

# Perceived changes in the self following an MBCT protocol: a qualitative study to inform further theory development

Philippine Chachignon, Emmanuelle Le Barbenchon, Carine Finiels, Marion Martinelli, Lionel Dany and Sylvia Martin

## Abstract

**Purpose** – Mindfulness-based cognitive therapy (MBCT) is a flagship intervention addressing depressive disorders that are distressing for the self and socially impairing. While psychological processes such as self-regulation, meta-awareness and self-transcendence account for its efficacy, these are often examined in isolation, and the social aspects of the self remain under-researched. Moreover, theoretical paradoxes in mindfulness – simultaneous strengthening and deconstruction of the self – call for more holistic and qualitative approaches. The purpose of this paper is to explore how MBCTs are experienced by individuals to inform self-related and social mechanisms.

**Design/methodology/approach** – This study explored these dynamics through ten post-interventional semi-structured interviews focusing on changes in psychological, physical and social dimensions of the self. Two independent coders used thematic analysis methods to blindly assess the verbatim transcriptions and extract themes. Thematic analysis revealed four main themes: 1) evolution of awareness, 2) evolution of the sense of self, 3) evolution of the connection to others, and 4) negative aspects, with the sense of self predominating. Participants reported that social connectedness evolved alongside differentiation, suggesting that MBCT strengthens intrapersonal self-regulation more readily than social identity processes, which are particularly impaired in depression.

**Findings** – A thematic content analysis revealed four main themes associated with changes involved in the MBCT: 1) evolution of awareness, 2) evolution of the sense of self, 3) evolution of the connection to others, and 4) negative aspects. Theme 2 was significantly predominant. A focus on theme 3 reflected participants' common discourses of differentiation that coexisted with social connectedness, and a lesser importance of this theme compared to the first two.

**Research limitations/implications** – The findings contribute to theory development by showing that, despite mindfulness being associated with empathy and prosocial behaviors in the literature, the social dimension of the self remained subtle and ambivalent – torn between processes of differentiation and social identification – highlighting a theoretical blind spot and the need to explicitly address social identity in mindfulness-based interventions. These insights illuminate the complex interplay between individual and social dimensions of the self in MBCT and suggest avenues for enhancing both therapeutic and social outcomes.

**Practical implications** – The findings suggest that MBCT protocols could benefit from explicitly integrating social dimensions of the self which are often overlooked. Clinically this means adding modules or exercises that target social belonging and connection to others enhancing social support for depressed patients. Recognizing the limitations of MBCT for certain personality profiles calls for more personalized interventions. Addressing individual and social needs more effectively could improve treatment adherence and optimize overall therapeutic outcomes.

**Social implications** – This research highlights the crucial but underexplored role of the social self in mental health within mindfulness practices. It reveals a paradox of increased self-awareness coupled with limited social connection among depressed patients. Beyond clinical settings, these findings encourage rethinking group interventions to foster belonging and social identity recognition. Promoting

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the “social cure” through mindfulness could reduce social isolation, strengthen support networks and ultimately help prevent depressive relapse, producing significant societal benefits.

**Originality/value** – This study offers an original qualitative exploration of the social self-experience in MBCT an area rarely investigated. It challenges classical models by showing that an enhanced sense of self does not necessarily coincide with improved social connectedness. The holistic change-focused approach reveals a fundamental theoretical paradox and suggests integrating social identity processes more explicitly in interventions. This perspective advances the psychosocial understanding of mindfulness mechanisms and proposes innovative directions to enhance therapeutic protocols.

**Keywords** *Self, Social self, MBCT, Depression, Social connectedness, Differentiation*

**Paper type** *Research paper*

## Introduction

### *Context and challenges*

In an era promoting both personal freedom and social connectedness, individuals suffering from anxiety and depressive disorders often face significant challenges, preventing them from accessing personal development and success (Adams *et al.*, 2019). To address these challenges, mindfulness-based interventions (MBIs) – in which mindfulness serves as the core therapeutic component – represent leading approaches that position the self as central to the well-being process (Britton *et al.*, 2021; Shireen *et al.*, 2022). Mindfulness can be defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 2009, p. 4). The effectiveness can be attributed to regulatory and monitoring mechanisms – including emotion regulation, attentional control and acceptance – as well as to meta-awareness processes such as bodily awareness, shifts in self-perspective, dis-identification and self-transcendence (Burzler *et al.*, 2019; Coffey *et al.*, 2010; Hölzel *et al.*, 2011; Lindsay and Creswell, 2017; Shapiro *et al.*, 2006). However, very little has been research about its connection to social connectedness before the 2010’s, aside from very specific practices of loving kindness (Collins-McHugh, 2016) or the aspects of empathy development (Van Doesum *et al.*, 2013).

### *Mindfulness and the self: theoretical paradoxes*

Along with its effectiveness on mental health (Coffey *et al.*, 2010; Goldberg *et al.*, 2018; Gu *et al.*, 2015), mindfulness (and MBIs consecutively) is reported to foster self-improvement and the sense of self (e.g. self-regulation, self-control, self-esteem, self-worth and self-efficacy; for reviews, see Britton *et al.*, 2021; Xiao *et al.*, 2017). These practices are also recognized to strengthen character and act on one’s own identity (Anand and Karn, 2025; Pang and Ruch, 2019).

However, the traditional practices from which they originate emphasize the therapeutic effects of moving towards a state of “no self” – “no ego” or self-as-process, which consists of a lucid awareness of the impermanence of the self (Bodhi, 2016; Payne, 2016; Shapiro *et al.*, 2018; Walsh, 2016; Xiao *et al.*, 2017). Moreover, MBIs have been increasingly scrutinized for their potential to diminish the social dimensions of the self (Purser, 2021; Stanley, 2012) and for their limited capacity to foster a community-oriented sense of belonging and interdependence (for a review, see Chachignon *et al.*, 2024). Such assumptions appear to contradict the fact that MBIs are all generally conducted in group settings, that the group is an active ingredient of the therapeutic process (Imel *et al.*, 2008; Wyatt *et al.*, 2014) and that MBIs promote prosocial behaviors (Berry *et al.*, 2020; Donald *et al.*, 2019). What seems to be theoretical contradictions of the self – or “paradoxes,” as Shapiro *et al.* (2018) put it – in contemporary mindfulness are particularly intriguing in the context of depression, due to the specific effects of depression on the self on one hand, and the way in which MBIs can address them on the other hand.

