

Mindfulness and Obsessive Compulsive Disorder; Implications for Psychological Intervention

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Abstract

This article reviews the current research regarding the use of Mindfulness as treatment in Obsessive Compulsive Disorder which has been an area of increasing interest for more than a decade. Research investigating the application of specific models of Mindfulness and integrative treatments incorporating Mindfulness is reviewed together with a consideration of how descriptive components of Mindfulness may contribute to understanding its contribution to OCD treatment. This is briefly examined by considering the main mechanism of change proposed by the Mindfulness literature and followed by a discussion of the criticism of applying Mindfulness to OCD. The conclusion suggests that whilst there is good evidence to support Mindfulness in the treatment of OCD, particularly for those who have not benefited from traditional interventions, there is not enough evidence for it to be considered a stand alone treatment. The current literature suggests that Mindfulness may be best considered as adjunctive treatment within an existing treatment framework but further research is required to further investigate its effect and clarify its contribution to change.

It was great honour to be asked by this Journal to review the contribution of Mindfulness in the treatment of OCD, which had been suggested by several clinicians including myself around ten years ago (Fairfax, 2008)¹⁵. Mindfulness, or adapting traditional treatment to include it, has become a significant development in psychotherapeutic practice. The treatment for OCD is no exception and specific books and manuals have been developed (Hershfield, and Corboy, 2013, Hyman, and DuFrene, 2008)^{30,34}. In an online survey of 181 therapists the average of whom had practiced for 15 years and treated 25 clients with OCD, Jacobson, Newman and Goldfried (2016)³⁵ found the majority of therapists reported incorporating mindfulness interventions into their practice.

It is well established that despite significant evidence of the effectiveness of Cognitive Behavioural Therapy (CBT) and Exposure and Response Prevention (ER-P) in the treatment of OCD (NICE, 2005)⁵⁴, many clients fail to engage or complete treatment (Claudius et al., 2015, Hale, Strauss, and Taylor, 2013, Singh, Wahler, Winton and Adkins, 2004)^{10,26,66}. For example Mancebo et al. (2011)⁵¹ found that 25% of clients diagnosed with OCD did not engage in CBT and 30% of those who start treatment drop out. The main reason provided by clients is a fear of what CBT or ER-P requires (Claudius et al., 2015)¹⁰. It is important therefore to consider alternative treatments or methods to support clients to engage in interventions that are shown to be effective. Mindfulness may offer a promising option and one that has a developing literature (see reviews by Hale, Strauss and Lever, 2013, Bluett et al., 2014)³.

This article reviews current research in terms of its efficacy of Mindfulness in treatment for OCD followed by a brief discussion of psychological mechanisms that may relate to the use of Mindfulness. Criticisms of Mindfulness in this context are explored before conclusions are presented.

Does Mindfulness Have a Positive Effect on The Treatment of OCD?

The research reviewed includes two well known Mindfulness based models, adaptations of these models and more individualised Mindfulness based approaches.

Mindfulness Based Stress Reduction (MBSR)

Originally established in the 1970's by John Kabat-Zin (2013) for the treatment of chronic pain, MBSR is an eight-week, two hour group interventions that can include a one day retreat after the sixth session. It one of the most wellknown Mindfulness based interventions and an evidence based treatment for various health conditions (Rush and Sahrma, 2016)⁵⁸. MBSR uses Mindfulness techniques of meditation, body scanning with basic yoga postures. The intention is to help develop an attitude of non-judgment, non-striving, acceptance and letting go, beginner's mind, patience, trust, and de centering.

Despite being one of the first applied models of Mindfulness in Western Health care, only a single trial of MBSR in OCD was found. Patel, Carmody and Simpson (2007)⁵⁶ described a client who had refused both medication and ER-P but offered an 8 week MBSR program adapted for OCD. They described significant improvements in OCD symptoms and an increased state of Mindfulness. However as a single case study, by itself does not justify an adaption of MBSR as treatment option. Without significant sample size or a control group it is hard to make any claim that the observed improvement was due to the specifics of the intervention. It is also important to note that there have been no further easily available research into the effect of MBSR in OCD.

