

APPLICATION OF LOVING KINDNESS MEDITATION BASED PSYCHOTHERAPY ON EMOTION REGULATION AMONG INDIVIDUALS WITH SCHIZOPHRENIA

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Abstract

Present study was conducted study the effects of loving kindness meditation-based psychotherapy on emotion regulation among individuals with schizophrenia. It was hypothesized that loving kindness mediation would have significant effects on emotion regulation among individuals with schizophrenia. Recent findings regarding emotional dysregulation among individuals with schizophrenia are presented and the role of emotional experience in the etiology and the development of the illness are discussed. In agreement with the published literature, argue for the priority of emotion regulation strategies such as reappraisal, exposure, acceptance, detachment, and mindfulness in mettabhavana for schizophrenia. Initially Twenty persons diagnosed with schizophrenia currently in remission were taken from inpatient services of Ranchi Institute of Neuro-Psychiatry and Allied Sciences, Kanke, Ranchi. Amongst these, ten patients were included in experimental group and whereas, remaining ten patients would be part of Treatment as usual group. The course of loving kindness mediation Program was span over the period of eight to nine weeks. The experimental group was attended weekly for approximately six sessions or as per as requirement. All subjects were in the age range 20-40 Years. Non parametric test applied to test the significant difference between pre and post score of both groups. It was found in results that practices of loving kindness mediation is effective in reducing social isolation, anger, negative emotion, psychological recovery.

Keywords: Loving kindness meditation, Emotion Regulation, Schizophrenia

Introduction

There is a significant need for research regarding how best to treat the of schizophrenia given these symptoms association with poor prognosis and the limit efficacy of existing treatments.^[1] Loving-kindness meditation (LKM) is a special form of Buddhist meditation that aims to cultivate unconditional kind

attitudes toward self and others. Loving Kindness Meditation can cultivate by four immeasurable first one loving-kindness, which refers to unselfish friendliness, second compassion, which refers to a willingness to cease the suffering of the distressed, third appreciative joy, which refers to feeling happiness for other's

success or fortune; and fourth equanimity, there are refers to calm toward the fate of others based on wisdom. Loving kindness meditation have to use broad sense, to refer to all of these subtypes of meditations, and certain subtype interventions that focus on compassion. according to ^[2]it can foster positive emotions,^[3] and it has demonstrated significant improvement on positive emotions. Meditation can act of inward contemplation and the intermediate state between attention to a stimulus and complete absorption in it^[4] some study suggests that both concentration and mindfulness meditation are associated with a variety of clinical benefits, including anxiety and stress regulation, reduction of chronic pain, and management of medical illnesses.^[5,6] Practical sessions incorporated three major components: discussion, skills teaching, and practice. At the beginning of each session, the participants were encouraged to discuss something they learned from doing the meditation or a perceived benefit of the meditation. According to the broaden-and-build theory^[7] of positive emotions can apply to Loving Kindness Meditation for negative symptoms of schizophrenia. And other meditation like mindfulness activity was taught and practiced, such as mindfulness eating, walking, listening or body movement. These practices were done to strengthen the patient's ability to concentrate in the present moment with the ultimate goal of strengthening focus on loving kindness. Finally, the facilitator led the participants in 5–10 minutes of formal loving kindness meditation practices during the session, gently reminding participants to non-

judgmentally redirect their attention to the feeling of loving kindness when attention wandered.

Mechanic of change: Mindfulness meditation encourages nonjudgmental awareness of experiences in the present moment by focusing on bodily or other sensorial experience, affective states, thoughts, or images, Compassion Meditation focuses awareness upon alleviation of the suffering of all beings, and Loving Kindness Meditation is work on loving and kind concern for their well-being. These exercises each can be practiced at any time and in different postures e.g., like sitting or lying and even while walking ^[8] Through the psychotherapy, approach look at techniques that enhance emotional well-being, build positive coping and internal resiliency skills, reduce stress, and encourage self-care. these reasons, Loving kindness meditation is a useful tool in psychotherapy. Loving kindness meditation may promote happiness as it shifts our outlook from the individual to the collective and provide purpose, connection, and selfless action for the well-being of other.^[9]

METHOD

- **Participant:** Twenty persons diagnosed with schizophrenia currently in remission were taken from inpatient services of Ranchi Institute of Neuro-Psychiatry and Allied Sciences, Kanke, Ranchi. Amongst these, ten patients were included in experimental group and whereas, remaining ten patients were part of Treatment as usual group. Among these individuals were randomly distributed in LKM with

treatment as usual group (LKM +TAU). Nature of the sampling was purposive sampling. Mean age of these patients was found (31.20 ± 5.33) years and mean education was found (11.20 ± 2.09).

