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Original Research

A study of the prevalence of headache among patients of psychotic disorder

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ABSTRACT:
Aim Vague physical symptoms or somatic complaints are very common chief complaints of patients suffering from mental illnesses. Though they are a recognized and accepted part of the neurotic disorders they are generally ignored as non-specific to psychotic disorders. Nonetheless, these so called vague symptoms are a source of persisting distress to the patient. The present study was therefore undertaken to assess the prevalence of headache, which is one of the most common somatic complaint, in patients suffering from psychotic disorder. **Methods** It was a cross sectional observational study without any intervention carried out in a tertiary hospital. The subjects were recruited as per the study criteria. A semi-structured questionnaire purpose built for the study was used to collect the study data – sociodemographic and clinical. The results were statistically analysed. **Results** A total of 245 subjects with mean age of 35.38 years (± 5.17 years) were recruited into the study. The mean duration of psychotic illness was 2.32 ± 0.54 Years. 53.87% of the study subjects were males and mostly belonging to Hindu religion. 64.08 % were unemployed. The prevalence of headache was 77.14 % (n=189) of the sample. The type of headache was classified as Migraine in 22.85%, Tension headache in 43.26 %, Cervicogenic headache in 7.75% of the study sample. The headache was classified as other or unspecified type in 3.26% of the study sample. **Conclusions** This study finds a headache prevalence of 77.14 % among patients suffering from psychotic disorders which is very high. Our study underlines and highlights the fact that somatic complaints like headache are also very common presenting complaints in psychotic disorders. These complaints need to be properly assessed and addressed as part of the comprehensive work up and treatment plan.
Keywords: Prevalence; Psychosis; Headache.

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INTRODUCTION:
Headache is one of the most common complaints across all population. The presence of headache impacts on a person's function and quality of life. People with headaches recorded significantly worse scores for physical, social and role functioning components of quality of life and had worse mental health than people with chronic diseases such as arthritis and diabetes, even can be as bad as patients with myocardial infarction[1].
Vague physical symptoms or somatic complaints are very common chief complaints of patients suffering from mental illnesses. Though they are a recognized and accepted part of the neurotic disorders they are generally ignored as non-specific to psychotic disorders. Nonetheless, these so called vague symptoms are a source of persisting distress to the patient. Headache has been associated with psychiatric illness in the medical literature for well over a century. As underlined by Silberstein and colleagues[2,3] the association between headache and psychiatric diorders has been clinically under discussion more frequently than it has been scientifically studied. This association is probably one of the less understood areas suitable for future headache research. Epidemiological and health care institution based studies are confirming relationships between headache and particular mental disorders,

and outlining implications for medical practice.[3]

While some of the early research works on the issue of headache accepted the strong effect of psychological and behavioral factors in these disorders, it was not until the end of the 19th century that Freud categorically associated concepts of psychopathology with commonplace migraine.[4,5]

While others working within the emerging field of psychosomatic medicine carried forward Freud's notions regarding psychopathology and headache[6,7] it was not until the late 1930s that Harold Wolff first applied careful, systematic observation to the study of these associations in those with migraine who were not seeking treatment for psychiatric illness.[8] For more than 25 years, Wolff vigorously pursued efforts to integrate knowledge from the social and medical sciences that would lead to better understanding of headaches and other "psychophysiological" disorders—efforts that foreshadowed contemporary behavioral medicine. Wolff has been credited with formulating the notion of "the migraine personality" that he characterized as a mix of "personality features and reactions dominant in individuals with migraine" including "feelings of insecurity with tension manifested as inflexibility, conscientiousness, meticulousness, perfectionism, and resentment" (p. 348).[9]

A large number of epidemiological and community studies have pointed out that psychiatric disorders (eg, depression and anxiety) occur with greater frequency among recurrent headache patients than among the general population, and the prevalence of psychiatric symptomatology increases and is over represented in clinical populations. There is evidence indicating patients with elevated psychological symptoms are more likely to seek medical assistance. When present, psychiatric comorbidity often complicates headache management and portends a poorer prognosis for headache treatment.[10]

