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## Research Article

# Impact of a Brief Mindfulness Intervention on Psychiatric Consult Patients' Symptoms

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### ABSTRACT

Psychiatric patients in the hospital suffer from stressors and challenges that may contribute to their hospitalization. They also suffer additional stressors related to being an inpatient. The psychiatric consultation liaison service of a hospital or health system is designed to respond to patients when stressors have accumulated, and patients are deemed to be at risk or when patients are suspected of having a psychiatric condition. This service provides necessary evaluation and treatment of patients who are acutely distressed, and often the focus is on diagnosing and stabilizing the patient and keeping them safe. Due to time constraints on medical residents, there is often no time for a professional to implement an appropriate and effective therapeutic intervention in the moment. We developed and conducted pilot testing of a brief mindfulness intervention for psychiatric consult patients that could be ordered by the consultation liaison physician or team and be implemented immediately by a trained nurse. This intervention consisted of offering a range of guided mindfulness techniques to the patient in real time response to patients and evaluated the impact on symptoms pre-and post-intervention. Results demonstrate significant improvements in self-reported anxiety, stress, uncomfortable thoughts, and pain after the intervention. Other symptoms of low mood, restlessness, and body tension were not significantly improved post intervention. We briefly discuss the intervention, its impact and potential reasons for the mixed findings.

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### Introduction

Mood and anxiety disorders are among the most common psychiatric disorders in the United States and are frequently comorbid with other mental and medical disorders [1]. Common symptoms of those diagnosed with psychiatric disorders include depressed mood, anxiety, bodily tension, uncomfortable thoughts, and pain [2-6]. It has been demonstrated that mindfulness-based stress reduction (MBSR) is effective in modulating the aforementioned symptoms [7]. Additionally,

mindfulness-based therapy has been shown to be effective in treating anxiety and mood difficulties [8]. Unfortunately, the length of such interventions has been a challenge to implementing them in acute settings, such as in a consultation service.

While most mindfulness interventions emphasize the importance of consistent practice, the acute patient needs of a psychiatric consult demand an immediate and effective “real-time” intervention. We believe that mindfulness interventions can be used to address these acute

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symptoms in psychiatric patients in hospital settings. Specifically, mindfulness interventions may target symptoms in patients who have demonstrated habitual and automatic maladaptive coping strategies. Some more recent research is beginning to indicate that individuals who are exposed to mindfulness practices may experience symptom-reduction after relatively short periods of training [9, 10].

Specifically, brief mindfulness-based therapy has been shown to be useful for tension-headaches, atrial fibrillation, pain, mood and anxiety [11-14]. Thus, for this study, a brief one-time, 30-minute mindfulness intervention was developed and deployed. The intervention was based upon a consolidation of demonstrated effective mindfulness-based skills that could be easily taught and practiced. These practices include guided-techniques including "Attention to Breathing," "Awareness of Thoughts," "Awareness of the Body," and "Guided Imagery." Each was introduced, explained, and practiced with the patient in the moment in order to provide relief from their endorsed symptoms in the moment. The purpose of this study was to understand what impact, if any, a brief mindfulness intervention would have in an acute-care setting. This study is novel in that it is not known if such a brief mindful intervention would affect symptomatology in this patient population.

## Materials and Methods

### Study Design

This intervention was developed and formalized at the University of Virginia across the medical center and health system and was approved by the UVA IRB. Patient personal health information was not collected in order to keep participants deidentified. The study was developed to provide a mindfulness intervention on an as-needed basis in real time. Psychiatric nurses were trained with brief mindfulness exercises to work individually with patients. As the psychiatric consult liaison team encountered patients, they were referred to psychiatric nurses skilled in delivering mindfulness interventions. The nurses then approached the patient, explained the intervention and asked for consent if the patient was agreeable. All patients were provided the time and opportunity to ask questions and have their questions or concerns adequately addressed.

### Participants

The participants were a convenience sample of patients at the University of Virginia Medical Center and Health System referred to the psychiatric consultation liaison service. Patients were recruited from the psychiatric consultation liaison service patient list on a daily basis between March 2017 - September 2017. After verbal informed consent was obtained, and any questions addressed, the patients were asked to complete a very brief survey that assessed if they had any previous experience with mindfulness, and also assessed their current symptom level of the symptoms of interest: anxiety, mood, restlessness, bodily tension, stress, uncomfortable thoughts, and pain. Patients were also asked to complete the same symptom rating scale immediately after the mindfulness intervention. Forty-five patients were referred to the mindfulness consult service during this time-frame. All participants who were offered the opportunity to participate did agree to participate and all completed the

intervention and post assessment. No participants dropped out during the duration of the intervention.

### Measures and Procedures

A clinician different than the referring provider or the provider administering the mindfulness intervention gathered the symptom pre- and post-assessment data. No specific identifiers were collected, and participants were informed of their confidentiality. Following this, a psychiatric nurse trained in mindfulness teaching and clinical care, as well as the specific group of mindfulness interventions implemented in this study, met individually with the patient in a private space within the hospital.

