in spasm all the time. And just by doing that little bit of yoga I realised in what a terrible state my body is. At work I actually got a new chair so that I don't sit that way anymore and now my back feels better. So I actually started listening to my body. I actually knew that my back has been aching for a long time but I just didn't do anything about it, but this course made me aware of it and your body also tells you when something isn't right.

Both Willem and Monique indicated a new awareness of pain, and responded to it differently as a result of this new awareness. They cognitively explored the experience, which suggests that they then reflected on it. They identified a suitable action related to the experience of pain, which therefore implies new action related to embodied learning through mindfulness. In other words, these adult learners were aware of, and considered, the needs of the body, which ultimately guided their ensuing actions.

Other adult learners, such as Gerard, also recognised, for the first time, that they had to consider the needs of the body. Gerard explained:

> So this course came at the right time. I am more aware of my health, I am more aware of my body and I am more aware that I should take things easy. But not bring everything to a grinding halt. I just have to take care of myself.

Gerard realised, as a result of embodied learning through mindfulness, that he should change his actions and take better care of himself. Like the others, he learnt that it is important to pay attention to the body and its needs, or to consider the body, and that it is a source of knowledge that can provide him with valuable information about himself which could then guide his actions. The evidence indicates that it was embodied learning, rather than cognitive learning, that inspired new actions. However, it is important to note that embodied learning was not limited to awareness of physical sensations in the body, but that a new awareness of the body also sparked a new awareness of emotions for adult learners who participated in the study.

Embodied learning: Emotions

An awareness of emotions is considered a component of embodied learning in the academic literature, as Clark (2001) and Merriam et al. (2007) confirm. The findings brought to light many similar examples of how adult learners on the MBSR programme learnt to be aware of the experience of their bodies, or, in other words, embodied learning through mindfulness, and as such realised that they were experiencing stress, anger or other emotions. The evidence indicated that 22 adult learners then connected bodily sensations to their emotions, thereby learning about themselves, because previously they were unaware of these emotions. For instance, Benjamin became aware that he experienced stress and anxiety in his shoulders. This is what he pointed out:

> Well, I feel it in my shoulders when I get anxious or stressed. So I find I can then consciously relax it.

The data from the above extract show that mindfulness training enabled an adult learner to identify his embodied emotions. Other adult learners also noticed that they could feel emotions such as stress and anxiety in their bodies, yet they did not feel it specifically in their shoulders. Lizelle, for instance, felt anxiety in her stomach. She commented:

> I am a bit more aware of how emotions manifest in my body … for example, anxiety I can feel in my stomach.

Kerisha associated feeling stressed with heart palpitations, stating:

> Like physiological [indications,] you can feel stress coming. I found myself quite stressed and experiencing heart palpitations.

Like Kerisha, Lydia linked emotions to the body, saying:

> When I get into a heightened emotional state, I can see what is happening with the sensations in my body.

Nadia also observed a physical reaction to her emotions. She realised that she was not only not particularly aware of her emotions before starting the MBSR programme, but that she was also ignoring her body and her emotions. She explained it in this way:

> I realised that I am not in touch with my body. I will experience frustration and I will just tell myself to get over it. That body scan was a reality check and I realised I wasn't in touch with my body. What I also learned is that I do not allow myself to experience pain, not physically or emotionally.

This extract from the interview testifies to Nadia's acknowledgement that she used to ignore her body and emotions, especially when she was experiencing pain. Mindfulness

training prompted embodied learning and Nadia then realised that simply ignoring the body was not beneficial and that it was time to become more aware of the experience of the body and of the knowledge that is located in the body. Nadia was not the only adult learner who ignored her body and her emotions prior to the MBSR programme. Marli made a similar statement and related that she had learnt to be aware of the experience of the physical body as well as of embodied emotions. In her words:

> And you can't ignore it anymore because I could feel it in my body as well[;] and that is why mindfulness is important because you cannot just deal with stress cognitively. I embody my stress so I have to deal with the body.

In the above testimonies, the adult learners described how they learnt to recognise the physical effect of emotions in the body, which indicates embodied learning through mindfulness. There were also adult learners who referred to a new awareness of their emotions that they had not previously recognised, although they did not necessarily refer to the physical sensations associated with the emotion. For instance, Julia commented:

> In general I noticed more negative emotions but sometimes there were positive emotions. It helped me to see there can be positive emotions. Not everything is bad. There can be good things as well.

