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Research Paper

Can Internet-Delivered Counselling-Based Yoga Destigmatize Seeking Mental Health Intervention for Depression in India?

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ABSTRACT

The aim of this study was to investigate the efficacy of Internet-delivered Counselling-based Yoga (i-CY) in making psychological interventions for depression more accessible to Indian adults with self-reported symptoms of depression, by countering the perceived public stigma of the process. This paper proposes and defines i-CY as an intervention technique in which psychological counselling sessions are added to the conventional yoga classes. The study was conducted in three phases. In Phase I, the researcher provided 384 participants Beck's Depression Inventory (BDI) for self-administration and self-scoring. The sample was drawn randomly from semi-urban and urban population of India. In Phase II, the researcher did an assessment of the mental health self-stigma of the participants (N= 107) who self-reported symptoms of depression (BDI self-score > 20) using the Internalized Stigma Measurement Inventory (ISMI 10). In Phase III, a survey studied the comparative willingness of the participants to accept internet-delivered mental health intervention for their self-reported symptoms of depression. The comparison was between two alternatives: a. Internet-delivered Standard Mental Health intervention b. Internet-delivered counselling-based yoga. To control the impact of the variables of cost and time, both alternatives were offered free of cost and twice a week for a month. Chi square was used to statistically analyse the data thus obtained at the level of significance of 0.01. Out of 41% of the respondents who showed self-reported symptoms of depression on BDI, the ISMI-10 assessment showed that 74.4% of the respondents endorsed stigmatized attitude towards various aspects of mental health. However, a significant number of participants (37.5%, $\chi 2$ =7.385 at confidence level of 0.01) responded with willingness for adopting i-CY as intervention while a meagre 9.09% of participants agreed to enroll for standard psychological intervention for their self-reported symptoms of depression. To the best of the author's knowledge, this is one of the first studies proposing the Internet-delivered Counselling-based Yoga (i-CY) as an intervention strategy for self-reported symptoms of depression. Thus, the results of this study have implications in policy making of India's mental healthcare outreach program that uses cultural factors as its advantage in overcoming the hinderance of mental health stigma in seeking out intervention for depression. A need for wider meta data, along with training and certification of experts to administer i-CY is also recommended in this paper.

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While the COVID-l9 lockdown reportedly increased the number of Indians suffering from depression (Mohammad G. Shahnawaz, 2021); the accessibility to psychotherapy and medication was observed to be restricted (Torales J, 2020). This made it difficult for the individuals to address their mental health needs (Mohammad G. Shahnawaz, 2021). 'Self-care' became the most searched query on Google search engine during the second phase of Covid 19 lockdown in India (Times of India, 2020), but public stigma prevented individuals from seeking counselling and other psychological treatment (Gaiha, 2020). This is because many people with mental illness face systematic disadvantages in most areas of their lives (Corrigan PW, 2004). These systematic disadvantages include social exclusion at home, at work, in personal life, in social activities, and even in healthcare (Link BG, 2002).

Public stigma is defined as interrelated 'problems of knowledge (ignorance), problems of attitude (prejudice), and problems of behavior (discrimination)' (Thornicroft G, 2008).

The perceived stigma and discrimination are the factors that individuals consider while seeking mental health assistance in India (Jovial, 2017). In fact, perceived public stigma is a major reason in the underreported prevalence of mental disorders too with only 7.3% of young people reporting a mental disorder and fewer accessing treatment (Gururaj G, 2015-2016). Therefore, this study emphasizes on exploring creative ways to counter the hinderance of perceived public stigma in seeking interventions for psychological distress. By proposing the addition of psychological counseling sessions to conventional yoga classes, and studying the community attitude towards i-CY, this paper is investigating the efficacy and sustainability of one such internet-delivered creative approach.

The efficacy of internet-based psychological intervention strategies for depression is well established (Andersson G, 2014). Moreover, several psychologists (Novotney, 2009) have reportedly admitted the benefits of yoga in psychotherapy. Since, there was a surge in seeking out 'breathing techniques' and 'guided relaxation' during the Covid-19 lockdown (Times of India, 2020); therefore, using the advantage of this cultural factor, the current study investigated the community attitude towards adding psychological counselling to conventional yoga sessions. This investigation gave us an insight into the efficacy of i-CY as a tool to counter the hinderance of perceived public stigma towards seeking mental health interventions in India.

About Internet-delivered Counselling-based Yoga (i-CY) intervention:
Globally, an increasing number of psychologists are using yoga as a practice tool to treat their clients suffering from depression (Novotney, 2009). Therefore, in alignment with the cultural sensibilities of Indians (Hearld View, 2020), this study proposes using yoga as an adjunct to standard psychological counselling for depression, by introducing counselling sessions in the yoga classes.

