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Research Paper

Influence of Locus of Control on Proneness to Developing an Eating Disorder

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ABSTRACT

The researches on Locus of control and depression has evoked many considerable research discussions. The association between depression and eating disorders has many a times been a topic of relevant research. This study examines the relationship between Locus of Control and proneness to developing an eating disorder. The study was conducted on 165 participants with the age range of 14-70. The objective of the study was to understand the influence a person's locus of control has on their proneness to developing an eating disorder. The results show a significant positive correlation between external locus of control and proneness to developing an eating disorder.

Keywords: *Eating disorders, Locus of Control, Depression, Anxiety*

Eating disorder is an illness that is characterized by irregular eating habits and disproportionate emphasis placed on thinness as a vital source, sometimes the only source, of self-esteem; with weight becoming the overriding and consuming daylong preoccupation of thoughts, mood, and behaviours. Most of the patients suffering from eating disorders will lose weight by drastically reducing their total food intake and engage themselves in binge eating followed by purging behaviours. There are three types of eating disorders, namely Anorexia nervosa, Bulimia nervosa and Binge eating. Locus of control is a psychological process that refers to the degree to which how strongly people believe that they, as opposed to the external forces, have control over the situations and experiences that affect their lives or the outcome of events in their lives.

Locus of control is one of the four dimensions of core self-evaluations along with self-esteem, self-efficacy and neuroticism. People that have the combination of the two types of locus of control are often referred to as Bi-locals. People that have Bi-local characteristics are known to handle stress and cope with their diseases more efficiently by having the mixture of internal and external locus of control.

LITERATURE REVIEW

A person's locus is conceptualized as internal or external based on the belief whether they can control their own life and that events in their life are derived primarily from their own

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actions or is it determined by outside factors which the person cannot influence, or that fate controls their life respectively. People with external locus of control tend to not take ownership of the events happening in their life, so on the flip side, if something good happens or the person is successful then they tend to not take ownership of that either. Due to their tendency of locating control outside themselves, externals tend to feel they have less control over their fate and tend to be more stressed and prone to clinical depression. In general it is considered to be more psychologically healthy to possess a certain level of internal locus of control than to be on the other side of the continuum.

Individual differences for a long time have been a very important and popular topic in personality research and since Rotter published an article in Psychological Monographs in 1966 summarizing over ten years of research on Locus of control, wherein: most of it was previously unpublished earlier, drastically changed and bought a lot of focus on further scope of researches on the given dimensions. Briefly Internal-External (I-E) refers to the degree of control one thinks he has on his own life versus the ones that believe that they have no control over the situations and experiences or the outcome of events that affect their lives and believe it to be an effect of luck, fate or power beyond one's control. Although an individual's locus of control can be measured through many scales but the most popular one is the Rotters' Locus Of Control Questionnaire. The relationship between locus of control and depression has evoked considerable research and discussions. Rotter (1966) itself mentioned in his early papers that there is a relation between positive adjustment and internality but the extremes of the continuum either external or external may prove to lead to maladjustment behaviours. Other researchers like Lefcourt and (1976) and Strickland have argued that there may exist a possible relationship between externality and depression as well.

Seligman (1975) has mentioned that hopeless and helpless attitudes are being expressed by the depressed patients, which are mostly related to externality in attitudes. The learned helplessness model of Seligman's have profoundly mentioned that in depressed patients the outcomes are generally viewed as independent of the response to the situation by the patient. A number of researchers have found a significant correlation between the external dimension of the locus of control and depression. Thus, the IE dimension must have much to offer to the study of depression.

Eating is a necessary activity for growth, development and sustaining life and a balanced eating sustains the fitness of our body. Stein RI, Kenardy J, Wiseman CV, Dounchis JZ, Arnow BA, Wilfley DE (2007) gave view that anxiety, depression and stress are leading factors to developing an eating disorder. Negative emotions are shown to be higher prior binge eating in bulimic patients making them blame emotions rather than hunger for improper eating, and as loss of appetite is a serious symptom of depression; therefore, such thoughts and loss of appetite prompts to improper food intake leading to extreme weight loss. Wolff GE, Crosby RD, Roberts JA, Wittrock DA. (2000) talks about how most of the individuals that have an abnormal eating pattern are suffering from depression. Their study reported that upto 35-85% of the anorexia patients and 15-36% of Bulimia patients suffer from depression. Park JE, Kim SJ, Choue RW. (2009) says that most of the patients suffering from anorexia and bulimia are usually always depressed. College students are in the transitional stage and mostly bad eating habits and lifestyle are formed during this stage. A study was conducted with male and female students showed that 0.8% have bulimia and 0.7% have anorexia. Lifetime comorbidity exists between Mood disorders and Eating Disorders and this has been confirmed in the study of N. T. Godart, F. Perdereau, Z. Rein et

