ORIGINAL RESEARCH PAPER

# Efficacy of meta-cognitive therapy on adolescents with social anxiety disorder

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## ABSTRACT

**Background:** According to National Comorbidity Survey Adolescent Supplement, about 9.1% of adolescents have social anxiety disorder and 1.3% have a severe impairment. Studies indicate that adolescents with social anxiety disorder have reduced quality of life and low self-esteem. Various psychotherapies attempt to cure social anxiety disorder. Meta-cognitive therapy is one such technique that proves to be effective in the treatment of social anxiety disorder. The present study aims to study the efficacy of meta-cognitive therapy on adolescents' social anxiety, quality of life and self-esteem. **Materials and Methods:** The current adopted pre-post intervention with a control group design. *Sample:* A total of 33 patients who met the inclusion and exclusion criteria, were taken for the study. *Tools Used:* Self-prepared socio-demographic and clinical data sheet, Social Anxiety Scale for Adolescents, WHO Quality of Life, Rosenberg Self-Esteem Scale and Meta-Cognitive Awareness Inventory. **Result:** The result of the present study indicates that meta-cognitive therapy is an effective non-pharmacological approach to treating social anxiety disorder when combined with pharmacological treatment. **Conclusion:** It could be concluded that meta-cognitive therapy is an effective approach in the treatment of social anxiety disorder.

**Keywords:** Meta-cognitive therapy; obsessive-compulsive disorder; adolescents

## INTRODUCTION

An adequate amount of anxiety is normal for healthy functioning. But when this anxiety starts hindering normal functioning then it takes the form of anxiety disorder. Social anxiety disorder is one such disorder where an individual has difficulty in performing in front of others, hence leading to impairment in daily functioning.[1] Following depression and substance abuse, it is considered the 3rd most common mental health disorder and its lifetime prevalence is about 12%.[2] Around 10% of prevalence is found among adolescents.[3,4,5] About 9.1% of adolescents have social anxiety disorder and 1.3% have a severe impairment.[3] Social anxiety disorder not only impairs daily functioning but also produces negative self-image, low confidence level, low self-esteem, poor quality of life etc.

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Over the years, various researches have been conducted to find a cure for such conditions as anxiety disorder have been found to give birth to various severe psychiatric illnesses such as schizophrenia. Meta-cognitive therapy (MCT) is one of the emerging techniques that work extensively in the treatment of anxiety disorders. MCT focuses on helping patients be aware of their thinking patterns, how this thought process takes place and how such thinking pattern leads to problematic conditions.

Various studies have been conducted to explore the effecti veness of MCT on anxiety disorders and other psychiatric illnesses. Not much literature is available for social anxiety disorder specifically. Wells and Matthews developed the meta-cognitive model explaining that all psychological disorders get

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intensified by the thinking pattern of an individual, i.e. cognitive attentional syndrome (CAS)[6] MCT was developed to reduce CAS and change the maladaptive thinking pattern. Ahmad Ashouri et al. compared the effectiveness of CBT and MCT on patients with major depressive disorder (MDD).[7] Their study showed that MCT is more effective than CBT in the improvement of dysfunctional thoughts. Similarly, in 2014 Norman et al. showed the effectiveness of MCT in the treatment of depression and different anxiety disorders.[8]

In a study conducted by Bahadori et al. in 2011, it was found that meta-cognitive therapy reduces symptoms of social phobia (now social anxiety disorder) and facilitates changing of object mode into meta-cognitive mode as well as improving coping mechanisms.[9] Taking this study as a base, the present study was undertaken. The current study aims to see the efficacy of meta-cognitive therapy (MCT) on adolescents' social anxiety, quality of life and self-esteem.

## MATERIALS AND METHODS

*Study Design:* The current adopted pre-post intervention with control group design

*Sample:* A total of 33 patients who met the inclusion as well as exclusion criteria were taken up for the study.

*Inclusion Criteria:* Patients in the age range 13-19 years, both girls and boys, literate and illiterate were included. Patients who were diagnosed with severe social anxiety, poor quality of life and low self-esteem.

*Exclusion Criteria:* Having co-morbidity with OCD or any severe medical or other psychotic features were excluded.

*Tools Used:*

*Socio-Demographic and Clinical Data Sheet:* It was self-prepared, especially for the present study which was used to collect clinical and personal information of all the patients. The data sheet included questions related to their age, marital status, occupation, residency, duration of illness, etc.

