

## **Alternative Interventions in Clinical Mental Health Settings: A Survey of Mental Health Professionals' Perceptions**

### **1. Introduction**

Against the backdrop of COVID-19, mental health needs have increased while access to affordable mental health interventions has been reduced (Nochaiwong et al., 2021; Xiong et al., 2020). In view of this, the United Nations has recognised the need for supplementary interventions that can support existing mental health care (United Nations Sustainable Development Group [UNSDG], 2020). Religious and spiritual (R/S) practices, such as chanting, breathwork and yoga offer cost effective and accessible supplementary mental health interventions (Herman et al., 2012). There is substantial evidence for the mental health benefits of these practices, with evidence that they may be preferred by some patients over mainstream treatment, possibly due to the stigma attached to mental illness and shame associated with accessing conventional mental health services (Burnett-Zeigler et al., 2016; Sickel et al., 2019). Side effects of medications (Hanson et al., 2016) and lack of response to conventional treatments (Hurst et al., 2018) are other reasons cited for why R/S practices may be a preferred treatment approach. Despite this potential, no studies were located that investigated the use of R/S practices as mental health interventions in clinical settings. This highlights the need to investigate the viability of integrating these practices in clinical mental health care.

A limited number of studies have investigated inclusion of R/S practices in counselling and “talking therapy” (Anderson et al., 2015; Beckstead et al., 2015; Baehr, 2009; Greeson et. al., 2011; Haque and Keshavarzi, 2014). The focus of these studies was either addressing mental health through counselling and/or cognitive restructuring strategies

Survey of perceptions of MHPs regarding alternative interventions in Mental Health based on practices related to R/S philosophies (Anderson et al., 2015; Beckstead et al., 2015) or by supplementing counselling with R/S meditation and healing practices (Baehr, 2009; Greeson et al., 2011; Haque and Keshavarzi, 2014). So, while integration of some R/S practices into mental health interventions have been explored, to our knowledge, no study has focussed on the feasibility of using R/S practices as standalone interventions in mental health settings. Indeed, at present, it is unclear to what extent R/S practices are considered viable for use in these settings.

In this survey, we focus on a specific subset of R/S practices that have distinct sensory (related to senses) and motor (body movements such as vocalisation/ manipulation of breathing/ body postures and movements) components and can be termed as sensorimotor R/S practices (Malviya et al., 2022a). As body-oriented practices, sensorimotor R/S practices such as yoga, pranayama and chanting do not pose high cognitive and linguistic demands. This differs from many of the current conventional interventions in mental health settings which are conversational and involve cognitive based strategies (Pugh 2019). Cognitively mediated interventions, such as cognitive behavioural therapy, may be challenging for people with limited cognitive or linguistic skills (including those with severe mental illness, trauma histories, and people from diverse sociocultural backgrounds) (Burnett-Zeigler et al., 2016). Body-oriented interventions (such as sensorimotor R/S practice) may be of value for these populations (Burnett-Zeigler et al., 2016). Furthermore, psychological stress affects cognitive flexibility and the ability to retrieve information from long-term memory (Shields et al., 2016) supporting the need for interventions that do not rely on cognition.

In Australia, sensorimotor R/S practices, such as yoga, have been increasingly used and accepted by the general population for their mental health benefits (Cramer et al., 2017a; Lauche et al., 2019) which suggests possible use of these practices as potential therapeutic interventions in mental health clinical settings. In a recent study, chanting was assessed as a

Survey of perceptions of MHPs regarding alternative interventions in Mental Health potentially useful online intervention and was shown to have mental health benefits such as reduced stress and increased positive affect (Simpson et al., 2021). In another study, veterans reported reductions in depression and anxiety with a yoga intervention provided through telehealth (Schulz-Heik et al., 2017). Mental health benefits of these practices for people with severe mental illness have also been identified, including yoga in schizophrenia (Cramer et al., 2013) and major depressive disorder (Cramer et al., 2017b), and pranayama (Walker and Pacik 2017) and chanting (Bormann et al., 2014) for post-traumatic stress disorder. Authors of other studies have recommended use of breathwork (Aideyan et al., 2020; Victoria and Calwell, 2013) and yoga (Avery et al., 2021; Bayley-Veloso and Salmon 2016) as either standalone or adjunctive mental health interventions.

A review of the literature revealed three sensorimotor R/S practices with substantial evidence of effectiveness in mental health: pranayama (Malviya et al., 2022b; Saoji et al., 2019; Sharma et al., 2017); chanting (Lynch et al., 2018; Malviya et al., 2022b; Perry, 2017; Simpson et al., 2021); and yoga (Brinsley et al., 2020; Hendriks et al., 2017; Pascoe and Bauer, 2015). In our survey, we used the following definitions of R/S practices: *Pranayama*, sometimes referred to as breathwork, is an ancient yogic breathing practice to promote mind-body connection; *Chanting* is an ancient religious/spiritual practice that involves repetition of a prayer or spiritually meaningful word or phrase; and, *Yoga* refers to the ancient spiritual practice of adopting body poses and postures to achieve mind and body connection which has physical and mental health benefits.