al. (2007) that reports that in patients suffering from Anorexia Nervosa there is a prevalence of mood disorders that varies between 64.1% and 96% whereas in Bulimia Nervosa the prevalence of mood disorder is 50% to 90%.

Anxious preoccupied behaviours, mood intolerance and many of the dysthymic traits have been seen in the patients that have reported eating disorders. Bruch H. Harvard University Press; (1978) has defined Anorexia Nervosa as "struggle for control, for a sense of identity competence, and effectiveness", which shows that there is a lack of self-control which proves to be a central role in the etiology and maintenance of eating disorders. According to her the symptoms of Anorexia Nervosa can be understood as a desperate attempt of compensation for a sense of lack of control and gradual ineffectiveness a person experiences in their life.

Slade P (1982) has spoken about controlling over eating as a primary focus in patients suffering from Eating Disorders because they perceive it as "successful behaviour in the context of perceived failure in all other areas of functioning" Slade also hypothesized that in patients suffering from Anorexia Nervosa the control in weight loss enables them to avoid negative thoughts associated with general life dissatisfaction. Several other authors have proposed models that individuals use the tactic of controlling their weight and shape as an index of overall self-control and self-worth and a feeling of controlling and the environment including their close family and friends, which gets reinforced through the individual's sense of loss of control.

Fairburn CG, Shafran R, Cooper Z Behav Res Ther. (1999). Studies that measure locus of control have shown that women that suffer from Eating Disorders show greater externality {Fouts G, Vaughan KJ Adolesc. 2002} and greater internality {Donovan CL, Penny R Eat Behav. 2014}. Acording to Espíndola CR, Blay SL Psychopathology. (2009) perceived lack of control is an important factor in the development of an Eating Disorder.

Purpose of study

The purpose of the study is to gauge the extent of influence a person's locus of control has on how prone they are to developing an eating disorder. Eating Disorders have highest comorbidity with depression, generalized anxiety disorders and other mood disorders. A person's locus of control, often to a large extent talks about their thinking pattern and it defines how one approaches almost everything in life; this makes the concept of locus of control highly crucial in studying depression and anxiety. Thus, studying the level of locus of control and how it affects the proneness to an eating disorder, in the long run, can be an effective method to help patients diagnosed by an eating disorder.

Significance of the study

Although there have been several studies done on locus of control and its relation to depression, anxiety, familial origins, organizational structure, cultural differences and religion, the review of the given literature shows that locus of control has been less likely associated with their proneness to developing an eating disorder, thus pointing out at an open area of research.

Objective of the study

The aim of the study is to understand the influence of locus of control in proneness to developing an eating disorder. The result of the study is expected to enhance our knowledge on prevention of an eating disorder by gaining extensive knowledge on the correlation

between locus of control and proneness to developing an eating disorder. The results are assumed to be of importance for both research and treatment purposes.

METHODOLOGY

The methodological procedures used in this study is spoken about in this section including the sample, the data collection instruments, the data collection procedure and the data analysis techniques.

Participants of the study

The participants of the study were 165 (116 females and 49 males) of age groups ranging from 14-70. For selection of the samples, random sampling method was used and the research was conducted by the using the instruments on volunteered individuals.

Data collection instruments

The data of this study is obtained by Rotter's Locus Of Control Scale (1966) which is a 29-item forced-choice test including six filler items and the Eating Attitudes Test (EAT-26, 1982) by David Garner which is an abbreviated 26-item test and a demographic information form.

Data collection procedure

To collect the data, the instruments which are Rotter's Locus Of Control Scale (1966) and the Eating Attitudes Test (EAT-26, 1982) by David were given to the participants who were then asked to fill it after the topic under study, the purpose of the study, confidentiality issues and contact information of the researcher was explained to them. The administration of the instruments took approximately 10 minutes.

