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Short communication

Healthy lifestyle behavior and personal control in people with schizophrenia with healthy controls: A cross-sectional comparative study

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ABSTRACT

The aim of the article was to compare persons with schizophrenia and healthy controls about their life style on their physical health and personal control. Evidences highlights that it helps to change risk behaviours associated with co morbid physical health problems. Subjects were recruited from adult mental health services in tertiary level psychiatric center.Comparisons between the groups were done by using the lifestyle and personal control questionnaire. Subjects were 86 with schizophrenia, 72 were healthy controls. Results showed significant difference. However, physical health was considered to be a less important priority in their personal life by persons with schizophrenia.

1. Introduction

Persons with diagnosis of mental illness mainly, schizophrenia experience less life expectancy from physical health problems than the general population. Schizophrenia have notably higher morbidity and mortality rates resulting from cardio vascular disease (CVD) and stroke (De Hert et al., 2011; Dikeç et al., 2018; Heald, 2010). Evidence also suggests that people with schizophrenia may have higher risk of death from co- morbid physical illness and metabolic side effects as compared with those suffering from non-psychotic mental illness including depression (Wu et al., 2019; Folsom et al., 2002). In persons with schizophrenia, the rate of metabolic syndrome is thought to be between 41% and 67% (John et al., 2009).

Many factors may contribute the physical health problems in persons with schizophrenia, such as inadequate physical inactivity, smoking, poor dietary habits, substance abuse and anti-psychotic medication (Murphy et al., 2019; Burghardt and Ellingrod, 2013). The instigation of lifestyle behavioral change is mainly dependent on successive factors such as an initial awareness of the harm caused to physical health by the particular behavior, and the successful actualization of this change in behavior (Davis et al., 2015).

Health locus of control refers to people's attribution of their own health to personal or environmental factors (Thakral et al., 2014). The health locus of control construct is assessed in three dimensions: internal locus of control, external locus of control or powerful others, and chance (Wallston and Wallston, 1978). People with a high internal locus of control feel more empowered to bring about behavioral change independently, whereas those whose locus of control is located in powerful others or in chance feel less empowered to bring about behavioral change related to physical health. Hence, the present study attempted to identify the healthy life style behaviors and personal control in people with schizophrenia to improve the physical health problems.

The primary objectives of the study were to explore and assess the healthy life style behaviors and personal control in people with schizophrenia and compare with healthy controls with respect to their overall physical health.

2. Materials & methods

The study was conducted in a tertiary level psychiatry center in South India. The convenience sampling method was adopted, and 158 subjects (86 persons with schizophrenia and 72 controls) were recruited. The healthy life style behaviors and personal control in both the groups were assessed. Patient dependents were selected as controls because other than disease condition almost all socioeconomic

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variables were considered as matching with study subjects.

2.1. Data collection

Ethical approval for this study was obtained from the Institute Ethics Committee, in tertiary level psychiary centre, (No.NIMH/DO/IEC(BEH.Sc.DIV)/2016. The patients and their dependents who attend outpatients services and schizophrenia clinic on a particular day were selected for this study. As per the study protocol, about 4 to 5 patients and 4 of their dependents were recruited in a week, hence the data collection was spread over for 6 months, from January to June 2018. The subjects were between the age group of 18–65 years and diagnosed as schizophrenia, based on ICD 10 criteria. Subjects were excluded if they were not cooperative, or had acute symptoms. In control group, subjects between the age group of 18–65 yrs and no psychiatric disorders were selected. Confidentiality and anonymity was maintained. Those who agreed to participate were then received brief information about the study. Information was also given on how to complete the questionnaire. Informed consent was obtained from the subjects. Further, the questionnaires were distributed, the returned questionnaires were checked for completeness before including them for data entry. Out of 169 questionnaires, 11 were not included as it was not complete, 158 completed questionnaire, with a response rate of 93.49%. were included for the analysis.

2.2. Study instruments

The sociodemographic proforma and the healthy life style and personal control questionnaire were used to collect data. The healthy lifestyle questionnaire had 26 positively stated items on a Likert-type scale (1 = Never, 2 = Sometimes, 3 = Often and 4 = Always). It measured the personal lifestyle practices and health choices. The scale was designed to reflect daily activities in six dimensions: Dietary Healthy Choices, Dietary Harm Avoidance, Daily Routine, Organized Physical Exercise, and Social and Mental Balance. There are 12 items concerning diet, 8 items on daily time management, 2 items on organized physical exercise and 4 items on practices of social support and positive thinking which was developed by Darviri et al., 2014. The total score is calculated as the sum of scores for each item. Higher scores indicate appropriate and better physical health behavior, and proper personal control. The internal consistency of the scale was Cronbach's alpha of 0.75. The questionnaire was translated and content validity index was obtained from a panel of 6 members from psychiatry and nursing discipline.

