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Prevalence and Patterns of Meditation Related Unpleasant Experiences among Community based Yoga Practitioners

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***Abstract*---**Yoga is mainly known to restrain the emotional ripples in the mind but according to some studies, it may lead to some overwhelming challenges like uncontrolled emotional venting as meditation-induced adverse effects, along with benefits. This study intended to assess the prevalence and patterns of meditation-related unpleasant experiences (UEs), among 300 community-based yoga practitioners. In this mixed-methods study, a semi-structured interview schedule was developed to carry out the self-assessment survey. The Chi-square test of association was used for finding the pattern between the UEs and other variables. Total 114 (38%) respondents agreed to experience UEs. UEs were reported more in females (<0.01). Reporting of UEs was found to be associated with a longer history of yoga practice (<0.01), > 20 minutes of daily meditation (<0.05), perceived therapeutic effects of yoga in physical suffering (<0.01), perceived improvement in emotional well-being (<0.01), perceived reduction in negative emotional constructs like stress (<0.01), depression (<0.01), and anxiety (<0.01), due to yoga. The study suggests a high prevalence of UEs, which may be associated more with female yoga practitioners, longer yoga and particularly meditation practice, yoga-induced improvement in emotional well-being, stress, depression, and anxiety, and the therapeutic effects of yoga in the physical sufferings.

***Keywords*---**adverse effects, meditation induced, meditation related, unpleasant experiences, yoga practitioners.

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Introduction

Man has been a conscious part of the evolutionary process through several means, of which yoga is reckoned to be the most intriguing endeavor. The science of yoga has its origin thousands of years ago and has been retained across various cultures and traditions. Venting of suppressed emotions has remained the leading idea behind the evolution of mind via various psychotherapeutic approaches. Whereas, yoga is restraining the mind-stuff from taking various forms of thought waves (Vivekananda, 2020), and emotions are constructed by multiple brain networks working in tandem (Barrett & Wager, 2006; Lisa, 2006). Hence, yoga is primarily understood as a psycho-spiritual practice that mainly restrains emotional ripples in the mind causing the dissolution of those emotional constructs leaving behind pure awareness.

Emotion is defined as a mental and physiological state associated with a wide variety of feelings, thoughts, and behaviors. It is a prime determinant of the sense of subjective well-being and appears to play a central role in many human activities (Santrock, 2003). Emotional well-being (sometimes called hedonic well-being or experienced happiness) refers to the emotional quality of an individual's everyday experience—the frequency and intensity of experiences of joy, fascination, anxiety, sadness, anger, and affection that make one's life pleasant or unpleasant (Kahneman & Deaton, 2010).

Now with an ever-increasing number of yoga practitioners world over, the question haunts that if yoga is shattering the defense mechanism of masses and making them go through (along with benefits) uncontrolled emotional venting as yoga induced adverse effects (Vieten et al., 2018; Cebolla i Martí et al., 2017; Schlosser, Sparby, Vörös, Jones, & Marchant, 2019; Shapiro Jr, 1992). This study intended to assess the prevalence and patterns of meditation related unpleasant experiences (UEs), among community-based yoga practitioners. This study offers insight into overlooked features of the concerned program that can minimize the UEs and the drop-out rate.

UEs may be defined as a subjective experience of any type of unpleasant and unwanted deep rooted emotion or thought, in an unexpected or unusual frequency and intensity, surfacing as sadness, fear, troubling emotions or thoughts etc., apparently triggered by meditation. However, from a research, clinical and scientific perspective, it is yet to be cleared that whether, and how, meditation induces or triggers such unwanted experiences and how they exactly should be measured, investigated, or even defined (Cardoso et al., 2004; Ahn et al., 2019; Ching & Chan, 2020). The small part of research on such instances consists mainly of case reports and case series that have associated meditation with exacerbation of fear, anxiety, panic, mania, psychosis, depersonalization, and suicidal behavior etc.

Materials and Methods

Background: Although there are several yoga centers and some influential traditional yoga institutes in a small city of Chandigarh, a new initiative was launched by Directorate of AYUSH and Govt. College of Yoga, Chandigarh for

providing free yoga classes to the general public. It was initiated with 38 centers in March, 2017 which later in February, 2019 were expanded to 50 centers with 50 plus classes. The classes were organized in 38 different govt. schools of Chandigarh. Later some Health & Well-being Centers (dispensaries) were added as yoga centers. Classes were taken either in the early morning or in the evening. The program is oriented to enhance the health and lifestyle of the general public. Intervention: Common Yoga Protocol (CYP) by Ministry of AYUSH was followed by the yoga instructors, recruited by Directorate of AYUSH, Chandigarh and Govt. College of Yoga, Chandigarh. The booklet "Common Yoga Protocol" was initially formed and presented for the International Day of Yoga celebration prepared by the committee of yoga experts and heads of the eminent yoga institutions of India. The booklet underlines useful yogic practices for healthy living (Chung, 2018; Fingelkurts et al., 2015; Putri et al., 2021).