It is perhaps due to the design and evidence base that MBSR is primarily offered for physical health conditions which may explain the limited application in OCD. It's influence on psychological interventions however is significant and directly associated with the development of 'Third wave' interventions that use Mindfulness such as Dialectal Behavioural Therapy (DBT) (Linehan, 1993)⁴⁶ and Mindfulness Based Cognitive Therapy (MBCT) (described below).

Mindfulness Based Cognitive Therapy (MBCT)

MBCT was developed by Segal, Williams and Teasdale (2013)⁶¹ as a combination of CBT with Mindfulness techniques, in particular present moment awareness

and non judgment, to support non reaction to negative thoughts. It was initially designed as a treatment for recurrent depression but has been found to be successful in other psychological difficulties such as anxiety and mood disorders (Galante, Iribarren, and Pearce, 2013, Williams et al., 2008)^{22,74}. It is usually provided as a two hour, eight week group, although a day long intervention can be offered after the fifth meeting. MBCT requires the daily practice of Mindfulness techniques. MBCT has been applied to the treatment of OCD and positive outcomes reported.

Key et al., (2017)⁴⁰ randomised 36 clients who continued to experience symptoms following CBT treatment for OCD into a trial of either MBCT or a waiting list control group. Compared with the control group clients reported a decrease in symptoms of OCD, anxiety, depression, obsessive beliefs and an increase in Mindfulness practice and self compassion. However this was a small sample and suggests that MBCT is only more effective than remaining waiting list. It is interesting to note that the clients had already received CBT and may well represent the treatment resistant group previously who do not benefit from traditional OCD interventions. Squazzin et al. (2017) conducted a thematic analysis of post intervention interviews from 32 clients with OCD who completed MCBT. They found that clients reported a decrease in symptoms, and an increase in reports of quality of life and Mindfulness. However there were no objective measures to support these verbal accounts or a control group.

Hertenstein et al. (2012)³¹ offered 12 clients with OCD an 8 week MBCT intervention and found improvements in OCD symptomology, however this was a relative small number of participants with no control group or follow up evaluation. Lui, Han and Xu (2011)⁴⁷ evaluated MBCT for 6 clients with OCD and found significant improvement on a range of measures. This is limited again due to the small sample size but does raise interesting questions concerning the cross cultural contribution of Mindfulness.

Mindfulness Informed Interventions

In addition to these two models, research has also been conducted on more integrated and personalised Mindfulness based interventions.

Hanstede, Gidron and Nyklicek (2008)²⁸ randomly allocated 17 clients to either an eight week Mindfulness training group or a waiting list group. Their Mindfulness intervention included applying techniques of meditative breathing, body scan, and Mindful daily living to OCD symptoms. They reported a significant decrease in OCD symptoms in the Mindfulness group but there was no follow up and this was only compared to the waiting list group.

In a review of complementary, self help and psychosocial interventions for OCD and trichotillomania, Sarris, Cranfield and Berk (2012)⁵⁹ rated the methodological quality of 14 trails that met their criteria. Tentative support was found for Mindfulness although the range of quality of research at the time of their review was limited.

Fairfax, Easey, Fletcher and Barfield (2014)¹⁸ randomly selected 20 clients who had previously attended a CBT informed OCD Group over the previous five years in which Mindfulness was a core intervention. The 15 clients that participated were interviewed about their experiences of the group. Twelve of the clients described Mindfulness as the most helpful and most remembered skill from the group. It continued to be practiced by a majority of participants. This suggests that Mindfulness may also have a use in maintaining changes and prevention relapse (Fairfax and Barfield, 2012)¹⁶. However this was small selection of clients and the reported changes were not supported by symptom measures. It is also possible that clients may have been biased by the emphasis placed on Mindfulness during the group.

Wilkinson-Tough et al. (2010)⁷³ conducted a case series investigation of three clients provided with a six session mindfulness based intervention. All clients reported improvements in symptoms and two maintained these at two month follow up. However the results are limited by the very small number of participants.

Claudis et al. (2015) compared mindfulness with progressive muscle relaxation delivered as a bibliotherapeutic self-help approach on an online sample of 87 clients identifying with OCD and depression. They did not find any positive outcome for Mindfulness in either group. However the training was only 6 weeks and not therapist guided. Claudis et al. (2015) found that 47% of the sample reported they would have found Mindfulness more helpful if it involved contact with a therapist.