INCLUSION CRITERIA (for both Experimental as well as treatment as usual group). Clients diagnosed according Diagnostic Criteria of Research to ICD-10 DCR (WHO, 1992)^[10] for Schizophrenia., Patient who is amenable, Age between 20-40 years, Education level of minimally 10th standard, at least two years of illness history.

EXCLUSION CRITERIA (for both Experimental as well as treatment as usual group), Clients with a history of any severe or serious medical illness, Clients with history of mental retardation, Clients diagnosed with other psychoactive substance use, Clients diagnosed with epilepsy, Clients diagnosed with co morbidity, Clients who don't give consent

Research design: The study followed a hospital based repeated measure study design. The variable under investigation were categorized along six-dimension outcome variable- non accepted of emotion response, difficulties engaging in goal directed behavior, impulse control difficulties, lack of emotional awareness, strategies and reading for change process measure emotional self-regulation and Compassionate Love.

Instrument: Socio-Demographic and Clinical Data Sheet (SDCS): A socio-demographic and clinical data sheet

were specially be designed for the present study to record demographic variables and clinical variables such as age, sex, age of illness onset, duration of illness, history of past and present illness and family history etc. Scale for the assessment of negative symptoms^[11] SANS assesses five symptom complexes to obtain clinical ratings of negative symptoms in patients with schizophrenia. They are: affective blunting; alogia (impoverished thinking); avolition/apathy; anhedonia/ a sociality; and disturbance of attention. The final symptom complexes seem to have less obvious relevance to negative symptoms. Scale for the assessment of positive symptoms^[12] This scale is designed to assess positive symptoms, principally those that occur in schizophrenia. It is intended to serve as a complementary instrument to the Scale for the Assessment of Negative Symptoms^[11] These positive symptoms include hallucinations, delusions, bizarre behavior, and positive formal thought disorder. Compassionate Love Scale.^[13] A 21-item measured designed to measure compassionate love for humanity. Compassionate love toward humanity is defined as an attitude toward humanity that involves behavior, feeling, and thinking that focuses on concern, caring, and support for humanity, as well as a motivation to understand and help humanity (strangers) when they are most in need. And, "humanity" is considered anyone who is a stranger (not a close other). Respondents answer each item on a 7-point Likert-type scale ranging from

1 (not at all true of me) to 7 (very true of me). Difficulties in Emotion Regulation Scale (DERS). As described, the DERS^[14] is brief 36-item self-report question designed to assess multiple aspects of emotion dysregulation, revised score items are member 1,2,6,7,10,17,20,22,24 and 34 higher score suggest greater problem with emotion regulation the measure yield a total score as well as score on six, scale derived through factor analysis. 1-Non acceptance of emotional (nonacceptance) 2-difficulties engaging in goal directed behavior (Goal) 3-impulse control difficulties (Impulse) 4-limited access to emotion regulation (Strategies) 5-lack of emotion clarity (Clarity) and 6-limited access to emotion regulation (Awareness). Each item is rated on a 5-point scale based on how often participants believe each item pertains to them (10 almost never to 50 almost always). **Module for loving kindness meditation** (Based on previous literature and studies of^{[15][16][17][18]}-The course of loving kindness meditation Program was span over the period of eight to nine weeks. The experimental group was attended weekly for approximately six sessions or as per as requirement, lasting one hour each as well as a single follow-up booster session six weeks later. Main themes of each week are discussed below. A participant was less allowed outside contact. As the course was conducted in silence, they were instructed to refrain from speaking, except for questions to course staff or the instructor. Mediators

began by focusing on observing the breath and calming the body. Beginning with each day, patients practice "mindfulness meditation," or observations of physical, emotional, and mental experiences, with a focus on non-reaction to sensations.

