

## Journey back into body and soul – An exploration of mindful yoga with psychosis

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(Received 1 May 2013; accepted 6 January 2014)

Yoga is regarded in the West mainly as a physical activity. However, increasing evidence supports yoga's efficacy as an adjunct treatment for complex mental health issues. This study explored the suitability of an integrated mindful yoga programme in a mental health rehabilitation centre. Ten psychiatric inpatients participated in twice-weekly 30 minute sessions over seven weeks. Semi-structured interviews and weekly journal entries were utilized to explore reasons for attending the yoga, challenges, barriers, and the programme's impact on achieving personal objectives. Themes included increased relaxation, reduced stress, improved energy, greater ability to focus, and further motivation to engage in life. These findings support the potential benefits of yoga programmes for people experiencing psychosis.

**Keywords:** psychosis; yoga; mindfulness; self-awareness; recovery journey

### Introduction

*"... for that is the pressing need of the individual, to arrive at the highest truth of his own being, to set right its disorders, confusions, false identifications, ... to know and mount to its source."* Sri Aurobindo, *Synthesis of Yoga* (Aurobindo, 1992)

The experience of psychosis is often overwhelming and confusing, causing difficulty in trusting one's own bodily sensations and mental perceptions (Bentall, 2003; Geekie, Randal, Lampshire, & Read, 2012). This commonly results in difficulty modulating physical arousal and regulating affect (Nuechterlein & Dawson, 1984). Research suggests that slow *hatha* yoga breathing practices balance the Autonomic Nervous System (ANS), thereby enhancing Para-sympathetic Nervous System (PNS) functioning and reducing activity of the Sympathetic Nervous System (SNS) (Streeter, Gerbarg, Saper, Ciraulo, & Brown, 2012), allowing for relaxation (Ross & Thomas, 2010).

Over the past decade, a small but growing body of research has explored potential benefits of yoga for people with schizophrenia (Vancampfort et al., 2012). One Indian Randomized Controlled Trial (RCT) compared efficacy of yoga therapy with physical exercise as an adjunct to antipsychotic medication in schizophrenia patients (Duraiswamy, Thirthalli, Nagendra, & Gangadhar, 2007). Yoga participants ( $n = 21$ )

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improved in PANNS scores, had greater social and occupational functioning, and quality of life. An American RCT ( $n = 18$ ) showed similar findings (Viscaglia & Lewis, 2011). Another recent study suggests that even a single session of yoga or aerobic exercise positively affects state anxiety, psychological stress and wellbeing in people diagnosed with schizophrenia (Vancampfor et al., 2011).

Yoga is one of the six orthodox Indian philosophies, providing the practical methodological pathway toward attainment of “self-realization” (DeMichelis, 2005), which is conceptualized as dwelling in a state of universal consciousness when experiencing the higher “Self” (Feuerstein, 1998). *Hatha* yoga specifically emphasizes body-mind-breath coordination in a mindful manner, gradually building physical and mental strength, flexibility, and balance. The focus is on release of physical, mental, and emotional tension (Raub, 2002).

Mindfulness is the practice of cultivating awareness of the present moment with an attitude of openness and curiosity (Kabat-Zinn, 1990), based on the philosophy of 2500-year-old Buddhist tradition. Mindfulness has been integrated into specific interventions in psychological practices (Shapiro & Carlson, 2009), which may alleviate distress with general mental health issues (Carmody & Baer, 2008). Recent qualitative studies explore the effectiveness of mindfulness practice to regulate anxiety in people diagnosed with schizophrenia (Brown, Davis, LaRocco, & Strasburger, 2010; Davis, Strasburger, & Brown, 2007) and psychosis (Chadwick, Hughes, Russell, Russell, & Dagnan, 2009). Benefits described include “relaxation, self-awareness/acceptance, and benefits of group dynamics” (Brown et al., 2010, p. 232). Less rumination, learning to stay in the present, being more mindful, and lessening symptoms of anxiety and depression were also identified.