About 45 minutes class was held for 6 days per week. The sequence of yoga techniques as per CYP is as follows:

- Prayer – 2 minutes
- Loosening practices – 6 minutes
- Postures (standing, sitting, prone, and supine postures) – 18 minutes
- Kapalabhati – 2 minutes
- Breathing techniques – 6 minutes
- Focused meditation – 8 minutes
- Prayer – 1 minute

The design of the yoga intervention comprised practices that addressed one practice from the shatkarmas i.e. Kapalabhati and mainly five of the eight limbs of Ashtanga yoga, consisting Asana, Pranayama, and Pratyahara, Dharana, and Dhyana (considered as focused meditation). Prayers were meant to invoke the virtues of non-violence (ahimsa), harmony and manifesting divinity in sacred endeavors (ishvara pranidhana).

Sampling Method and Sample Size: Purposive sampling was used as we chose general public practicing under free teachings of Directorate of AYUSH and Govt. College of Yoga, Chandigarh. Data were collected from 30 different centers out of 50 centers across the city of Chandigarh. Then, 300 yoga practitioners, those who were willing to participate were selected, who fulfilled the criteria of being above 12 years of age and who were identified to be practicing yoga for at least 2 months.

Instrumentation: In this mixed-methods study, a semi-structured interview schedule was developed to carry out the self-assessment survey. A single question was asked in yes or no format, each, to determine the prevalence of perceived UEs, and the perceived therapeutic effect of yoga in physical suffering (pre-existing or acquired while practice), in case they ever suffered through any kind of physical ailment while yoga practice. Perceived improvement in emotional well-being, perceived reduction in stress, depression and anxiety were quantitatively recorded on the five-point likert scale. Using the standard operational definitions to convey the right meaning, participants were asked through one question to rate the effects of the yoga on above-mentioned aspects of their health. Further, to

triangulate, participants were asked to narrate their experiences and feelings regarding the impact of yoga in their own words through one open-ended question (Artana et al., 2019; Kumar & Sumathi, 2017; Nyandra et al., 2018).

Ethical Clearance: It was duly taken from the Panjab University Ethics Committee (Ref no: PUIEC/2019/180/A/03 dated 6 March, 2019). Permissions from the concerned authorities from the Directorate of AYUSH and Govt. College of Yoga, Chandigarh, along with approval from yoga instructors and informed ethical consent of respondents were taken before conducting the study. Data collection: A cross-sectional, community based study was done in Chandigarh for a period of 2 years (October 2018 – October 2020). Several field visits and informal meetings were conducted for rapport building with the yoga instructors and the practitioners before beginning of the formal interview. It helped to identify the practitioners who were practicing yoga for more than 2 months regularly and who were above the age of 12 years. Since the present study is a part of a larger study, interview lasted for 10 minutes approximately, for the data provided in the present study. The verbatim was translated (wherever required) in English and transcribed in written form.

Data Analysis: The numerical data thus collected were analyzed in form of frequency tables and percentages. Chi-square test of association was used for finding the pattern between the UEs and the various variables of the socio-demographic profile, duration of yoga practice, perceived therapeutic effects of yoga in physical suffering, perceived improvement in emotional well-being, perceived reduction in stress, depression and anxiety. The results thus derived are presented in tabular form followed with suitable interpretation in text. For qualitative data, before following the procedure of inductive thematic analysis, transcripts were textually analysed and coded manually, step-wise in various stages (Saldaña, 2016). First, authors read all the transcribed data and then reached a consensus to agree on terminology and definitions to frame the original coding manual. Transcripts were read several times, line by line, as they were highlighted and coded using the coding manual. In this process, new codes were identified for concepts that emerged from the data. Hence, subthemes were developed and then grouped into a broader theme as per coding. Since, there were limited responses around the theme of UEs, excerpts related to that theme only are provided.

Results

Table 1 shows the distribution and corresponding percentage of respondents with respect to variables of socio-demographic profile and their association with UEs.

