ORIGINAL ARTICLE

Stressful Life Events In First Episode Psychosis

Karki BD[1], Joshi D[2] , Adhikari AP[3]

1. Assistant Professor, Department Of Psychiatry, National Academy Of Medical Sciences, Bir Hospital, Kathmandu, Nepal 2. Associate Professor, Department Of Psychiatry, National Academy Of Medical Sciences, Bir Hospital, Kathmandu, Nepal 3. Assistant Professor, Department Of Psychiatry, National Academy Of Medical Sciences, Bir Hospital, Kathmandu, Nepal

*E-mail *Corresponding author :* basu.karki72@gmail.com

Abstract

Introduction: *First episode psychosis refers to the first time someone experiences psychotic symptoms or a psychotic episode. There are evidences related to the role of major life events and childhood trauma in the development of first episode psychosis. There are few studies regarding the environmental exposure to stressful life events and how these events might influence the onset of a psychotic disorder, and role of perceived stress. This study aimed to identify the relationship between stressful life events and first episode psychosis in Nepalese context.*

Material And Method: *It was a hospital based cross-sectional, descriptive study. A total of 50 cases of first episode psychosis were included and the diagnosis was made according to ICD 10- Diagnostic Criteria for Research and verified by two consultant psychiatrists. Semi Structured Performa was designed to collect the information about the socio demographic data and perceived stress was assessed with Presumptive Stressful Life Events Scale (PSLES).*

Results: *There were 62% female and 38% male patients with first episode psychosis with mean age 26.32 years. Majority of the participants were from rural areas (94%), married (58%), educated up to primary level (38%) and housewife (40%). 60.7% of ATPD had stressful life events (P =0. 000)which was higher than the stressful life events in patient with Schizophrenia (P =0. 005). There was a positive correlation between stressful life events and gender, setting, socioeconomic status and Diagnosis (P <0.05).*

Conclusion*: Results show the relevance of presence of stressful life events as a potent source of perceived stress in first episode psychosis sample. Therefore this study highlights the importance of psychosocial intervention in this vulnerable group for management of illness and might be an important strategy for prevention.*

Keywords: First episode psychosis, life events, stress

INTRODUCTION

Psychosis is characterized by a constellation of symptoms that includes abnormal perceptions and beliefs, usually called positive symptoms. Negative symptoms like anhedonia, social withdrawal, etc. and cognitive deficits like impaired memory, attention, executive functions, are also evident, and represent major predictors of functional outcome. Although psychotic disorders undoubtedly have biological underpinnings, psychological factors are thought to influence their onset and course.[1] Epidemiological data have consistently demonstrated a well-replicated association between early environmental social risk factors and psychosis.[2] The stress diathesis model of psychosis highlights heightened vulnerability to stress as core of psychosis, must be biological in origin, usually genetic but with some attention to perinatal factors.[3] The exact mechanism(s) by which social stress can affect brain function, and in particular the molecular targets involved in psychosis (such as the dopaminergic system), are not fully understood however, it is well accepted that there is interplay between social environmental risk factors and molecular changes in the human brain; in particular, the impact of social stress on three specific systems: dopaminergic system,

neuroinflammation/immune, and endocannabinoid signaling.[4]

In studies with individuals with psychotic disorders, the most common way of measuring stress is the 'life events' approach. As per Lazarus and Folkman life events are major life changes that are not uncommon or unusual but may occur outside the individual's control (such as death of a loved one or being made redundant at work) or they may be influenced by the individual's own actions (such as divorce or becoming a parent).[5] The association between stressful life events and the onset of acute psychosis has been shown in the studies from different parts of the world.[6,7,8,9] A meta-analysis done on 16 studies published between 1968 and 2012 showed positive associations between exposure to adult life events and subsequent onset of psychotic disorder/experiences in 14 studies with an overall weighted Odds Ratio of 3.19 (95% CI 2.15–4.75).[10] There are very few studies from South East Asian Region exploring this association and there are no studies in Nepalese context. In this study we aim to identify the relationship between the stressful life events and first episode psychosis in Nepalese patients.

MATERIAL AND METHOD

A total of 50 subsequent drug naïve admissions of either gender in inpatient unit of the Mental Hospital, Lagankhel Nepal, aged more than or equal to 16 years with the initial first episode psychosis were included. The operational definition of first episode psychosis was taken as "any psychotic episode who had first treatment contact or had never taken antipsychotic medication or taken medication for sub-optimal duration or dosage".[11] The diagnosis was made as per ICD-10 Diagnostic Criteria for Research (DCR)[12] and verified independently by two consultant psychiatrists. Any patient with affective psychosis, organic psychosis or substance induced psychosis and unwilling to participate were excluded from the study. The patients were enrolled after taking informed consent. Ethical clearance was obtained from the Institutional Review Board, National Academy of Medical Sciences, Nepal.

