

Role of Emotional Maturity in the Development of Irritable Bowel Syndrome (IBS) Among Adolescents

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Abstract

Objective:

When bowel starts functioning abnormally (not in a normal routine), without any physical problem attached with it, it is called Irritable Bowel Syndrome. The present study was conducted to identify the factors related to emotional maturity which contribute in the development of IBS among adolescents.

Method:

The sample of the present study consisted of 200 adolescents (100 IBS and 100 non IBS) studying in different C.B.S.E. schools located in Meerut city, India. A questionnaire based on Rome II criteria was applied for screening IBS students and Emotional Maturity Scale by Y. Singh and M. Bhargava to measure variables related to emotional maturity. High scores on these variables reflect negative aspect of the dimension. Multiple regression analysis was employed for analysis of data.

Result:

On these five variables obtained r-value was found .3897, .3498, .3657, .3554, and .3070 respectively which were significant at .01 level of confidence. Emotional stability/ instability and social adjustment/ maladjustment were found significant at .01 level with beta value (.27 and .20), t-value (3.24 and 2.49) and multiple R (.42). The combined contribution of both the variables in the development of Irritable Bowel Syndrome was found 18%.

Conclusion:

Result indicates that IBS group lacks emotional stability and social adjustment as compared to non IBS group. Adolescents with IBS were found more emotionally instable and socially maladjusted.

Keywords:

Emotional Maturity, Irritable Bowel Syndrome, Adolescents, Emotional Stability and Social Adjustment

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Introduction

Irritable bowel syndrome (IBS) is a cluster of various symptoms of bowel function. But not every malfunctioning of bowel is called IBS. The irritable bowel syndrome (IBS) is the prototypic functional bowel disorder in terms of its heterogeneous nature, multi-factorial pathogenesis and requirement for individualized diagnosis and treatment (Longstreth, 1998).

According to Berkow and Fletcher (1992) IBS fits into a category of gastrointestinal (GI) illnesses in which a pathological condition is not present, poorly established or does not entirely explain the clinical state. Moreover, extra-digestive disorders (Azpiroz, et al. 2000) and psychological disturbances (Drossman, et al. 1988) are frequently associated with IBS.

When there is constipation, diarrhea, and/or pain in the stomach without any medical problem, for more than 3 months then it is called IBS. Still, these symptoms are called IBS when they start affecting the life of the sufferer, negatively. According to Dr. Shah IBS is one of the most common disorders of digestive system producing a spectrum of symptoms such as persistent and recurring abdominal pain associated with passing of motion, change of bowel habit (diarrhea, constipation, or alternate diarrhea and constipation), etc. without any apparent cause. IBS is a syndrome because it can cause several symptoms in addition to those mentioned, like cramping, bloating, gas, frequent urge to pass stools, sensation of incomplete evacuation etc.

These psychosomatic symptoms start at the age of adolescence. At this age adolescents undergo number of changes in their psychic, emotions, studies, social role, and needs etc. They perceive them as stressors and to get relaxed or to avoid the situation they find one simple way i.e. to develop some psychosomatic symptoms. Whenever the stressor comes, symptoms arise.

At adolescent age, a child is no more a child and not even a grown up adult, he is in the middle of both. In this stage he looks like an adult but emotionally he is little bit a child. His emotional level is not of an adult.

Emotional maturity is the ability to understand the course of life, whatever might happen during it. Emotional maturity means a level of self control over our emotional reaction, stability in expression and connection to the reality of practical life more. According to Chaube (1983) emotional maturity is power to bear tension, indifference towards emotional incitements, stability in the expression, and self control over emotional reactions.

An emotionally mature person has the capacity to withstand delay in satisfaction of

needs. He has belief in long-term planning and is capable of delaying or revising his expectations in terms of demands of situations. An emotionally mature child has the capacity to make effective adjustment with himself, members of his family, peers in the school, society and culture. But maturity means not merely the capacity for such attitude and functioning but also the ability to enjoy them fully. Self acceptance is an important aspect of maturity, and it must be preceded by acceptance from others.

As one goes mature, his emotional stability, depth of social adjustment, vocational and professional aptitude, life's ambitions, etc. go on developing (Doll 1938). The emotional maturity begins during adolescence. The adolescents differ in degrees with each other in this development.

In a study Reilly, et al. (1999) found IBS subjects being more emotionally and socially disturbed. A community-based study of 507 middle school and high school students by Hyams, et al. (1996) found that 6-14 percent of the adolescent population had IBS symptoms. Anxiety and depression scores were significantly higher for this group.