Table 1
Association between socio-demographic variables and UEs

Variables	Total	UEs		Chi-square statistic	*P* value
Gender	300	Yes (n= 114, 38%)	No (n= 186, 62%)		
Males	98 (32.7)	24 (24.5)	74 (75.5)	11.2757	0.00078*

Females	202 (67.3)	90 (44.6)	112 (55.4)		
Age in years					
13-40	164 (54.7)	60 (36.6)	104 (63.4)	1.0925	0.5791
40-60	125 (41.7)	51 (40.8)	74 (59.2)		
60-75	11 (3.7)	3 (27.3)	8 (72.7)		
Average Age	38.8				
Marital Status					
Single	83 (27.7)	33 (39.8)	50 (60.2)	5.1188	0.1633
Married	206 (68.7)	76 (36.9)	130 (63.1)		
Widow(er)	6 (2)	1 (16.7)	5 (83.3)		
Divorced/No response	5 (1.7)	4 (80)	1 (20)		
Religion					
Hindu	244 (81.3)	96 (39.3)	148 (60.7)	1.0026	0.3166
Non-Hindu	56 (18.7)	18 (32.1)	38 (67.9)		
Sikh	52 (17.3)	18 (34.6)	34 (65.4)		
Christian	2 (0.7)	0	2 (100)		
Jain	2 (0.7)	0	2 (100)		
Education					
< or up to 12th	19 (6.3)	6 (31.6)	13 (68.4)	0.9355	0.817
Graduate	133 (44.3)	50 (37.6)	83 (62.4)		
Post Graduate	131 (43.7)	50 (38.2)	81 (61.8)		
PhD	17 (5.7)	8 (47.1)	9 (52.9)		

Figures in parenthesis indicate a percentage, * significant at $P < .05$ as well as at < .01

The figures in Table 1 indicate that:

- Total 114 (38%) respondents agreed to experience of UEs at some point, which they thought may have been caused by their meditation practice.
- Gender and reporting of UEs are significantly associated, X^2 (1, N = 300) = 11.3, P = 0.000785, as 24.5% of the male respondents felt UEs while it was higher (44.6%) in females.

Table 2 shows the distribution and corresponding percentage of respondents concerning occupational status, duration of yoga practice and perceived healing or therapeutic effects of yoga in their physical suffering and their association with UEs.

Table 2
Association of UEs with occupational status, duration of practice and perceived healing in physical suffering

Variables	Total	UEs		Chi-square statistic	*P* value
Occupational Status		Yes	No		
Student	53 (17.7)	24 (45.2)	29 (54.7)	9.2807	0.054455
Service	148 (49.3)	47 (31.7)	101 (68.2)		
Self-employed	39 (13)	18 (46.1)	21 (53.8)		
Housewives	51 (17)	24 (47)	27 (52.9)		
Retired	9 (3)	1 (11.1)	8 (88.9)		
Duration					
≤ 4 months	84 (28)	16 (19)	68 (80.9)	33.7393	0.00001*
4-8 months	32 (10.7)	3 (3.3)	29 (90.6)		
8-12 months	53 (17.7)	21 (39.6)	32 (60.3)		
≤ 1 year	169 (56.3)	40 (23.7)	129 (76.3)		
1-1.5 year	20 (6.7)	10 (50)	10 (50)		
1.5 year-2 years	33 (11)	18 (34)	15 (45.4)		
2-3 years	50 (16.7)	28 (56)	22 (44)		
More than 3 years	28 (9.3)	18 (64.3)	10 (35.7)		
More than 1 year	131 (43.7)	74 (56.5)	57 (43.5)		
≤ 20 min meditation	237 (79)	82 (34.6)	155 (65.4)	5.5402	0.01858**
healing in physical suffering					
Yes	196 (65.3)	99 (50.5)	97 (49.5)	37.5576	0.00001*
No/ Never suffered while practicing	104 (34.7)	15 (14.4)	89 (85.6)		
No	5 (1.7)	1 (20)	4 (80)		
Never suffered while practicing	99 (33)	14 (14.1)	85 (85.8)		

Figures in parenthesis indicate a percentage, * significant at $P < .05$ as well as at $< .01$, **significant at $P < .05$

Table 2 shows that:

- Housewives reported UEs higher (47%) than the rest of the respondents.
- UEs and duration of yoga practice are found to be significantly associated, X^2 (1, N = 300) = 33.7, P = 0.00001, as UEs were reported considerably higher by the respondents practicing yoga for more than a year than those who practiced less than a year. Also, a significant association between UEs and particularly the duration of meditation was noticed, X^2 (1, N = 300) = 5.5, P = 0.018584, as those who meditated for more than 20 minutes reported higher UEs.
- Further, healing in physical suffering and UEs are significantly associated, X^2 (1, N = 300) = 37.5, P = 0.00001, as respondents who reported experiencing the therapeutic effects of yoga in their physical suffering, reported UEs considerably higher than the rest of the respondents.