A semi-structured performa was suitably designed to collect the information regarding socio-demographic profile and clinical profile of the participants in the study. The residence of participants was considered as urban and rural as per the address mentioned by the care-taker of the participant. Presumptive Stressful Life Events Scale (PSLES) developed by Dr. Gurmeet Singh and coworkers in 1983 was used. It has 51 items in 10 domains related to various stressful life events in the life of an individual relevant to our culture and is administered in semi-structured interview manner. It taps desirable, undesirable and ambiguous life events in last one year. It gives a stress score, individual and cumulative, for computation.[13]

RESULT

Table 1: Distribution of respondents by socio demographic characteristics

Variable	Frequency	Percent
Age Mean Age= 26.32 yrs 16-25 26-35 36-45 46-55		
Sex Male Female	19 31	38 62
Residence Urban Rural	3 47	6 94
Marital Status Unmarried Married	21 29	42 58
Education Illiterate Just Literate Primary Secondary Higher Secondary	6 10 19 9 6	12 20 38 18 12
Occupation Unemployed Student Housewife Partially employed Employed	8 12 20 8 2	16 24 40 16 4

Table 1 showed more of the respondents as female (62%) and more than half respondents were married (58%). Majority of respondents were from the rural areas (94%) followed by urban areas (6%). About 38% were educated upto the primary level, whereas 20% were just

Karki BD. et al. Stressful Life Events In First Episode…

39

literate, followed by education upto the secondary level (18%) and higher secondary level (12%). About 12% of the respondents were found to be illiterate. In terms of occupational status, majority of respondents were housewife 20 (40%), 12 (24%) were students, 8 (16%) were unemployed, 8 (16%) were partially employed and 2 (4%) were unemployed.

Stressful life events in cases of first episode psychosis

As shown in figure 1, in 50 cases with the diagnosis of first episode psychosis, 28 (56%) cases were diagnosed as Acute and Transient Psychotic Disorder (ATPD), 19 (38%) as Schizophrenia and remaining 3 (6%) were Psychosis NOS.
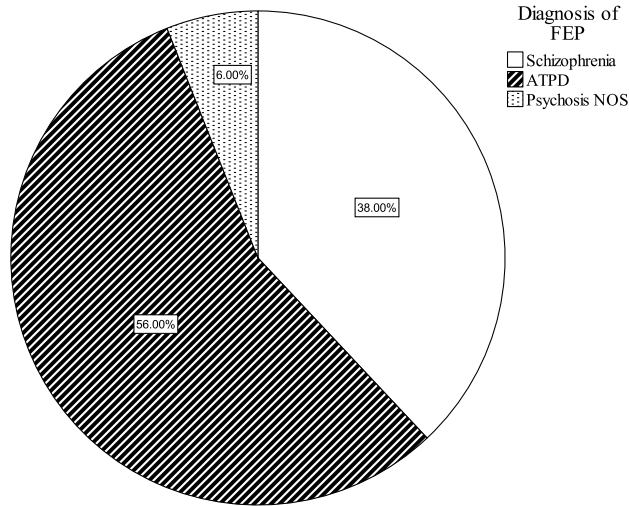
Figure 1: Cases diagnosed with first episode psychosis

Table 2 shows, 19 (38%) had stressful life events occurring within 2 weeks prior to the onset of the illness and among them, 17 (89.5%) had the diagnosis of ATPD and 2 (10.5%) were diagnosed as Schizophrenia. Among the patients with ATPD, 60.7% had stressful life events (P =0. 000). (Table 2, Figure 1).

In cases of ATPD, Mean number of stressful life events was 0.86 (Std. deviation = 0.891) which was higher than the stressful life events in patient with Schizophrenia (P =0. 005). (Table 2)

Table 2: Stressful life events in cases of first episode psychosis

Diagnosis	Stressful life events within 2 weeks				Chi-square		
	Present		Mean	Std. Dev.	Value	df	P-value
	N	%					
Schizophrenia	2	4	0.16	0.501	16.09	2	0.00
ATPD	17	34	0.86	0.891			
Psychosis NOS	0	0					
Total	19	38	0.54	0.813			

Among the 19 cases with preceding stressful life events, 17 (89.5%) were categorized as having moderate level of stress (Score 41-200) whereas 2 (10.5%) were categorized as having no stress (Score <40). Among 17 with preceding moderate stress 15 (88.2%) were female and 2 (11.8%) were male which was statistically significant (P <0.01). (Table 3)

Table 3: Stressful life events and gender in first episode psychosis

...ases of first episode psychosis								Chi-square		
...o ...rents		No stress		Moderate stress		Total		Value	Df	P-value
	%	N	%	N	%	N	%	8.37	1	0.004
	32	1	2	2	4	19	38			
	30	1	2	15	30	31	62			
	52	2	4	17	34	50	100			