Ethics Statement
This research was conducted in line with the guidelines of the American Psychological Association. All participants gave informed consent before starting the study on condition of

the anonymity of their identity. There was neither any deception of participants, nor any incentive was given.

METHODOLOGY

The purpose of present study is to assess the community attitude towards adding a counselling session (once a week) to conventional yoga sessions, in order to evaluate the potential of the proposed i-CY intervention strategy in countering the hinderance of public stigma in seeking out intervention for depression. For this purpose, the study was conducted in three phases: Phase I, Phase II and Phase III.

The participants received an automated e-mail as a reminder, if they didn't finish the survey in 24 hours. Participants who had not completed the survey in 48 hours, received personalized e-mails. Those who had still not completed were considered as participants with intention to withdraw.

Phase I:

Method:

This phase was the screening phase, conducted on May 13, 2020 with 384 participants (n=384) selected through snowball sampling using the platform of a social media app called WhatsApp. The participants self-administered and self-scored, the self-reported symptoms of depression on Beck's Depression Inventory- II (BDI- II). The objective of this phase was to draw out a sample of participants with self-reported symptoms of depression from a randomly selected group of people.

Participants:

Participants were recruited via online advertising on social media platforms (Whatsapp). The demography of participants is discussed in Table 1.

Table 1: Demographic details of the participants

Number of participants	384
Percentage of female	45.75%
Percentage of male	54.3%
Mean age	33.33 years
Standard Deviation	13.00
Percentage from Urban India (Delhi, Mumbai, Pune)	53.4%
Percentage from Semi Urban India (Pithoragarh, Bewar)	46.6%

Measures

The study used the Beck Depression Inventory-II (BDI-II)- a 21-item questionnaire that can be self-scored. In this study, participants were provided the questionnaire through google form for self-reporting and self-scoring. BDI-II was used to assess the presence and degree of depressive symptoms (McDermott, 2019). The author selected this instrument on the basis of the significant empirical support for its use in non-clinical populations (McDermott, 2019).

Scoring

The BDI-II is scored by adding the ratings for the 21 items in the questionnaire. Each item is rated on a 4-point Likert scale ranging from 0 to 3. The interpretation of score is in following table 2.

Table 2: Interpretation of BDI scores

Total Score	**Level of Depression**
1-10	These ups and downs are considered normal
11-16	Mood disturbance
17-20	Borderline Clinical Depression
21-30	Moderate depression
31-40	Severe depression
Over 40	Extreme depression

Result

The result of the screening stage is discussed in Table 3:

Table 3: Number of participants self-reporting symptoms of depression

Participants self-reporting symptoms of borderline depression	28%
Participants self-reporting symptoms of moderate depression	9%
Participants self-reporting symptoms of severe depression	4%
Total percentage of participants self-reporting symptoms of depression	41%

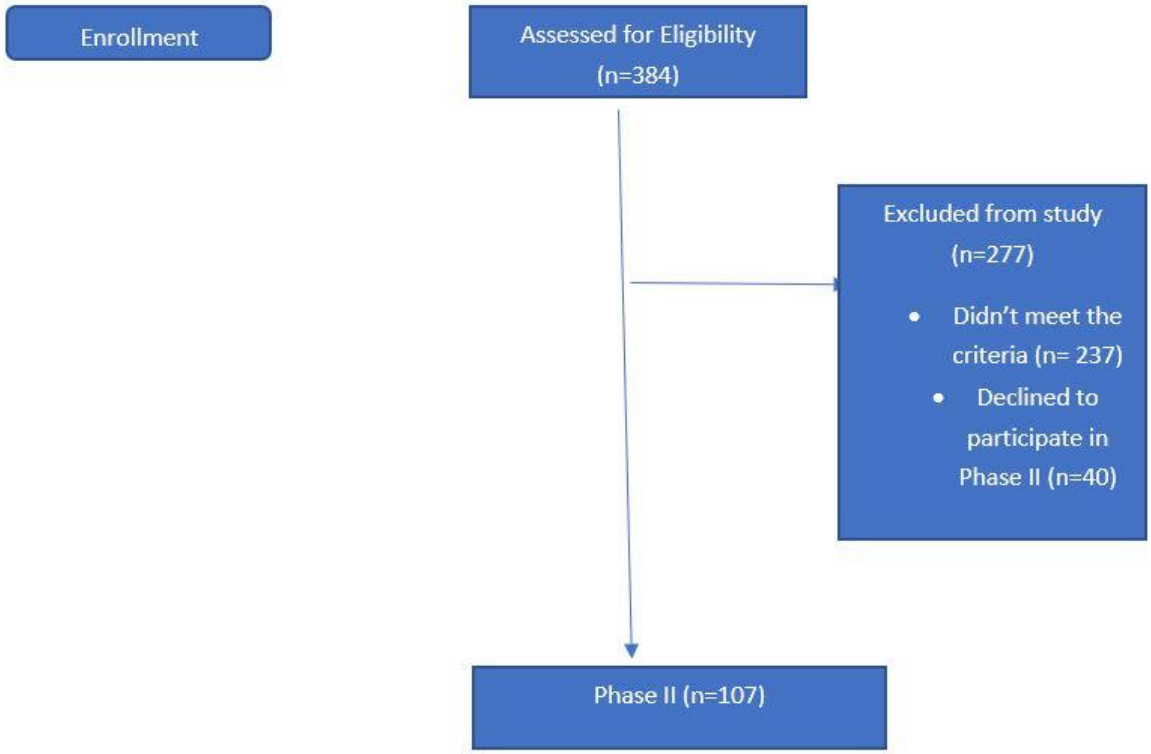
Phase 2:

Method:

Phase II was conducted on 17 May 2020. The participants who met the eligibility criteria in the screening stage were enrolled for this phase for assessment of their endorsement of internalized stigma towards mental health using Internalized Stigma Measurement Inventory (ISMI-10).

Participants:

Three hundred and eighty-four participants completed the screening questionnaire in Phase I and provided demographic information. Of those participants, 147 met criteria for the study and were invited to participate. Only 107 actually enrolled in the Phase II of the study and completed the questionnaire. A consolidated information is in the diagram is displayed in Figure 1.



The demographic details of the participants of Phase II are illustrated in Table 4.

Table 4: Demographic details of the participants

Total number of Participants	107
Female participants	58.27
Male participants	41.73%
Mean Age	34.1
SD	13.0
Percentage from Urban India (Delhi, Mumbai, Pune)	58%
Percentage from Semi-Urban India (Pithoragarh, Bewar)	42%

Measures:

The study measured effect of stigma in the participants using brief version of Internalized Stigma for Mental Health Inventory (ISMI-10), adapted from Boyd and Otilingam in 2014, USA (Boyd JE, 2014). It is a self-reporting questionnaire with 10-items and 4-point Likert scale, where 1 indicates strongly disagree and 4 indicates strongly agree. The author chose this scale for its good content and criterion validity. The sensitivity was 0.87 and the specificity was 0.94. The reliability was 0.75. For the purpose of this study the reliability was maintained by utilizing Cronbach alpha 0.74.

Scoring and interpretation:

This study used Lysaker et al method for the interpretation of the scores (Lysaker PH, 2006;33(1)). The method included the following steps:

Step 1- Reversing item 2 and item 9

Step 2- Summation of all the item scores

Step 3- Dividing the result of the Step 2 by the total number of answered items.

The resulting score ranged from 1 to 4. For example, if someone answers 9 of the 10 items, the total score is produced by adding together the 9 answered items and dividing by 9. Stigma was categorized into 4 levels, as illustrated in Table 5.

Table 5: Categorization of levels of stigma

Score	Level of Stigma
1.00–2.00	no to minimal self-stigma
2.01–2.50	mild self-stigma
2.51–3.00	moderate self-stigma
3.01–4.00	severe self-stigma

Results:

The prevalence of self-stigma was 74.4% (n=80). Among these 48% had mild self-stigma, 26.4% had moderate self-stigma and 9.1% had severe self-stigma, as illustrated in Table 6.

Table 6: Level of self-stigma amongst respondents

Level of Stigma	Score	Frequency	Percentage (N=80)
Mild self-stigma	2.01–2.50	37	46.25
Moderate self-stigma	2.51–3.00	34	42.5
Severe Self-stigma	3.01–4.00	9	11.25

Amongst the subscales of ISMI-10 the highest mean score was observed for stereotype endorsement, followed by discrimination experience and social withdrawal as illustrated in Table 7.