25.2% of the females were housewives which was total 17% of all the respondents. The average duration of yoga practice of respondents was 1.15 hour daily for 17.5 months approximately. Comparatively, females (68.3%) reported the therapeutic effect of the yoga practice in their physical suffering more than the males (59.2%). Table 3 shows the distribution and corresponding percentage of respondents with respect to a perceived improvement in emotional well-being and their association with UEs.

Table 3
Association between perceived improvement in emotional well-being and UEs

Variables	Total	UEs		Chi-square statistic	*P* value
Emotional Well-being		Yes	No		
Very Good	140 (46.7)	80 (57.1)	60 (42.8)	41.2569	0.00001*
Good	129 (43)	29 (22.5)	100 (77.5)		
Neither good nor poor/ Poor	31 (10.3)	5 (16.1)	26 (83.9)		
Neither good nor poor	30 (10)	5 (16.7)	25 (83.3)		
Poor	1 (0.3)	0	1 (100)		

T=Total, figures in parenthesis indicate a percentage, * significant at $P < .05$ as well as at < .01

Table 3 shows that:

- UEs and perceived improvement in emotional well-being are significantly associated, X^2 (2, N = 300) = 41.2, P = 0.00001, as UEs were reported higher by respondents who rated the improvement in their emotional well-being to be 'very good' than those who rated it otherwise.

Table 4 shows the distribution and corresponding percentage of respondents with respect to perceived reduction in their levels of stress, depression, and anxiety, and their association with UEs.

Table 4
Distribution of yoga practitioners according to perceived reduction of negative emotional constructs and their association with UEs

Response	Stress			Depression			Anxiety		
	T	UEs		T	UEs		T	UEs	
		yes	no		Yes	No		yes	no
Strongly Agree	202 (67.3)	98 (48.5)	104 (51.5)	163 (54.3)	91 (55.8)	72 (44.1)	166 (55.3)	90 (54.2)	76 (45.8)
Agree	95 (31.7)	15 (15.8)	80 (84.2)	104 (34.6)	18 (17.3)	86 (82.7)	108 (36)	20 (18.5)	88 (81.5)
Neither agree nor disagree/ Disagree/ Not	3 (1)	1 (33.3)	2 (66.7)	33 (11)	5 (15.1)	28 (84.8)	26 (8.7)	4 (15.4)	22 (84.6)

Applicable Chi-square statistic	29.3986	48.2031	41.5716
P value	0.0001*	0.0001*	0.0001*

T=Total, figures in parenthesis indicate a percentage, *significant at $P < .05$ as well as at < .01

From Table 4, it is evident that:

- UEs and a perceived reduction in negative emotional constructs are significantly associated, as UEs were considerably reported higher by those respondents who 'strongly agreed' to a reduction in stress, X^2 (2, N = 300) = 29.4, P = 0.0001, depression, X^2 (2, N = 300) = 48.2, P = 0.0001, and anxiety, X^2 (2, N = 300) = 41.6, P = 0.0001, due to yoga than those who felt otherwise.

99% either agreed or strongly agreed on a reduction of stress followed by a reduction in anxiety (91.3%), and depression (88.9%).

Qualitative data

Out of total 300 respondents, 101 narrated their experiences about the impact of yogic techniques on them. Out of 101, only six respondents conveyed their unpleasant experience related to meditation, and hence illustrating excerpts from the transcripts are given below.

"In the beginning, I used to struggle to concentrate and keep my mind focused. Many disturbing thoughts and emotions would surface up. My body also reacted to them I guess. Sometimes, it would itch at certain area of body or my legs would pain. But, now I don't struggle that much." ~ Housewife, (47 years old).

". In retrospection, I can say that I started yoga in one of bad phases of my life. Usually, I felt good while meditation in those early days of my practice. But, I noticed that I used to get more depressed, whenever I was trying to do my worldly duties. Slowly I have improved a lot with practice." ~ Self-employed, male (34 years old).