Procedure: Patients were selected from different units of Ranchi instituted Neuropsychiatry and allied science as per the inclusion and exclusion criteria was taken up for the study. Potential candidates were approached to determine their interest in the study and who are stabilized on medication enough to participate in therapy. Participants agreeing to Participate were provided with informed consent from, following which socio-demographic data was collected. Subsequently, the scales selected for the present study were applied on the patients. Finally, based on purposive sample, participants were considered in either MB (with treatment as usual) group or only treatment as usual (TAU) group. The experimental group was provided with the designed module based psychotherapeutic intervention along with regular treatment provided by the treating team. Also, there should be any inference with the regular regime of the loving kindness meditation group participants. After selection of the participant in the two groups, baseline assessment was done. A subsequently second assessment was performed after 8 weeks. Described below the began two sessions focused on mindfulness breathing the Preliminary loving kindness meditation

practice began in week 3 and involved sitting with close or open eye and silently repeat phase of position interaction for the person thought to mind. Each class included opportunities for questions and discussion of their experiences integrating loving kindness mediation meditation into daily life. A typical class included 10 minutes of breathing meditation, 20 minutes of instruction, 30 minutes of loving kindness mediation meditation practice, 15 minutes of group discussion, and ended with 15 minutes of BM meditation practice. Each participant was provided with loving kindness mediation. The curriculum is briefly summarized as follows. Classes 1 and 2 focus on instructions in mindfulness meditation. Class 3 introduces loving-kindness meditation phrases. There are seven steps of LKM- 1-the emotional regulation system,2- stress reaction and self-compassion ,3-inner patterns,4- the compassion mode,5- self and other ,6- compassion in daily life,7-the healing power of compassion. There is Exercises of LKM 15 steps.**Data analyses:**In present study initially twenty-two patients with diagnosis of schizophrenia were purposely selected from in-patient department of Ranchi Institute of Neuro-Psychiatry and Allied Sciences, Ranchi. After initial selection they were assigned to loving kindness medication-based psychotherapy plus treatment as usual group (LKM+TAU group) and treatment as usual group (TAU group). Out of these twenty-six patients six patients dropped out from the study one from

each group due to premature discharge on the request of family members. Similarly, out of 10 patients in TAU group, 8 patients (80%) were unemployed and 2 patients (20%) patients were employed, 9(90%) were Hindu while one patient (10%) was from Islam religion, 5 patients (50%) were hailing from rural socio-cultural background while 5 patients (50%) were from urban social cultural background, 6 patients (60%) were married while 4 patients (40%) were unmarried, 4 patients (40%) were from low socioeconomic strata while 6 patients (60%) were from middle socioeconomic strata, 6 patients (60%) were from joint family while 4 patients (40%) were from nuclear family. Mean age of these patients was found (31.20 ± 5.33) years and mean education was found (11.20 ± 2.09). Comparison between both groups on categorical data was done by using Chi-square Test and for continuous variables t-test was used. Further percentage, mean and standard deviations were calculated for descriptive purpose. Comparison between both Groups.

Result -In this phase of current study comparison between Loving Kindness Meditation + Treatment a usual group and TAU group was done on different study variables which were assessed via Scale for the Assessment of Negative Symptoms ^[11]Scale for the Assessment of positive symptoms ^[12]Compassionate Love Scale, ^[13]Difficulties in Emotion Regulation Scale. ^[14]This comparison was necessary to evaluate whether or

not there were any significant differences between both the groups before intervention. After considering the sample size of the study Mann Whitney U test was used to analyze the data to evaluate significance of differences. Apart from the Mann Whitney U test Mean and Standard Deviations were also calculating for descriptive purpose. The results of this analysis are presented.

Table-1: Comparison between LKM+TAU group and TAU group at baseline scores on Scale for the assessment of negative symptoms (SANS), Scale for the assessment of positive symptoms (SAPS)

Variable	Group (Mean \pm SD)		Mean Rank		U	Z
	TAU+LKM	TAU	TAU+LKM	TAU		
Scale for the assessment of negative symptoms (SANS)						
SANS	46.034 \pm 6.5	56.34 \pm 11.11	7.30	13.70	18.0	.24
Scale for the assessment of positive symptoms (SAPS)						
SAPS	34 \pm 7.33	36.834 \pm 6.00	9.55	11.45	40.5	.72

*Significant at $p < 0.05$, **Significant at $p < 0.01$, ***Significant at $p < 0.000$

Table shows comparison between both the groups on Scale for the assessment of negative symptoms (SANS), Scale for the assessment of positive symptoms (SAPS) Analysis of data as provided by these tools revealed that there was no significant difference between both the groups on any of the variables as measured by these tools. Again, it was found that before intervention both groups were comparable and equivalent on these variables

Table-2: Comparison between LKM+TAU group and TAU group at baseline on Difficulties in Emotion Regulation Scale (DERS).

