

# Impact of Mindfulness Based Stress Reduction Interventional Program on Body Image Dissatisfaction among Young Adults

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## ABSTRACT

The current study was designed to assess the role of Mindfulness Based Stress Reduction Interventional Program (MBSR) in reducing body image dissatisfaction among young adults. In this experimental study the sample comprised of 175 participants (female = 100, male = 75). Age range of participants was between 19-25 years. Data was collected from different colleges and universities of Rawalpindi and Islamabad. Participants were assessed on different measures i.e. Body Shape Questionnaire-16b (BSQ-16b), Mindfulness Attention Awareness Scale (MAAS). Psychometric indices of the measures provided satisfactory evidence for the use in research. Results also indicated that significant difference exists between the means of experimental ( $M = 59.62$ ,  $SD = 13.65$ ) and control ( $M = 38.16$ ,  $SD = 5.94$ ) groups on body image dissatisfaction  $t(46) = 7.06$ ,  $p < .001$  among young adults after applying MBSR intervention. This indicates the efficacy of using MBSR intervention in reducing level of body dissatisfaction among young adults. Present research demonstrated the effectiveness of Mindfulness Based Stress Reduction Interventional Program (MBSR) in improving level of body dissatisfaction among young adults. Training sessions should be arranged in universities about the use of Mindfulness Based Stress Reduction interventional program (MBSR). This will help students in solving their socio-cultural, psychological and other related issues in the best possible way. Mental health professionals should also seek MBSR training so that they can help the individuals suffering from different psychological and social issues with advanced ways of treatment.

## Keywords

Body image, Body image Dissatisfaction, Mindfulness Based Stress Reduction Program

## Introduction

People are interested in their bodies from the day they are born. They use different senses to discover the life around them (Fox, 1997). There was a time when studies about body image majorly focused the health issues. In 1920s Paul Schilder founded that body has an impact on the wellbeing of the individual. So many research studies were done to understand the term body image (Grogan, 1999). Relationship between distortion of body image and mindfulness has become the focus of attention with the passage of time because understanding and awareness of body are important to human growth (Cash & Pruzinsky, 2002). Mindfulness plays a positive and vital role in facilitating self-awareness. It was stated that practice of mindfulness might provide

evidence of being effectual treatment for those experiencing high body dissatisfaction and have pessimistic view of their self. As it is stated that body displeasure usually develops depressing thoughts about the physical appearance like shape and size (Lavender et al., 2012). And these types of negative thoughts are linked with self-harming behaviors that cause body image dissatisfaction. Combination of these negative thoughts and self-defeating behaviors could be explained as "mindlessness" (Lavender et al., 2012). Pessimistic view and behaviors have a relationship with body image which in return causes more dissatisfaction (Fink et al., 2009). On the other hand, mindfulness causes more flexibility in thoughts, behaviors and emotions and helps in lowering level of body disturbance. The capability of becoming mindful is achieved

by accepting the internal experiences non-judgmentally and to become conscious and attentive. It is also important to live in the current instant as well as accept the incident whether pleasant or unpleasant (Brown & Ryan, 2003). For that reason, a person who is capable of developing mindfulness is expected not to become dissatisfied with their physical body appearance. So, mindfulness interventions work effectively for body related disturbance. The current study was designed to assess the role of Mindfulness Based Stress Reduction Interventional Program (MBSR) in reducing body image dissatisfaction among young adults.

### Literature Review

Body image was first defined by Schilder (1935) as perception of a person's physical outlook that he/she has for himself/herself. Moreover, evaluation of personal features (height, body mass index, body movements etc.) is projected onto self as it is done by others that influence the behavior of an individual (Gleeson, 2006). This subjective analysis is linked to how a person views life and moves in a society (Schilder, 1950). Each person assesses on two different levels; one represents the real status while other suggests the ideal state of the body (Stevens, 2005). Many factors are involved in shaping the body image of a person which includes perceived appearance, thoughts associated with their physical facial appearance and also the relationship with other people around you (Grogan, 1999).