"At one point of my life, while I was in practice, I developed a lot of anxiety and fear, due to unknown reasons. I would sweat a lot. I had to take a break from meditation in those times. Later, I changed some habits and incorporated many things like proper diet, mantras and even good company helped me to fit nicely into yogic lifestyle." ~ Pharmacist, female (40 years old).

"I have found God through yoga. Yoga has saved my life. Although, there was a time when I had to be admitted to hospital for certain health issues…" ~University Staff, female (46 years old).

"Some days I just don't feel like going to work or meeting people, especially after good meditation. And sometimes, witnessing the unexpected and unwanted

negative emotions and thoughts is all I can do. It is like cleaning our mental muck. It is all part of the practice." ~ Lecturer, female (39 years old).

"With meditation practice, over a period of time, I have learned that one has to keep his actions and thoughts positive. Mind will eventually show in our meditation practice, the colors of our past negative thoughts, deeds and intentions from our life. It is up to us what direction we keep our mind into." ~ Bio-Medical Engineer, male (52 years old).

Discussion

According to the present study, total 114 (38%) respondents agreed to experience of UEs at some point, which they thought may have been caused by their meditation practice. There are limited studies on UEs. Three recent large-sample online studies have showed the prevalence of UEs to be 25.4%, 25% and 32% (Cebolla i Martí et al., 2017; Schlosser et al., 2019; Vieten et al., 2018). Vieten et al. (2018), reported in their study feeling disturbing feelings of fear, dread, or terror during or as a result of their meditation practice. Similarly, Schlosser et al. (2019), showed that participants had encountered particularly unpleasant meditation-related experiences (e.g., anxiety, fear, distorted emotions or thoughts, altered sense of self or the world) in the past. Shapiro Jr (1992), showed adverse effects in long-term meditators (average 4.27 years) also. From twenty-seven subjects, seventeen (62.9%) reported at least one adverse effect, and two (7.4%) suffered profound adverse effects.

Results of present study showed that gender and UEs were significantly associated, as reporting of UEs was higher in females (44.6%) than males (24.5%), but there were 32.7% males only compared to 67.3% females. This may be due to the fact that females tend to be more sensitive to emotions and emotionally expressive as well. So males may have not shared their true experience because of reinforced masculine traits and this may have prevented other males to enroll for yoga classes which may have been regarded as feminine by them (Sivaramakrishnan et al., 2017). This could be the reason that suicides rates tend to be higher in males across all countries (Möller-Leimkühler, 2003). Furthermore, housewives reported UEs higher (47%) than the rest of the respondents, as they might have found more time to meditate, which could have triggered off UEs, as focused attention has been associated more with UEs (Cebolla i Martí et al., 2017). In contrast, Schlosser et al. (2019), reported that male compared to female meditators had a higher likelihood of reporting particularly UEs.

In current study, reporting of UEs was found to be significantly associated with duration of yoga practice and especially meditation, as UEs were reported considerably higher by the respondents practicing yoga for more than a year and by those, particularly who meditated for more than 20 minutes. Similarly, Cebolla i Martí et al. (2017), reported that the practice of body awareness was associated with UEs to a lesser extent, whereas focused attention done privately for more than 20 minutes was associated more with UEs. Data from Lindahl et al. (2017), indicated a higher trend with 82% (n=60) of practitioners reporting it, with

more than three quarters of Buddhist meditators practicing one hour or more per day at the onset of their meditation-related difficulties.

Paradoxically, present study showed that UEs and perceived improvement in emotional well-being are significantly associated, as UEs were reported higher by respondents who rated the improvement in their emotional well-being to be 'very good' than those who felt otherwise. Furthermore, significant association was seen between the reporting of UEs and perceived reduction in negative emotional constructs like stress, depression and anxiety. Similarly, Lindahl et al. (2017), also reported in contrast to increased emotionality, that some practitioners reported having fewer or less intense emotions or affective flattening, sometimes even the complete absence of emotions. In this detailed study, using mixed methods, practitioners reported having both increased as well as decreased emotionality. It can be inferred that UEs faced by these respondents were transitory and did not discourage or force them to discontinue their practice as reported in a study by Cebolla i Martí et al. (2017), but the drop-out rate and the reasons behind should be explored more in future studies. Until thoroughly researched, it can only be assumed from our study that when a particular negative emotion or a construct is being reduced or restrained, initially a subject automatically starts venting out negative emotions (rapidness depending upon the intensity of yoga techniques) as one becomes aware of it being surfaced, leading to an unpleasant experience, and then later to its gradual dissolution into a positive affect. It may be a natural and inevitable part of a trajectory of spiritual phenomenon, as mentioned in a study by Lindahl et al. (2020). However, we opine that the triggering of UEs can be reduced as mentioned in the recommendations below.