## *The social self in MBIs: unexplored and critical*

Given the centrality of self-related distress and social withdrawal in depression (Beck, 1961; Fried and Nesse, 2014; Rush *et al.*, 1996), MBIs have emerged as promising approaches. Depression is characterized by maladaptive self-focus – including self-criticism, over-identification with thoughts and affects, and low self-acceptance (Neff, 2003; Neff *et al.*, 2007; Silva *et al.*, 2019; Zhang *et al.*, 2017) – which can hinder both personal and social functioning. MBIs aim to address these intrapersonal challenges through structured practices such as body scans, breathing exercises and yoga, promoting self-compassion, emotional awareness and adaptive self-regulation (Hofmann and Gómez, 2017; Shahar *et al.*, 2010). Mindfulness-based cognitive therapy (MBCT) – particularly – has been shown to enhance self-esteem, self-compassion and self-concept while reducing self-criticism (Crane *et al.*, 2008; Neff and Dahm, 2015; Raee *et al.*, 2022; Schanche *et al.*, 2021; Shireen *et al.*, 2022; Frostadottir and Dorjee, 2019). MBIs have also inspired CBT-based adaptations such as the ECCCLORE protocol to support hard-to-treat disorders (Martin and Del-Monte, 2022).

Beyond these intrapersonal effects, MBIs are generally delivered in group settings, where social identification with meaningful groups is associated with lower levels of depression and improved psychosocial functioning (Cruwys, Haslam, Dingle, Haslam, *et al.*, 2014; Fried and Nesse, 2014; Hirschfeld *et al.*, 2000; Jetten *et al.*, 2017; Postmes *et al.*, 2019). Engagement in groups can thus represent a potential mechanism for translating intrapersonal gains into social connectedness and support recovery. Yet MBIs have been criticized for their limited emphasis on fostering community-based belonging and interdependence, instead narrowing psychological difficulties to a neoliberal, individually focused framework (Purser, 2021; Stanley, 2012). While MBIs may improve interpersonal functioning (Bihari and Mullan, 2014; Britton *et al.*, 2021; Chachignon *et al.*, 2025; Van Ravesteijn *et al.*, 2013; Weintraub *et al.*, 2023), the exact processes linking self-related changes to enhanced social engagement remain underexplored. In this regard, the implications for social inclusion in mental healthcare, for instance, how mindfulness could promote inclusion by supporting people in fulfilling their social roles (Wright and Stickley, 2013), remain unclear, as no work to our knowledge has directly examined the therapeutic potential of MBIs for social inclusion. This gap highlights the need to examine both intrapersonal and social dimensions of the self to fully understand MBIs' therapeutic potential, especially on depressive disorders.

### *Research aim*

Psychological processes such as self-regulation, meta-awareness and self-transcendence account for the efficiency of MBCT but are often examined separately. Moreover, the social self is under-researched. Additionally, the existence of theoretical paradoxes of the self and social self in mindfulness calls for more holistic and qualitative empirical approaches to enhance its theory and conceptualizations. Therefore, the aim of this study is to explore how MBIs are experienced by individuals with depression, to inform a more comprehensive theoretical and conceptual understanding of self-related and social mechanisms underlying their effects. Thus, we investigated the experience of these changes in MBCT, with a focus on the social self.

### **Method**

#### *Study design and setting*

The present research was based on a pre-registered study from an adult outpatient psychiatry department of a French hospital. Participants were referred by their treating mental health professional (either a psychiatrist, clinical psychologist or neuropsychologist) to join an 8-week MBCT program to address mood-related disorders (see Intervention

section below). As the ideal composition of an MBCT is around 12 participants, and considering that literature reports attrition rates in MBIs ranging from 15.5% to 29% (Goldberg *et al.*, 2020) and even up to 80% (Khoury *et al.*, 2013), this study enrolled participants from two different programs to maximize inclusion. Both programs were led by the same two instructors and took place successively in 2024. The interviewer (PC) is a PhD in social psychology expert in MBIs herself but had no clinical involvement with the participants. The interviewer explained the procedure to the participants during both information sessions, prior to the start of the programs, and obtained signed informed consents for the post-intervention semi-structured interviews scheduled with each participant.

### ***MBCT intervention***

Two women MBCT instructors – a neuropsychologist and a healthcare manager who both completed certified MBCT training in 2012 and have been facilitating two groups per year since then – led the two MBCT programs over a period of 8 weeks each, with a two-hour session of guided meditations and CBT exercises following a French version of Segal *et al.* (2012) book instructions. In addition to MBCT, the neuropsychologist is trained in CBT and Acceptance and Commitment Therapy (ACT). The healthcare manager, who structures the practices and projects within the psychosocial rehabilitation team in the outpatient psychiatric department where the study was conducted, is also trained in ACT. Along with the group sessions, weekly formal and informal meditation practices are scheduled (see supplementary material 1 with all meditation practices). Formal practices were taken from audio files from a Francophone mindfulness website by clicking on the following link: <https://mindfulness.cps-emotions.be/materiel-adulte.php>. Patients had to select the files titled with the meditation practice needed to be done during the week following the group session, such as “Body Scan”, “Meditation of breath and body”; “Breathing Meditation”; “Meditation of sounds and thoughts”; “Mindful movements” and “3 Minutes of Breathing”. The instructions for CBT at-home exercises, such as a booklet to fill out where patients had to note pleasant events over a week, were handed out in session. For the full content of the MBCT sessions and at-home exercises, refer to Table SM1 for the session program and daily home exercises adapted from (Segal *et al.*, 2012) in Supplementary Material 1 at the following link <https://doi.org/10.6084/m9.figshare.28749386.v1>, and to Table SM 2 for the types of mindfulness practices with examples, in Supplementary Material 2 at the following link <https://doi.org/10.6084/m9.figshare.28749398.v1>.