Despite evidence for the mental health benefits of sensorimotor R/S practices and their apparent acceptance among Australians (Xue et al., 2007), little is known about the viability of using these practices as mental health interventions in clinical settings. In a qualitative study conducted in Australia, mental health professionals (MHPs) identified the value of alternative therapies that included some sensorimotor R/S practices; however, they felt

Survey of perceptions of MHPs regarding alternative interventions in Mental Health confused about integrating these interventions in their mental health practice and acknowledged the need for a framework and clear guidelines (Wilson and White, 2011), this study however was not focussed on R/S practices. To transfer available empirical evidence to clinical mental health care, there is a need to understand more about the factors that might impact use of R/S practices. Practical considerations, such as whether MHPs are equipped with necessary knowledge and skills, their personal experience with R/S practices, whether clinical settings have adequate resources for these practices, and the need for guidelines, have not been explored in the extant literature.

The aim of the present study was to understand MHPs' (e.g., psychiatrists, mental health occupational therapists, psychologists, nurses) perceptions of the viability of using three sensorimotor R/S practices (chanting, pranayama, and yoga) as therapeutic interventions in clinical mental health settings. There were six objectives: 1) To examine the knowledge and confidence of MHPs regarding using these R/S practices in mental health clinical settings, including differences between professions; 2) To understand MHPs' perceptions regarding the feasibility of these R/S practices in clinical mental health care, and any differences between professions and health sectors; 3) To investigate any differences in knowledge, confidence, and feasibility across the three R/S practices; 4) To understand the training and resource needs of MHPs in relation to these practices; 5) To examine MHPs' personal experience of R/S practice; and 6) To investigate the view of MHPs regarding the need for a guideline that may inform them about use of R/S practices in mental health settings. The study was restricted to Australian MHPs with a view to using the findings to support future integration of sensorimotor R/S practices in mental health clinical settings in Australia.

## **2. Method**

## Survey of perceptions of MHPs regarding alternative interventions in Mental Health

A survey was conducted with MHPs in Australia. After receiving ethical approval from the Human Research Ethics Committee of Central Queensland University, Australia (approval number 0000022594), the survey was conducted online using the software Qualtrics.

### 2.1. Survey design

Survey questions were designed to gather data specific to:

**2.1.1. Demographics and professional characteristics.** Demographic details and information about professional background and current practice setting (mental health experience, profession, current work setting, type of health sector, and areas of mental health) of the participants were collected. All questions were forced choice with space provided for free text should responses not fit within the choices given.

**2.1.2. Knowledge, confidence, and feasibility (KCF).** This part of the survey employed a modified version of the Knowledge, Confidence and Attitudes (KCA) scale (Meredith et al., 2018) to ascertain participants' perceptions of their knowledge, confidence, and the feasibility of using chanting, pranayama, and yoga in clinical mental health practice. The scale consisted of 13 questions, all scored using a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). A separate scale was completed for each R/S practice, totalling 39 questions overall (refer to Appendix for KCF scale). All questions regarding knowledge (five questions), confidence (three questions), and feasibility (five questions) were identical for the three R/S practices. Sample questions were: (1) *Knowledge* – I am familiar with evidence regarding the efficacy of the R/S practice in mental health; I have personally practiced the R/S practice; (2) *Confidence* – I feel confident using the R/S practice for therapeutic purposes with my clients; and (3) *Feasibility* – My current work setting is well resourced to conduct therapeutic the R/S practice sessions. Internal consistency for the original KCA scale has been shown to be adequate (Meredith et al., 2018).

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**2.1.3. *Need for a guideline*:** The final question on the survey invited participants to rate their agreement with a comment regarding the need for a therapeutic guideline about use of R/S sensorimotor practices in mental health. This item was scored using a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

## **2.2 Participants**

Targeted participants were MHPs (e.g., psychiatrists, mental health occupational therapists, psychologists, mental health social workers, and mental health nurses) working in Australia. The information sheet and consent forms were embedded in the online survey and only participants indicating that they had mental health experience were admitted to the survey. Participation in the survey was voluntary and no identifiable information was collected.

## **2.3 Dissemination of survey and data collection**

The survey was designed using Qualtrics software. It was available only in English and was disseminated using a weblink through online platforms and social media (Twitter, LinkedIn, Facebook). Snowball dissemination of the survey was encouraged. Data were collected between November 2020 and February 2021.

## **2.4 Data analysis**

Data analyses were conducted using SPSS (Statistical Package for the Social Sciences) for Windows (version 28.0.0). Information about the sample was summarised using descriptive statistics. Three of the thirteen questions in each category (knowledge, confidence, feasibility) were negatively worded; these questions were reverse coded for data analyses. Internal consistency of each category for each of the three R/S practices were measured using Cronbach's alpha. Formal and informal analyses were conducted using the Shapiro-Wilk test of normality, histogram, and Q-Q plots, to check assumptions. Due to missing data, numbers of responses in some analyses are lower. All three subscales

Survey of perceptions of MHPs regarding alternative interventions in Mental Health (knowledge, confidence, feasibility) for each of the three practices (nine variables) met assumptions for normality, so parametric tests were employed including one-way and repeated measures ANOVAs. Where a significant difference ( $p < 0.05$ ) was noted in ANOVAs, a post-hoc Bonferroni test was used.

### 3. Results

#### 3.1 Participants

Overall, 105 individuals started the survey and 101 met inclusion criteria; four participants could not advance past the screening question because they responded that they did not have experience in working in mental health. Participants were aged between 22 and 60 years ( $M = 41.93$ ;  $SD = 10.27$ ) with experience in mental health ranging from 1 year to 40 years ( $M = 14.69$ ;  $SD = 10.46$ ). The largest proportion of survey respondents (39%) were occupational therapists. Nearly half of the participants (49.58%) worked in a community mental health setting, and most (77.08%) worked with adults. More detailed information about participants is provided in Table 1.