Summary

Despite a number of methodological difficulties, including lack of randomised control trails, small sample sizes and lack of consistently used outcome measures, there is an indication that Mindfulness could have a positive effect on the symptoms of OCD. However there is not currently sufficient evidence to support Mindfulness as standalone intervention.

There is however support for Mindfulness as adjunctive intervention or augmentation into existing interventions. The research indicates that not only could it increase client engagement and successful completion of treatment but may also improve the quality and maintenance of therapeutic successes. On the basis of the evidence it seemed reasonable to consider that Mindfulness in the treatment of OCD should be a therapist guided and not a

purely client led technique. This requires therapists to have a good knowledge of evidence informed treatments for OCD, knowledge and personal experience of Mindfulness which is supported by the literature (Segal, Williams, and Teasdale, 2013, MAMIG, 2006, Potter and Coyle, 2017)^{61,50,57}. There is a good justification therefore for more standardised outcome based research and more detailed investigations into what Mindfulness may be contributing to the treatment of OCD. Further exploration of any similarities the mechanisms of Mindfulness those related in the successful outcome in OCD could provide useful comparison to help refine existing treatment. This is briefly discussed later (3 to 3.5).

Descriptive Outcomes

A general observation from the wider outcome research in Mindfulness, and in the literature relevant to OCD, includes positive client endorsement often using more qualitative and less clinical language (Carmody, 2009)⁷. This includes comments such as 'I was able let go', 'I felt more part of the moment', 'Its still there but I worry less about it', 'I can see it more for what it is'. Identifying this more thematically could help to clarify the processes of how Mindfulness may be helping those who find it beneficially. A number of commonly expressed terms from the OCD literature are briefly summarized below.

Observation and non judgement

Individuals have reported being able to 'stand back', 'sitting alongside', 'act differently towards', 'being distant from', and 'observing more'. Closely associated with these observations is the invitation in Mindfulness to be aware of 'the present moment' which has been related to being able to tolerate the coexistence of different states allowing for different cognitive responses to occur (Hertenstein et al., 2012)³¹. Emerson, Heapy and Garcia-Soriano (2017)¹⁴ reported that unprocessed 'observation' can be related to increased obsessive thoughts and perhaps reflects the hypervigilance of cognition associated with obsessive symptoms.

Exploring the association between observation and non judgment, it has been suggested that Mindfulness results in perceptual change at a sensory level allowing the individual to separate the sense of self from the sensory experiences (Jerath et al., 2012, Shonin et al., 2015)³⁷. It also increases the accurate identification and interpretation of mood states which in turn increases the ability to observe them without participating (Gillespie et al., 2012)²⁴. For example 'I am in pain/ dirty,/ smell bad' changes to 'I have the experiences of feeling pain, I observe the sensation of feeling dirty'. This places the emphasis away from individuals' ownership to one more of transitory sensory experiences which could help to promote cognitive challenges and engagement in ER-P (Fairfax,

2008)¹⁵. Key et al., (2017)⁶² argued that the development of a nonjudgmental stance towards intrusive thoughts increases non reactivity, reduced thought suppression and avoidance, reducing reliance on neutralising behaviour.

Connectedness and present moment

Mindfulness may also have wider psychosocial applications perhaps related to descriptions of 'being part of something bigger', 'connected' and 'in touch' (Block-Lerner et al., 2007)². Mindfulness can lead to an endorsement of religious or spiritual belief, both of which can result in an individual feeling less isolated and give a new sense of meaning and purpose (Didonna, 2009)¹². In turn this could help individuals to respond more flexibility to negative life experiences, physical injury and bereavement (Mackenbach et al., dcvvcfc2002)⁴⁹.

The description of 'connectedness' and 'in the moment' may also be associated with what Shonin and Van Gordon (2015) have identified as the 'phenomena feedback'. This describes the practice of Mindfulness increasing an individual's awareness of their immediate situation which has been associated with improved efficiency in decision making (Shonin and Van Gordon, 2016)⁶⁵. This could help support ER-P and cognitive challenges by increases the individual's ability to make different response to ritualised behaviour or obsessive thoughts.