### ***Ethical considerations***

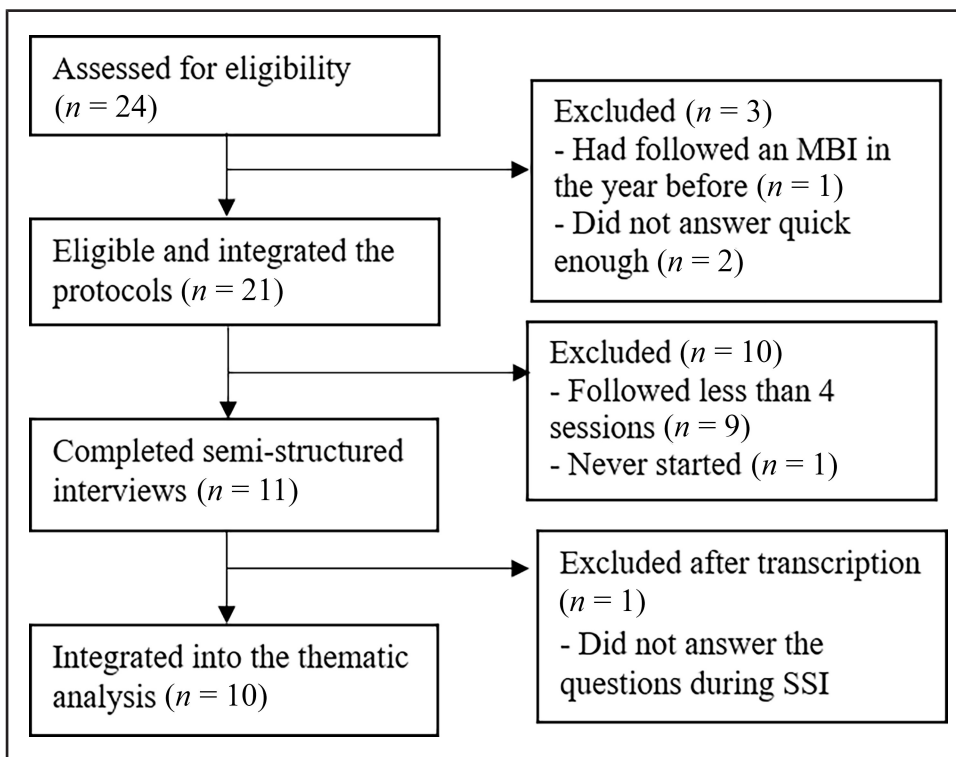
The study was approved by an Institutional Review Board, the Committee for the Protection of Human Subjects Ile-de-France XI n°2021-A03188-33.

### ***Participants***

Participants ( $n=24$ ) were diagnosed with at least three prior depressive episodes by their psychiatrist or general practitioner (based on the Mini-International Neuropsychiatric Interview for DSM-IV disorders (Sheehan *et al.*, 1998) and were referred to an MBCT program for relapse prevention. Patients with psychotic disorders, severe neurocognitive disorders or experiencing an acute episode were not directed toward these protocols. Participants who attended an MBCT program within the last 12 months were excluded from the protocol. Those who missed more than 4 sessions (Strohmaier *et al.*, 2021) during the protocols were excluded from the study *post hoc*. Prior knowledge of mindfulness – including an interest in meditation, spirituality, or brief meditative experiences – was not an exclusion criterion.

Among the 21 participants who integrated the MBCTs, only 11 completed the programs or attended at least 4 sessions and were invited to post-interventional semi-structured interviews. One participant was excluded after the semi-structured interview due to responses that were unrelated to the interview guide (e.g. recounting the story of a family relative when asked what changed in her self-views with the MBCT). The 10 participants were aged between 23 and 56 years. Seven were female; 6 were unemployed. Four participants had diagnosed comorbidities such as substance use disorders ( $n=2$ ), ADHD ( $n=1$ ) and bulimia nervosa ( $n=1$ ). One participant had a concomitant medical condition (i.e. multiple sclerosis). The 10 participants, all psychiatric outpatients, were receiving pharmacotherapy at the time of the inclusion (e.g. mood stabilizers, anxiolytics), but were not in a state of excessive sedation and maintained an attentive presence during the group sessions. All participants were familiar with CBT, which is provided by the psychiatrists or psychotherapists of the service. Depression and anxiety levels were assessed using the Hospital Anxiety and Depression Scale (Zigmond and Snaith, 1983). For each subscale (anxiety and depression), cut-off points are as follows: 7 or below indicates the absence of depression or anxiety, 8–10 corresponds to minor anxiety/depression, 11–15 to moderate anxiety/depression and 16 and above to severe anxiety/depression (e.g. Brekelmans *et al.*, 2022). The scores are the sum of each item's score, not the averages, although the means and standard deviations are also provided. In our sample, patients had mild to moderate anxiety and depression symptoms before and after the intervention: pre-intervention, the anxiety score (HAD-A) was 11 ( $M=2.27$ ;  $SD=0.54$ ) and the depression score (HAD-D) was 12.7 ( $M=2.50$ ;  $SD=0.49$ ); post-intervention HAD-A was 8 ( $M=1.67$ ;  $SD=0.27$ ) and HAD-D was 10.1 ( $M=2.05$ ;  $SD=0.47$ ). For detailed information on inclusion and exclusion criteria, refer to Figure 1. Participants inclusion flow chart.