**Table 1.** *Summary of descriptive information for categorical demographic and study variables*

| Variable                               | n  | %     |
|----------------------------------------|----|-------|
| <b>Education</b>                       |    |       |
| Diploma or Certificate or equivalent   | 4  | 4.12  |
| Bachelor's degree                      | 42 | 43.30 |
| Master's degree                        | 38 | 39.18 |
| PhD or professional doctorate          | 13 | 13.40 |
| <b>Profession</b>                      |    |       |
| Psychiatrist and Psychiatry registrar  | 22 | 21.0  |
| Mental health nurse                    | 11 | 10.5  |
| Occupational therapist                 | 41 | 39.0  |
| Psychologist                           | 8  | 7.6   |
| Social worker                          | 10 | 9.5   |
| Others: Counsellor, GP, Support worker | 4  | 3.8   |
| <b>Current work setting</b>            |    |       |
| Government or public health setting    | 72 | 75    |
| Private health setting                 | 14 | 14.58 |
| Non-government organisation            | 9  | 9.38  |
| Training                               | 1  | 1.04  |

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### Mental health setting

|                                                                                                             |    |       |
|-------------------------------------------------------------------------------------------------------------|----|-------|
| Inpatient mental health                                                                                     | 20 | 16.81 |
| Outpatient mental health                                                                                    | 22 | 18.49 |
| Community mental health                                                                                     | 59 | 49.58 |
| Rehabilitation centre                                                                                       | 3  | 2.52  |
| Community care centre or similar                                                                            | 6  | 5.04  |
| Other: School, Unemployed,                                                                                  | 9  | 7.56  |
| Suicide prevention across settings, Service wide<br>management, Justice system, Disability private practice |    |       |

### Area of mental health

|                                                                                             |    |       |
|---------------------------------------------------------------------------------------------|----|-------|
| Aged care and dementia services                                                             | 7  | 7.29  |
| Adult mental health                                                                         | 67 | 69.79 |
| Child and youth mental health                                                               | 16 | 16.67 |
| Infant mental health                                                                        | 0  | 0     |
| Other: Older adults mental health, Professional<br>leadership/manager, AODS, Justice system | 6  | 6.25  |

Note: AODS = Alcohol and other drug services; GP = General practitioner

## 3.2 Knowledge, Confidence, and Feasibility Scale

Internal consistency was assessed for each subscale (knowledge, confidence, feasibility) across three R/S practices (chanting/pranayama/yoga) using Cronbach's alpha reliability coefficient. Cronbach's alpha was acceptable ( $\alpha > .60$ ) for all subscales. For *chanting*, Cronbach's alpha was 0.78 for knowledge, 0.65 for confidence, and 0.62 for feasibility. Regarding *pranayama*, Cronbach's alpha was 0.85 for knowledge, 0.78 for confidence, and 0.74 for feasibility. Finally, for *yoga*, Cronbach's alpha was 0.70 for knowledge, 0.74 for confidence, and 0.67 for feasibility.

## 3.3 Knowledge and confidence regarding using R/S practices in mental health clinical settings and difference between professions

Overall mean ratings for knowledge and confidence are shown in Table 2 for each MHP group. Mean *knowledge* levels of respondents was almost 37 overall; all professions revealed means below 42 (maximum possible knowledge score = 75). *Confidence* ratings were proportionately similar to knowledge ratings. The overall mean for *confidence* was almost 22, and all professions were below 24.5 (maximum possible confidence score = 45). The one-way ANOVAs conducted to examine differences in MHPs knowledge of and

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**Table 2.** Overall mean ratings of knowledge and confidence, and differences between professions

| Scale                                      | Profession             | n  | M     | SD    | Min score | Max score | Between group difference |
|--------------------------------------------|------------------------|----|-------|-------|-----------|-----------|--------------------------|
| <b>Knowledge</b><br>(Possible Range=15-75) | Overall                | 89 | 36.88 | 11.76 | 15        | 68        | <b>ANOVA</b>             |
|                                            | Psychiatrist           | 21 | 39.62 | 11.90 | 17        | 57        |                          |
|                                            | Mental Health Nurse    | 11 | 38.73 | 11.08 | 22        | 54        | $F(5,83)=2.23, p=0.06$   |
|                                            | Occupational Therapist | 40 | 34.78 | 12.11 | 15        | 68        |                          |
|                                            | Psychologist           | 7  | 28.14 | 7.66  | 21        | 42        |                          |
|                                            | Social Worker          | 7  | 41.57 | 8.61  | 26        | 50        |                          |
|                                            |                        |    |       |       |           |           |                          |
|                                            | Profession             | n  | M     | SD    | Min score | Max score | Between group difference |
| <b>Confidence</b><br>(Range=9-45)          | Overall                | 89 | 21.83 | 7.52  | 9         | 40        | <b>ANOVA</b>             |
|                                            | Psychiatrist           | 21 | 22.48 | 8.64  | 9         | 38        |                          |
|                                            | Mental Health Nurse    | 11 | 24.27 | 5.55  | 15        | 31        | $F(5,83) = 1.27, p=0.28$ |
|                                            | Occupational Therapist | 40 | 21.38 | 7.23  | 11        | 40        |                          |
|                                            | Psychologist           | 7  | 16.00 | 5.41  | 9         | 24        |                          |
|                                            | Social Worker          | 7  | 23.57 | 7.32  | 13        | 34        |                          |
|                                            |                        |    |       |       |           |           |                          |