Yoga and mindfulness were combined in the Mindfulness-Based Stress-Reduction (MBSR) programme (Kabat-Zinn, 2003). The aim is not to perfect postures, but rather to notice with every breath external and internal stimuli and experiences in the present moment with openness, curiosity and without judgment. Movement itself though has a stimulating effect, leading to increased alertness and awareness. Mindful engagement in yogic practice enhances one’s capacity to observe stimuli, notice bodily sensations and release emotional tension. In essence, mindful yoga is not simply exercise, rather a personal practice which offers development of attentiveness to the present moment, therewith deepening self-awareness (Salmon, Lush, Jablonski, & Sephton, 2009). Lavey et al. (2005) used mindful yoga based on the MBSR programme in an acute mental health unit group setting, finding reduction of negative emotions in psychiatric inpatients. Van der Kolk (2006) noted that working with the body is essential in the treatment of psychological trauma, which itself in turn can trigger the onset of psychosis (Read, Os, Morrison, & Ross, 2005). Self-regulation of distressing symptoms supports managing everyday life challenges. Therefore, mindful yoga may enhance mental health and recovery. Yoga literature reviews identified the need for further research into the integration of yoga into mental health management (Cramer, Lauche, Klose, Langhorst, & Dobos, 2013). Therefore, this qualitative pilot study sought to explore the feasibility, value, and meaning of a mindful *hatha* yoga programme to people with psychosis in a residential psychiatric rehabilitation centre.

## Method

### *Clinic environment*

This study took place in a sub-acute rehabilitation centre, which provides assessments, treatment, and intensive rehabilitation in urban New Zealand (NZ). Most clients present with treatment-resistant psychosis, often with co-existing substance disorders and trauma histories. Comprehensive group programmes encompass learning psychological, educational and social skills. Length of stay is generally 12–18 months. The Participants were first cleared by their psychiatrist and internist. Thoto introduce yoga not simply as a physical exercise, but embedded in the philosophy of “re-recovery” (Randal et al., 2009). Programmes are open to all residents.

### *Participants*

Consultation with case manager and family, if requested, facilitated study registration. Participants were first cleared by their psychiatrist and internist. Those experiencing acute psychotic relapse or were unable to provide informed consent were excluded.

The 10 participants included equal numbers of females and males from a range of cultural backgrounds, including NZ European ( $n=4$ ), Asian ( $n=3$ ), Māori (indigenous New Zealander) ( $n=2$ ), and Pacific Islander ( $n=1$ ), aged between 20 and 50 years ( $M = 29.4$ ,  $SD = 8.33$ ). Six participants had experienced yoga previously. Length of hospitalization at baseline varied from having arrived recently to over a year prior. Eight participants had a principle diagnosis of schizophrenia as assessed by their psychiatrist; the remaining two had other psychotic disorders. Nine participants were undergoing treatment with antipsychotic medication. Five were actively hearing derogatory voices. Nine completed the study; one was unable to complete post-assessments due to becoming acutely unwell, although still participating when possible. Multiple participants also experienced physical problems such as asthma or obesity. A hunched-over body posture with a compressed chest and abdomen, shallow breathing in the upper thoracic area, and limited physical strength were common. Muscle tightness and tremor were present in some. Generally, participants tended to move either rather slowly or with jarring movements. They often complained about physical aches and pains. Paranoia and signs of hallucinations were frequently observed in class.

### *Ethics*

Ethics approval was obtained from the New Zealand Health and Disability Ethics Committee (NTX/08/06/057), the Auckland District Health Board Research (ADHB), and Māori ADHB Research committees.

### *Mindful yoga intervention*

The intervention took place over seven weeks with two 30 minutes classes per week. Class began at 10 am, following residents’ morning meeting, in a large lounge. Staff were present for safety reasons and role-modeling. Each session started with simple flexibility practices with an average of 12 practices per class. (Table of *asanas* [yoga postures] available on request from first author). Repeats were between three and five times, honouring participants’ level of concentration with focus on body awareness;

avoiding introspection, a potential trigger for psychotic experience. Mindfulness was encouraged by observing physical and mental responses to the practice.

