

Prevalence of Binge Eating Behaviour in Patients with Psychotic Disorders Admitted in A Tertiary Care Hospital

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Abstract:

Background and Objectives: Binge eating (BE) is characterized by “eating, in a discreet period of time, usually within 2 hours an amount of food which is larger than what most people would consume under similar circumstances.” Eating disorders and psychotic disorders may present together and has been researched in both affective and non-affective psychosis. Detailed surveys are not available from the Indian context regarding the same. The objectives of this study were to assess the prevalence of binge eating behaviours in patients with psychosis admitted in a tertiary care hospital. Secondary aims were to ascertain the psychiatric comorbidity in them, to analyse the stress levels and coping strategies employed and lastly to note the patient’s attributions to weight gain.

Methods: This is a hospital based cross-sectional study. The target population was in-patients diagnosed with psychotic disorders. The study duration of two Years. A total of 101 patients included. The patients were interviewed, socio-demographic data, clinical details noted, QEWP, Binge Eating Scale, PSS and Brief COPE administered.

Conclusion: Hence it is vital for clinicians to look into it for better therapeutic outcome and to prevent comorbid conditions like obesity. Stress levels and coping strategies are important factors that influence treatment and recovery and need to be addressed.

Keywords: binge eating, psychosis, schizophrenia, bipolar, stress, coping, suicide.

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Introduction

Eating disorders characterised by reduction in intake of food or food refusal, excessive eating followed by vomiting have been described in ancient Greek and Roman literature [1]. Eating disorders are anorexia nervosa, bulimia nervosa and binge eating disorder which previously was included in the not otherwise specified category of DSM IV. The prevalence of eating disorders in general population is relatively rare. There are many reports of eating disorders in the western literature. It is less studied in the non-western world when compared to the western world. However reports of different eating disorders are increasing, which signifies that these conditions are now emerging even in the non-western world[2]. Population based and clinic based estimates of anorexia nervosa in Western countries among female subjects ranged from 0.1% to 5.7%, and that of bulimia nervosa ranged from 0% to 2.1% in male participants and from 0.3% to 7.3% in females[2]. Population and patient based estimates in non-Western countries of anorexia nervosa ranged from 0.002% to 0.9% and of bulimia nervosa ranged from 0.46% to 3.2%[2]. Data taken from the

World Mental Health Survey Initiative conducted by the WHO compared binge eating disorder with bulimia nervosa. Community surveys done in 14 upper- middle and high income countries were assessed. Results indicated that the country specific lifetime prevalence for BED was greater than BN i.e. 1.4% and 0.8% respectively [3]. The prevalence and incidence of eating disorders is not known in India and no specific surveys for this have been carried out [4]. Binge eating disorder (BED) is defined as recurrent episodes of binge eating. An episode of “binge eating” is defined as eating, in a discreet period of time, an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances. A discreet period of time is said to be less than 2 hours. It may be associated with a feeling of loss of control and distress. During the episodes there must be an absence of behaviours to compensate for weight, e.g. self-induced vomiting, diuretic/laxative abuse. Another essential feature BED is that the episodes must occur at least once a week for 3 months[5]. Psychotic disorders and eating disorders can be

present together. In the nineteenth century Eugene Bleuler described disorders of eating as a part of schizophrenic illness. In spite of this eating disorders are poorly understood and studied. Eating disorders may occur in many combinations with a psychotic illness and the two may not be mutually exclusive. However eating disorders may present a separate clinical diagnosis with schizophrenia. Sometimes, in a schizophrenic illness eating disorder may occur as the first manifestation [6]. Some studies have shown that in patients with eating disorders the incidence of psychotic illness is comparable with that in the general population[7]. However, several studies suggest that there is a significant overlap between psychotic illnesses and eating disorders. There are cases reporting a reciprocal relationship between the eating disorder and psychosis and that disordered eating serves as a defence against psychosis[8]. Similarly Khalil et al remarked that the symptoms of eating disorders recur when psychotic symptoms remit and reduce when there is a flare up of psychosis[9]. As mentioned above there is a lack of studies in the area of eating disorders in the Indian literature and even lesser studies on eating disorders in psychotic illnesses. This could be due to various factors ranging from socio-cultural factors to lesser reporting of eating disorders at the clinic. There is a need for studies to estimate the prevalence and assess binge eating in the patients diagnosed with psychotic disorders. This will facilitate diagnosis and better treatment outcome. In addition to the above, data on stress and coping strategies will help understand what the patients' perception and response is to the particular situation. Assessing weight changes in patients with binge eating, determining obesity especially can help prevent the escalation of the existing weight gain.