Psychiatric comorbidity is in fact relatively commonplace among headache patients who present for treatment (especially those presenting for specialist care) and an important consideration in headache treatment planning. Patients with migraine and tension-type headache show symptoms of mental disorder at a much higher rate than persons with without a past history of recurrent headache. These comorbid relationships have been identified in epidemiological research as well as clinical studies of treatment-seeking patients. Mood disorders occur with a minimum of 3 times greater frequency among patients of migraine compared to persons in the general population at large, and the rates of prevalence increases in hospital attending populations, particularly with patients complaining of daily headache chronically.[3,11]

The co-occurrence of headache and mental disorders is now well-appreciated clinically occurrence needing further comprehensive research. However, the linkage between headache and psychiatric morbidity has over the past been not understood. In a few patients headache has been wrongly assigned to psychodynamic or psychiatric reasons, based on mere anecdotal reports. Measures of psychopathology have not always been met the criteria promulgated in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (DSM-IV), which have evolved over time.

In addition, the diagnosis of headache has not always followed standard classification and has been complicated by the formulation of new nomenclature and criterion. For example the first published classification criteria of the International Headache Society in 1988, proposed new criteria for "chronic daily headache" published by Silberstein et al in 1994, and the new diagnosis of "chronic migraine" in the 2004 revision of the International Classification of Headache Disorders, 2nd ed. (ICHD-2). The challenge for future researchers is to use research methods and designs that correctly identify and classify the subgroup of patients of headache with mental disorders, assess the impact of mental illness on headache symptomatology and therapeutics, and identify proper behavioral and medication treatment strategies.[3]

Further,there can also be multiple primary headache, which can present as such or can be present as a co morbidity. There is considerable overlap of clinical symptoms across migraine, tension type, cervicogenic and other headache.[12,13]

Headache is the most frequent somatic symptom in children and adolescents referred for emotional and behavioural disorders, as well as in patients with depression and/or anxiety psychosis.[14] There are studies that suggests that cognitive impairments can be attributed to a decrease in behavioural responses to pain.[15] Similarly one more significant study reported that poor communication and cognitive impairments as well as negative symptoms such as blunted responses experienced by this population group could contribute to altered pain expression.[16]

In recent times, there is research to suggest clinical effects of mental disorders on headache. There is initial evidence available that points towards psychiatric illness impacting the natural course of migraine. Gathering evidence is also emerging suggesting that treating the mental illness may favorably impinge on improvement in headache treatment.[3]

The presence of co-occurring mental illness may contribute to the intractabe and chronic migraine. An 8-year follow-up study of 100 young adults with headache examined the relationship between psychiatric disorders at initial evaluation and headache status at follow-up.[17] In this study, sleep disturbance was defined as a psychiatric disorder, in addition to depression and anxiety conditions, among others. For those with two or more psychiatric disorders at initial evaluation, 57% exhibited no improvement or deterioration in headache at follow-up, 29% were improved, and only 14% were headache free. In contrast, patients with no psychiatric disorder or only one comorbid condition

(eg, sleep disturbance) exhibited greater headache improvement 8 years after the initial evaluation: only 7 to 15% were the same or worse, 46 to 53% had improved, and 39 to 40% were headache free.

Moreover, there is growing evidence that a number of psychodynamic risk factors are linked to progression from episodic to chronic daily headache. Further, psychological distress may play an even bigger part in the change and chronicity of headache than can be attributed to pain-killer abuse. There is a clear need for prospective reearch studies to understand the natural progression of migraine and to gauge the effect of co-morbid psychodynamics on the prognosis and evolution of migraine.[3]

Psychiatric morbidity is a bad prognostic factor for headache management which necessitates the need for screening and following up mental disorders that may account for the difference in headache outcomes in trials. Behavioral and psychodynamic factors can play a vital role as "mediator" and "moderator" variables in impacting clinical outcomes. A moderator is a factor that predicts the amount of impact a treatment strategy will have on patients with a certain attribute. Identification of influential moderators is a key factor for establishing the clinical benefit of a treatment. As it relates to clinical trials, a mediator potentially explains "treatment mechanisms"—why or how treatments have their effect (mediator and moderator variables are addressed in detail in a companion article within this issue. Interestingly, few studies have moved beyond the prognostic implications of psychiatric comorbidity and conducted post hoc analyses of headache outcomes in relation not only to psychiatric disorders but also treatment modality.[3]