This mindful *hatha* yoga programme was informed by the teachings of Swami Satyananda Saraswati, 1996 from the Bihar School of Yoga (Northern India), a Modern Yoga approach (De Michelis, 2005), based on Patanjali's principles (Feuerstein, 1989). Previously the first author taught yoga to inpatients, which offered insight into potential risk and safety issues, including difficulty rising off the floor, and relaxing when lying on the mat, due to trauma histories. Therefore, postures were performed while seated, or standing, using a chair or wall for support.

The yoga intervention was based on modifications of the *Pawanmuktasana* Part 1, 2 and 3 series (Saraswati, 1996), a gentle approach to simple flexibility and abdominal strengthening exercises. Included were variations of the "Leg raise pose," "Leg lock pose," "Cat stretch pose," and "Sitting side twist" while seated; followed by standing poses: *Tadasana*, *Taryaka Tadasana*, and *Kati chakrasana*, which was practiced free style and the most popular *asana*. Pre-*pranayama* practices such as "Hand raising pose" (*Hasta utthanasana*) were performed emphasizing breathing benefits, particularly to smokers.

Standing postures were taught in stages, facilitating recognition of strengths and limitations when choosing the level of engagement. Depending on participants' requests, variations of *Trikonasa*, Warrior Two, Squat, or more free flowing sequences were included. At times "double postures" were incorporated, learning to support each other. Yoga mats were integrated half-way through the study, presenting a welcome challenge to a few, whereas the majority preferred the chair or sofa.

When moving, participants were invited to feel for example, the arm contacting the air while moving through space. This instruction sought to foster awareness of the body in day-to-day movements, give permission to use physical space, and facilitate the subtle shift toward connecting with the outside world in a self-directed safe manner. Participants were encouraged to feel the contact of the soles of their feet with the floor, a sensation which helps to feel grounded, specifically relevant to those with psychosis (Singh et al., 2007).

Breathing techniques (*pranayama*) introduced included: abdominal breathing, breath balancing pose (*padadhirasana*) and the humming bee breath (*bhramari*). Brief body scan (*yoga nidra* based) concluded the 30 minutes session, asking participants to notice body sensations, state of mind, and emotions. *Sankalpa* (resolve) then assisted participants in focusing on their therapeutic goal. Finally, participants were invited to share their experiences. Languaging the yoga experience sought to facilitate gradual development of making sense of body experiences (Visceglia, 2007).

The mindfulness aspect of the intervention encouraged participants to observe their responses to body sensations, movement and breathing rhythm, without having any expectations imposed on them to perform particular exercises. Furthermore, developing witnessing awareness and noticing one's judgment about oneself while performing a posture were intended to soften self-critical tendencies. Participants were reminded to respond with awareness to outer stimuli, i.e., instructions or class interruptions.

### ***Research design and data collection***

Phenomenological enquiry (Creswell & Piano Clark, 2007) was utilized to elicit experiences of people with psychosis before and after a mindful yoga programme.

Data were collected through semi-structured interviews, in-depth group responses, journals, and researcher observations.

Semi-structured interviews sought to identify reasons for attending, and whether expectations were achieved. Questions were based on themes, reflecting general goals, common motivators, and barriers of prior yoga class participants. A weekly journal allowed participants to record their yoga experiences. Written cues for self-observation (developed in collaboration with previous participants) included: *body, mind, emotions, myself. How did this help me in my day? What stopped me from attending? What motivates me to come to yoga?* Additionally, after four months, noted themes were shared with participants, to discern whether they reflected their experiences, and give opportunities for feedback, seeking to enhance internal validity.

### ***Data analysis***

A general inductive approach (Thomas, 2006) was adopted for analysis, developing emerging themes and meaningful units. When saturation of meaning was achieved, emerging themes were examined, clustered, and then related to each other to understand major patterns and interconnections, highlighting conveying ideas, supported by illustrative data (quotes).

## **Results**

### ***Attendance***

Average class attendance was 70%. Reasons for non-attendance were identified as “sleeping in” (13.6%), being psychologically too unwell (4.3%), another appointment (2.1%), or physically ill (0.7%,  $n = 1$ ). Several non-study participants joined sometimes. On one occasion it was necessary to ask a non-study participant to leave class because of disruptive behavior.