The psychiatric nurse was trained to offer specific guided-techniques including "Attention to Breathing," "Awareness of Thoughts," "Awareness of the Body," and "Guided Imagery." The psychiatric nurse worked collaboratively with the participant to investigate and decide which guided-technique might be most helpful to them. There was one nurse providing all of the interventions during this study period, in order to make the intervention more reliable and consistent. All patients were given additional time to process the intervention and debriefed. No patients endorsed increased distress following the intervention.

### Data analysis strategy

The primary aim of the study was to evaluate the impact of a very brief single in-the-moment intervention upon the psychological well-being of psychiatry inpatients. We evaluated symptoms in a dichotomous fashion (presence of symptom: yes or no) and specifically hypothesized that each assessed symptom would be reduced post intervention. We used matched pair one sample t-tests for the comparisons ( $H_0: \mu_d = 0$   $H_a: \mu_d \neq 0$ ) for the analysis.

### Results

Pre- and post-data for ratings of anxiety, mood, restlessness, bodily tension, stress, uncomfortable thoughts, and pain were scored dichotomously and compared across time via matched-pairs one-sample t-tests. We hypothesized that each of these measures would significantly improve post brief mindfulness intervention when compared to the pre-intervention ratings. Our results are mixed. Specifically, our hypotheses that significant changes post intervention would be found for low mood ( $t=.39$ ,  $p=.6995090$ ), restlessness ( $t=-.19$ ,  $p=.849889$ ) and body tension ( $t=-1.29$ ,  $p=.204287$ ) were not supported. However, our hypotheses that there would be significant improvement post intervention were supported for the symptoms of anxiety ( $t=-3.70$ ,  $p=.000601$ ), stress ( $t=-3.70$ ,  $p=.000601$ ), uncomfortable thoughts ( $t=6.36$ ,  $p<.00001$ ), and pain ( $t=8.98$ ,  $p<.00001$ ).

### Discussion & Conclusion

Previous research has demonstrated positive impacts of brief mindfulness interventions on inpatient populations. We examined the influence of a very brief (one-time 30 minute) mindfulness intervention on psychological and somatic symptomatology of psychiatric consult inpatients. Our hypotheses were that the brief intervention would

positively impact symptomatology as demonstrated by improved scores on self-report of symptoms after the intervention when compared to prior to the brief intervention. We found mixed support for our hypotheses, but some promising findings regarding the positive impact of the intervention on patients' self-reported anxiety, stress, and uncomfortable thoughts. Of note, mood, restlessness, and body tension did not subside significantly following the intervention. Almost all participants were new to mindfulness and may have had difficulty sitting still or effectively participating during the intervention. Restlessness has been shown to be associated with elements of mind-wandering, specifically during one's first experiences with meditation [15, 16]. Moreover, bodily tension has been shown to be more effectively impacted by movement practices, such as yoga, than mindfulness [17]. It is likely that certain symptoms are more likely influenced by certain contemplative practices. Additionally, mood symptoms were not impacted, which is consistent with previous findings that mood symptoms take significant time to impact [18].

Again, significant relief was seen in symptoms of anxiety, stress, uncomfortable thoughts, and pain. These mixed findings highlight the possibility that anxiety, stress, uncomfortable thoughts, and pain are somehow more accessible targets for a mindfulness intervention. One hypothesis may be that the stress, anxiety, and thoughts are all "momentary" and therefore more subject to brief interventions. This hypothesis poses two questions, 1. What changes might be seen if a relaxation intervention was compared, randomly, to this mindfulness intervention, and 2. Would other symptoms improve if the intervention was longer or repeated? Both questions merit inquiry and future investigation.

All patients who were approached did agree and consented to the study. We believe this demonstrates the power of teaching nurses to deploy mindfulness at the bedside. Boredom is an often-cited effect of any inpatient hospitalization [19]. This intervention not only demonstrates one possible way to increase patient satisfaction, but also teach patients meaningful ways to engage with their own symptoms. Because nurses are deploying this, the consequential impact can be widespread, enabling nurses on any unit to teach these practices to their patients. This research demonstrates the importance of training nurses not just in traditional nursing skills, but also training them in brief psychotherapeutic techniques which may target psychosomatic symptomatology. This study provides support for a low-cost behavioural intervention that may profoundly positively impact the care of struggling psychiatric patients. More investigation is warranted to ascertain if all nurses, across all units, can be taught these skills, to provide meaningful stress-relief to patients.

### Limitations

This study is limited by the lack of a control group or active comparison clinical intervention that would provide a basis for making a stronger inference as to the effects of brief mindfulness interventions. We believe that this data does show a brief mindfulness intervention is feasible. The data does not show whether a brief mindfulness intervention would be more impactful than alternative interventions.

Additionally, this study was composed of a small number of homogeneous participants. While demographic data was not collected,

we understand that the intervention was targeted to patients who were in significant distress, therefore making the outcome more susceptible to regression towards the mean. The intervention itself was quite brief, thereby making the results less generalizable over time. Further research must examine the long-term effects of these short-term interventions to understand the clinical effect and significance.

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