Table 7: Mean Score and standard deviation for each sub-scale of ISMI-10

Subscale	Mean Score	Standard Deviation (N=107)
Alienation	2.8	1.01
Stereotype Endorsement	3.73	1.11
Discrimination Experience	3.42	1.29
Social Withdrawal	3.21	1.39
Stigma Resistance	2.3	0.86

Phase 3

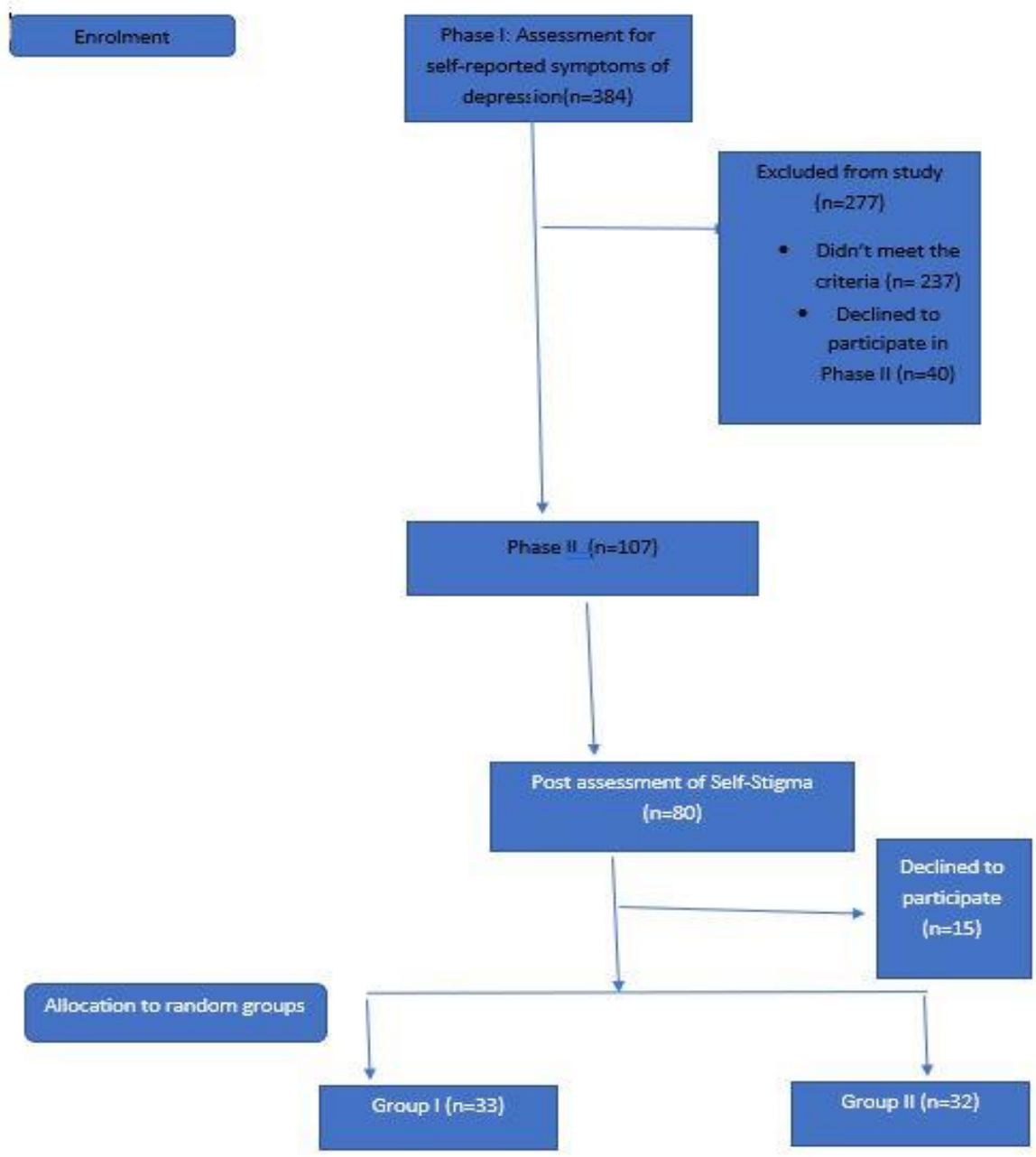
Method:

Phase III was conducted on 20 May 2020. The participants whose self-stigma level were assessed as mild, moderate and severe (N=80), were randomly assigned into two groups with equal sample size in this phase- Group I, Group II. Both groups were asked to respond to a single question: "Are you willing seek out intervention for your self-reported symptoms of depression (Free of cost, 1 hour session, twice a week, for a month)?" In Group I, internet-delivered standard psychological intervention was suggested, while, to Group II Internet-delivered Counselling-based Yoga was recommended.

Participants:

Eighty participants in Phase II whose self-stigma level was assessed from mild to severe, were included in this phase (N=80). Sixty-five participants enrolled in this phase and were randomly assigned into Group I and Group II. Consolidated illustration of the reporting is illustrated in Diagram 2.