**Figure 1** Participants inclusion flowchart



### *Procedure for the interviews*

Given the exploratory nature of our research, a qualitative approach was chosen to enhance understanding of the effects, processes and meanings attributed to a phenomenon from the participants' perspective, without relying on formal or predetermined categories (Flick *et al.*, 2004). One-hour long semi-structured interviews with each participant were conducted by the interviewer (PC) in the days after the intervention within the hospital premises. Following an interview guide, the opening instruction was: "Please, mindfully think of the person that you are". Then, three main axes, the psychological, social and physical dimensions of the self, were successively investigated. In this purpose, participants were asked a first question (Q1) corresponding to the psychological dimension: "How would you describe yourself today, compared to before the MBCT group?". Questions two (Q2) and three (Q3) were related to the social dimension: "How would you describe your relationships with others today compared to before the MBCT group? This can include interactions in your private circle or in a wider social context, and with people in general" and "How would you describe your position within the group you participated in?". The fourth question (Q4) investigated the physical dimension: "How would you describe what you are like physically today compared to before the MBCT group?". For each question, we explored what changed and what did not, as well as whether these perceived changes were attributed to the protocol. For the full interview guide with prompts or follow-up questions, see Semi-structured interview questions. The semi-structured interviews were tape-recorded and then anonymized in the transcription process by the interviewer (PC).

Opening instruction: "Please, mindfully think of the person that you are"

1. "How would you describe yourself today compared to before the MBCT group?"<sup>a</sup>
  - Follow-up questions:
    - "How would you have described yourself before attending the MBCT group?"
    - "What has changed within you?"
    - "What has not changed?"
    - "What connections do you see between your participation in the MBCT group and these changes?"
2. "How would you describe your relationships with others today compared to before the MBCT group? This can include interactions in your private circle or in a wider social context, and with people in general."<sup>b</sup>
  - Follow-up questions:
    - "How would you have described yourself in terms of your relationships with others before attending the MBCT group?"
    - "What has changed within you?"
    - "What has not changed?"
    - "What connections do you see between your participation in the MBCT group and these changes?"
3. "How would you describe your role within the group you participated in?"<sup>b</sup>
  - Follow-up questions:
    - "What were the other members of the group like?"
    - "To what extent did you identify with these individuals?"

4. "How would you describe what you are like physically today compared to before the MBCT group?"<sup>d</sup>
  - Follow-up questions:
    - "How would you have described yourself physically before attending the MBCT group?"
    - "What has changed within you physically?"
    - "What has not changed physically?"
5. "What connections do you see between your participation in the MBCT group and these physical changes?"

<sup>a</sup>Corresponds to spiritual dimensions, <sup>b</sup> and <sup>c</sup> to social dimensions, and <sup>d</sup> to material dimensions.

### *Conceptualization of the self and measures*

To qualitatively assess the self, this study drew on psychosocial theorizations that conceive it as both stable and malleable depending on context (Markus and Kunda, 1986), and as multidimensional, comprising spiritual (e.g. affects, thoughts), social (e.g. relationships, roles) and material aspects (e.g. body) (James, 1968; Mead, 1978). In line with Shireen *et al.* (2022), our research adopts a holistic approach that both integrates and goes beyond intrapersonal, interpersonal and transcendental dimensions of the self, using these theorizations as heuristic guidelines to examine the perceived effects of MBCT from a comprehensive perspective. This perspective constitutes the main strength and originality of the study, particularly in its specific focus on the social self and social identity, which appear to be impaired in depression.

To assess the primary outcome measure of the intervention, anxiety and depression levels were measured with the Hospital Anxiety and Depression Scale (HADS, Zigmond and Snaith, 1983) at pre-intervention ( $\omega T1 = 0.84$ ;) and post-intervention time points ( $\omega T2 = 0.82$ ).

### *Data analyses*

*Qualitative analysis.* The present study's thematic content analysis (TA) relies on a dual deductive/inductive (i.e. theory-driven/data-driven) procedure, as we are not solely looking to validate pre-existing themes, but also to identify potentially unexplored themes (see Joffe, 2011, p. 210) existing in these specific experiences of therapeutic mindfulness. Eventually, the scientific validity of our approach, which is inherently interpretive, and control for author bias, are guaranteed by the investigator triangulation (Flick, 2004) we performed. Balancing out the subjective input of the first author (PC) was made possible thanks to the intervention of a second investigator (ELB) in the data analysis.

To analyze the ten semi-structured interviews, the TA was conducted following the methodological stages of thematization and triangulation recommended by Braun and Clarke (2006). The purpose is to identify recurring content patterns in the *verbatim* data, which can be coded and then organized into themes and sub-themes through an interpretive process, with the objective to create a thematic map. Moreover, TA is sometimes considered a bridge between qualitative and quantitative methods (Terry *et al.*, 2017), which aligns with the aim of this study to integrate a quantitative approach into the analysis of themes, including examining themes prevalence and participants convergence among themes. Indeed, this method can inform us qualitatively about the changes or absence of changes following an MBCT protocol and, from a more positivist perspective, help us understand which themes prevail in the experience of change following such an intervention.

To conduct the TA, the first author (PC) extracted *verbatim* segments related to the research question (i.e. perceived changes following MBCT) from the transcripts. Each unit

of meaning, defined as a sentence or short set of sentences expressing a coherent idea, was entered as a separate line in an Excel file, along with participant ID, contextual notes, and coding information. In line with reflexive thematic analysis, coding was predominantly semantic and partly informed by the interview guide, while remaining open to inductive insights. The two coders (PC and ELB), both social psychologists experienced in qualitative methods, independently coded the material, then compared their Excel files during triangulation. Discrepancies were discussed and resolved by returning to the original verbatims until consensus was reached on themes and subthemes. The process followed all phases recommended by Braun and Clarke (2006), as summarized in Table 1.

*Coders' positionality.* Based on (Holmes, 2020), the positionality of the coders (PC and ELB) is outlined to clarify factors that may have influenced data interpretation. PC is a white female post-doctoral researcher (doctoral student at the time), a mindfulness practitioner, psychotherapist and professionally aligned with a critical social psychology perspective. Her familiarity with literature on the "McMindfulness movement" shaped her interest in how mindfulness meditation relates to neoliberal subjectivity, where the erosion of the social self is assumed to be a key feature. ELB is a white female associate professor in social psychology, a long-term mindfulness practitioner, and a psychotherapist. Her interest in self-presentation strategies across contexts, on the one hand, and her observations of the impact of mindfulness in clinical settings, on the other, may have guided the coding of the data.