Objectives

- To estimate the prevalence of binge eating behaviour in patients with psychotic disorders admitted in a tertiary care hospital.
- To assess psychiatric comorbidity in patients with binge eating.
- To assess the perceived stress in patients of the above sample.
- To study the coping strategies employed, to deal with the perceived stress.

Material and Methods

This study was a Cross-sectional descriptive study. All patients admitted in the psychiatry ward, diagnosed with psychotic illness were taken as study sample. Department of Psychiatry, Darbhanga medical College and hospital Laheriasarai Bihar.

Study duration of Two Years.

Patients admitted in the hospital diagnosed with psychotic symptoms with their informed consent were included. If the patient was not in a position to give an informed consent, in view of their mental state, assent from the patient and informed consent from their guardians was taken. When the patients' mental state improved, the informed consent was taken. Relative prevalence of 10% taken, precision 5 and with confidence interval of 90, sample size of 97 was obtained.

Inclusion Criteria

Patients admitted in the hospital ward. Patients between ages 18-65. Psychotic disorders including: schizophrenia, schizo-affective, delusional disorder, acute and transient psychosis, psychosis NOS, BPAD with psychotic symptoms, substance induced psychosis

Exclusion Criteria

- Patients refusing consent.
- Patients diagnosed with organic psychosis.

Patients who were admitted and diagnosed with psychotic disorders were approached for the purpose of the study. Informed consent was taken from the study subjects and confidentiality of the information obtained was maintained. Study relevant socio-demographic data and clinical measures were recorded using a semi structured pro forma designed for the study. Study subjects are selected considering the inclusion and exclusion criteria.

This scale by Cohen et al. is a widely used scale to assess perception of stress. It has a 10 item inventory, and helps assess stress in the last one month. Items are designed to find how unpredictable, uncontrollable, and overloaded respondents find their lives. PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. Data collected was analysed using Statistical Package for Social Sciences (SPSS) version 22. Descriptive statistics like frequencies, percentages, means and standard deviations were computed. Categorical variables are expressed as percentages, between group comparison done using the Pearson's chi-square test and Fisher's exact test, when indicated, assuming statistical significance for $p < 0.05$.

Results

Table 1: Details of subjects excluded and included in the study

Details	Number
Total number of subjects interviewed	104
Number of subjects excluded/Withdrew consent	3
Final study sample	101

Table 2: Distribution of age across the sample

Age	Male	Female	Total frequency	Percentage
18-29 years	25	17	42	41.6%
30-39 years	18	14	32	31.7%
40-49 years	12	7	19	18.8%
50-65 years	6	2	8	7.9%
Total	61	40	101	100

Majority of the subjects were in the age group ranging from 18-29 years.

Table 3: Distribution of first episode psychosis vs relapse

Episode	Frequency	Percentage
First	49	48.5%
Relapse	52	51.5%

Table 4: Comparison of BMI of subjects with binge and non- binge eating behaviour

BMI	Binge Behaviour	No Binge	Total
Underweight	1(12.5%)	11(11.8%)	12
Normal	4(50%)	55(59.1%)	59
Overweight	1(12.5%)	21(22.5%)	22
G1 Obesity	0(0)	6(6.5%)	6
G2 Obesity	2(25%)	0(0)	2
TOTAL	8(100%)	93(100%)	101

P value 0.00

Table 5: Patients' attribution to weight gain

Patients' attribution to weight gain	No. of subjects
No Weight Gain	74
Food	3
Lack Of Exercise	6
Medicines	6
Eating More	1
Illness	3
Food & Medicines	2
Medicines & Lack Of Exercise	1
Food & Lack Of Exercise	1
Others	4

Others – 'Don't Know'-2, 'Inability to Walk'-1 'Want To Gain Weight'-1

Table 6: Coping strategies used by the subjects across the sample

Coping Strategy	Frequency	Percentage
Active Coping	77	76.20%
Planning	74	73.30%
Emotional Support	91	90.10%
Instrumental Support	93	92.10%
Positive Reframing	67	66.30%
Acceptance	78	77.20%
Religion	80	79.20%
Humour	30	29.70%
Self-Distraction	77	76.20%
Denial	47	46.50%
Substance Use	37	36.60%
Behavioural Disengagement	44	43.60%
Venting	74	73.30%
Self-Blame	40	39.60%