*Kuppuswamy's Socio-economic Status Scale:* This scale took into account the details regarding the occupation and education of the head of the family as well as the family income. Based on scores, an analysis was done. The score were 26-29 (upper), 16-25 (upper middle), 11-15 (lower middle), 5-10 (upper-lower) and <5 (lower).[10]

*Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A):* is a clinician-rated tool, used for the assessment of the severity of social phobia in adolescents as well as for measuring treatment outcomes.[11]

*WHO Quality of Life- BREF:* It consists of 26 items, where 24 items are divided into 4 domains: Physical Health, Psychological, Social Relationships and Environment; the remaining 2 items cover Overall Quality of Life and General Health features. The items are rated on 5 points Likert Scale: very poor, poor, neither poor nor good, good and very good. The higher the score, the higher the quality of life.[12]

*Rosenberg Self-Esteem Scale:* This scale consists of 10 items measuring both positive and negative feelings about global self-worth. All items are answered using a 4-point Likert scale format: strongly agree to strongly disagree. [13]

Meta-Cognitive Assessment Scale: This scale consists of 52 items, to be rated on a True and False basis. The scale assesses 2 broad domains - knowledge of cognition and regulation of cognition.[14]

*Procedure:* A total of 52 patients with diagnosed social anxiety referred from Psychiatric OPD, Jawaharlal Nehru Medical College and Hospital, Aligarh Muslim University were taken for psychosocial management. Those fulfilling the inclusion and exclusion criteria and who gave consent for the study were selected. All the patients were explained the purpose of the study. Socio-demographic and clinical details were taken-up after which the severity level of social anxiety was assessed using Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A).[11] The meta-Cognitive level of all the patients was assessed using Meta-Cognition Assessment Scale.[14] Of these patients, those who were having a severe form of social anxiety disorder were taken up for the study. A total of 33 patients fulfilled the inclusion and exclusion criteria and then were randomly divided into 2 groups (Group I; 17 and Group II; 16). Group I was given MCT

intervention along with medication while Group II was given only medication. Patients were asked to visit once a week for the session for 3 months. Patients were divided into groups of 5-6.

The MCT intervention package included thinking aloud, attention training technique, detached mindfulness, worry postponement and worry mismatched.

*Statistical Analysis:* Statistical Package for the Social Sciences (SPSS) version 26 was used. The percentage was used for the socio-demographic data sheet and a t-test was applied to see the effect of meta-cognitive therapy from pre-intervention to post-intervention and a comparison was made between both two groups. Column graphs were used to represent the effect of meta-cognitive therapy from pre-to-post-intervention.

## RESULTS

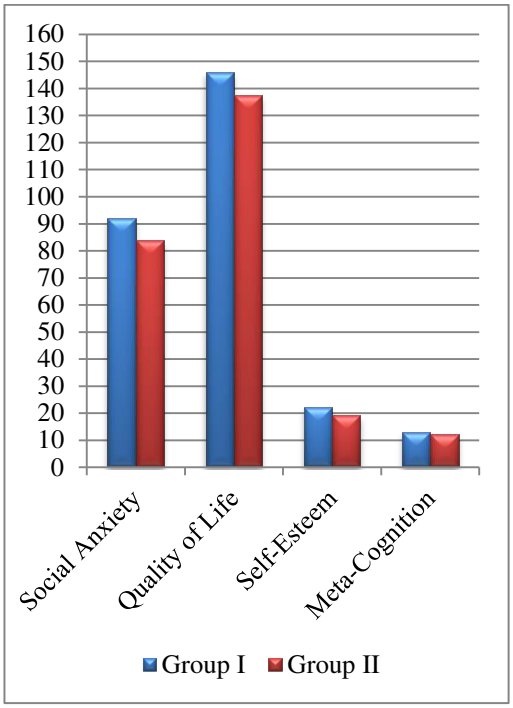
**Table 1 Socio-Demographic and Clinical Details**

| Variables | Variable Groups | Group I (n=17, %) | Group II n=16, %) |
|---|---|---|---|
| **Age** | 13-16 | 9 (53) | 8 (50) |
| | 16-19 | 8 (47) | 8 (50) |
| **Gender** | Girls | 10 (59) | 9 (56) |
| | Boys | 7 (41) | 7 (44) |
| **Education** | 10th | 9 (53) | 8 (50) |
| | 12th | 8 (47) | 8 (50) |
| **Religion** | Hindu | 9 (53) | 7 (44) |
| | Muslim | 8 (47) | 8 (50) |
| | Christian | 0 | 1 (6) |
| **Residence** | Rural | 8 (47) | 7 (44) |
| | Urban | 9 (53) | 9 (56) |
| ***Socio-Economic Status** | Upper | 0 | 0 |
| | Upper Middle | 4 (23) | 3 (19) |
| | Lower Middle | 8 (47) | 9 (56) |
| | Upper Lower | 5 (30) | 4 (25) |
| | Lower | 0 | 0 |
| **Duration of Illness** | > 6 Months | 10 (66) | 11 (73) |
| | < 1 Year | 7 (34) | 5 (27) |