Table 4: Correlation between stressful life events and other variables

Variables	Person's correlation coefficient(r)	p-value
Age	-0.082	0.573
Sex	0. 358*	0.011
Education	0.156	0.280
Marital status	-0.085	0.557
Occupation	-0.036	0.803
Setting	0.323*	0.022
Socioeconomic status	0.288*	0.042
Religion	-0.113	0.434
Diagnosis	0.289*	0.042

*. Correlation is significant at the 0.05 level (2-tailed)

Table 4 showed a positive correlation between stressful life events and gender, setting,

Karki BD. et al. Stressful Life Events In First Episode…

socioeconomic status and diagnosis, which was statistically significant (P <0.05).

Relationship between life events and first episode psychosis

Mean number of stressful life events during one year was 1.9 (Std. deviation 0.886) and number of events within the whole life was 4.54 (Std. deviation 1.249). Mean score of life events within one year was 86.68 (Std. deviation 39.397) and whole life 223.2 (Std. deviation 67.038) (Table 5)

Table 5: Paired sample t-test

	Mean	N	Standard deviation	Std. error mean	Corre lation	P-value
No. of Events (1 yr.)	1.90	50	0.886	0.125	0.584	(P <0.001)
No. of Events (Whole Life)	4.54	50	1.249	0.177		
Life Event Scores (1 yr.)	86.68	50	39.397	5.572	0.594	(P <0.001)
Life Event scores (Whole Life)	223.20	50	67.038	9.481		

DISCUSSION:

The purpose of this study was to find out the relationship between cases with first episode psychosis and stressful life events. The study found female participants to be higher than male, which was similar to the findings of studies in Africa but different from those in Nepal.[14,15] It could be due to changing pattern of help seeking behavior and getting access to health facility by female patients in developing countries like Nepal.[15] Mean age of presentation was similar to that of studies conducted in Nepal, Pakistan and India but different from that of Nigeria.[15,16,17,18] Sample for study in Nigeria and Pakistan had high proportion of Schizophrenia cases. Study conducted in Nepal was based on cases of ATPD and Indian sample contained patient with other psychiatric conditions as well.

In this study, majority of patients were married, housewives or students, had low levels of education and were from low socio-economic status and rural setting. These findings were similar to those of other studies conducted in Nepal.[15] It might be due to high proportion of population of similar status and also the preference of care takers to visit government hospitals which might be different in private setup.

In this study, the stressful life events in preceding two weeks were found to be associated with 38% of respondents. Among them, 89.5% were with the diagnosis of ATPD and 60.7% of those cases with ATPD had stressful life events, which was consistent with findings of studies conducted in Nepal and Latvia.[14, 15] The finding was also consistent with characteristics of ATPD as described in ICD-10.[19] It also reflected the possible triggering role of life events in ATPD. It supported the hypothesis that stress depletes defensive resources of an already vulnerable person.

Mean number of life events in patients with ATPD was higher than in patients with Schizophrenia which was comparable to the findings of Indian study.[20] There might be another possibility of insidious onset and long duration of illness in majority of Schizophrenia affecting proper recollection of life-events.

In majority of cases the severity of preceding life events was moderate (89.5%). This might be due to association of minor stressors and daily hassles resulting in precipitation of psychotic symptoms and the episode itself. This finding was consistent with that of Norman R. et.al. 1994.[21] The presence of moderate stress was significantly high in case of females in comparison to males. This might indicate the probability of higher chances of stress in female lives. In this regard, role of stress in causation of psychotic episode in males may be considerably limited.

Similarly, higher life time score of stressful life events was statistically significant in patients having higher life events and score within one year. This revealed the effect of clustering of life events in vulnerable individuals which is consistent with the understanding that the physiological impact of various stressors may accumulate.

There were very few studies regarding relationship between stressful life events and first episode of psychosis in the context of

Karki BD. et al. Stressful Life Events In First Episode…

41

Nepal. It highlighted the importance of social events and stress associated with it in first episode of psychosis. The study was hospital based with relatively little number of participants having limitation to generalizability of the findings.

CONCLUSION:

Presence of life events with significant score was found in ATPD rather in Schizophrenia or Psychosis NOS. Presence of life events of moderate stress in patients with ATPD highlights the importance of psychosocial intervention in this vulnerable group for management of illness. It might be an important strategy for prevention of occurrence as well as recurrence of ATPD. It is clearly hard to prevent events, but individuals' interpretation of them may be modified by therapeutic intervention. Even after the onset of psychosis, understanding the role of events in triggering onset may help patients normalize their problems.

CONFLICT OF INTEREST: None

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Karki BD. et al. Stressful Life Events In First Episode…