The effect of being in the 'Present Moment' has also been related to descriptions of developing 'stillness' (Khanna and Greeson, 2013)⁴¹. Research has indicated Mindfulness can improve regulation of cardiac functioning and breathing which in turn increased psychological mindedness and insight (Telles et al., 2013, Bluett et al., 2014)^{3,70}. Fairfax, Easy, Fletcher and Barfield (2014)¹⁸ found that in a review of their Mindfulness based treatment groups for OCD, participants reported improvements in sleep. There are therefore physiological benefits of Mindfulness that could support techniques of anxiety management and regulation of emotion in CBT.

Non reaction

'Not reacting' describes the choice not to respond in habitual or ritualistic ways (Kabat-Zinn, 2013)³⁹. There may be two levels that Mindfulness can encourage this, firstly by making the unconscious more conscious through the development of greater awareness and secondly the deliberate resistance to usual response to stimulus. This latter process is related to the concept of 'Urge' Surfing (Lienhan, 1993) in which the individual actively decides to 'rides the wave' of the experience without distraction or avoidance. In OCD urge surfing can have significant application to response prevention and relates to techniques such as the 'Five minutes Rule' (Schwartz and Beyette 2016)⁶⁰. Hertenstein et al. (2012)³¹ discussed benefits such

as an increased ability to let unpleasant emotions surface and to live more consciously in the present.

Letting Go

'Letting go' is commonly reported by participants evaluating the effect of Mindfulness. Van Gordon et al. (2016) suggest that as consequences of observation and non judgement enables an individual to become aware of the temporary nature of existence. This encourages a more fluid attitude to internal and external events. 'Letting Go' also highlights the underlying Buddhism tradition of Mindfulness and philosophical emphasis on 'non attachment'. There are overlaps with attachment theory which have previously been explored (Brazier, 2003)⁴ but it can also describe the existential process of disentangling the self from sentiment and materialistic needs. Encouraging a stance of 'Letting Go' through Mindfulness could support CBT and ER-P but may require a more nuanced understanding of the individual and expectations of their treatment.

Summary

The more qualitative outcomes of Mindfulness interventions further adds to the understanding of what may be contributing to positive outcomes. Being able to include a richer psychological narrative around a concept such as 'Present Moment' helps to further consider the contribution of Mindfulness, the ways it may be supporting existing techniques or offering a novel intervention. There needs to be more detailed analysis of these terms to increase understanding of what they mean on both an individual and more meta level and how this may relate to other psychological theories of change.

How Mindfulness May Contribute to Successful OCD Interventions

The purpose of the following section is not to provide a detailed description of the mechanisms proposed but to highlight potential psychological processes promoted by Mindfulness. The previous discussion suggests Mindfulness may be a useful addition to the treatment of OCD, but it is important to consider how any integration could be understood.

Intention, Attention and Attitude (IAA)

Shapiro, Carlson, Austin and Friedman (2006)⁶³ suggested IAA and the associated process of 'Reperceiving' based on the definition of Mindfulness by Kabat Zinn (2013). IAA describes three cyclical processes; *Intention*, the desire to make goal based changes on an individually defined continuum, *Attention* is the process of deliberately focusing attention on the external and internal present moment experience and *Attitude* or the decision to be compassionate, accept, and not judge. IAA can result

in 'reperceiving' which enables a much broader meta process of clarification and revaluation of an event. Shapiro et al. (2006)⁶³ argue that reperceiving results in a four subsequent mechanisms associated with change; *self-regulation*, (cognitive, emotional, and behavioural) *flexibility*, *clarification of values* and *exposure*.

An advantage of IAA is that it provides an overarching explanation for the positive outcomes described by the research in OCD. *Attitude* relates to findings highlighting 'non judgment' and acceptance, *Attention* the ability to purposeful shift attention from one stimuli to another and *Reperceiving* describes establishment of a meta mechanism (perhaps similar to DBT 'Wise Mind') that enables the process of change. However IAA may be almost too comprehensive. For example it isn't automatically certain whether 'letting go' reflects part of a goal determined 'Intention' or 'Change in Attention'. Whilst providing a useful structure IAA is not currently able to assert which process may be more related to change in OCD and should therefore be a greater emphasis in treatment. As a general understanding of how Mindfulness can operate, IAA provides a useful framework but lack of research limits the ability to adopt it as sole mechanism. It does however identify useful areas of investigation.