Ali, et al. (2000) also found a relationship between having a tendency to self-silence, or suppress emotional responses to situations and assume personal responsibility for negative events and IBS.

Blomhoff (2000) of the National Hospital in Oslo, Norway, studied the effects of emotional words on women with IBS. The women's rectal muscles responded by contracting or relaxing in 70% to 77% of cases. The strongest responses were to words that were related to sadness and anxiety.

Houghton et al. (2002) stated that this study shows that emotion can also affect an IBS patient's perception of rectal distension and demonstrates the critical role of the mind in

modulating gastrointestinal physiology. These results emphasize how awareness of the emotional state of the patient is important when either measuring visceral sensitivity or treating IBS.

Objective

To study the role of emotional maturity in the development of Irritable bowel syndrome (IBS) among adolescents.

Hypothesis

Emotional maturity would significantly contribute in the development of IBS among adolescents.

Methodology

Sample

The sample of study consisted of 200 adolescents (100 IBS and 100 non IBS) within the age group of 13-18 years studying in different C.B.S.E. schools located in Meerut city, India.

Measures

A questionnaire based on Rome II criteria was applied for screening IBS students and Emotional Maturity Scale (**EMS**) by Y. Singh and M. Bhargava to measure their emotional maturity level. It contains 48 items under the five categories- Emotional Stability/ Instability, Emotional Progression/ Regression, Social Adjustment/ Maladjustment, Personality Integration/ Disintegration, and Emotional Independence/ Dependence. The reliability of the scale was determined by test-retest reliability method (.75). The test also has high validity (.64).

Procedure

The tests were administered in two different sessions. In the first session screener was given to the whole class to identify IBS students. This screener was administered from class 9 to 12. Students with IBS were screened out and a matched group of non IBS counterparts

was selected. In the second session Emotional Maturity Scale was given individually to IBS and to non-IBS students.

Statistical Analysis

The collected data subjected to appropriate statistical analysis. The correlation coefficient, multiple regression and t-test were employed to analyze the data.

Result and discussion

Emotional maturity is a state when an individual is capable of controlling his/her emotions, can bear tensions and is capable of expressing their emotions at right time.

Emotional maturity means a level of self control over our emotional reaction, stability in expressions and connection to the reality of practical life more.

Emotional maturity may or may not affect IBS symptoms among the respondents. So it was hypothesized that emotional maturity will significantly contribute in the development of IBS among adolescents in respect of (a) emotional stability/ instability, (b) emotional progression/ regression, (c) social adjustment/ maladjustment, (d) personality integration/ disintegration, (e) emotional independence/ dependence modes of emotional maturity.

The individual raw scores on five dimensions of emotional maturity were taken as individual variables and first of all subjected to correlation analysis (table 1).

The correlation coefficients provide a measure of degree and direction of the relationship between criterion and predictor variable. To determine whether the predictor variables were correlated with the criterion,

Pearsonr was employed and obtained correlation coefficients were presented dimension wise in table 1.

Table I: Relationship (correlation coefficient of IBS with other variables) (N=200)

	IBS
Emotional Stability / Instability	.3897**
Emotional Progression / Regression	.3498**
Social Adjustment / Maladjustment	.3657**
Personality Integration / Disintegration	.3554**
Emotional Independence / Dependence	.3070**

** Significant at .01 level

IBS, Irritable Bowel Syndrome

The correlation coefficients as presented in table 1 reveal that irritable bowel syndrome (IBS) scores were found to be significantly associated with Emotional instability/ stability, Emotional regression/ progression, Social maladjustment/ adjustment, Personality disintegration/ integration and Emotional dependence/ independence. These were .3897, .3498, .3657, .3554 and .3070 respectively. All the values were significant at .01 level of confidence. The positive direction of all the correlations indicates that the respondents with irritable bowel syndrome (IBS) have scored higher on these five variables as higher

scores reflects negative pole of the dimensions related to emotional maturity. It means when emotional regression, personality disintegration and emotional dependence increase symptoms of IBS also increases. It also reflects that more emotional instability and social maladjustment results in more IBS.