Together, they coded and interpreted the data, producing themes that may reflect their professional and personal experiences with mindfulness, as well as their orientation toward a critical social psychology approach.

**Table 1** Phases of thematic content analysis

Phases	First investigator	Second investigator
Familiarizing with the data	Read the entire dataset twice ( $n = 10$ semi-structured interviews) and extracted relevant segments of verbatims ( $n = 375$ ) into an Excel sheet file	Read the 375 segments of the relevant selected verbatims from the first investigator's Excel sheet file
Generating initial codes	Entered codes and interrogations in a separate datasheet. For instance, the code "T1" was given for Mindfulness processes that referred to the self, and "T2" for processes referring to the others, to form coding paradigms of self-related processes	Entered codes and interrogations in a separate datasheet. For instance, the codes "Action" or "Inaction" were attributed to form coding paradigms of change. Question marks were added when unsure
Searching for themes	Collated codes into themes and subthemes and regrouped all data from each code (e.g. all T1 codes were gathered along with their subthemes)	Collated codes into themes and subthemes and regrouped all data from each code (e.g. all "Inaction" codes were gathered along with their subthemes)
Reviewing themes	Checked if the themes fitted with the coded verbatims and aligned the entire data set, and generated a first thematic map with three (3) dominant themes	Checked if the themes fitted with the coded verbatims and aligned the entire data set, and generated a first thematic map with four (4) dominant themes
Defining and naming themes	Refined the specifics of each theme and subthemes, and generated clear definitions and names for each theme (e.g., defined "Evolution of the Sense of Self" as a progression where the participant described an improvement in their conceptual self, such as more self-efficacy)	Refined the specifics of each theme and subthemes, and generated clear definitions and names for each theme (e.g., defined "Outcomes" as a progression where the participants described the consequences of the practice, such as self-regulation)
Triangulating and producing the report	Compared both thematic maps, reviewed the labels and definitions, merged the two Excel sheets Negotiated and argued over each theme and subtheme to keep just one label of each kind. For instance, Investigator 1 agreed to create Theme 4 "Negative aspects", following the coding paradigm "Action/Inaction" of Investigator 2, instead of creating "change" and "no change" subthemes into each theme. Investigator 2 agreed to label themes in terms of "Evolution of" and subthemes in terms of processes Decided on the final themes and subthemes and calculated the proportions for each Maintained the theme "Miscellaneous" for two ambiguous segments	

*Statistical analyses.* To examine possible differences in prevalence between the main themes, a  $\chi^2$  goodness-of-fit proportion test was performed. Paired samples *t*-tests were conducted to examine differences between pre-intervention and post-intervention time points in depression and anxiety on the HADS.

## Results

### *Thematic content analysis*

To explore perceived changes in the self, we retained a typology of both change and no-change processes, as what remained unchanged after the intervention also emerged as meaningful. From the data, 375 *verbatim* segments relevant to the research question were extracted. Investigator triangulation led to three main themes and a fourth, less central one:

1. evolution of awareness (seven subthemes);
2. evolution of the sense of self (six subthemes);
3. evolution of the connection to others (four subthemes); and
4. negative aspects (two subthemes).

A small miscellaneous theme grouped two *verbatim* segments that did not fit elsewhere. Each theme was linked to specific thematic areas corresponding to the psychological, social and physical dimensions of the self. See [Table 2](#) for *verbatim* examples used throughout the entire analysis.

*Theme 1: Evolution of awareness.* The participants talked about what we termed “awareness” ( $n=111$  verbatims), in the sense of positive changes in the way they perceived their own feelings, emotions, thoughts, body, external stimuli or others. Those changes were attributed to the MBCT. Awareness reflected a distancing between the observer and what was observed, as exemplified in the *verbatim* excerpt from P1:

Mindfulness meditation has given me a connection to my body and an awareness of my body, of bodily things and the material, the physical dimension – a much sharper awareness, it’s really clear.

Theme 1 encompassed processes of:

- observing these phenomena;
- embodiment, a way to attend to body experience;
- defusion, meaning that the participants took a distance from what they experienced;
- flexibility, an ability to adapt or process things in a different way;
- self-awareness, the awareness of one’s inner states;
- acceptance, which involved embracing the present moment experience without reacting or judging; and
- insight, we defined as the newly gained understanding of a phenomenon.

These processes corresponded to the seven subthemes. Thematic areas included what the participants associated with these processes, such as change in the self and self-image, psychological dimensions such as a new outlook on thoughts, judgmental attitudes, attention, emotions, reactions and behaviors, physical dimensions such as considering the body and its experiences of overload, and more broadly, their perspectives on things, situations and reality.

*Theme 2: Evolution of the sense of self.* The participants also expressed a variety of content ( $n=153$  verbatims) related to the notion of “sense of self.” We defined the sense of self as a progression where the participant described an improvement in their conceptual self,