### ***Semi-structured interviews***

Overall, participants achieved more goals and experienced greater benefits than they had set at study start in areas of relaxation, stress reduction, mental focus, and physical strength. “Being more relaxed” was the most reported outcome, with a 50% increase from baseline, followed by “being less stressed” and “being more focussed” with both increasing 30%. Physical “strength” was reported with an increase of 20%. Participants experienced themselves as “more mindful” (20%), and capacity to “breathe more fully” increased by 10%; perceived “flexibility” and “fitness” remained unchanged.

Barriers identified at baseline became less of a hurdle over time, including “feeling embarrassed” or “fear of comparison” with others, decreasing by 75%. Conversely, “*feeling unfit*” and acknowledging that it was “*hard to commit myself to regular exercise*” was noted by more participants at the end (20%). Regarding what helped them with their attendance, they reported “*support in getting up on time,*” “*encouragement by staff and other residents*” and the “*nice group atmosphere.*” That yoga “*was beneficial to my mental health*” was recognized by 50%.



### **Journals**

Frequency of journal entries varied, particularly due to fluctuating levels of wellbeing. No one reported worsening symptoms during the programme. In fact, participants who experienced derogatory voices reported that it was easier to redirect their attention during the yoga practice by shifting their focus to breathe or body movement, which carried over into their next activity. Four specific themes were developed, including relaxation; calmness; energy and focus; and motivation to engage in life – constituting the primary framework for understanding participants' perceptions of their yoga practice.

#### *Theme one: relaxation*

From week one participants consistently reported feelings of bodily “*tension release*” and a deep sense of “*relaxation*” and “*rejuvenation*”. Participants identified “*tension release in my shoulders and neck*” (50%) or “*in my back*” (40%). One reported “*walking (and) sleeping better.*” With this increased relaxation, 40% experienced being “*more confident,*” finding it “*easier to manoeuvre around.*” Progressive development of physical strength was described by all: “*Exercised all the different muscles in my body,*” “*getting fitter*” and “*I felt I was getting some core strength.*”

#### *Theme two: calmness/reduced stress*

Feeling “*calm,*” “*serene,*” “*less anxious/worried*” and “*peaceful*” was reported frequently (40 entries). With practice, this experience deepened toward feeling “*confident and collected; a sound mind.*” A sense of self-control emerged in week five: “*being more in control, instead of controlled by your feelings or emotions or anxiety.*” Some (30%) referred to practicing abdominal breathing in stressful situations. One described: “*I am at peace in my mind and ability to cope with life’s problems,*” indicating greater self-acceptance and coping strategies. Another noted: “*There is no pressure to think what I will do next ... You don’t try and push yourself too hard, trying to be gentle with yourself.*” Comments included: “*I feel good on the inside,*” “*happy*” (70%), and “*good about myself.*” Those hearing derogatory voices (50%) experienced a “*release of the stress of the voices*” and feeling “*less paranoid.*”

#### *Theme three: energy and focus*

Another positive outcome was an increase in perceived vitality and focus, particularly for participants who experienced sleepiness (40%) and dizziness (20%). Entries offered descriptions like: “*Yoga wakes me up, which lasts for quite a while.*” Participants felt “*awake and alert*” (80%), “*alive*” (40%) or “*energized*” (30%). One described yoga as a “*mind work-out,*” implying the mental effort that is required in order to bring one’s body, breath, and mind into alignment.

#### *Theme four: motivation to engage with life*

Most participants (80%) reported being “*motivated*” participating in the day-programme, while others (70%) reported “*a positive outlook on the day*” gained from

yoga. A correlation between decreased anxiety and increased level of motivation to engage in daily activities was suggested: *“I feel I can apply yoga techniques to my anxious thoughts and I am more motivated to do activities of daily living and group activities.”*

Gradual development toward greater presence in the world was noted by all. One participant reflected: Yoga *“made me feel more relaxed, calm, and I felt less anxious”*; and the next week *“I am feeling better for the exercise.”* Week seven concluded: *“I had more energy for vacuuming and I was more able to do things.”* Illustrative examples include: *“Doing yoga becomes easy,” “It helps me doing the cooking, my chores, tidy my bedroom.” “After yoga when hanging out my washing, I feel pleased that I worked out, I feel motivated ...”* One summarized: *“After yoga I do my daily tasks. Yes that I have learnt.”*