Differential Activation Hypothesis (DAH)

This was proposed by Teasdale, Moore, Hayhurst, Pope, Williams, and Segal, (2002)⁶⁹ to explain the contribution of Mindfulness to MBCT and further supported by Lau, Segal, and Williams (2004)⁴⁴. They suggested a three-stage 'spiral' in depression beginning with transient negative moods (TNM) that promoted negative thought patterns, which in turn led to full depressive episodes. The DAH suggests that through Mindfulness, clients learn to become aware and identify TNM thereby providing the opportunity to interrupt the process and respond differently. Teasdale et al. (2002)⁶⁹ have described these components of Mindfulness as *defusing* and *decentering* to prevent the spiral and alter the course of potential relapse. This involves promoting awareness of thought processes and disengagement from ruminating by understanding thoughts as events to which the individual does not have to identify him/herself with. Therefore the target of the DAH is not the content of the thoughts, but the relationship of the individual to the process of thinking. Mindfulness shifts the metacognitions from personal negative self-evaluating, to seeing thoughts as impersonal from a decentered perspective in which the subject becomes object. Hayes, Strosahl, and Wilson (2012)²⁹ describe a similar process of cognitive defusion in ACT, in which the emphasis is on changing one's relationship to thought rather than attempting to alter the content of thought itself.

There are clear application to OCD, particular helping

the client to become aware of the pattern as it occurs and separate the self from the obsessive thought, increasing the likelihood of behavioral challenge. However there has been criticism of both DAH and cognitive diffusion suggesting that internal self directed use of attention could actually increase negative appraisals related to self-focused attention, threat monitoring, ruminative processing, and activation of dysfunctional beliefs (Myers and Wells, 2005)^{53,72}. It is also theoretical and depressive moods can be more related to physiological and neurochemical processes that may not involve TNM.

Attentional Control

Neurobiological research has suggested changes in the anterior cingulate cortex, insula, default mode network structures, left hippocampus, temporo-parietal junction, and fronto-limbic network are involved in Mindfulness practice (Holzel et al., 2011)³². These regions have also been associated with OCD and corresponding difficulties with introspective awareness, self regulation and memory (Tang et al. 2012, Crowe and McKay, 2016)^{11,68}. It is not possible to provide a detailed explanation here, however the role of attention as a mechanism of change will be briefly explored.

Attention is a core component of Mindfulness practice and a potential cognitive mechanism involved in change. In disorders such as OCD, memory, concentration and difficulties controlling attention are often reported by clients (Chamberlain, Blackwell, Fineberg, Robbins, and Sahakian, 2005)⁸. However attention is an extensive subject and one that exceeds the current investigation (a helpful review is provided by Muller and Roberts, 2005)⁵². For the purposes of the current investigation Attention describes various processes of sustained attention (the ability to maintain focus for a long period of time), inhibition (skills to allow attention to be maintained without associated thoughts or emotions effecting the act of attending) and attention shift (which allows choiceful shifts of attention by the individual. These neuropsychological abilities are all associated with executive functioning which has been highlighted in research into OCD (Olley, Malhi and Sachdev, 2007, Fairfax, 2010)^{55,17}.

Holzel et al. (2011)³² proposed that the development of sustained attention through Mindfulness allows self regulation which when applied to internal stimuli can create the climate for reappraisal and change. Being more aware of these events can result in what Holzel et al. (2011)³² describe as 'exposure and extinction response'. The implication for OCD is significant as it suggests that ER-P can occur without external provocation. This adds support to previous suggestions that mindfulness is both a support to ER-P but an exposure technique in itself (Fairfax, 2008)¹⁵. Expanding this further this may make

Mindfulness being particularly relevant to treatment of ruminative OCD and thoughts experienced as too shameful to express (Alem-Dianati, Moheb and Amiri, 2016)¹. It also helps to challenge specific OCD cognitive processes such as Thought-Action-Fusion (Hanstede, Gidron and Nyklick 2008, Wilkinson-Trough, Didonna, 2009, Fairfax, 2008)^{12,15,28}, Experiential Avoidance (Franklin, Morris and Budzyn, 2018)¹⁹ and over responsibility (Gasnier et al., 2017)²³.