95% Confidence Interval

### 3.4 Feasibility of R/S practices in clinical mental health care and differences between professions and health care sectors

Table 3 provides mean ratings for *feasibility* for the different MHPs who responded to the survey, and for the sectors (government/private/NGOs) in which these MHPs provided mental health care. The mean overall *feasibility* score was 46 (maximum possible feasibility score = 75). Means for each profession, and for each health care sector, were below 51. A one-way ANOVA conducted to examine differences in MHPs' perceptions of the feasibility of these practices showed a significant difference across the different professionals,  $F(5, 83) = 3.04, p = .01$ . A post hoc Bonferroni test revealed that psychologists ( $M = 36.86, SD = 7.33$ ) rated the feasibility of R/S sensorimotor practices significantly lower than occupational therapists ( $M = 48.30, SD = 7.69, p < 0.01$ ). A one-way ANOVA conducted to examine differences in MHPs' perceptions of the feasibility of these practices based on the sector in which they were employed was not significant.

**Table 3** *Feasibility of three practices and differences between different mental health professions and health sectors*

| Scale                  | Across different professions       | n  | M       | SD    | Min score | Max score | Between group difference   |
|------------------------|------------------------------------|----|---------|-------|-----------|-----------|----------------------------|
| Possible Range (15-75) | Overall                            | 89 | 46.31   | 8.65  | 27        | 69        | ANOVA                      |
|                        | Psychiatrist                       | 21 | 45.10   | 8.46  | 33        | 62        |                            |
|                        | Mental Health Nurse                | 11 | 44.45   | 7.10  | 30        | 53        | $F(5,83) = 3.04, p = 0.01$ |
|                        | Occupational Therapist             | 40 | 48.30** | 7.69  | 32        | 67        |                            |
|                        | Psychologist                       | 7  | 36.86** | 7.33  | 27        | 46        |                            |
|                        | Social Worker                      | 7  | 48.00   | 12.16 | 33        | 69        |                            |
|                        |                                    |    |         |       |           |           |                            |
|                        | Across different sectors           | n  | M       | SD    | Min score | Max score | Between group difference   |
| Possible Range (15-75) | Overall                            | 89 | 46.31   | 8.65  | 27        | 69        | ANOVA                      |
|                        | Government or public health sector | 68 | 44.99   | 8.14  | 27        | 67        |                            |
|                        | Private health sector              | 13 | 50.92   | 8.68  | 39        | 69        | $F(3,85) = 2.48, p = 0.66$ |
|                        | Non-government organisation        | 7  | 50.71   | 10.93 | 33        | 60        |                            |
|                        |                                    |    |         |       |           |           |                            |

95% Confidence Interval, Significance level - \*\* =  $p < 0.01$

### 3.5 Knowledge, confidence, and feasibility across different R/S practices

Mean ratings for each KCF subscale for each of the three practices are shown in Table 4. A one-way repeated measures ANOVA was conducted to compare knowledge, confidence, and feasibility ratings across three R/S practices. Mauchly's test of sphericity was not significant for knowledge ( $p = 0.79$ ) and confidence ( $p = 0.14$ ). However, Mauchly's test indicated that the assumption of sphericity was not met for ratings of feasibility ( $p = 0.004$ ); thus, degrees of freedom were corrected using Greenhouse-Geisser estimates for this part of the KCF scale.

Self-rated *knowledge* was statistically different across the three R/S practices,  $F(2, 176) = 37.88, p < .001, \eta^2 = 0.30$ . Bonferroni post hoc tests, using an alpha of 0.017 (.05/3) indicated that knowledge ratings for yoga ( $M = 14.15, SD = 4.16$ ) were significantly higher than both pranayama ( $M = 12.73, SD = 5.51, p = 0.017$ ),  $F(2, 176) = 37.88, p < 0.017$ ; and chanting ( $M = 10, SD = 4.41, p < .001$ ),  $F(2, 176) = 37.88, p < 0.001$ . Knowledge ratings of pranayama ( $M = 12.73, SD = 5.51$ ) was also significantly higher than that of chanting ( $M = 10, SD = 4.41, p < .001$ ),  $F(2, 176) = 37.88, p < 0.001$ .

The one-way repeated measures ANOVA conducted for *confidence* also showed a significant main effect across the three practices,  $F(2, 176) = 9.34, p < 0.001, \eta^2 = 0.096$ . As shown in Table 4, MHPs rated their confidence levels highest for pranayama, followed by yoga, with chanting rating lowest. Bonferroni post hoc tests ( $\alpha = 0.017$ ) showed that confidence ratings for pranayama ( $M = 7.76, SD = 3.43$ ) were significantly higher than chanting ( $M = 6.37, SD = 2.88, p < 0.001$ ),  $F(2, 176) = 9.34, p < 0.001$ . Yoga ratings ( $M = 7.70, SD = 3.24$ ) were also significantly higher than chanting ( $M = 6.37, SD = 2.88, p < 0.001$ ),  $F(2, 176) = 9.34, p < 0.001$ . There was no significant difference in confidence ratings for pranayama ( $M = 7.76, SD = 3.43$ ) and yoga ( $M = 7.70, SD = 3.24, p = 1.00$ ).

