

FEELING OF CROWDING AND PSYCHIATRIC DISORDERS

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SUMMARY

Relationship of high population density to mental illness has been well known. The feeling of crowding has also been found to have a causal influence on individual's mental health. Recently, it has been reported that even in high population density, the individuals who have a high feeling of crowding are more prone to mental illness. However, no attempt has been made by Indian researchers to study whether the amount of feeling of crowding which is supposed to be a cause of mental illness in high dense areas differs in various psychiatric disorders. Thus, a prospective study which included 150 psychiatric patients suffering from schizophrenia, affective disorders and neuroses and 50 normal subjects, selected from high dense area of Bikaner city was taken up to find out (1) whether the amount of feeling of crowding differs in schizophrenia, affective disorders, neuroses and normal, and (2) whether the severity of illness in these subjects has any relationship of the feeling of crowding experienced by them. Results revealed that feeling of crowding differs in schizophrenics, patients with affective disorders, neurotics and normal subjects. The scores of feeling of crowding and severity of illness of all these subjects had a positive relationship. Results and their implications are discussed.

Introduction

Researchers have begun to deal with crowding as other than a simplistic, unitary concept. Most of them agree that crowding deals with psychological, subjective states that typically have a stress component. Some researchers reason that such feelings are associated with perception of too little physical and psychological space (Stokols 1976); Others emphasize feeling of loss of control over interaction and undesirable or excess contact with other (Altman 1975; Desor 1972; Rappaport 1972); Others discuss disharmonious psychological and biological processes (Esser 1972).

The definition of crowding as a stress response to high density needs to take account of various types of high density. Furthermore, problem in defining the concept of crowding stems from the fact that high density may not always produce stress (Altman 1975; Freedman 1975;

Sundstrom 1975; Stokols 1972b). Instead, interpersonal or physical conditions that accompany or result from high density may mediate crowding (Rapaport 1975; Stokols 1972a). For example, stress in high density might stem from such aversive conditions as heat or noise, from overload of social stimulation, close interpersonal proximity or too many interaction patterns (Milgram 1970; Stokols 1976). 'Social Interference' or 'behavioural constraint' in high density may also produce stress (Saegert 1973; Stokols 1972a, 1972b, 1976). Based on these assumptions Stokols (1978) has presented an 'ecological model' which states that high density along with other situational conditions may lead to crowding, which in turn leads to certain coping strategies or negative behavioural effects to the extent that coping attempts are unsuccessful. This model was supported by the work of Kamal & Jain (1984) who have reported that high density

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first leads to feeling of crowding, which in turn gives rise to psychiatric symptomatology. Recently it has also been established that in high density if some one attributes his discomfort or feeling of crowding to the number of persons around him, only then he has the possibility of becoming mentally ill (Kamal et al. 1985; Kamal et al. 1986). However, no attempt has been made by Indian researchers to study whether the amount of feeling of crowding which is supposed to be cause of mental illness in high dense areas differs in various psychiatric disorders. Therefore, a prospective study was taken up to find out (1) whether the amount of feeling of crowding differs in schizophrenia, affective disorders, neuroses and normal, and (2) whether the severity of illness in these subjects has any relationship to the feeling of crowding experienced by them.

Material and Methods

Sample – On the basis of density criterion of census of Bikaner city high dense area was identified. In Bikaner city the areas where the population is 201 to 300 persons per acre are demarcated as high dense area. Then 150 psychiatric patients (initially screened by Key Informant Schedule, which is a standardized interview technique) diagnosed according to ICD-9 by a consultant psychiatrist, who were suffering from schizophrenia, affective disorders and neuroses and 50 normal subjects were selected. Equal number of patients were taken in each diagnostic category. All the subjects were matched in terms of socioeconomic status, number of family members, duration of residence and material facilities available in the house.

Measures – Following questionnaires were used:

1. Day to day feeling in high population density (Jain 1983).

This was developed to assess the social behaviour in dense conditions. It consists of 29-items. These items are in the form of simple Hindi sentences, which tap the experiences, feelings related to high dense living in the houses. The items are related to the following aspects of day-to-day living:

(1) feeling of crowding, (2) feeling of security-insecurity, (3) feeling towards neighbours, (4) social interaction, (5) affiliation, (6) discomfort due to physical conditions, (7) encroachment on privacy, (8) withdrawal from highly dense conditions.