Data analysis Procedure

Before analysing the raw data, missing data analysis was done of the Rotter's Locus Of Control and Eating Attitudes Test and as a response the participants that had even one missing response among the 55 items (29 items of Rotter's Locus Of Control and 26 items of Eating Attitudes Test) were not included in the analysis.

Afterwards the scores of Rotter's Locus of Control Scale (1996) and Eating Attitude Test were calculated. For scores below 11 the person was marked as having Internal Locus of Control and for scores above 12 the person was marked as having External locus of control. The total score range is 0-23. The person was marked as a bi-local if the person had a score of 11-12.

In the Eating Attitudes Test there are 26-item and 6-point scale tool where sum of scores may range from 0 to 78 points: 0 was assigned to "Never", "Rarely", and "Sometimes"; 1 point to "Often"; 2 points to "Usually"; and 3 points to "Always" till question 25, for the 26^{th} question the scoring was exactly reversed. For a score of 20 and above the person was said to be prone to developing an eating disorder and subsequently, means, standard deviation were computed for the scores necessary, and this was followed by Pearson's Correlation Coefficient.

Hypothesis

Null hypothesis- There is no relationship between External Locus Of Control and Proneness to developing an eating disorder.

Alternative hypothesis- There is a positive relationship between External Locus of control and Proneness to developing an eating disorder.

RESULTS

The I-E scale of Locus of Control was given 165 participants that simultaneously also gave their responses to the Eating Attitudes Test-26. The participants which received a score of 20 and above were marked as prone to developing an eating disorder and the ones that got a score below 20 were taken to be not prone to developing an eating disorder. The I-E scores was then divided into two groups, Prone and Not Prone. The range of the I-E scores for all the participants was 2-21 with the test score range being 0-23. The range of I-E scores for participants falling in the prone section is 4-21 and the range of I-E scores for participants falling in the not prone section is 2-20. The mean of I-E scores for both prone and not prone represents the following trend as displayed in Table 4.1

Table 4.1- Means and Standard Deviation of I-E Scores According to sections representing proneness to developing an eating disorder.

LOC	Mean	N	SD
Prone	12.47	42	3.823909
Not Prone	10.97	94	3.868974

According to this table the participants that are exhibiting Proneness to developing an eating disorder show Locus of Control Scores that exhibit externality as a trait, whereas the scores decrease and show a trait of internality with individuals that are not prone to developing an eating disorder.

Table 4.2- Pearson Correlation Coefficient of participants with External locus of control scores with Proneness to developing an eating disorder.

	Locus of Control score	EAT-26 score
Locus of Control Score	1	
EAT-26 Score	0.122736769	1

Pearson's correlation coefficient was calculated for scores depicting External locus of control and their respective scores on EAT-26. According to the table it can be understood that External Locus of control is positively correlated with Proneness to developing an eating disorder with (r= 0.122736769).
Further, ANOVA was computed between the scores that suggested the following-

Table 4.3- The ANOVA of participants with External locus of control scores with Proneness to developing an eating disorder.

ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	467.5135	1	467.5135	5.038742	0.02786	3.973897
Within Groups	6680.432	72	92.78378			
Total	7147.946	73				

The ANOVA computed indicated statistical significance between External Locus of Control and proneness to developing an eating disorder where, F (5.038742), P< 0.05. Therefore, the null hypothesis was rejected. The Pearson's Correlation coefficient indicates a positive relation between the variables and the data is statistically significant.

DISCUSSION

According to Rotter the individuals that have an internal locus of control believe that the consequences of the situations in the environment are a result of their own action, whereas people with external locus of control believe that people the consequences of the situations in the environment are not in their control and are merely a puppet to fate and luck or chance. It is seen in the research that the Pearson's Correlation suggests a positive correlation between the variables of External Locus of control and Proneness to developing an eating disorder and the ANOVA computed shows the data is significant This can be supported by the facts that as mentioned by Slade P (1982) about controlling over eating as a primary focus in patients suffering from Eating Disorders because they perceive it as "successful behaviour in the context of perceived failure in control of all other areas of functioning" and as according to Rotter people with external locus of control have a difficulty in taking responsibility of their action and they seem to think that they have no control over the environment surrounding them and thus, most of them think of focusing on controlling their eating as a desperate attempt to feel that they have control over their life.

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Conflict of Interest

The author(s) declared no conflict of interest.

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