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A one-way repeated measures ANOVA also showed a main effect of *feasibility* across the three R/S practices,  $F(1.78, 157) = 41.31, p < 0.001, \eta^2 = 0.319$ . Bonferroni post hoc tests ( $\alpha=0.017$ ) revealed that chanting ( $M = 13.39, SD = 3.45$ ) was rated as significantly less feasible than yoga ( $M = 16.39, SD = 3.82, p < 0.001$ ),  $F(2, 176) = 41.31, p < 0.001$ ; and for pranayama ( $M = 16.53, SD = 3.82, p < 0.001$ ),  $F(2, 176) = 41.31, p < 0.001$ . There was no significant difference between ratings for yoga ( $M = 16.39, SD = 3.82$ ) and pranayama ( $M = 16.53, SD = 3.82, p = 1.00$ ).

**Table 4** Comparison of knowledge, confidence, and feasibility levels across different R/S practices

| Scale        | R/S Practice | n  | M       | SD   | Min score | Max score | One way repeated ANOVA         |
|--------------|--------------|----|---------|------|-----------|-----------|--------------------------------|
| Knowledge    |              |    |         |      |           |           |                                |
| Possible     | Chanting     | 89 | 10.00   | 4.41 | 5         | 21        | $F(2, 176) = 37.88, p < 0.001$ |
| Range (5-25) | Pranayama    | 89 | 12.73** | 5.51 | 5         | 25        |                                |
|              | Yoga         | 89 | 14.15** | 4.16 | 5         | 25        |                                |
| Confidence   |              |    |         |      |           |           |                                |
| Possible     | Chanting     | 89 | 6.37    | 2.88 | 3         | 14        | $F(2, 176) = 9.34, p < 0.001$  |
| Range (3-15) | Pranayama    | 89 | 7.76**  | 3.43 | 3         | 15        |                                |
|              | Yoga         | 89 | 7.70**  | 3.24 | 3         | 14        |                                |
| Feasibility  |              |    |         |      |           |           |                                |
| Possible     | Chanting     | 89 | 13.39   | 3.45 | 5         | 24        | $F(2, 176) = 41.31, p < 0.001$ |
| Range (5-25) | Pranayama    | 89 | 16.53** | 3.82 | 7         | 25        |                                |
|              | Yoga         | 89 | 16.39** | 3.45 | 9         | 25        |                                |

Significance levels- \*\*= $p < 0.01$

### **3.6 Personal experience of R/S practice**

As seen in Table 5, over 73% of participating MHPs had personal experience of practicing yoga. About 40% of respondents indicated that they had personal experience of chanting, while over 56% had practiced pranayama.

**Table 5** *Participants' perspective on need for a guideline, training and resources, and personal experience of R/S practice*

| Question                                                                                                    | N   | Strongly agree<br>n (%) | Somewhat agree<br>n (%) | Neither agree<br>nor disagree<br>n (%) | Somewhat disagree<br>n (%) | Strongly disagree<br>n (%) |
|-------------------------------------------------------------------------------------------------------------|-----|-------------------------|-------------------------|----------------------------------------|----------------------------|----------------------------|
| I have personally practiced this R/S practice                                                               |     |                         |                         |                                        |                            |                            |
| Chanting                                                                                                    | 91  | 10 (11)                 | 27 (29.7)               | 6 (6.6)                                | 11 (12.1)                  | 37 (40.7)                  |
| Pranayama                                                                                                   | 89  | 22 (24.7)               | 28 (31.5)               | 4 (4.5)                                | 13 (14.6)                  | 22 (24.7)                  |
| Yoga                                                                                                        | 89  | 41 (46.1)               | 24 (27)                 | 5 (5.6)                                | 10 (11.2)                  | 9 (10.1)                   |
| A guideline that can inform the use of evidence-based sensorimotor R/S practices in mental health is needed |     |                         |                         |                                        |                            |                            |
|                                                                                                             | 101 | 60 (67.42)              | 23 (25.84)              | 5 (5.62)                               | 1 (1.12)                   | 0 (0.00)                   |
| To conduct therapy sessions with my clients, I require more training and knowledge in                       |     |                         |                         |                                        |                            |                            |
| Chanting                                                                                                    | 91  | 47(51.6)                | 18(19.8)                | 13(14.3)                               | 6(6.6)                     | 7(7.7)                     |
| Pranayama                                                                                                   | 89  | 35(39.3)                | 30(33.7)                | 13(14.6)                               | 8(9)                       | 3(3.4)                     |
| Yoga                                                                                                        | 89  | 44(49.4)                | 23(25.8)                | 13(14.6)                               | 4(4.5)                     | 5(5.6)                     |
| My current work setting is well resourced to conduct therapeutic for R/S practice sessions                  |     |                         |                         |                                        |                            |                            |
| Chanting                                                                                                    | 91  | 2(2.2)                  | 7(7.7)                  | 17(18.7)                               | 28(30.8)                   | 37(40.7)                   |
| Pranayama                                                                                                   | 89  | 10(11.2)                | 23(25.8)                | 18(20.2)                               | 21(23.6)                   | 17(19.1)                   |
| Yoga                                                                                                        | 89  | 8(9.0)                  | 14(15.7)                | 20(22.5)                               | 24(27.0)                   | 23(25.8)                   |
| My current work setting would require more resources for me to be able to conduct sessions of R/S practices |     |                         |                         |                                        |                            |                            |
| Chanting                                                                                                    | 91  | 28(30.8)                | 28(30.8)                | 22(24.2)                               | 6(6.6)                     | 7(7.7)                     |
| Pranayama                                                                                                   | 89  | 20(22.5)                | 31(34.8)                | 20(22.5)                               | 10(11.2)                   | 8(9.0)                     |
| Yoga                                                                                                        | 89  | 31(34.8)                | 38(42.7)                | 9(10.1)                                | 7(7.9)                     | 4(4.5)                     |