#### Aspects of body image

As explained above there are different components of physical appearance. Similarly, two different aspects are also mentioned. (Elkind, 1978).

#### Negative body image

It is an imprecise insight about body figure, distress, embarrassment and anxiety related to body. Negative body image is unclear observation about shape and body structure different from what actually exists. You are inclined that everyone is beautiful and have perfect figure as compared to you. Mostly adolescents are more

disturbed and anxious (Cash, Winstead & Janda, 1986).

#### Positive body image

A true insight of your look, seeing one's real self and also liking it. Optimistic view about oneself is the understandable vision related to the shape of a person. A person should regard their real self as this gives security and strength to move in the society with confidence. The character and worth of person cannot be defined by the outlook of a person (Franzoi & Herzog, 1987).

Body image can be either positive or negative or somewhere in between. Body image can change with time but remains moderately stable in teenage and when a person is grown up (Tiggemann, 2004; Wertheim & Paxton, 2012). Importance of body image can be demonstrated differently, starting with little importance for other physical features and going towards morbid disorders related to body e.g. eating pathology and muscle preoccupation (Pope et al., 2005). A person may have interest about their entire physical appearance or about some specific parts of the body (Wertheim & Paxton, 2012).

#### Body dissatisfaction (BD)

In accordance with the definition of body disturbance it was explained as the discrepancy between actual and real self. As the society and media creates a culture of thinness, individuals become vulnerable to get influenced by thin-ideals (females) and muscularity (males). A difference exists between the internalization and externalization of males and females. Females have a tendency to internalize thinness because they have a fear of becoming overweight. In contrast, males tend to externalize thinness and show dislike for others being overweight rather than focusing on their own bodies (Crandall & Beirenat, 1994).

Body image dissatisfaction consists of two different aspects: distortion in perception and disturbance related to body. Disturbance related to the perception of one's appearance includes the inability to evaluate the size and shape of body. Distortion of body involves emotional and

attitudinal perceptions of an individual's outlook. These factors of body image dissatisfaction could operate separately or collectively also (Garner & Garfinkel, 1981). At this time, while there is no commonly accepted definition of body image (Hsu & Sobkiewicz, 1991) most researchers agree with the division between the perceptual dimension and the cognitive-emotional dimension. Several studies have practically investigated the role that social pressure has on body image dissatisfaction (Moore, Silberstein & Rodin, 1986; Williamson, 1990).

### **Mindfulness**

In this modern era of development, mindfulness awareness and use of its techniques has become popular. Mostly these techniques are used in research studies and clinical practice. (Sobczak & West, 2011). Mindfulness originated from the word *sati* which means paying attention, memorizing and being aware of the surroundings (Kabat-Zinn, 1994). Buddhist tradition gives huge importance to the concept of mindfulness and explains it as the thoughtful way of giving attention to the mental schemas, audio-visual inputs, beliefs and approach of a person (Walach et al., 2006). Mindfulness goes back to the era of eastern meditative civilization (Shapiro et al., 2006). However, western world has considered it as the important conception and are working on it (Christopher et al., 2009).

John Kabat-Zinn is known as the pioneer of mindfulness in Western world and states that mindfulness is the consciousness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the describing experience moment to moment (Kabat-Zinn, 1994). The capability to tend attention with strength of mind towards the present experience and also to examine the surrounding experiences by interest, recognition and honesty (Alberts & Raes, 2012; Baer, 2003). It's contradictory to governing experiences and by some means to avoid obnoxious acquaintance which also includes pessimistic thoughts, distress and powerful emotions (Bishop et al., 2004; Chadwick, et al., 2005).

This practice of keeping yourself aware of the current experience makes it dissimilar to the everyday activities of an individual because we run on automatic pilot and our mind keeps on wandering and pacifies undesirable experiences (Worth & Gilbert 2010). On this construct is based the MBSR intervention which is the combination of yoga, resolving stress neurologically, practicing and responsiveness about body. Interest in MBSR interventions has increased from last three decades.