To find out the contribution of predictor variables in the development of IBS, multiple regression was employed on the data collected on test administered on 100 IBS and 100 non-IBS respondents. The results are reported in table 2

Table II: Determinants of IBS (Criterion variable IBS)

Predictor variables	Beta	Simple r	Tolerance	t- value
Emotional instability	0.27**	0.3897**	0.6103	3.24**
Social maladjustment	0.20**	0.3657**	0.6248	2.49*
Multiple regression = 0.42				
Std error of estimate = 0.46				
$R^2 = 0.18$				

**significant at 0.01 level

*significant at 0.05 level

The standardized regression coefficient (Beta) allows the researcher to examine the effects of each predictor variable on criterion variable. Thus the Beta for Emotional instability means that for each one unit change in Emotional instability there is a standard deviation change in IBS of 0.27 with the effects of other predictor variables on IBS partialled out. It is also evident from the table that Emotional instability has greater impact on IBS in comparison to Social maladjustment (Beta = 0.20).

Correlation provides estimates of covariance i.e. two variables are related. Significant correlation values of Emotional instability and Social maladjustment i.e. 0.3897 and 0.3657 indicates that a moderate relationship is likely to exist in the population from which the sample was selected and it is not arisen by chance.

Information about multi-collinearity is also found under the heading "tolerance". When the predictor variables are correlated together, this is known as multi-collinearity. A low tolerance indicates possibility of multi-collinearity. But it is evident from the table that predictor variables, Emotional instability and Social maladjustment, have a high level of tolerance (0.6103 and 0.6248 respectively) which ruled out the possibility of multi-collinearity in the present study.

The table 2 also reflects a test of statistical significance of individual regression coefficient through the calculation of a t-value for each co-efficient (3.24 and 2.49). The table shows that both the values were found significant beyond chance.

As seen in the table 2, the multiple regression value of these two variables is 0.42 which indicates a relationship of average strength. Reported R^2 in the table is 0.18 which indicates that the combined contribution of emotional instability and social maladjustment in the development of IBS is 18 percent.

Emotional instability is a factor representing syndrome of irritability, stubbornness, temper tantrums, lack of capacity to dispose off problems and seek help for one's day to day problems. Emotionally instable people are not able to do what is required of them in any given situation and often subjected to unpredictable mood shifts. The same was found true for IBS respondents.

Social adjustment is that type of relationship which involves the accommodation of the individual to circumstances in his social environment for the satisfaction of his needs or motives. The significant t-value indicates that IBS group lack the social adaptability, seclusive but boasting, in comparison to their counterparts. The respondents of non-IBS group were found more socially adjusted.

There were five dimensions of emotional maturity and while doing regression all these dimensions were put in order to determine the IBS. Only two dimensions (i.e. emotional instability and social maladjustment) have emerged as predictors of IBS. In the case of correlation (table 1) all the dimensions are significantly related to the IBS. This may be due to the influence of dimensions on each other. In the case of regression the influence of variables on each other is partialled out and the true relationship emerged. In the case of the hypothesis that 'emotional maturity will significantly contribute in the development of IBS' it is partially accepted as only two dimensions contribute to IBS instead of five.

The findings of present study are very encouraging and also supported by some previous researches. Chaube (1983b) stated that the emotional intensity of an adolescent lacks stability. The effect of his social unrest is clearly visible in all his actions relating to family and society (Chaube 1983c). Wilhelmsen (2000) found that psychological stress or emotional responses to stress can affect gastrointestinal

function. Welgan, et. al. (2000) found that patients with IBS respond to emotional and environmental stimulation with increased colon motor activity. In two different studies (Jarret, et al. 1998, Koloski, et al. 2003) it was found that higher subjective scores of emotional distress in patients with IBS were also associated with more intense and more persistent IBS symptoms.

The present study turned out to be successful in finding out two predictors of IBS among adolescents, which is the strength of this study. Both the predictors are related to emotional maturity and it's a well known fact that emotional maturity could be enhanced so it could be possible to control the onset or development of IBS among adolescents due to their emotional immaturity. So, the present findings would be of great help to understand the possible causes of the development of IBS and also in its prevention.

The present study, inspite of encouraging findings, has limited focus. It is based on limited data as it was done on a sample of 200 adolescents of C.B.S.E. school from Meerut city, it could be replicated on a larger sample to verify the findings. Gender difference should be examined with regard to IBS in Indian context. Some attempts should be made to explore the role of motives such as social approval and achievement motives, academic achievement, self- esteem and coping styles also.

To conclude it can be said that the present exploratory study shows the relevance of emotional maturity as an important psychological construct in the development of IBS among adolescents.

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