### 3.7. Need for a guideline, training, and resources in mental health settings

As shown in Table 5, most respondents (93.26%) agreed that a guideline is required to inform MHPs about the use of evidence-based sensorimotor R/S practices in mental health. A high proportion of respondents expressed the need for training to conduct sessions of chanting (71.4%), pranayama (73%), and yoga (75.2%) in mental health settings. In terms of resources for each of the practices, only 9.9% of respondents agreed that their settings were well resourced for *chanting*, with 61.6% indicating a need for greater resources in their setting to conduct chanting sessions. For *pranayama*, 37% of MHPs indicated that their setting was well resourced for this practice, but a need for further resources was still expressed by 57.3% of respondents. The expressed need for additional resources was highest for *yoga* (77.5%), with only 24.7% of participating MHPs agreeing that their settings were well resourced.

## 4. Discussion

This study was conducted to obtain a preliminary understanding of MHPs' knowledge and confidence, and their perceptions of the feasibility of using three sensorimotor R/S practices – chanting, pranayama, and yoga – in clinical mental health settings in Australia. This information is needed to gain insight into the viability of using these practices and to inform strategies to transfer of evidence regarding the mental health benefits of R/S practices into clinical settings.

A key aim of this study was to assess the knowledge and confidence levels of MHPs regarding the use of three sensorimotor R/S practices – chanting, pranayama, and yoga. MHPs reported relatively low levels of ratings for both *knowledge* and *confidence* across all three R/S practices. While no significant differences were found for ratings by different MHPs, psychologists reported the lowest levels of knowledge and confidence compared to

Survey of perceptions of MHPs regarding alternative interventions in Mental Health other health professionals. This may be because typical psychological interventions focus more on cognition and conversational skills (Pugh, 2019), with minimal involvement of sensorimotor components. This finding is consistent with a qualitative study with 12 psychologists in which they revealed their confusion, lack of confidence, and apprehension regarding use of alternative therapies (including some sensorimotor R/S practices) for mental health (Wilson and White, 2011). In our survey, across three practices, MHPs rated relatively higher knowledge and confidence levels for yoga and pranayama than chanting. With greater popularity of yoga in Australia (Lauche et al., 2019), MHPs possibly were more informed about yoga compared to the other two practices. Despite overall lower confidence levels, MHPs reported highest confidence levels in using pranayama as therapeutic intervention. Apparent similarity of pranayama practice with breathing strategies used in the conventional mental health intervention (Hopper et al., 2019) possibly attributed to higher confidence level of MHPs for using this practice as a mental health intervention.

Ratings for *feasibility* were more promising, with the three R/S sensorimotor practices generally viewed as feasible alternative supplementary therapies for mental health. Again, psychologists' ratings were the lowest of the MHPs, likely reflecting their focus on mental health interventions that are cognition-based and conversational (Pugh, 2019). In contrast, the significantly higher level of feasibility reported by occupational therapists is not surprising given their strong sensorimotor focus in mental health interventions (Craswell et al., 2021). Trained in theoretical and practical aspects of sensorimotor interventions, occupational therapists potentially had greater insight into use of considered R/S practices as interventions, which may have attributed to their higher ratings of feasibility. This finding aligns with the results of a survey with student health professionals where occupational therapy students were more likely to see the importance of a *sensorimotor R/S practice* yoga and refer patients to yoga than other professionals, including psychologists (Sulenes et al., 2015).

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In addition to exploring whether feasibility ratings would differ across the different groups of MHPs, the influence of the health sectors in which MHPs worked was also examined. Overall, MHPs' generally agreed that R/S practices may be feasible interventions in clinical mental health care, with the private mental health sector receiving the highest feasibility ratings and government the lowest.

Although these practices were generally perceived to be potentially feasible, participants indicated that mental health services lacked the resources needed for these practices. While the need for resources was particularly evident for chanting, MHPs indicated more resources were needed for yoga and pranayama. This finding may be related to the knowledge that a larger percentage of MHPs in our survey had personal experience of doing yoga and pranayama compared to chanting. Having practiced yoga and pranayama themselves, MHPs potentially had better acceptability for these two practices which might explain their higher rating to have more resources for yoga and pranayama rather than chanting. With less personal experience of chanting, they may have been unclear about the resources that might be needed and defaulted to negative responses as a result. Consistent with this explanation, in a survey with 478 health students, participants with personal practice of yoga showed greater acceptability for the practice than the students with no personal experience of yoga (Sulenes et al., 2015).

The low overall levels of knowledge and confidence align with the MHPs' expressed need for training and for guidelines to implement these practices in mental health settings. Nearly half of the MHPs in this study reported they would need training to conduct sessions of yoga and chanting, and about one third indicated that training would be needed for pranayama. While training those MHPs who may be willing to use these practices as mental health intervention is an option, alternatively trained experts could be hired to conduct intervention sessions. Most of MHPs in our survey had personal experience of yoga practice,

Survey of perceptions of MHPs regarding alternative interventions in Mental Health which may have influenced their rating of the need for training. Having practised yoga themselves, respondents potentially felt more comfortable with using yoga as an intervention, but also recognised the potential constraints of yoga, hence requiring more training before using the practice as an intervention. This proposition aligns with the recommendation of authors of a review of 52 yoga studies (Bayley-Veloso and Salmon 2016). These authors stressed the importance of training clinicians on potential benefits and limitations of yoga before using this practice as intervention in healthcare settings (Bayley-Veloso and Salmon 2016). The perceptions of MHPs in the present study about the need for training is also consistent with recommendations of other authors regarding the requirement for training of MHPs should they use yoga as clinical intervention (Bayley-Veloso and Salmon 2016; Bidgoli et al., 2016; Dhruva et al., 2012; Jagannathan et al., 2021).