Whilst these findings offer useful areas of explanation, the links between the neural, cognitive and therapeutic changes processes are still unclear and require on going inter disciplinary research. There is no current support for example, for a stand alone cognitive remediation program for OCD.

Detached mindfulness and meta cognitive approaches

Detachment Mindfulness describes an internal awareness of events in which the individual purposefully does not respond to them in any way (Wells, 2005)⁷². It involves the decision not to engage with the contents of awareness accepting it through 'cognitive decentring', in this context described as a process which allows the thought or feeling to be seen solely as an event in the mind. Detachment Mindfulness is also a non goal directed activity requiring executive abilities to inhibit conceptual processing. By contrast Engaged Mindfulness extends the awareness of an un processed stimuli with the choice to respond. Ludvik and Boschen (2015)⁴⁸ compared Detached Mindfulness with cognitive restructuring and control groups in a non clinical sample of 65 participants. They found that whilst both treatment conditions reduced checking behaviours, detached mindfulness also improved participants trust in their memory functioning.

Detached mindfulness is also part of Meta Cognitive Therapy (Wells, 2005)⁷². This approach has been reviewed by Hussain (2015)³³ and briefly summarised by Jankowski and Holas (2014)³⁶ who identified five characteristics of metacognition in Mindfulness (in Hussain, 2015)^{33,a}.

Metacognitive Therapy has a growing but still limited evidence base particularly when compared to other interventions such as CBT and ER-P (Johnson, Hoffart, Nordhal, and Wampold, 2017)³⁸. It has been applied to OCD but this is largely developmental and best reports equivalence to existing treatments (Fisher and Wells, 2005, Van De Heiden et al., 2016)^{21,71}. Meta cognitive approaches therefore offer promise but do not yet have a robust evidence base for either effectiveness or application to Mindfulness or Treatment of OCD. It is unclear therefore if there is sufficient support to present this as a separate mechanism for change in the application Mindfulness.

Footnote

1. ^a Metacognitive, multilevel processing of information is inherent to a mindfulness state
2. Mindfulness depends on dynamic cooperation of three main components of the metacognition: metacognitive knowledge, metacognitive experiences and metacognitive skills
3. Mindful meta-level is always conscious while the other meta-levels of cognition can occur implicitly
4. Intentionally practiced mindfulness leads to decreases in dissociations between meta and object levels
5. Components of mindful meta-level of cognition develop and change during continuous practice

Summary

Although providing a detailed theory of the possible mechanisms theories such as IAA and DAH, are still very conceptual.

Whilst these mechanisms suggest a potential framework to understand change there is currently no comprehensive explanation. They do however provide a useful structure to guide research into the detailed application of Mindfulness in OCD. The current growth in neuropsychological research, particularly in Mindfulness and OCD, offers exciting new possibilities to develop these mechanisms and explore potential overlaps with more detailed knowledge of neural pathways (Stien, Ives-Deliperi and Thomas, 2010, Chiesa, and Serretti, 2010)^{9,67}.

Criticism of Mindfulness in OCD Interventions

There are a number of concerns about Mindfulness with regard to its treatment rationale, how it is practiced and potential negative consequences. There have been a number of criticism about the translation of Mindfulness from the wider Buddhist tradition it originates from and how this has been applied in Western health care practice (Hanley et al., 2016)²⁷. This includes the experiences of states that can be destabilising with the cultural understanding embedded in Buddhist societies, such as the experience of 'non self' (Farias and Wikholm (2015)²⁰.