From the perspective of mindfulness, stress is experienced by the individual because of personal response of individual than the occurrence of experience (Abba, et al., 2008). Therefore, mindfulness does not aims at reducing or diminishing thoughts rather it focuses on modifying the association a person has with complicated thoughts and pain (Abba et al., 2008). It was found that by enhancing the capability of being aware about the present moment the person becomes attentive and aware of his surrounding experiences which includes feelings, thoughts, imagery and non-judgmental point of view (Baer, 2003; Bishop et al., 2004; Chadwick et al., 2005). Mindfulness has some advantages which are also empirically supported by different psychologists. These are as follows (Davis & Hayes, 2011)

### **Psychosomatic Benefits**

Mindfulness psychologically benefits an individual in several ways. Firstly it increases the awareness of person's mind. It also helps in reducing anxiety, stress and depressing emotions. It helps in increasing mental focus and flexibility. Mindfulness helps in controlling the subjective thinking which causes anxiety and depression. It enhances the compassion and empathy towards the emotions of other individuals. Emotional reactivity and distraction of an individual also decreases with the practice of mindfulness.

### **Bodily Benefits**

Physiological or bodily benefits of mindfulness are also evident as it helps in enhancing immune system functioning. In addition mindfulness is helpful in lowering blood pressure and levels of cortisol (stress hormone). Practice of mindfulness

also increases the density of brain and neural integration of areas responsible for positive emotions and self-regulation. Being mindful creates great resistance towards stress related illnesses e.g. heart problems.

### **Devotional Benefits**

The spiritual or devotional advantages of mindfulness are also worth explaining as it enhances self-insight and acceptance of the individual. It is also helpful in increasing mortality and courage to change. Self-discipline of a person also increases and that person becomes empathetic and compassionate. Mindfulness also spiritually benefits the individual by making the person able to control his automatic behaviors.

### **Mindfulness Based Stress Reduction Program (MBSR)**

MBSR is the 8-week program, developed by Jon Kabat-Zinn at the University of Massachusetts Medical School. And it is the most well-known mindfulness intervention in the scientific literature (Kabat-Zinn 1982). MBSR includes weekly 2-2.5 hour group-based classes with a trained teacher, daily audio-based home practice (45 minutes per day), and a mindfulness retreat (occurring during week six of the eight-week program) (Kabat-Zinn 1990). The aim of MBSR program is to learn that how a person can mindfully attend to body sensations through the use of body scans, yoga, gentle stretching and other exercises, along with planning and practicing that how to apply mindful awareness to daily life experiences, including dealing with stress in daily life. When emotions, sensations, or cognitions arise, they are to be observed without any judgment. Participants are instructed to become aware of their thoughts and feelings, but do not throw your-self into in the content or rather try to avoid them or change them (Kabat-Zinn, 1982). Also the judgmental feelings, such as “this is a foolish waste of time,” are to be observed non-judgmentally and should be considered as “thoughts”. Hence, an important instructional element of mindfulness is to understand that most sensations, thoughts, and emotions, as well as painful ones, are short-lived and brief (Linehan, 1993).

Interventional program of MBSR was primarily used to treat unremitting pain patients (Kabat-Zinn 1982). However, now it has been used with other patients having different problems also (Ludwig & Kabat-Zinn 2008). This program is also used with individuals having body image issues.

### **Methods**

In the current research the sample size was 175 young adults. Among them 100 were females and 75 were males. Age range was between 19-25 years. Mean age of the participants was found to be (22.3; SD= 1.25). Education level among students was divided into three categories (Bachelors, Masters, and M.Phil). Participants belonged to both nuclear and joint family system. Family monthly income was also divided into three categories (10-40,000, 41-70,000 and 70,000 & above).

### **Research design**

In the current study Randomized Control Trial was used. Those participants who scored high on body image dissatisfaction were selected for RCT trial and were randomly divided into control and experimental group. Research was carried out by comparing control and experimental group on body image dissatisfaction.