Diagram 2: Consolidated reporting of the participants in Phase III



Measures:

The participants of Group I were given Question I.1: "Are you willing to enroll in counselling/therapy sessions for reducing your symptoms (free of cost, 1 hour session, twice a week, for a month)"

A. 0. No thanks

B. 1. Yes, I am willing to enroll.

The value for each response was indicated on its left.

Group II was given Question II.1: "Are you willing to enroll in yoga sessions which will include counselling also, for reducing your symptoms (Free of cost, 1 hour session, twice a week for a month"

A. 0. No thanks.

B. 1. Yes, I am willing to enroll in yoga sessions
The value for each response was indicated on its left.

Scoring:
To calculate the number of participants willing to seek out intervention for their depression, in the total value of the responses was calculated, as shown in Table 8.

Table 8: Participants' response to seeking intervention for self-reported symptoms of depression

Group	Intervention Technique Recommended	Response of the Participants			
		Yes		No	
		Number	Percentage	Number	Percentage
Group I (n=33)	Standard Psychological Intervention (Counselling/Therapy)	3	9.09	30	90.90
Group II (n=32)	Internet-delivered Counselling-based Yoga	12	37.5	20	62.5

Statistical Analysis:
All the collected data were checked for completeness, consistency and accuracy. To assess the significance of the increase in the number of respondents willing to seek intervention for the self-reported symptoms of depression Chi Square was calculated, 0.01 level of significance.

For the calculation of the Chi square, the null hypothesis was- The willingness of the participants to enrol in intervention for the self-reported symptoms of depression is independent of the options offered to them in terms of: a. Internet-delivered standard psychological intervention and, b. Internet-delivered Counselling-Based Yoga (i-CY)

Results:
This study found significant association between the option of intervention recommended and the willingness of the participant to seek out intervention for self-reported symptoms of depression ($\chi^2 = 7.386, p = 0.01$), as shown in Table 9. Evidently, a significantly higher number of people agreed to enroll for intervention when i-CY was recommended instead of standard psychological intervention.

Table 9: Association between the recommended method of intervention and willingness of the participant to enroll in the intervention program

Response of the participants	Frequency in Group I Standard Psychological Intervention n(%)	Frequency in Group II Internet-delivered Counselling-based Yoga n(%)	Value of χ^2	P-value
Yes	3 (9.09%)	12 (37.5)	7.386	6.635
No	30 (90.90%)	20(62.5)		

DISCUSSION

The major finding of this study is that the community attitude towards seeking out intervention for depression in India is dependent on the method of intervention offered. While, previous studies have established a correlation between mental health stigma and

treatment avoidance by individuals (Henderson, 2013), the present study shows that treatment avoidance of the participants is significantly reduced when counselling is offered as a part of internet-delivered yoga sessions, instead of being provided as a standard internet-delivered psychological intervention.

The present research has important policy implications. Specifically, in the effort to reach higher number of people with depression and provide them with the necessary phycological aid.

While according to a report by World Health Organization, India is the most depressed country in the world (India Today, 2018), Madras High Court has taken a note of the "inadequate treatment facilities" (LiveLaw.in, 2020). It becomes essential to reduce the burden of mental healthcare on the states of India by exploring efficacious and sustainable interventions that can bridge the gap of mental health aid and the population suffering from depression. Culturally, Indians are more inclined towards seeking out yoga than standard mental health interventions for depression (Hearld View, 2020) and this study has shown that a significant number of people suffering from self-reported symptoms of depression are willing to enroll for counselling sessions when the sessions are provided in yoga classes (i-CY). As statistically established in Phase III of the current study the percentage of participants (37.5%) willing to enroll in i-CY is significantly higher than the number of participants willing to enroll in standard internet-delivered psychological intervention for depression (9.09%). Therefore, the proposed i-CY technique has potential to be the cultural bridge that India needs right now to overcome the hinderance of mental health stigma and make psychological intervention more accessible to the population suffering from depression. Thus, the author wants to emphasize on the need for setting up a regulatory body to monitor the certification of the experts to administer i-CY.

Whether i-CY can prove to be a gateway intervention for the people suffering from severe depression who require more intense treatment than counselling; is a follow-up study that the author is proposing in this paper for better insight into stigma and treatment avoidance; and to create a better community mental healthcare outreach program.

CONCLUSION

In sum, the present research provides an understanding of how the cultural factors can play an important role in overcoming the hinderance of mental-health stigma in seeking out interventions for self-reported symptoms of depression. Internet-delivered Counselling-based yoga is one such viable option, as shown by this study, which reduces the mental health stigma induced treatment avoidance in participants with self-reported symptoms of depression.

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Conflict of Interest

The author(s) declared no conflict of interest.

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