More specific to OCD, Grayson (2013)²⁵ was concerned about the use of Mindfulness in ER-P as it could inadvertently become a neutralising technique. Mindfulness in this sense could be used as way of avoiding the experience of anxiety associated with an exposure experiment limiting the possibility of behavioral extinction and associated cognitive changes. Brendel (2015)⁵ argued that some clients can use Mindfulness to avoid critical thinking or confronting difficulties through a form of 'non engagement', the emphasis on present moment for example could become

justification for not needing to make behavioral changes. Mindfulness practice could become a process that involves mentally 'discharging thoughts' resulting in both negative and positive thoughts being excluded by the individual. There have been concerns about the effect of Mindfulness on memory, Wilson (2015)⁶ found that false memory can occur after a single 15 minute Mindfulness practice

Although very rarely reported, a number of psychiatric difficulties associated with Mindfulness have been described including insomnia, depersonalisation, loss of appetite and psychosis (Lindahl, Fisher, Cooper, Rosen and Britton, 2017, Shonin, William Griffiths, 2014)^{45,64}. Similar to Segal, Williams, and Teasdale (2013)⁶¹ and Kabat-Zinn (2013)³⁹, Dobkin, Irving and Amar (2012)¹³ argued for the importance of appropriate training for Mindfulness practitioners and through assessment of clients.

Whilst these criticism do not result in the rejection of Mindfulness in the treatment of OCD, similar to other psychological intentions participants should be fully assessed and appropriately informed. Mindfulness practitioners should be trained and supervised and if offering the practice as a therapeutic intervention have the appropriate psychotherapeutic training.

Conclusion

On the basis of the above there is a strong argument for Mindfulness being included in the treatment of OCD as adjunct to existing treatment. Many therapists are already using Mindfulness to treat a variety of difficulties and evaluating their practice (Potter and Coyle, 2017)⁵⁷. There some support for Mindfulness being considered for clients who have not found traditional interventions helpful or dropped out of ER-P, which and is a promising development for this significant group of individuals

Any significant conclusion with regard to practice are limited by the lack of research and highlights the need for larger sample sizes and RCT. It would appear however Mindfulness based within MBCT may be an effective therapeutic structure and should be employed to support specific ER-P and CBT interventions.

It is not clear how Mindfulness enables change to occur but would appear to have a positive effect on Thought Action Fusion, Experiential Avoidance and Rumination. It maybe that Mindfulness practice such as observation, being in the moment and letting go creates an environment that promotes dis engagement from OCD behavioral and cognitive patterns. It also seems that the intention behind Mindfulness practice has an important role in its likely benefit and that a motivation to engage in non judgment and acceptance of distress in addition to commitment to regular practice is required. Mindfulness also appears to operate on a cognitive, sensory, psychological and behavioral level and presents a way to treat an individual

holistically. This could also improve client engagement in ER-P and providing another way of managing distressing symptoms. It further provides the opportunity to include the wider context of a client's life in the treatment through participants involvement in present moment situations, developing external perspective and increasing greater situational awareness.

A further limitation in the existing research is that lack of consistently used outcome measures. Although some reported the use of the Yale Brown Obsessive Compulsive Scale (Y-BOCS) it was limited due to use of other methodologies such as case studies, qualitative interviews, self report and use of surveys. A similar criticism can be made of the lack of objective measurement of Mindfulness. In addition to the recommendation that further research should employ valid tools such as the Y-BOCS or Obsessive Compulsive Inventory (OCI-R); an established measure of Mindfulness such as the Five Facet Mindfulness Questionnaire (FFMQ) could be used. Not only would this provide the opportunity to formally assess a possible relationship between Mindfulness and OCD but measures such as the FFMQ may help to further investigate the Descriptive Outcomes discussed in section 2.

The current evidence would suggest that if used in the treatment of OCD Mindfulness needs to be part of formalised treatment structure and not a random or suddenly introduced technique. It is also important that the therapist has training, experience and personal practice of Mindfulness (Kulz and Rose, 2014)⁴³. Without this it is a possibility that the intervention would not be successful and at worst it could lead to deterioration.

In the last decade there has been a growth in the literature which includes cross cultural and interdisciplinary research (Kirmayer, 2015)⁴². It is hoped that this current review begins to provide some basic guidance for the application of Mindfulness in the treatment of OCD and suggestions for future research. Mindfulness offers an exciting avenue in the continued desire to improve the treatment for those suffering with OCD and the next ten years offers much promise in finding new ways to help those struggling with such severe and challenging disorder.

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