Like Julia, Ella did notice positive new feelings as a result of mindfulness; but, for her, it was mostly a matter of recognising unpleasant emotions. She described it in this way:

> I would say negative emotions like anxiety and guilt. There were also positive things like feeling a sense of empowerment. Not sure if that is an emotion. Calmness at certain points but noticing the dominant unhealthy emotions.

The findings confirmed the perspective of Clark (2001) and Merriam et al. (2007) that, during embodied learning, emotions are often central. The findings also indicated that embodied learning through mindfulness can be central to transformative learning theory, as it can be the basis for reflection, which may trigger perspective transformation. They also confirm the view of Mälkki (2010) that emotions indicate assumptions that require reflection, which will be referred to in the discussion of emotional reflection in embodied learning.

Embodied learning: Reflection on emotions

The findings of the study showed that embodied learning, although in itself significant, often triggered cognitive reflection. Mezirow (1981; 1995; 1998) refers to the cognitive processes of reflection as pivotal to the process of learning. Therefore, it had to be considered how embodied learning and a new awareness of emotions influenced the cognitive processes of knowledge construction and how it may have inspired new actions.

Eighteen adult learners described how embodied learning through mindfulness triggered reflection – including Julia, who referred to herself as anxious. She noted:

> I found it helpful in terms of my anxiety. I am definitely (pause) it has helped it. Whereas before I would get myself worked up into a flurry of panic, I will still worry about things but you know I am sort of (pause) or I manage to be more calm and rational [about] worries. I will ask the question[s]: Why am I feeling this way? What am I so worried about?

In this extract, Julia describes how she engaged cognitively with her emotions through a process of reflection. Once she was aware of anxiety, she questioned the reason for the anxiety, creating the possibility of additional new knowledge about the emotion. She recognised that she had to stay aware of her emotions and deliberately engage with emotions in a different way than before the MBSR programme, which seemed to have benefitted her. She explained:

> I can now get myself sort of out of it whereas before I would harp on the emotion and fall into a depressed or demotivated state. Now I will get angry or irritated but it will last for maybe a day or two and then I will get over it, whereas before it would last much longer and I would hold on to it without letting go.

Julia admitted that she used to stay angry or irritated for days on end. However, it seemed that a new consciousness of emotions and the reflection that followed helped her to let go of these emotions.

Marli was another adult learner who illustrated in detail the process of embodied learning and reflection on it. She worked at a well-known university, where she was in charge of the debt-collecting department, a position that caused her considerable stress. She gave a detailed description of the new way that she worked with embodied emotions and how this had changed her:

> I found that initially it wasn't such a pleasant experience but later on I could feel, okay, here I feel my stress, and just be curious about that and what can I do about it. So, ja, it definitely helped with the stress. I got more in touch with my body and my breath and what I did was, if parents came to me, they would schedule a meeting, like every half an hour, especially during registration time. So it was hectic. And then I would, before they walk into my office, I would take a breath. Just that type of thing to make sure that I will be present in a way. And when they are talking to me, listening to what they say. Not thinking I can't help you, I can't help you. So this is how the mindfulness has helped me with my stress. And I found that helped me to get through the day in those stressful times.

Although Sharon did not refer to anxiety or stress in the same way as Julia and Marli, she also described how mindfulness enabled her to identify her emotions and then further explore the reasons for the emotion through reflection. Or, in Sharon's words:

> Just kind of finding out what is going on.

She elaborated:

> So I kind of, when I am angry at a friend I say to myself, okay, am I judging that person? And if so, why? Does it relate to the past? What is happening? And then I am able to say okay and it really does help me. I am a very impulsive person so it helps me to almost … not to be so impulsive.

Sharon clearly described the process of reflection on emotions that helped her to create additional new knowledge. She reflected on the source of an emotion, questioning and considering her own response, which helped her to gain understanding. It appeared that this new understanding also helped Sharon not to act so impulsively, indicating new actions. Sharon was not the only participant who acted differently towards others. Christine also noticed that she was acting differently towards her children and her husband. She stated:

> I don't raise my voice to my children nearly as much as I used to, only occasionally. I haven't had a rip-roaring fight with my husband in at least a few months.

She elaborated:

> Being able to feel emotions and not kind [of] draw away from them and discovering that they are less overwhelming that way. With mindfulness I worked with emotion and I can see that there is always something behind the emotion that you need to deal with.