In the questionnaire, validity index (Garrett 1966) for high density and low density groups was found out and only the items yielding a validity index of .20 or more were retained to avoid discrepancies in the two groups. Thus, the items of the questionnaire are validated against density. All the items are scored on a four point scale, where score of 4, represents the category of 'very much' and the score of 1, the category of 'least'. The sum of all the items is taken as the score of feeling of crowding.

2. Key Informant Schedule (Gahlot et al. 1983) :

It is a standardized interview technique to be administered to any adult member of the family. It has been designed in such a way that by interviewing adult member a wide range of mental disorders, if present, in any member of the family can be identified. The tool makes enquiry in the presence or absence of symptoms of following illnesses : (1) Schizophrenia, (2) Manic-depressive-psychoses, (3) Depression, (4) Paranoid Illness, (5) Anxiety Neuroses, (6) Hysteria/Epilepsy, (7) Alcoholism and drug abuse, (8) Obsessive-

compulsive-neuroses, (9) phobia, (10) organic brain syndrome, (11) suicidal behaviour, (12) psychiatric problems of childhood, like mental retardation.

3. Hindi Version of Goldberg's General Health Questionnaire (Gautam et al. 1987).

Originally GHQ was developed by Goldberg (1970). It is a 60-item self administered questionnaire concerning psychological distress or altered behaviour. For each item the respondent is asked to compare his recent state with his normal usual state and an item is only counted as being present if it is being experienced as more than usual. There are four categories for answering, namely, better than usual, same as usual, worse than usual and much worse than usual. The score for first two categories is one. The lowest score is zero and the highest is 60. It was translated in Hindi and Standardized by Gautam, Nijhawan and Kamal (1987). By validating the Hindi version against clinical interview, it was found to be a quite sensitive, reliable and valid instrument for screening psychiatric patients in O.P.D. settings as well as population surveys. The optimum threshold for case detection is 8 or more. Thus a person scoring 8 or more is 'probable case' and that scoring 7 or less is a 'probable normal'. The sensitivity of the test was found to be .95 for original English version. For Hindi version translation-re-translation reliability was 96%.

Procedure

After the selection of sample, each subject was contacted at his residence at his convenience and the questionnaire measuring feeling of crowding i.e. day-to-day feeling in high population density and General Health Questionnaire, were administered. Scoring was done, and suitable statistical techniques were applied.

Results

Table 1
Mean Values of scores obtained for feeling of crowding and severity of illness

Variable	Schizo- phrenia	Affect- disorders	Neuroses	Normal
Feeling of crowding	61.94	46.40	82.19	29.72
Severity of the illness	32.86	27.28	37.49	6.98

Table 2
Significance of difference in feeling of crowding in all the groups (Summary of one way ANOVA)

Source of Variation	df	Sum of Squares	Mean Squares (Variance)	F
Among means of groups	3	16385	3192	9.12*
Within groups	146	51433	349.88	
Total	149	67818		

* P < .01

Table 3
Correlation between scores of feeling of crowding and severity of illness

Groups	r	p
Schizophrenia	.395,	<.01
Affective disorders	.219	<.01
Neuroses	.426	<.01
Normal	.631	<.01

Discussion

Recent investigation of high population density and mental illness show that population density is not directly related to mental illness. Instead its effects are mediated by feeling of crowding which is a

psychological state of discomfort (Kamal & Jain 1984). It is also reported that even in high density, if someone attributes his discomfort to presence of many people around him, he is likely to have symptoms of mental illness (Kamal et al. 1985, 1986).

In the present study also feeling of crowding has been found to be an important factor to keep a person mentally healthy or ill. The findings of the study show that there exists a significant difference in the feeling of crowding in patients suffering from schizophrenia, affective disorder and neuroses as well as normal subjects. Further the scores of feeling of crowding and scores of severity of illness (as measured by General Health Questionnaire) were found to be significantly correlated in all the groups. Here the high scores of feeling of crowding were correlated with high scores of severity in patients suffering from schizophrenia, affective disorders and neuroses and the low scores of feeling of crowding were highly correlated with low scores obtained on general health questionnaire, which represent no illness in normal subjects. This significance of correlation coefficients indicate that severity of illness in psychiatric patients living in high dense area depends upon the amount of feeling of crowding they have. Therefore, it is suggested that a preventive effort is necessary at the level of planning population density in geographical areas. However, this being a cross-sectional study a cause and effect relationship could not be established. The validity of these findings can be tested by conducting a longitudinal study.

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