### **Procedure**

An official permission was taken from Fatima Jinnah Women University, from the different colleges and universities of both public and private sector to collect data from Rawalpindi and Islamabad. Informed consent was obtained from participants. All the individuals who fulfil the required criteria and voluntarily agreed to participate were included in this study. Data was collected from different colleges and universities, after pre-assessment participants were screened for the purpose of intervention. Sample consisted of 175 participants including 100 females and 75 males. After showing the institutional support letter respective universities allowed us to collect the data. Data was collected from the students of age ranged between 19 years to 25 years.



## Study Measures

Following protocols were utilized in the present research investigations.

### **Body shape questionnaire (BSQ-16b) (Cooper, Taylor, Cooper and Fairburn, 1987)**

BSQ was used to measure body image. It is a Self-applied questionnaire with 16 items and is a Likert type scale (1= Never, 6= always). It is utilized to assess dread of putting on weight, sentiments of low confidence in view of one's appearance, the craving to get thinner and body disappointment. The first form has 34 things however it additionally has abbreviated structures which are BSQ-16 and BSQ-8. In this investigation BSQ-16 was utilized. The scores are grouped into 4 classifications: no worry with shape < 38, gentle worry with shape 38 to 51, moderate worry with shape 52 to 66, marked worry with shape more than 66.

### **Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003)**

The MAAS is a likert type scale (1= Almost always, 6= Almost never) designed to assess mindfulness which is open or receptive awareness of and attention to what is taking place in the present. The scale shows strong psychometric properties and has been validated. It consists of 15-items e.g. "I could be experiencing some emotion and not be conscious of it until sometime later". For scoring, it was mentioned in the description of scale to simply compute the mean of 15 items. Which indicates that higher score means higher dispositional mindfulness.

## Intervention

### **MBSR Program (Kabat-Zinn 1982)**

The 8-week Mindfulness-Based Stress Reduction (MBSR) program, developed by Jon Kabat-Zinn at the University of Massachusetts Medical School, is perhaps the most well-known mindfulness intervention in the scientific literature (Kabat-Zinn 1982). The 8-week Mindfulness-Based Stress Reduction (MBSR) program, created by Jon Kabat-Zinn at the University of Massachusetts Medical School, is maybe the most

notable care mediation in the logical writing (Kabat-Zinn 1982). MBSR comprises of week after week 2-2.5 hour bunch based classes with a prepared educator, day by day sound guided home practice (45 minutes out of each day), and a day-long care retreat (happening during week six of the eight-week program) (Kabat-Zinn 1990). Much of the MBSR program emphases on learning how to mindfully attend to body sensations through the use of body scans, gentle stretching and yoga mindfulness exercises, along with discussions and practices geared toward applying mindful awareness to daily life experiences, including how one deals with stress. The MBSR program was initially used to treat chronic pain patients (Kabat-Zinn 1982). However it has since been applied to numerous other patient and network grown-up populaces. It is a multi-week program however can likewise be abbreviated to about a month (Ludwig & Kabat-Zinn 2008).

## Ethical Consideration

First of all project was submitted for approval to the FJWU Ethical Research Committee. After that formal permission was taken from the university to collect the data. Permission was also taken from the other colleges and universities for the collection of data. Another important thing was to explain the basis of the study to the members and signed consent was also taken from the participants. It was mentioned that confidentiality and anonymity of the participants was maintained. Participants were knowledgeable that they are free to leave the research at any point in time if they are not comfortable.

## Data Analysis

Statistical Package for Social Sciences (SPSS, version 20) was utilized to carry out data analysis. Data screening was carried out to ensure the data doesn't contain any errors, extreme outliers and missing values. Paired sample t-test was used to examine the changes in body image dissatisfaction at time 1(pre-assessment) and time 2 (post-assessment). Independent sample t-test was also used to evaluate the difference between the means

of experimental and control groups. Independent sample t-test was used to examine the dissimilarity between the means of experimental (those who received treatment) and control groups (those who didn't received any treatment). It was used to evaluate whether the levels of body image dissatisfaction changed or not after giving the MBSR intervention.