The latest revision of the ICHD-2 classification (Headache Classification Subcommittee, 2004) has made a provision for the small number of patients for whom headache ostensibly is causally related to psychiatric illness.[11] The classification of headache attributed to psychiatric disorder (ICHD-2 12. code type; pp. 121-123) is reserved for those patients for whom a headache occurs in the context of a psychiatric condition where headache is believed or known to be a symptom of the psychiatric illness, and not a primary disorder in its own right.

The classification provides criteria for only two varieties of this form of headache: headache attributed to somatization disorder (ICHD-2 12.1), and headache attributed to psychotic disorder (ICHD-2 12.1).[11] When a new headache occurring around the time of a mental disorder is coded as a secondary headache due to that disorder. When a headache is made worse in close temporal relation to a mental disorder, the patient can be given a diagnosis of the pre-existing headache. If the mental disorder does not improve on its own or when there has been insufficient time for this to occur, a diagnosis of headache probably attributed to a mental disorder is noted.[11] Clearly, much research is needed to validate and establish the utility of this new classification. In our opinion, there may be very few cases where headache could actually be attributed to a psychiatric disorder. For example, the emergence of severe migraine headaches during episodes of a paranoid delusional disorder, followed by the remission of both headaches and delusions with neuroleptic medication, would best be considered an example of shared neurophysiological mechanisms underlying the two disorders—not as evidence that the delusional disorder was the cause of the headache.[3]

Based on these findings, we planned this study to explore the prevalence of headache among patients suffering from psychotic disorders.

MATERIALS AND METHOD

The aim of the present study was to assess the prevalence of headache among psychotic disorders. This study was conducted at department of Psychiatry at Hi-Tech Medical College and Hospital, Bhubaneswar, which is a tertiary care medical college hospital of Odisha, India. The study protocol was approved by the institutional review board of Hi-Tech Medical College and Hospital, Bhubaneswar. All participants provided informed consent and all procedures adhered to the declaration of Helsinki. It was a cross- sectional study carried out over a seven months period (January 2018 – July 2018). All consenting men and women, who attended this hospital for psychiatric consultation either as new patients or follow up old psychotic patients. All recruited subjects who satisfied the inclusion criteria for the study, presence of any major co morbid medical or other illness was kept as exclusion criteria. Included patients were examined clinically after taking detailed history and their socio demographic variables. They were requested to complete a questionnaire about their socio-demographic data sheet.

Participants were not selected according whether they experienced headache or not rather they were selected with a confirmed psychiatric diagnosis of schizophrenia or schizoaffective disorder with age over 18 year. The exclusion Criteria included a history of affective psychosis or presence of catatonia or gross cognitively impairment resulting inability to complete the questionnaire.

Tools

Socio-demographic cum clinical data sheet: This was a semi structured questionnaire which was used to record various socio-demographic data like age, religion, occupation, education besides relevant clinical information.

Procedure: It was a cross sectional observational study without any intervention. The s ubjects were recruited as per the pre-decided inclusion and exclusion criteria. On satisfying the criteria and the patients were required to fill up semi-structured questionnaire meant to collect the socio-demograhic data. The datasheet aws also used to record relevant clinical data of the study subjects.

Statistical Analysis:
The data collected during the study was statistically analyzed, using Statistical Package for Social Sciences (SPSS, Inc., Chicago, Illinois) version 10.0. Means, standard deviations, frequency distribution etc were the variables used in the analysis.