Variable	Group (Mean ± SD)		Mean Rank		U	Z	p
	TAU±LKM	TAU	TAU±LKM	TAU			
Difficulties in Emotion Regulation Scale							
Non acceptance	12.6±1.07	11.2±.79	13.9	7.10	16.00	2.65	.008
Goal	13.8±2.09	10.7±.95	15.20	5.80	3.00	3.60	.96
Impulse	13.0±2.80	12.0±2.6	13.35	6.65	10.5	2.93	.007
Awareness	13.7±2.05	11.6±2.62	13.90	7.10	16.0	2.60	.009
Stringiest	15.4±1.5	12.6±2.2	14.05	6.95	14.5	2.71	.007
Clarities	12.0±1.33	10.5±.97	13.65	7.35	18.5	2.45	.014

*Significant at $p < 0.05$, **Significant at $p < 0.01$, ***Significant at $p < 0.000$

Table shows comparison between both the groups on Difficulties in Emotion Regulation Scale (DERS). Analysis of data as provided by these tools revealed that there was no significant difference between both the groups on any of the variables as measured by these tools. Again, it was found that before intervention both groups were comparable and equivalent on these variables.

Table-3: Comparison between LKM+TAU group and TAU group at baseline on compassionate

Variable	Group (Mean ± SD)		Mean Rank		U	Z	P
	TAU+LKM	TAU	TAU+LKM	TAU			
Compassionate scale							
Compassionate	34.50±6.09	37.20±3.08	8.30	12.70	28.0	1.67	.093

*Significant at $p < 0.05$, **Significant at $p < 0.01$, ***Significant at $p < 0.000$

Table shows comparison between both the groups on Compassionate Analysis of data as provided by these tools revealed that there was no significant difference between both the groups on any of the variables as measured by these tools. Again, it was found that before intervention both groups were comparable and equivalent on these variables.

Post Intervention Phase: Efficacy of Intervention: Within group comparisons: These types of comparisons were done to evaluate whether or not each group

improves in due course of treatment and to evaluate their relative improvements to each other from one phase to another i.e., from pre intervention to post intervention phase. For this purpose, data were analyzed by using Wilcoxon Signed Rank Test to test significance of difference. Apart from this mean and standard deviations were calculated for descriptive purposes

Table-4: Comparison between baseline and post scores on Difficulties in Emotion Regulation Scale within TAU+LKM group and TAU group.

Variable	Group (Mean ± SD)		Mean Rank		Z	P
	Baseline	Post	Negative Ranks	Positive Ranks		
TAU+LKM Group						
Non acceptance	12.20±.88	9.90±1.19	5.50	.00	3.00	.005
Goal	10.7±.94	10.1±1.66	4.50	4.50	1.27	.201
Impulse	13.0±2.6	9.8±.96	5.60	.00	3.69	.004
Awareness	12.6±2.7	11.7±1.05	4.90	2.90	1.00	.03
Stringiest	12.6±2.27	11.3±1.7	5.75	3.50	1.43	.151
Clarities	10.5±.97	12.4±1.7	4.50	5.61	2.36	.01
TAU Group						
Non acceptance	12.60±1.07	17.0±3.1	.00	.00	.00	1.0
Goal	13.8±2.09	20.7±3.59	1.0	.00	1.0	.31
Impulse	15.0±2.8	21.3±3.1	1.5	.00	1.4	.15
Awareness	13.7±2.05	18.3±1.6	1.0	.00	1.0	.31
Stringiest	15.5±1.57	22.3±1.15	2.0	.00	1.6	.102
Clarities	12.0±1.33	16.4±1.8	4.0	.00	2.4	.014

*Significant at $p<0.05$, **Significant at $p<0.01$, ***Significant at $p<0.000$

Table shows comparison between baseline assessment scores and post scores on Difficulties in Emotion Regulation Scale (DERS). Within both groups. First part of the table is showing the result of baseline intervention assessment scores and post assessment scores on Difficulties in Emotion Regulation Scale within LKM+TAU group and second part of the table is showing the same assessment scores within TAU group.