*According to Kuppuswamy's Socio-Economic Status Scale

*Table 1* shows the socio-demographic details of all the participants. Most of the adolescents belonged to an urban area (*Group I, 53% and Group II, 56%*). The maximum was girls in the age range 13-16 years. Adolescents belonged from the lower middle socio-economic background (*Group I, 47% and Group II, 56%*). A maximum of the adolescents were seeking treatment for more than 6 months (*Group I, 66% and Group II, 73%*).

**Graph 1 Pre-Intervention Difference in Social Anxiety, Quality of Life and Self-Esteem between Group I and II**




*Graph 1* shows the difference between Group I and Group II before the intervention. No significant difference was found between the two groups before the intervention.

**Table 2 Pre-post Differences in Social Anxiety, Quality of Life and Self-Esteem (Group I)**

| Variables | Pre/ post | M | SD | t |
|---|---|---|---|---|
| **Social Anxiety** | Pre | 91.82 | 10.44 | 15.98* |
| | Post | 43.35 | 5.47 | |
| **Quality of Life** | Pre | 145.94 | 26.08 | 18.76* |
| | Post | 315.71 | 25.26 | |
| **Self-Esteem** | Pre | 22.06 | 1.6 | 24.82* |
| | Post | 51.88 | 4.16 | |
| **MCT** | Pre | 12.88 | 3.27 | 18.83* |
| | Post | 39.65 | 4.03 | |

* Significant at 0.001 level

*Table 2* shows the Mean and Standard Deviation of Group I, pre-post MCT intervention, along with medication. In pre-intervention assessment, the level of social anxiety was M=91.82, SD=10.44 while it

reduced to M=43.35, SD=5.47 post-intervention. A significant difference was found in the pre-post intervention. Similarly, a significant difference among the scores of quality of life was found which increased from M=145.94, SD=26.08 to M=315.71, SD=25.26. The statistically significant result indicates the effect of MCT. A similar effect of MCT was found on the level of self-esteem, initially, it was M=23.24, SD=2.65 and after the intervention, it was recorded as M=51.88, SD=4.16. The level of meta-cognition also changed post the intervention of MCT, M=12.88 to M=39.65, which was found statistically significant.

**Graph 2 Post-Intervention Difference in Social Anxiety, Quality of Life and Self-Esteem between Group I and II**

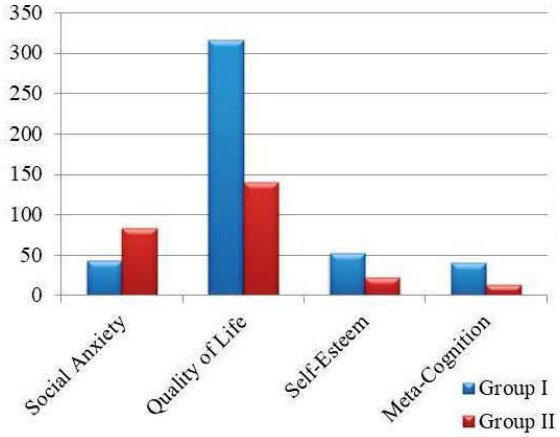



**Table 3 Pre-post Differences in Social Anxiety, Quality of Life and Self-Esteem (Group II)**

| Variables | Pre/ post | M | SD | t | p-value |
|---|---|---|---|---|---|
| Social Anxiety | Pre | 83.81 | 7.73 | 0.3 | 0.5 |
| | Post | 84.31 | 6.43 | | |
| Quality of Life | Pre | 137.25 | 10.86 | 3.05 | 0.008** |
| | Post | 140.38 | 10.59 | | |
| Self-Esteem | Pre | 19.13 | 4.57 | 2.56 | 0.005** |
| | Post | 21.88 | 1.85 | | |
| MCT | Pre | 12.13 | 2.27 | 2.51 | 0.02* |
| | Post | 13.13 | 2.41 | | |

*Significant at 0.05 level ** at 0.001 level

*Table 3* shows the Mean and Standard Deviation of Group II, pre-post medication minus MCT intervention. In pre-intervention assessment, the level of social anxiety was M=83.81, SD=7.73 while it reduced to M=83.31, SD=6.43 post-medication. Similarly, no difference was found in the pre-post medication on the scores of quality of life M=137.25, SD=10.86 to M=140.38, SD=10.59. No significant effect of medication was found on the level of self-esteem, initially, it was M=13.63, SD=3.2 and after the intervention, it was recorded as M=15.69, SD=3.82. The level of meta-cognition also didn't change post-medication, from M=12.13 to M=13.13. The reported differences were not found statistically significant.