Interestingly, according to present study, perceived healing in physical suffering due to yoga and UEs were significantly associated, as respondents who reported experiencing the therapeutic effects of yoga in their physical suffering, reported UEs considerably higher than the rest of the respondents, as emotional well-being influences physical health (Lamers et al., 2012), just like a syndrome, being a set of concurrent things, such as certain emotions with a certain group of physical symptoms or a disease that might not always have a definite cause. Likewise, a London based study (n=30) by Lomas et al. (2014), reported that 100% described meditation as challenging (difficult, unpleasant thoughts and emotions), 25% of the interview data involved problems with meditation, 20% reported threats to sense of reality, 7% hospitalized (1 suicidal). 100% described meditation as valuable and conducive to wellbeing. Many described difficulties (even severe ones) as important to their development.

Importantly, in the present study only one question was asked to get the prevalence of UEs. Secondly, respondents were not actively prompted to disclose their negative experiences unlike to a study by Schlosser et al. (2019). Our data did not provide any measurement of type, impact and severity of experiences that could define the condition according to the existing criteria of diagnosis. Lastly, we did not assess possible pre-existing mental health disorders, which could have confounded our prevalence estimate of UEs. Prior cultural conditioning likely influences how those who encounter meditation-related difficulties appraise such experiences. Nevertheless, it must be noted that while ascertaining UEs in our

study, respondents were especially asked to assess their experiential journey from retrospective frame of their subjectivity, which suggests that the reported prevalence estimates cannot be entirely explained by citing base rates of mental health problems in the general population (Patel et al., 2018; Conklin et al., 2019; Lefebure, 2019; Vorkapic & Rangé, 2014).

Conclusion

The present study suggests high prevalence of meditation-related unpleasant experiences, among community-based yoga practitioners, which may be associated more with the female yoga practitioners, longer yoga and particularly meditation practice, perceived improvement in yoga induced emotional well-being, perceived reduction in stress, depression and anxiety due to yoga, and the therapeutic effects of yoga in the physical sufferings of the yoga practitioners (Gallegos et al., 2017; Brown & Jones, 2010).

Strengths and limitations

There are lesser studies on a large sample community-based yoga program which measured UEs. However, study did not probe into drop-out rate. Participants may have under-reported the UEs because of cultural reasons, religious beliefs and devotional inclination towards yoga. It was a cross-sectional and self-assessment survey (Garfinkel & Schumacher Jr, 2000; Saatcioglu, 2013). Results may be affected due to recall bias. Since present study has more females than males, the results may not reflect the interpretations that can be generalized across genders.

Recommendations

These recommendations are based on some overlooked features in this concerned yoga program. This study proposes to maximize the benefits while adverse effects are minimized through a proper multifaceted health system at primary care level.
In the initial preparation stage, at the very outset, following measures may be considered: (a) Importantly, practitioner related factors also need due attention, therefore identification of the existing and potential cases with medical conditions, (b) integration of yoga and naturopathy (Salwa & Nair, 2021), and ayurvedic diet adoption and lifestyle adjustments as per body types to improve the physical and emotional well-being (Hegde et al., 2020; Madhavan et al., 2018; Newcombe, 2017; Vinjamury et al., 2014) and (c) orientation lectures on overlooked basic limbs (Yama & niyama) (Srinivasan, 2016), and philosophical aspects of yoga (Ross et al., 2012), to integrate the psycho-spiritual aspects of yoga into the practice.

Second stage, parallel with yoga classes, may need to further enhance the therapeutic effects of yoga by: (a) monitoring by other indigenous medicine experts (b) providing access to psychologists for counseling and behavioral therapies to refine the healing (Kutz et al., 1985; Kutz et al., 1985; Rangé, 2014), & (c) Teacher related factors play the most crucial role in planning and estimating the future trajectories of practitioner's evolution, hence, training yoga instructors for the management of UEs. Unlike popular traditional yoga institutes of India, such adjuvant services were overlooked in this community-based yoga program.

Recommendations for future research

Future research should be focused on the comparative evaluation between the effects of yoga and the effects of integrated models of yoga with alternative therapies in the management of UEs due to meditation. Other aspects of yoga which largely remain unexplored are Yama and niyama, role of breach of these principles, in the experience of UEs should also be properly researched.

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