Christine's realisations lead one to conclude that, as a result of embodied learning through mindfulness, she was able to feel her emotions. When she was able to stay with the awareness of the emotion, she realised that she had to engage cognitively with the emotion in order to work with the reasons for the emotion. She noted that 'there is always something behind the emotion that you need to deal with', suggesting that she was now dealing with whatever reason was causing the emotion, whereas previously she did not. Engaging with her emotions in this way changed the way she acted towards her children and husband.

The adult learners clearly demonstrated that there is a relationship between embodied learning through mindfulness and cognitive processes of reflection that can inform transformative learning theory. Adult learners often reflected on embodied learning, especially on a new awareness of emotions, as they wanted to understand emotional experiences. Embodied learning therefore created new knowledge, which then prompted reflection and consequently created additional new knowledge and resulted in new actions.

In transformative learning theory, awareness is considered as the first step towards transformation, but Mezirow (1995) does not consider the new awareness of experience, as illustrated by embodied learning through mindfulness, to be learning. According to transformative learning theory, the moment of learning is located in cognitive processes of reflection, while new awareness of the body and embodied emotions is not considered learning. Mälkki (2010) highlights the role of emotions so as to indicate assumptions that require reflection, but the new awareness of emotions in itself is not considered learning. The data gathered in this study support the perspective that emotions can trigger cognitive reflection and learning, but they also show that a new awareness of the body and emotions, in itself, is significant and can be considered to be learning.

By including embodied learning in the process of transformative learning, a more holistic approach to transformation becomes possible. Some scholars, such as Amann (2003) and Cohen (2003), advocate the inclusion of the body in transformative learning, but the body in relation to transformative learning theory remains largely unacknowledged and under-investigated. Dirkx (2008) and Taylor (2001) propose that emotions should be included in a more holistic approach to education, but they do not recognise the role of the body. The present study of the role of mindfulness in the process of learning provided evidence that a holistic educational approach, aimed at transformation, should include both the body and the emotions in the process of learning, and that mindfulness can support such an approach.

Conclusion

The findings of this study highlight the fact that the adult learners were in the habit of ignoring both their bodies and their emotions, signifying a shared-meaning perspective. This suggests that the experience of the body is not a site for learning and knowledge creation. This meaning perspective is typical in a Western society and indicates a Western perspective on learning. Mezirow (1991) claims that meaning perspectives will often result in experiences that do not correspond to the habitual belief being disregarded. The findings illustrate that the adult learners were in the habit of taking no notice of their bodies and their embodied emotions. However, embodied learning through mindfulness changed this habit, indicating the potential to transform a meaning perspective. These findings, therefore, support the academic literature which proposes the theoretical notion that learning should include both the body and embodied emotions.

It was found that other forms of learning, such as embodied learning through mindfulness, should be included in adult learning settings to complement rational, cognitive knowledge. For instance, mindfulness should be introduced in teaching and training programmes for adult educators at South African universities. Currently, the University of Cape Town has introduced mindfulness in its MBA programme, while Stellenbosch University also offers a postgraduate certificate in mindfulness aimed at developing facilitators who can offer the MBSR programme. However, these programmes reach a limited number of students and

more programmes, such as the MBSR programme, should be offered at universities and other further education and training institutions throughout South Africa.

Encouraging mindfulness in adult training and education settings will make embodied learning through mindfulness more accessible to the broader South African society. Authors such as John (2016) highlight the emotional barriers to learning in South Africa, barriers that are rooted in difficult emotions. As illustrated in the findings, embodied learning through mindfulness creates the aperture through which to address difficult emotions and, consequently, it has the potential to moderate emotional barriers to learning. However, further research aimed at exploring the potential of embodied learning through mindfulness to address emotional barriers to learning is required, particularly in an African context.

In conclusion, this study supports the view of authors such as Orr (2002), Dirkx (2012) and John (2016), who call for a more holistic approach to adult learning. Furthermore, it alludes to what Wagner and Shahjahan (2015:246) describe as a need to challenge 'the underlying epistemological foundation of the educational system', which is based on the mind dominating the body. Although there is some evidence of current debates on embodied learning in the academic literature, very little evidence exists of practical suggestions as to how to introduce embodied learning in the adult education and learning environment. Berila (2014) and Wagner and Shahjahan (2015) state that mindfulness represents a way of introducing embodied learning into adult education and learning settings, and the present study supports this view. Furthermore, it confirms the argument that, through mindfulness, embodied learning can be introduced in an adult education and learning environment in order to create the opportunity for a more inclusive approach aimed at transformation for both the individual and society at large.

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