**Table 4 shows the Difference between Group I and Group II Post-Intervention**

| Variables | Group | M | SD | t | Cohen's d |
|---|---|---|---|---|---|
| Social Anxiety | I | 43.35 | 7.73 | 20.62* | 5.15 |
| | II | 84.31 | 6.43 | | |
| Quality of Life | I | 315.71 | 25.26 | 21.84* | 5.44 |
| | II | 140.38 | 10.59 | | |
| Self Esteem | I | 51.88 | 4.16 | 23.75* | 5.93 |
| | II | 21.88 | 1.85 | | |
| MCT | I | 39.65 | 4.03 | 20.25* | 5.06 |
| | II | 13.13 | 2.41 | | |

** Significant at 0.001 level

*Table 4* shows the difference between Group I and Group II, post-intervention. It could be inferred from the table that a significant difference was found between the two groups, indicating that MCT affects the improvement of social anxiety, quality of life, self-esteem and level of MCT. The significant influence of MCT can also be interpreted from *Cohen's d*, which is above 5 for all the domains.

## DISCUSSION

Social anxiety among adolescents is of utmost concern as it not only hinders their day-to-day living but also has an impact on their future performances. The present study is designed in an attempt to see the efficacy of meta-cognitive therapy (MCT) on social anxiety among adolescents. The results of the present study showed a significant reduction in negative symptoms associated with social anxiety, i.e. reduced self-esteem and poor quality of life changed into positive ones (increased self-esteem and good quality of life).

The self-esteem of adolescents who suffer from social anxiety disorder was found low in the present study. The reason could be attributed to their fear of going in public or embarrassing themselves in front of others. With MCT intervention, it was found that this low level of self-esteem could be converted into a high level of self-esteem (*Table 2*), Unlike CBT where the focus is on the

discussion of thoughts and examining them with regard to their reality, MCT focus on the management of these thoughts as MCT not only focuses on the improvement of symptoms but also attempts at changing negative beliefs about oneself. The effect of MCT on self-esteem is in line with a previous study conducted by Paul H. Lysaker et al. in 2011 saw the effect of MCT on self-esteem as well as social anxiety of people with schizophrenia.[15]

Similar is the case with adolescents having poor quality of life. Terri L. Barrera and Peter J. Norton, 2009 found in their study that quality of life is influenced by their level of anxiety. It is important to improve the quality of life for better living.[16] The present study also found similar results, i.e. reduced and poor quality of life among adolescents with social anxiety. With proper MCT intervention, their quality of life improved significantly as shown in *Table 2*.

In the present study, it was found that level of social anxiety decreased due to the impact of MCT (*Table 2*). The negative meta-cognitive beliefs are associated with a cognitive attentional syndrome which leads to negative and threatening interpretations of events. The present study supports the previously done study by Nordahl, et al. who stated that changes in these negative interpretations of events can bring about changes in the level of social anxiety.[17] In this study, it was found that the effect of MCT is a good fit for the overall improvement of social anxiety and its related psychological characteristics. This could be seen in *Table 4*, where the difference between Group I and Group II was found to be significant with Cohen's d more than 5, hence establishing that MCT is an effective therapeutic technique for improving social anxiety and related concerns.

However, the stigma attached to psychosocial intervention persists especially in a society like ours. Different researchers and professionals have stood up to treat psychological as well as medical conditions with medication along with the use of psychosocial intervention, we still have a long way to cover this road were making people realise the combination of pharmacotherapy with psychotherapy is important to overcome problems.

### Limitations

The result of the study could not be generalized as the sample size was small. Other variables could be taken up such as emotional intelligence, social intelligence, etc.

## CONCLUSION

Although not enough literature is available that explores the effectiveness of MCT on social anxiety, the present study is still in line with previous research conducted and paves the way for future research. The result of the present study shows the effectiveness of meta-cognitive therapy on adolescents with social anxiety and improving their quality of life as well as increasing their self-esteem.

**Conflict of Interest:** None

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