### Results

The research examined the impact of Mindfulness Based Stress Reduction Interventional program (MBSR) on individuals showing higher levels of body image dissatisfaction. For this purpose, pre and post-test assessment was done with the participants. The sample consisted of 175 young adults with age range of 19-25 years.

**Table 1**

*Change in Body image dissatisfaction at Time 1 and Time 2 within experimental group*

Variables	Assessment time	Total participants (n)	Mean (M)	Standard deviation (SD)	T	Sig (p)	Cohen's d
Body image	Time 1	24	61.50	11.74			
	Time 2	24	36.88	11.28	20.33	<0.001	2.13

\*\*\* $P < .001$

**Table 2** shows the results of Independent sample t-test applied to assess the difference between experimental and control group at time 1(before intervention). The result of the independent sample t-test uncovered that there was no significant difference between the scores of body image dissatisfaction in experimental group ( $M = 59.83$ ,  $SD = 12.38$ ) and control group ( $M = 61.50$ ,  $SD = 11.74$ );  $t(46) = 0.47$ ,  $p = .635$  and the value of Cohen's  $d = 0.13$  indicates very little effect size.

**Table 1** shows findings from Paired sample t-test which was conducted to compare the change in body image dissatisfaction within experimental group at time 1 (pre-intervention) and time 2(post-intervention) among young adults. It was revealed that significant mean difference was found before using the intervention ( $M = 61.50$ ,  $SD = 11.74$ ) and after using the intervention with participants ( $M = 36.88$ ,  $SD = 11.28$ );  $t(23) = 20.33$ ,  $p < .001$  with ( $d = 2.13$ ) within experimental group. This means that the intervention showed its impact and the level of body image dissatisfaction of participants was reduced as compared to the baseline when the dissatisfaction was higher.

Independent sample t-test which evaluates the differentiation among the means of two dissimilar groups and it tells us whether the means of two independent groups are considerably different from each other or not.

Table 2 Independent sample t-test analysis for difference of mean in body image dissatisfaction at time 1 (n=48)

Variable	Experimental Group (n=24)		Control Group (n=24)		t(46)	Sig(p)	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Body image	61.50	11.74	59.83	12.38	0.47	.635	-		
	5.34	8.68		0.13					

Note: M= mean; SD=standard deviation; n= sample size; p= significance level; LL= lower limit; UL= upper limit

**Table 3** indicates that there was significant difference between the means of experimental (M= 59.62, SD= 13.65) and control (M = 38.16,

SD= 5.94) group on body image dissatisfaction t (46) = 7.06, p<.001. It also represented a large effect size (d= 2.03).

Table 3: Independent sample t-test analysis for difference of mean in body image dissatisfaction at time 2 (n=48)

Variable	Experimental Group (n=24)		Control Group (n=24)		t(46)	Sig(p)	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
Body image	38.16	5.94	59.62	13.65	7.06	.001	15.34		
	27.57	2.03							

Note: M= mean; SD=standard deviation; n= sample size; p= significance level; LL= lower limit; UL= upper limit\*\*\* p<.001

## Discussions

The current study explored the impact of Mindfulness Based Stress Reduction Interventional program (MBSR) on individuals showing higher levels of body image dissatisfaction. Results were supported by analyzing the two groups i.e. control group (no intervention applied) and experimental group (intervention applied) after going through the 4 weeks of interventional process.

Individuals identified with higher level of body image dissatisfaction were recruited for being part of the mindfulness based stress reduction interventional program (MBSR). Total 24 participants took part in the 4-weeks intervention program of MBSR. The purpose was to reduce the stress which individuals experience due to body image dissatisfaction. When their stress reduces the dissatisfaction level also decreases. After going through the intervention phase they become more mindful and were able to solve their problems efficiently. The MBSR intervention appeared to be really effective for the individuals having body distortion as depicted by t-test also. The aim of the examination was to investigate the importance of MBSR intervention on body image dissatisfaction among young adults. It was hypothesized that MBSR intervention will have significant impact on individuals having higher levels of body image dissatisfaction.