The final aim of the survey was to investigate if participants perceived a need for a guideline to inform MHPs about the use of R/S practices for therapeutic purpose. Most respondents strongly agreed that a guideline was needed. As noted in the introduction, this finding is consistent with other studies (Drew et al., 2021; Jagannathan et al., 2021; Kamradt 2017; McSherry and Jamieson 2011; Wilson and White 2011). For example, in Wilson and White's (2011) qualitative study, psychologists identified the need for a guideline for using alternative interventions (including some sensorimotor R/S practices) in mental health. This study however did not specifically focus on sensorimotor R/S practices. Some studies have provided guiding information on integrating some R/S practices, such as breathwork (Aideyen et al., 2020), in mental health counselling. Others noted ethical considerations of integrating yoga in psychotherapeutic interventions (Kamradt 2017). Nevertheless, there is no guideline available for MHPs that may provide detailed information or guiding principles to support integration of all R/S practices in mental health clinical settings.

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Overall, findings indicated that the three R/S practices considered in this survey – chanting, pranayama, and yoga – may warrant further consideration as a possible intervention in mental health settings. While our survey did not specifically examine the feasibility of any specific format of delivery (face-to-face or online), there is evidence of the possible efficacy of using these practices through telehealth (Gangadhar and Varambally 2015; Hart 2013; Stephens 2017; Simpson et al., 2021), which may be especially important in the current COVID-19 situation. For instance, an intervention trial of online chanting found this practice to be a feasible intervention in reducing anxiety levels (Simpson et al., 2021). Yoga has also been identified as a feasible intervention when delivered via telehealth (Gangadhar and Varambally 2015; Hart 2013; Stephens 2017). For instance, Schulz-Heik et al. (2017) found yoga conducted through telehealth was effective for mental health outcomes and suggested integration of telehealth yoga in clinical programs as *acceptable, feasible, and effective* interventions for veterans. In a recent study, tele-yoga was found to be a feasible and effective intervention in mental health (Jagannathan et al., 2021). While pranayama was also rated as a potentially feasible intervention in our survey, feasibility of this practice delivered through videoconference is unclear. In a randomised controlled trial, breathwork, including pranayama delivered through teleconference reduced level of anxiety (Shukla et al., 2020). Although authors of this study did not compare format of delivery (face to face versus online), they recommended face-to-face delivery as a more feasible medium for pranayama (Shukla 2021), possibly due to complexity of instructions involved in the intervention. It is possible that the feasibility of the R/S practices considered in this study may have been viewed higher if MHPs had been asked to consider different delivery formats.

In considering perceptions of MHPs from our survey, evidence from cited literature, and studies of the possible utility of R/S practices as an online intervention, sensorimotor R/S practices may be considered as a potential supplementary alternative to conventional mental

Survey of perceptions of MHPs regarding alternative interventions in Mental Health health care. Findings of this study may be more useful in current health climate when access to mental health care is reduced due to COVID-19.

## **5. Limitations and future considerations**

Three well-evidenced R/S practices were considered in this survey; however, there are other sensorimotor R/S practices (e.g., tai chi) that may be considered in future investigations. While the survey was distributed to a wide range of MHPs in Australia, occupational therapists were over-represented in the sample obtained. Similarly, although MHP respondents were from many different mental health settings, about half were from community mental health. It is important to consider that more than two third of respondents were from government sectors. The sample was also relatively small, with lower numbers in some analyses due to missing data which may have affected power. As a result, the sample may not be representative of all MHPs in Australia or relevant to MHPs in other countries. Due to the quantitative nature of the design, the survey did not capture subjective opinions of MHPs, which may have provided richer and more nuanced information. Finally, the perception of MHPs on mode of delivery (face-to-face or online) of these interventions was not investigated. A mixed methods design survey with a larger number of participants, that includes MHPs from other countries and additional R/S practices, and questions regarding the mode of delivery (face-to-face or online), may provide a broader and deeper understanding of the viability of R/S practices as therapeutic interventions in mental health settings. With additional resources and training of MHPs, and development of a clinical guideline, R/S practices such as chanting, pranayama, and yoga, could be considered viable interventions in clinical mental health settings. Further research is needed to consider this proposition.

## **6. Conclusion**

Overall, knowledge and confidence ratings provided by MHPs were low, with the majority indicating a need for guidelines and additional resources and training would be

Survey of perceptions of MHPs regarding alternative interventions in Mental Health needed if MHPs are to be considered as potential professionals to implement these practices in mental health settings. Ratings of feasibility were more promising, with overall ratings suggesting MHPs viewed these R/S sensorimotor practices as possible alternative supplementary therapies for mental health. Yoga and pranayama were considered more viable than chanting but respondents indicated that additional training was needed to be able to use R/S practices as interventions. While all mental health services required additional resources, clinical settings in government sectors appeared to be least resourced to conduct R/S practices therapeutic interventions. Finally, the majority of MHPs strongly agreed on the need for an overarching guideline for use of R/S practices in mental health. Findings of this survey may inform future research and development of a practice guideline regarding use of R/S practices as alternative supplementary interventions to conventional mental health care. Further research is needed to identify facilitators and barriers of integrating these practices in clinical mental health settings in Australia.