### ***Four-month follow-up***

After four months, five available participants’ verbal feedback emphasized body memory of their previous responses to yoga and effects on their functioning. They recalled *“learning to co-ordinate my body better”* (100%), *“the breathing really helped”* (80%) and yoga *“re-energizes me when I feel tired”* (100%) and is *“great for back problems”* (60%). *“Developing a strong will”* and *“determination with my goals”* was associated with yoga by all. *“It helps my self-esteem, like I am proud.”* Generally, participants reported still using breathing techniques and postures when feeling tense or anticipating an important meeting.

### ***Analysis of teacher’s journal***

Themes of trust and engagement, cohesion, and support were revealed in the teacher’s journal.

#### ***Trust and engagement***

Due to anxiety and paranoia, engagement could be fraught. Not rigidly requiring class attendance and allowing for brief 1:1 sessions was of great utility. Therapeutic alliance was built gradually along with increasing confidence. A pattern of observing, participating, leaving class and sometimes re-engaging, progressed to staying the entire class length.

#### ***Cohesion***

The gradually increasing capacity to stay with anxiety and remain engaged in class improved markedly. It was a privilege to witness the trust and courage it took to participate fully, recognizing and learning to bring forth their needs, and in this way contributing to the group.

#### ***“Team” cohesion – moving from distress***

Another challenging class situation occurred when screams could be heard from a nearby bedroom. Participants expressed their distress. The group decided to look for an alternative room and walked together to find a quiet space. All

continued to engage fully. We focused on grounding postures and calming breathing techniques, allowing participants to release emotional tension. The session ended with deepening awareness of the five senses and a reflection on compassion. Several commented in their journals that day: “*I feel release of stress and tension,*” “*calm*” and “*peaceful.*”

### ***Teacher observations***

Participants appreciated both teacher demonstrations and detailed instructions. When solely being talked through *asanas*, levels of engagement decreased noticeably, suggesting the importance of working in partnership and role-modeling. Participants felt safe in the group environment to verbally share their experiences of hallucinations as they occurred. Distress was acknowledged and verbal support offered. Physical touch, applied in some yoga styles, requires consideration in light of trauma backgrounds. This instructor respected personal space, never touching a participant, although giving permission for participants to touch their own bodies comfortably as many postures invite.

Most participants were able to complete an *asana* only two to three times before displaying distraction. Therefore, a continuous flow from posture to posture allowed better focus. Holding a posture was more demanding, because of symptoms interfering with concentration. Participants were encouraged to “listen” to their bodies and become aware of body parts feeling tense. Over time, participants recognized physical discomfort or mental tension, and identified helpful *asanas*. *Hatha* yoga itself encourages self-control and self-determination and allows the practitioner to ask for teacher support when needed. The group culture fostered values such as self-acceptance, respect, and compassion.

### **Discussion**

This pilot study suggests that mindful *hatha* yoga is potentially a valuable addition in treating people with psychosis. Four main outcomes reflected participants’ perceptions of their experience, including: a sense of increased relaxation, reduced psychological distress, focus on the present, and motivation to engage with life, all consistent with the existing yoga literature (Cramer et al., 2013). That relaxation and feeling calm were primarily identified as beneficial is promising, because anxiety and emotional distress are often high in this population. Self-reported development of greater focus and motivation to engage in day-to-day activities provides improved capacity for self-care and relationships with others.

The most striking result was the reported increase in motivation to engage in daily activities, which would have particular impact on quality of life. Mindful body movement facilitates the transfer of heightened self-awareness/mindfulness into day-to-day life. Damasio (2012) suggests that people evaluate and ultimately think through the conduit of the body.

Noticeably, there was no report of increased psychotic symptoms during the seven week yoga programme. Rather than experiencing symptom exacerbation, some participants reported relief from various symptoms, including derogatory voices. It is indeed of value to those who suffer from psychosis to experience “*less clutter in my mind*” or being “*able to balance thoughts,*” when otherwise experiencing much disorganization.