To identify the difference between the means of experimental (those who received treatment) and control group (those who didn't received any treatment) independent sample t- test was utilized. It was used to evaluate the difference between both groups for body dissatisfaction. Analysis indicated significant difference between the means of experimental ( $M = 59.62$ ,  $SD = 13.65$ ) and control ( $M = 38.16$ ,  $SD = 5.94$ ) groups on body image dissatisfaction  $t(46) = 7.06$ ,  $p < .001$  at time 2(after-intervention) as compared to time 1(before-intervention). It also represented a large effect size ( $d = 2.03$ ). So, we can say that this difference in both groups was due to the impact of intervention we used in the study.

Mindfulness based interventions are being used for treating different issues e.g. pain, depression, stress etc. Although the growing interest in the use of mindfulness based stress reduction intervention for body image dissatisfaction is evident in the current literature but the studies are small in number. A recent research on MBSR and its impact on body image indicated that mindfulness based stress reduction intervention influenced the body image of adolescents and there was significant difference among the experimental and control group in body image concerns. So, it was concluded that MBSR can be effective in improving body image concerns (Parya & Zohreh, 2019). A study by McMahan (2001) also explained the effectiveness of mindfulness practice for body image dissatisfaction and reported that the intervention was really effective in improving body image of participants.

Similarly, another study found that mindfulness intervention forms a successful framework for body dissatisfaction. They also reported that mindfulness programs are cost-effective and are not restricted to a particular gender (Cavanagh, 2014). Furthermore, mindfulness builds a positive relationship to the self which promotes body appreciation and helps in overcoming body dissatisfaction (Kabat-Zinn, 2005).

A study examined the efficacy of MBSR intervention for body dissatisfaction and binge eating disorder. Present study results revealed that they used pre-post design and significant improvements were shown in several measures of psychological functioning. And significant decrease was shown in body dissatisfaction and eating disorders (Kristeller & Hallet, 1999). It was also found that observing someone's internal experience non-judgmentally can promote self-acceptance and reduces the discrepancy between ideal and real self. This ultimately helps in reducing the body image dissatisfaction using mindfulness practice (Kabat-Zinn, 2005). Finally, It was also reported that mindfulness practice has been associated with improved health outcomes. Improvements were shown in pain, body image, anxiety, depression and other medical symptoms (Kabat- Zinn, 2005). It can inferred based upon



study findings that mindfulness enormously helps in improving body image of individuals. It enables us to appreciate the here and now and makes us realize that chasing thinness and ideals is of no value. It also enable us to come out of the societal pressures which we are facing. It helps us to value each minute of our life and to observe our bodies without making judgments. Finally, through mindfulness we can change our negative emotions into more productive and positive emotions, which would be a significant source of strength.

### Limitations and Future Studies

In the current study, the techniques of MBSR were applied for 4 weeks and due to time constraints techniques were not repeated for another 4 weeks. Therefore, it is recommended that future studies should also repeat the intervention for whole 4 weeks. The present study was the use of self-report measures for data collection. Participants might show biased responses which affects the validity of findings. The current research includes limited number of male participants which should not be given more representation in future study samples. Future research should also use a broader sample from different areas which show diversity to get the deeper understanding of the impact of MBSR intervention. It is also recommended that MBSR intervention should also be used for other psychosocial factors such as to enhance the well-being, reduce psychological distress and improve quality of life.

### Contribution of current research

Present study has added to the existing literature regarding MBSR intervention and its impact on body image. Hence this investigation adds to the writing and gives the standard for future researchers to utilize MBSR intervention program with various populations. As it helps in treating pain, depression, stress, anxiety and body related issues etc.

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### Conclusion

The study emphasized the efficacy of MBSR intervention in reducing the level of body dissatisfaction at time 1 (pre-intervention) and time 2 (post-intervention) between experimental and control group. MBSR intervention subsequently enhanced the level of body image satisfaction among young adults.

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