**Table 2** Themes and subthemes summary with participant convergence and verbatim examples

Theme	Subtheme	Verbatim examples
1 Evolution of awareness	<i>Observing</i> (n=8)	P10 I tell myself [...] 'Put all your energy into inspiration, observe what is happening within you' P1 And I manage to see better what I can change, especially what I cannot change
1 Evolution of awareness	<i>Embodiment</i> (n=7)	P4 I'm not sure if it was during the exercise or just after, but it really gave me the sensation that I was in my body, not just in my head thinking P5 What I quickly noticed was a much greater awareness of what I could eat, and of eating less
1 Evolution of awareness	<i>Defusion</i> (n=7)	P4 I don't want to define myself by my anxiety. It's not part of my personality. I might say I experience anxiety, for example, that I can say, but it's more in the sense that I have anxiety. It's not something that's part of my personality
1 Evolution of awareness	<i>Flexibility</i> (n=6)	P9 And then I told myself, 'ah, now it's not about playing the game, it's not about doing it like you used to, you know, like you did before, but it's something else'. So, trying to approach it differently. That was interesting. It made a difference
1 Evolution of awareness	<i>Self-awareness</i> (n=5)	P2 Often I remember that I remember that I was thinking. So that rarely happened to me
1 Evolution of awareness	<i>Acceptance</i> (n=5)	P3 So it's because we have a slightly more developed self-awareness after than before P3 But I accept, this module has helped me accept the state I'm in, which wasn't necessarily the case before
1 Evolution of awareness	<i>Insight</i> (n=4)	P9 Yes, for me, instead of talking about changes, I would speak of enlightenment, of things that become clear, that brighten
2 Evolution of the sense of self	<i>Self-regulation</i> (n=10)	P6 So I had my partner, the closest to me, let's say, who also allows himself to be more 'judgmental,' in quotes as well, where indeed sometimes he said to me, 'Wow, you managed not to get carried away 2 or 3 times in discussions that could have escalated,' he said, he was still impressed. Well, not all the time, of course, but where he sees that I manage to be a bit more composed, that's it P8 There are times when it helps avoid pain, bad positions. And even if we do have pain, it's true that it helps to try to lessen it, to lessen it a bit through the mind P1 But beyond that, not only to soothe anxiety, to go through stressful periods, to simply live, but beyond that, it not only alleviates the psychological challenges of my daily life
2 Evolution of the sense of self	<i>Self-stability</i> (n=9)	P6 I'm not going to transform myself. I'm not thinking, 'Great, I'm doing mindfulness, I'm changing my identity' P3 The issue is the perception we have of events that happen and occur, but in terms of my earthly identity, no, there is no evolution
2 Evolution of the sense of self	<i>Self-efficacy</i> (n=8)	P7 And it's reassuring, it instills confidence in One's ability to respond differently. . . to see things differently in everyday life [...] Yes. The fact that I tell myself I have resources that I didn't necessarily have before P1 Yes, I feel more confident with myself. There are things that I am able to change
2 Evolution of the sense of self	<i>Self-compassion</i> (n=7)	P8 Let me tell you, it's also about the mindset of taking care, of looking after oneself, of being One's best friend P6 So, there's a bit more, within quotes, this listening. Let's say that control is always there, but there's inner listening
2 Evolution of the sense of self	<i>Self-improvement</i> (n=6)	P1 But in addition to that, when I practice it regularly, it multiplies my abilities. And that, I can see directly that it has an impact on me. It amplifies, yes, it increases, it maximizes, I don't know which is the right word, particularly the abilities of reflection, of strategy, you know
2 Evolution of the sense of self	<i>Self-knowledge</i> (n=5)	P5 Maybe it's about knowing myself better. Maybe I had told myself that I would meet myself even more deeply and with even fewer filters, fewer things that sometimes hinder this encounter, to know what I want, make choices, all of that
3 Evolution of the connection to others	<i>Differentiation</i> (n=9)	P9 But it's a bit like putting together people who are completely different, and that's exactly the case, with different backgrounds, but they never really become a group. It's a bit like a soup with ingredients that don't mix. So, I think I don't identify with the issues that have been mentioned P1 I found that we were all very different. I felt that there were still very different backgrounds. I think we were all quite different in our backgrounds and origins
3 Evolution of the connection to others	<i>Social identification</i> (n=8)	P5 So I would say there's a part of me that identifies with the issues faced by others P9 Yes, regarding the various anxieties people have, different stresses, self-doubts, and all that. And also the irritability, the things we also experience and try to manage. But in terms of identification, I think it was about sharing those two hours. So, there is still a sharing of time and space

(continued)

**Table 2**

Theme	Subtheme	Verbatim examples
3 Evolution of the connection to others	<i>Openness</i> ( <i>n</i> =7)	P2 Recently, it's true that I've found myself listening to others more, wondering if they're doing well, even people I don't necessarily like. So maybe I'm a bit more attentive. Yes, a bit more of a listener
3 Evolution of the connection to others	<i>Sense of belonging</i> ( <i>n</i> =5)	P2 I felt in place with moments where I could exchange freely. Whenever I had something to say, I said it, I shared. By listening to others, I listened, I felt the same things
4 Negative aspects	<i>Difficulties</i> ( <i>n</i> =7)	P6 Like they say, the well-established thought patterns can sometimes be hard to detach from because the emotion is there, but it will not dissipate in five minutes to calm down
4 Negative aspects	<i>Inaction</i> ( <i>n</i> =6)	P1 But today, in terms of my body, not much has changed in the sense that the MBCT program I did was too short

**Note(s):** The short extracts were preferred to comply with word count limitations. *n* = number of semi-structured interviews mentioning the subtheme. "P" = participant's identification. The "miscellaneous" theme contains only two verbatims and was not reported in the table, however, it was included in the total count number

referred to as "self-as-content" in the literature. They connected this change to the intervention. P3's account illustrates this perceived change:

I learned with this group that we were still a very fragile population. And well, mindfulness is one of the levers that can help us.

Theme 2 differed from theme 1 in that there was no separation between the observer and what was observed. It encompassed:

- self-regulation, the adaptation of the self to the real-world demands;
- self-stability, meaning the self-consistency remained unchanged after MBCT, unlike inaction which would indicate something did not work;
- self-efficacy, the capability to perform a behavior;
- self-compassion, the capacity to be caring and kind toward oneself;
- self-improvement, recognizing that one is bettering oneself; and
- self-knowledge, gaining a better understanding of one's own mechanisms and functioning.

The thematic areas comprised processes related to psychological dimensions such as relief of anxiety, stress, rumination, self-criticisms and emotional difficulties; new tools and capacities; and physical dimensions such as pain and symptoms relief, better energy and health. More vaguely, participants referred to things, reality and events with a fresh outlook.