Results:
A total of 245 subjects were included in the study. The table summarizes the sample characteristics and finding of the study. The mean age of the sample was 35.38 years (± 5.17 years) with minimum age of 21 years to a maximum age of 55 years. The mean education years for the sample were found to be 10.21 ± 2.12 years. The mean duration of illness found during the study was 2.32 ± 0.54 years.. There were 132 male subjects amounting to 53.87% and 113 female subjects amounting to 46.12 % of the sample. The sample consisted of mostly Hindu subjects (n=197, 80.40%) and other non Hindu subjects amounted to only 19.60 % (n=48). Out of 245 patients 157 patients (64.08 %) were unemployed, and 35.9 % were working (n=88) (Table).
Headache was reported by 189 (77.14 %) of the sample where as only 56 patients did not complain of headache which amounts to 22.86 % of the sample. Using a checklist developed for the study, the investigators independently classified the headache into the following types Migraine (MH), Tension Type (TTH), Cervicogenic (CGH) and uncassified or the others (OH) type. The majority of the type of headache reported by the patients could best be classified as mixed type of headache but an attempt was made to tease out the predominant pattern of headache which was classified accordingly.
The headache was categorized as Tension type in 43.26 % (n=106), Migraine in 22.85% (n=56), Cervicogenic in 7.75% (n=19) and rest 26%(n= 8) of the sample belonged to the others/ unspecified type of headache (Table)

DISCUSSION
The aim of this study were to determine the prevalence of headache in patients suffering from psychotic disorder which includes schizophrenia, delusional disorder and schizo-affective disorder.
We found a prevalence rate of 77.14% for headache in our study sample, It is found to in accordance with many other studies reporting almost similar prevalence rate for headache among psychotic patients.[12,13,14,15] Our reported prevalence rate of headache was on the slightly higher side of the range reported prevalence rates of the referenced studies. On sub typing majority of the clinical presentation was of mixed types of headache but on further assessment the predominant pattern of headache could be classified as migraine, tension type, cervicogenic and other or unspecified headache. Usually small variations in prevalence may be attributable to sample selection and differing criteria sets used for diagnosis.
On comparing with the general population prevalence of tension-type headache were 63% and 86% respectively for men and women for the last preceding one year. The point prevalence rates for headache were 11% in men and 22% in women. Prevalence of migraine in the previous one year was 6% in men and 15% in women.[3]
Going by the specific types of headache, for migraine the prevalence was 22.85% which is in agreement with the finding of 19.4% prevalence reported by Kuritzky et al.[20] which also assessed the prevalence of headache among patients of psychotic disorder. Another similar study reported 17.8 % prevalence which is also comparable to our study.

TABLE : Sociodemographic profile of the sample and findings (n= 245)

	Mean ± SD	**Min**	**Max**
age	35. 38 ± 5.17	21	55
Years of education	10.21 ± 2.12	5	15
Duration of Illness (Years)	2.32 ± 0.54	0.6	8
		n	%
Gender	Male	132	53.87
	Female	113	46.12
Religion	Hindu	197	80.40
	Others	48	19.60
Occupation	unemployed	157	64.08
	Working	88	35.92
Presence of Headache		189	77.14
Absence of Headache		56	22.86
Headache –Types Predominantly	Migraine	56	22.85
	Tension	106	43.26
	Cervicogenic	19	7.75
	Others / Unspecified	8	3.26

Similarly for Tension type headache(TTH) the prevalence was found to be 43.26% in our study, which is in accordance with the findings of the study done by Kuritzky et al.[20] Another study found prevalence for TTH of 28.7%, which was significantly lower than our study. The 5% prevalence for CGH in our study is comparable to that the 4.6% prevalence rate determined by Knackstedt et al.[21] in the general population. Painful dysfunction of somatic structures in the cervical spine drives the experience of CGH and can be triggered by sustained awkward neck postures, neck movement or pressure over the occipital area.[22]

In our study we excluded patients with history of head injury and any diagnosed seizure disorder or epilepsy as these have been directly implicated in the causation of headache.

CONCLUSION: This study finds a headache prevalence of 77.14 % among patients suffering from psychotic disorders which is very high. Our study underlines and highlights the fact that somatic complaints like headache are also very common presenting complaints in psychotic disorders. These complaints need to be properly assessed and addressed as part of the comprehensive work up and treatment plan. Unfortunately, there are no evidence-based algorithms to guide research and practice in this important clinical arena. Future investigations should develop and test algorithms for screening and managing patients of mental disorders who have headache as a comorbidity.

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