Table-5: Comparison between baseline and post scores on compassionate within TAU+LKM group and TAU group

Variable	Group (Mean ± SD)		Mean Rank		Z	P
	Baseline	Post	Negative Ranks	Positive Ranks		
TAU+LKM Group						
Compassionate	46.0±6.51	23.30±2.45	5.50	.00	2.8	.005
TAU Group						
Compassionate	56.7±12.45	44.30±13.44	5.50	.00	2.9	.006

*Significant at $p<0.05$, **Significant at $p<0.01$, ***Significant at $p<0.000$

Table shows comparison between baseline assessment scores and post scores on compassionate within both groups. First part of the table is showing the result of baseline intervention assessment scores and post assessment scores on compassionate within Loving Kindness Meditation +Treatment A usual group ($Z=2.8$, $P<.005$) and second part of the table is showing the same assessment scores within TAU group ($Z=2.9$, $P<.006$). It is evident from the table that both groups showed statistically significant improvement on follow up assessment as compared to their respective post scores. It is evident from table that both groups showed marked improvement on post as compared to baseline intervention on these dimensions of compassionate.

Discussion

Loving kindness mediation is mental exercise that individual is practices every day. its mediation exercise has been enhancing wellbeing, relationship, feeling of warmth, feel positive emotion, joy and hope. In the present study Difficulties in Emotion Regulation Scale table 4 shows that both groups showed statistically significant improvement on post assessment as compared to their respective baseline scores.

Experimental group of Difficulties in Emotion Regulation Scale significant in domain non acceptance score Mean rank (x-5.50 y-.00, z-3.00) significant at .005, Difficulties in Emotion Regulation Scale impulse mean rank (5.60 X.00, Y-3.69) significant at .004, Difficulties in Emotion Regulation Scale Awareness Mean Rank X-4.90, Y-2.90 Z-1.0 significant at .03, Difficulties in Emotion Regulation Scale ^[13] Clarities Mean rank X-4.50, Y-5.61, Z-2.36 significant at .01, the nonjudgmental acceptance of thought and emotion that most part of the emotion regulation mechanism in loving kindness meditation is foster positive emotions.^[19] Recent researchers revealed that loving kindness meditation Based psychotherapy feasible and affective difficulty emotional regulation among individual with schizophrenia and how to develop the positive emotion. Baseline-Post Comparisons with patients with schizophrenia and as usual group there was found significant different between both groups in present study. It is evident from the table that both groups showed statistically significant improvement on post assessment as compared to their respective baseline scores. Similar Study by ^[20] compared an 8-week Loving Kindness Meditation program ($n = 18$) with standard care ($n = 25$). Participants' reported pain, anger, and distress. Loving Kindness Meditation initially involved patients recalling a time when they felt a very positive feeling of connection with a loved one, letting go of the content of this memory while remaining focused on the actual feelings of love and kindness elicited in the present movement. table is showing the

result of post intervention assessment scores and baseline assessment scores on compassionate within Loving Kindness Meditation Plus Treatment Ausual group and second part of the table is showing the same assessment scores within Treatment Ausual group. Results showed statistically significant improvement on baseline assessment as compared to their respective post scores. ^[21] examined the effects of 6 weekly 1-hour Loving Kindness Meditation courses as an intervention for treating negative symptoms in schizophrenia. The majority of the study the effect of Loving Kindness Meditation interventions on daily positive emotions. Same studies by ^[22] reported that Loving Kindness Meditation showed a greater improvement than concentration. whether Loving Kindness Meditation interventions are better than active interventions, Loving Kindness meditation explicitly guides practitioners to seek a feeling of warmth or imagine the smile of the target. As well the philosophy that gaining happiness from good interpersonal relationships is also an important idea of Loving Kindness Meditation ^[23] and ^[24] Reported that Loving Kindness Meditations (mindfulness meditation) enhances the experience of positive emotion, and they argued that findings on emotional change due to meditation may come from the expectancy effect.

CONCLUSION:

Limitations

Following limitations were noted in the current study

- Since it was time bound study, hence, Study sample was represented by

only male sample in this study that makes generalization of this study difficult for the whole schizophrenia population including female patients.

- Small sample size included in this study.
- Patients in present study had a diagnosis paranoid and unspecified schizophrenia, hence it is difficult to say whether this intervention would work similarly in other mental illness

Future Suggestion:

- To increase the generalization, efficacy and effective of loving kindness mediation-based psychotherapy in schizophrenia; further studies are required with larger sample size, consisting of both male and female patients.
- Researches can also include community population those who are diagnosis schizophrenia on regular basis and not undergoing any treatment, can be studied
- Future researches can select participants by Random Sampling Methods and that would be allow us to generalize the results as uniformity and probability was taken into consideration

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