*Theme 3: Evolution of the connection to others.* The participants referred to their self in relation with others at numerous occasions (*n*= 83 verbatims) and linked the evolution to the intervention. We defined the "connection to others" as the integration of others into one's self-concept, affectively or cognitively. P4's words highlight this theme:

There were sessions where someone said something and I saw myself in it, and someone would say something and then [...] it's just that, as we talk, we realize that we can think in the same way, that we can have the same kind of behaviour, the same feelings. In the end, we're human beings and we function in a certain way, more than in terms of a profile I would have identified with.

Theme 3 included various aspects of social identity that corresponded to the first three subthemes:

1. differentiation, recognizing a self different from others;
2. social identification, acknowledging similarities with the others; and

### 3. sense of belonging, sharing membership and fitting into a group.

We identified a fourth subtheme: 4) openness, which reflected experiencing alterity and finding deeper meaning in one's relationships. Thematic areas included identifying diverging profiles and life trajectories within the MBCT group; recognizing common stressors, anxieties, thought patterns, problematic issues and objectives within the MBCT group, and accepting, understanding and listening to others in daily situations.

*Theme 4: Negative aspects.* Eventually, there were 26 verbatims in which the participants demonstrated the limitations of the effectiveness of the MBCTs. These aspects, for example, are reflected in P6's words:

As we say, these are well-established patterns of reasoning, but in this case it's still going to be difficult to detach sometimes, because the emotion is there and it's not going to disappear in five minutes.

Awareness of challenges in changing certain aspects, or recognizing patterns where mindfulness was insufficient to enact change, corresponded to what we labeled subtheme 1) difficulties. The elements identified as entirely ineffective were designated as subtheme 2) inaction. The thematic areas mainly consisted of persistent automatic patterns of thoughts, emotions and behaviors. The results indicate that the limited effectiveness of MBCT, as reported by some participants, appears to stem from a combination of practical and psychological factors. In addition to difficulties integrating exercises into daily life and modifying automatic thought patterns, some participants noted a decline in motivation or a lack of attention to the exercises. Persistent cognitive and emotional patterns, which remain resistant to change even with increased self-awareness, and challenges in "taking action" – often hindered by personal constraints or overwhelming emotional responses – further compound these limitations.

### *Statistical analyses*

A  $\chi^2$  goodness-of-fit proportion test allowed us to identify the differences in proportion for the three main themes. Theme 2 "Evolution of the sense of self" was significantly more prevalent in the participants' experience of MBCT compared to theme 1 Evolution of awareness [ $\chi^2(1)=6.68, p=0.010$ ] and to theme 3 "Evolution of the connection to others" [ $\chi^2(1)=20.3, p<0.001$ ]. In addition, theme 1 "Evolution of awareness" was significantly more present in the participants' experience of MBCT compared to theme 3 Evolution of the connection to others [ $\chi^2(1)=4.04, p=0.044$ ].

The five patients who completed both the pre-intervention and post-intervention questionnaires showed significant improvements in depressive symptoms [ $t(4)=3.21, p=0.033, d=1.43$ ] and anxiety symptoms [ $t(4)=3.59, p=0.023, d=1.60$ ] post-intervention.

### **Discussion**

The main objective of this study was to explore the perceived changes that participants of an MBCT protocol experienced in the psychological, social and physical dimensions of the self, and the connections they made with the intervention and its therapeutic effects. We aimed to explore through these perceived changes, the existence of processes that could appear paradoxical on a theoretical level in mindfulness, such as a stronger sense of self coexisting with decentering and self-transcendence. Though the purpose of the research encompassed but also extended beyond assessing depression levels pre- and post-intervention, all participants identified positive processes and outcomes due to the MBCT for each interrogated dimension, either psychological, social or physical. The thematic content analysis yielded four themes, each with a cohort of subthemes, most of which refer to processes in mindfulness meditation.

## *Self-related processes and changes involved: confirming and extending theory*

*Confirming established mechanisms of awareness and the self.* The first finding is that, in accordance with the literature, both theme 1 Evolution of awareness and theme 2 Evolution of the sense of self are consistent with the therapeutic effects of MBCT on depression and the psychological and physical dimensions of the self. Indeed, there is ample evidence that awareness processes can be therapeutic in the context of mental health conditions (Chiarella *et al.*, 2020; Dunne *et al.*, 2019; Gaete, 2023; Vago and Silbersweig, 2012; Yadavaia *et al.*, 2014) and that processes reinforcing the sense of self contribute to shaping a more realistic and kinder self-view, leading to greater well-being (Fan and Cui, 2024; Leyland *et al.*, 2019; Nyklíček *et al.*, 2024).

*Nuancing the social self in mindfulness: new insights.* The second finding, which is the most theoretically significant, concerns theme 3 Evolution of the connection to others, and reveals novel and nuanced results with regards to the literature. On one hand, under-researched social identity processes were activated, such as social identification, sense of belonging and openness that are thought to be therapeutic in depression (Cruwys *et al.*, 2014). On the other hand, our study revealed mechanisms of differentiation, which is the main subtheme, with participants perceiving themselves as a collection of individuals inserted into a group-based protocol. Despite the presence of a thin body of research on the effects of MBCT on the social self putting forward positive interpersonal outcomes (e.g. Bihari and Mullan, 2014) our study suggests a relative failure of the protocols in developing the social aspects of the self, although the latter was solidly interrogated with the help of two direct questions (i.e. half the interview guide). Admittedly, the psychosocial functioning evolved with sense of belonging and openness, extended beyond the boundaries of the MBCT group to known and unknown others, but coexisted with firm differentiation. The participants still found the need for self-centeredness and prioritized talking about themselves over others, even when asked to think of their relationship with others. All the more, although participants made numerous explicit links between a better way to face maladaptive patterns and the evolution of both self and awareness, they did not establish so many links with the social aspects of the self in MBCT. This reflects a form of rupture with oneness and connection mechanisms that are supposed to be therapeutic (Hadaş *et al.*, 2016; Hanley *et al.*, 2017). Thus, these findings nuance the classic and seemingly self-evident self-transcendence mechanisms found in MBCT and MBIs (Britton *et al.*, 2021).