## **7. Authorship contribution statement**

SM contributed to the protocol development, overall design, survey development, data collection and analysis, and manuscript preparation. PM and BZ contributed to overall design, survey development, data analysis, and review of the manuscript.

## **8. Declaration of competing interest**

The Authors declare that there is no conflict of interest.

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## Appendix

### SURVEY

This survey has two parts. The first part will ask for basic information about you and your work setting. The second part explores your views on the feasibility of using sensorimotor religious and/or spiritual (R/S) practices as mental health intervention in **your** health setting.

### PART - 1

#### Demographic information

1. Do you have experience in working in mental health?

- Yes
- No

Please proceed to the next question if you ticked yes (Qualtrics had set this automatically)

2. What is your age (in years)? \_\_\_\_\_

3. What is your level of education?

- Diploma or Certificate or equivalent
- Bachelor's degree
- Master's degree
- PhD or professional doctorate

4. How many years of experience do you have in mental health? (Please enter numerals only) \_\_\_\_\_

5. What is your profession? (Please tick one option)

- Psychiatrist

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- Mental Health Nurse
- Occupational Therapist
- Psychologist
- Social Worker
- Other (Please specify) \_\_\_\_\_

6. Which of the following best describes your current work setting?

- Government or public health settings
- Private health setting
- Semi-private
- Non-government organisation
- Other (Please specify) \_\_\_\_\_

7. Which of the following describes the mental health setting you primarily work in?

(Please tick all that apply)

- Inpatient mental health
- Outpatient mental health
- Community mental health
- Rehabilitation centre
- Community care centre (CCU) or similar
- Other (Please specify) \_\_\_\_\_

8. Which of the following areas of mental health do you primarily work in? (Please tick all that apply)

- Aged care and dementia services
- Adult mental health
- Child and youth mental health
- Infant mental health

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- Other (Please specify) \_\_\_\_\_

PART – 2

**PLEASE READ THE DEFINITION BELOW BEFORE ANSWERING THE FOLLOWING QUESTIONS**

Sensorimotor religious/spiritual (R/S) practices are those practices that are affiliated with a religion or spiritual tradition and that incorporate sensory (related to senses) and motor (related to movement) components. Chanting, recitation, breathwork and yoga are all examples of sensorimotor R/S practices.

In this survey, we are investigating the perceptions of mental health clinicians regarding the feasibility of using three sensorimotor R/S practices as mental health interventions in their current work setting. These three sensorimotor R/S practices are:

1. Chanting – Chanting is an ancient religious/spiritual practice that involves repetition of a prayer or spiritually meaningful word or phrase.
2. Pranayama – Pranayama, sometimes referred as breathwork, is an ancient yogic breathing practice to promote mind-body connection.
3. Yoga – In this survey, yoga refers to the ancient spiritual practice of adopting body poses and postures with the aim of achieving mind and body connection which has physical and mental health benefits.

The questions below focus on your knowledge and perceptions of these three sensorimotor R/S practices and the feasibility of using them as mental health interventions in your work setting.

Please select one answer for **each of the three sensorimotor R/S** practices for the following questions. Please use the scale below when responding to these questions:

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| 1                    | 2        | 3        | 4     | 5              |
|----------------------|----------|----------|-------|----------------|
| Strongly<br>disagree | Disagree | Not sure | Agree | Strongly agree |

**Chanting/Pranayama/Yoga**

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| K/C/F | Questions                                                                                                                | Strongly disagree | Disagree | Not sure | Agree | Strongly agree |
|-------|--------------------------------------------------------------------------------------------------------------------------|-------------------|----------|----------|-------|----------------|
| K     | I am familiar with evidence regarding the efficacy of the R/S practice in mental health.                                 |                   |          |          |       |                |
| K     | I have personally practiced the R/S practice.                                                                            |                   |          |          |       |                |
| K     | I have adequate knowledge to conduct therapy sessions that include chanting with my clients.                             |                   |          |          |       |                |
| K     | I require training and knowledge about the R/S practice to conduct therapy sessions with my clients.                     |                   |          |          |       |                |
| K     | I have previously used the R/S practice in a therapeutic capacity with my clients.                                       |                   |          |          |       |                |
| C     | I feel confident using the R/S practice for therapeutic purposes with my clients.                                        |                   |          |          |       |                |
| C     | I feel confident that I could use the R/S practice effectively with my clients.                                          |                   |          |          |       |                |
| C     | I would not be confident in my ability to use the R/S practice with my clients.                                          |                   |          |          |       |                |
| F     | I believe that the R/S practice could be used for therapeutic purposes in my mental health setting.                      |                   |          |          |       |                |
| F     | I think my clients would be accepting of the R/S practice as a part of their therapy session.                            |                   |          |          |       |                |
| F     | I think the R/S practice might be used as a supplementary intervention alongside mainstream mental health interventions. |                   |          |          |       |                |
| F     | My current work setting is well resourced to conduct                                                                     |                   |          |          |       |                |

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|   |                                                                                                                 |  |  |  |  |  |
|---|-----------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
|   | therapeutic the R/S practice sessions.                                                                          |  |  |  |  |  |
| F | My current work setting would require more resources for me to be able to conduct sessions of the R/S practice. |  |  |  |  |  |

K= Knowledge, C= Confidence, F= Feasibility

A guideline that can inform the use of evidence-based sensorimotor R/S

practices in mental health is needed.

- Strongly disagree
- Disagree
- Not sure
- Agree
- Strongly agree