Table 7: Coping strategies used by subjects with binge eating behaviour

Coping Strategy	Frequency	Percentage
Active Coping	7	87.50%
Planning	7	87.50%
Emotional Support	7	87.50%
Instrumental Support	8	100%
Positive Reframing	8	100%
Acceptance	7	87.50%
Religion	7	87.50%
Humour	4	50%
Self-Distracton	6	75%
Denial	3	37.50%
Subsatnce Use	2	25%
Behavioural Disengagement	2	25%
Venting	6	75%
Self-Blame	3	37.50%

Discussion

101 subjects with different psychotic disorders were studied. The distribution of the age group was between 18-65 years. The youngest subject was 18 years old and oldest 58 years. The mean age was 33.26 years. The maximum distribution of the sample was in age range of 18-29 years (41.6%) followed by subjects in 30s and 40s respectively (Table 2). Total males in the study were 61 and females 40. Community based studies done in urban India and in south India, have found that there is no significant gender difference in schizophrenia. The studies also showed that mean age of onset of illness is similar in both groups [10,11]. A study done in urban India which evaluated patients with schizophrenia found the mean age of females was 26.12 and that of males was 22.63 [11]. A retrospective-prospective study done among 100 bipolar patients in India, found the mean age of onset was 34 years and that most commonly affected males [12].

The majority of subjects in the sample were single, 37 male and 19 female. This could be just indicative of the type of sample. Most patients being of young age could be a reason of being single. It also suggests that since the onset has been early it could prevent subjects from marriage. This is also comparable with western literature that found more men with schizophrenia remain single when compared to women [13]. Though most patients were educated, a large number of them were unemployed during time of the study which could be an indicator of the severity of the illness. Study done by Loganathan, with Indian subjects exploring gender perspectives of living with schizophrenia found that there were several cultural factors and stigma affecting their daily life. Stigma of illness affected both the genders and led to difficulties in marital life/ opting to be unmarried, difficulties in finding jobs and problems for women in pregnancy and child birth [14]. There is no data from Indian literature

regarding the prevalence rates of binge eating disorder. BED was only recently added as a separate diagnosis in the DSM-5 and is not coded in the ICD-10. Studies regarding eating disorders especially BED is still at its infancy in the Indian context. There is even lesser data comparing BED with psychotic disorders. This study aimed to find the prevalence of binge eating behaviours in psychotic patients during their admission in the hospital. However a diagnosis of BED according to DSM criteria could not be made even in one subject and only a handful of patients with certain binge behaviours were found. The reasons for this could be multiple and are discussed below. To assess coping in the sample the Brief COPE was used. It has a set of 28 questions and evaluates coping in 14 domains. Active coping, planning, emotional support, instrumental support, positive reframing, acceptance, religion and humour are considered adaptive strategies. Venting, denial, substance use, behavioural disengagement, self-distracton and self-blame are considered maladaptive. In the study sample many adaptive patterns of coping were employed. For the purpose of the study "use of food" was added to question 4 and 11, these questions tap into 'self-distracton' coping strategy. However no patient in the sample reported the use of food as a coping style. A recently concluded longitudinal study done among Swedish patients with binge eating disorder reported that a clinically significant proportion of patients had suicide risks. They explained that this could be influenced by stress, environmental factors and impulsivity which maybe a phenotype of BED [15].

The present study showed that it was the perception of stress rather than just binge eating behaviour that was significantly associated with risk of suicide.

Conclusion

The primary objective of this study was to study the prevalence of binge eating behaviour in patients diagnosed with a psychotic disorder. The secondary objectives were to assess psychiatric comorbidity in

the patients with binge eating, to ascertain the perceived stress levels and coping strategies employed by the subjects in the sample and to also note the attributions to weight gain by them.

Only 8 patients were found to have binge eating behaviour among the 101 included in the study. Most were male; most common psychiatric illness was schizophrenia. 50% of the subjects with binge behaviour had no psychiatric comorbidity. 90% of study sample perceived stress.

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