The fact that MBCT patients felt different from their peers raises questions about the impact or usefulness of the group-based nature of the protocols, particularly regarding the significantly impaired, and relatively unaddressed aspect of their self in depression, which is social identity (Cruwys *et al.*, 2015). Another possible explanation could lie in potential personality differences among participants. Indeed, for some MBCT patients with specific perfectionist or rigid, rule-governed behavior patterns, these tendencies may hinder the full benefits of the MBCT practice, as recently highlighted in the literature (Matko *et al.*, 2022; Whitford and Warren, 2019). We posit that processes of selflessness (see Dambrun and Ricard, 2011) or hypo-egoic functioning, states of minimal self-centeredness fostering other-centeredness and self-transcendence, are developed in advanced mindfulness practices (Nyklíček *et al.*, 2024) with meditators, not patients, and that MBCT protocols are too short, as one participant stated. Moreover, the instructions in MBCT are specifically focused on self-observation rather than on fostering full connection with others and the world (see Segal *et al.*, 2012), which can represent a significant avenue for protocol improvement.

*Participants' awareness of protocol limitations.* The third finding (Theme 4 Negative aspects) inscribes our study in a recent body of research targeting the adverse (or absence of) effects inherent with MBCTs (e.g. Farias *et al.*, 2020). Our contribution to this perspective is that participants themselves spontaneously expressed the limitations of the protocols in addressing deeply rooted patterns, concurrently demonstrating awareness of these limitations. These

findings suggest that MBCT may require further adaptation to individual needs or integration with other therapeutic approaches to overcome these barriers (Marks *et al.*, 2023).

### *Contributions related to debates in the literature*

The final finding pertains to how we address potential theoretical contradictions brought to light by the nature of the themes. We suggest that participants experienced a state of self in which selflessness, reflecting a sense of connectedness, and self-centeredness, reflecting egocentrism and separateness, coexisted simultaneously (Britton *et al.*, 2021; Dambrun and Ricard, 2011; Hanley *et al.*, 2017). The “mindful self” (Xiao *et al.*, 2017) represents a compromise between both, and can eventually be regarded as the best illustration of flexibility processes and non-dualism in mindfulness. Besides, participants were not talkative about their social selves (approximately half as much as about the sense of self) as demonstrated by the lower prevalence of theme 3 Evolution of the connection to others compared to themes 1 and 2. This may indicate that mindfulness is primarily about self-focus (see Shapiro *et al.*, 2018) and that MBCT patients encounter difficulties to think of themselves as social beings. This blind spot is reflected by the fact that the social self is only timidly investigated in the literature on mindfulness (Shireen *et al.*, 2022) and most certainly vice versa, while the practice is all about cultivating interconnectedness (Van Gordon *et al.*, 2018). One can wonder to what extent self-focus in early-stage practices diminishes the space for the social self.

### **Practical and theoretical implications**

This study has inherent limitations typical of qualitative research, including the small sample size, context specificity (e.g. hospital setting, interviewer effects) and limited generalizability (Bedos *et al.*, 2009). Semi-structured interviews, which explicitly prompted participants to reflect on their selves, may partly explain the prominence of theme 2, “Evolution of the sense of self.” While transferability across MBCT protocols is limited, these findings highlight important practical, theoretical and methodological avenues, showing that the self – central to recovery – is complex and warrants further phenomenological and qualitative investigation in mindfulness research.

#### *Practical implications*

Our results suggest that the experience of the self is not only intra-individual but also social and relational. Social identity plays a key role in mental health by fostering support and reducing relapse risk in depression (Cruwys *et al.*, 2013, 2014, 2015; Jetten *et al.*, 2017; Postmes *et al.*, 2019; Steffens *et al.*, 2016). In line with the “social cure” perspective (Jetten *et al.*, 2017), this calls for mindfulness protocols that explicitly target social identity processes. This has concrete implications for MBCT delivery (e.g. facilitators make social identity processes and group mechanisms more explicit during and between sessions, integrate practices that explicitly focus on the social nature of human experience, and, where appropriate, adapt the protocol accordingly), which may improve therapeutic effectiveness, reduce dropout (Goldberg *et al.*, 2020; Khoury *et al.*, 2013), and better meet patients’ social needs.

#### *Theoretical and methodological implications*

Our findings underscore the importance of studying the self in mindfulness not only from an intra-individual perspective, but also from a social and relational one, moving toward holistic approaches (e.g. Himelstein *et al.*, 2012; Shireen *et al.*, 2022). The paradoxes we observed – simultaneous strengthening and deconstruction of the self – highlight that mindfulness may foster both a more coherent, self-regulated individual and, at the same time, a shift toward selflessness and social interdependence. Conceptually, this tension illustrates how processes centered on the individual self interact with social inclusion, role fulfillment and participation – key factors in recovery from depression. Future research should continue to explore where and how these self-

paradoxes unfold, for instance by comparing protocols that explicitly cultivate other-centeredness (e.g. Loving-Kindness Meditation, see [Hutcherson et al., 2008](#)) with MBCT or other types of MBIs and by employing qualitative phenomenological methods ([Frank and Marken, 2022](#)) and mixed-methods (see [Chachignon et al., 2025](#)) to capture the nuances of self- and social- transformation. Such work could clarify which types of mindfulness practice most effectively support both individual well-being and social connectedness, advancing theoretical models of the self in the context of mental health.

In conclusion, our findings highlight the value of considering both individual and social dimensions of the self in MBCTs, with implications for clinical practice, research and the development of a social psychology of mindfulness.

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## Ethics statement

The study was conducted in accordance with the ethical standards of the Declaration of Helsinki and was approved by the appropriate Institutional Review Board, the Committee for the Protection of Subjects Ile-de-France XI n°2021-A0 3188-33.

## Data availability

The data that support the findings of this study are available at the online public repository Figshare (<https://doi.org/10.6084/m9.figshare.25880110.v1>). Please note that this original research is a pre-registered study (see PDF "AsPredicted (for peer-review only) #117978").

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#### Supplementary material

The supplementary material for this article can be found online.

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