Feeling disconnected from the body when experiencing psychosis highlights the value of a simple body and breath-oriented intervention, which holds the potential for re-connecting with the body. A grounding effect allows the psychotic person to connect with the worldly reality and make sense of their immediate environment. Mindful yoga not only offered participants to work the body in *asanas*, but gave permission to feel the body (Douglass, 2010). This non-intrusive approach provided safety to freely explore one's physical strength and limitations without judgment or performance expectations.

The additional opportunity to language experience immediately after class proved helpful in developing the ability to verbalize body experiences. Only one qualitative yoga study discusses at length the process of engagement with people with schizophrenia in a similar environment (Visceglia, 2007). Study journals illustrated increased capacity for body awareness and newly developed capacities to recognize and respond to physical needs. *"I want to look after my body after doing yoga; e.g. instead of ignoring being thirsty or tired, I go and do something about it."* Findings suggest that languaging body experiences helps understand the often confusing messages of traumatic experiences (Van der Kolk, 2006).

### ***Clinical implications and recommendations from yoga teacher***

Spontaneity and adaptability is required when teaching a severely mentally unwell population, respecting trauma histories, medication effects and fluctuating levels of psychological and physical wellness. It is paramount to recognize potential triggers and create a safe environment. Yoga trained clinicians would ensure safety and professional conduct for such intervention. One must also consider the limited ability for self-expression by some, and the potential for distortion of the mind-body relationship. The non-intrusive approach of mindful yoga offers a safe way of reclaiming the body (Emerson, Sharma, Chaudhry, & Turner, 2009). This study indicates that the mindful and reflective aspects of *hatha* yoga deepen self-awareness among people with psychosis. With yoga as an additional tool in the treatment armamentarium, improved recovery could result, leading to cost savings in treatment. Barriers identified by participants highlighted the importance of staff support in awakening on time, possibly related to sedating medications. Experiencing yoga in a familiar environment, instead of a yoga studio, made it easier for participants to integrate their practice with day-to-day activities. As one participant with religious concerns demonstrated, respecting beliefs is important when teaching yoga, an Eastern tradition. Open dialogue and freedom of choice for participants are essential components of any programme.

### ***Limitations***

It is outside the scope of a non-controlled pilot study to demonstrate that *hatha* yoga produces outcomes, and thus it is possible that self-reported improvements in relaxation, reduced stress, focus, and motivation could be attributed to other factors such as medication or other therapeutic interventions. Languaging and journaling the yoga experience invited self-reflection, which potentially contributed to subjectively experiencing positive effects, rather than merely the sessions themselves. Further factors may include support participants received from other group members, or

engagement with the specific yoga teacher, who was also a clinician. In addition, being part of a group session allowed for non-verbal interaction, such as witnessing processes of others, which may have deepened self-observation.

## Conclusion

This study suggests that modified *hatha* yoga can have a positive impact on mental health among people experiencing psychosis. In particular, yoga may positively affect levels of relaxation, reduction of stress, gaining energy and focus, as well as motivation to engage with life. One of the most encouraging results was the self-reported temporary absence of auditory hallucinations. Being able to maintain a mental state of peacefulness subsequently is promising. Barriers identified by participants highlighted the importance of support with early morning routines. Practicing *hatha* yoga may offer mental health clients the opportunity to experience their bodies as a source of pleasure and relaxation, rather than discomfort or shame. The findings in the present study are sufficiently promising that it would be useful to now administer standardized measures in areas such as psychotic symptoms, anxiety and adaptive functioning at pre-intervention, post-intervention and follow-up to assess whether the improvements reported in this study are substantiated on these instruments.

## Declaration of interest

None.

## Acknowledgments

The authors thank for their invaluable contribution to, and support of this project: The Auckland District Health Board who gave permission to conduct this first Yoga study in a New Zealand Mental Health Service; Clinic staff, who actively participated and supported the programme. Special thanks are extended to Yoga mentor Swami Kriyatmananda Saraswati, Director of Education, Satyananda Yoga Academy, Mangrove, Australia. Deepest thanks go to the residents, who embraced the programme so willingly and shared their experiences so generously. All efforts have been made to protect non-identifiable confidentiality of study participants.

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