2.3. Data analysis

Data were coded and analyzed using the Statistical Package for Social Sciences, Version 18.0. Descriptive and inferential statistics were used to analyze the physical health behaviors and personal control. Statistical significance was established at the level of $p < 0.05$.

3. Results

The demographic variables of both the groups (Table 1).

The results shows that the schizophrenia group have body weight of 66.63 kg (mean) with BMI of 25.0–29.9(overweight) than controls.

The comparison of lifestyle behavior and personal control in persons with schizophrenia and healthy controls are presented in Table 2.

The comparison between BMI scores with subscales in schizophrenia and control group showed significant differences ($p < 0.05$) between two groups in their lifestyle behavior and personal control (Table 3).

Table 1
Demographic variables associated with schizophrenia& controls n = 158.

Variable	Schizophrenia Group (N = 86) Frequency,%	Control Group (N = 72) Frequency,%	χ^2/t value	p value
Age(Mean ± SD)	40.93 ± 11.63	40.75 ± 10.75	0.33	0.565
Sex				
• Male	31(36%)	32(44.4%)	6.803	0.033*
• Female	55(64%)	40(55.6%)		
Religion				
• Hindu	50(58.1%)	38(52.8%)	5.578	0.061
• Christian	36(41.9%)	34(47.2%)		
Education				
• No education	37(43.0%)	31(43.1%)	8.490	0.037*
• School level	25(29.1%)	33(45.8%)		
• Graduate &above	24(27.9%)	08(11.2%)		
Leisure activities				
• Working	37(43.0)	41(56.9%)		
• Sports	16(18.6)	12(16.7%)		
• Social activities	13(15.1)	08(11.1%)	3.366	0.339
• Others(watching TV, reading books)	20(23.3)	11(15.3%)		
Body Weight(Kg) Mean ± SD	66.63 ± 10.53	62.72 ± 7.39	2.641	0.007

$p < 0.05$ level.

3.1. Personal control

Persons with schizophrenia compared to control group had statistically significant differences on the personal control aspects of their lifestyle behavior. In persons with schizophrenia, their lifestyle behaviors are mainly controlled by powerful others or their family members as highlighted in scale mean scores of the individuals in two groups.

4. Discussion

Healthy lifestyle and personal control behaviors may be of importance in persons with schizophrenia. In the present study, however, we found significant differences in healthy lifestyle behavior between two groups. People with schizophrenia generally may not give importance to their physical health as one of the main priorities in their life. On the other hand, due to the chronic nature of their mental illness, they may reasonably reserve a greater amount of their energy to attempt to optimize their mental health. Further, the persons with schizophrenia may perceive more burden imposed on their quality of life because of their mental health problems. In contrast, more concentration is demonstrated to physical illness by individuals without mental illness in our study. Similar finding were identified as lower than expected levels of awareness about physical health by this group of individuals (Buhagiar et al., 2011; Thakral et al., 2014). Numerous studies postulate that severe mental illnesses mainly schizophrenia itself may be a risk factor for coronary heart diseases, stroke and diabetes as compared to general population (Dayabandara et al., 2017; Dikeç et al., 2018; Gurusamy et al., 2018).

In the present study, the overall mean score of all sub scales of healthy lifestyle related behavior was found to be significantly differ from both the groups. It is mainly related to the persons with schizophrenia who don't have power to control the behavior due to the presence of mental illness and the control is with their health care providers or family care givers. This findings show that poor personal control should be linked to unfavorable outcomes related to physical health. This is in line with other studies that reports, the persons with schizophrenia tend to have external health locus of control (Holmberg and Kane, 1999; Komduur et al., 2009; Thakral et al., 2014).

Persons who suffer with schizophrenia are unaware of their increased physical health risks. Efforts and strategies should be planned in order to increase the knowledge related to these risks and

Table 2
Comparison of lifestyle behavior and personal control between schizophrenia with healthy controls.

Healthy lifestyle behavior(subscales)	Schizophrenia (N = 86)	Controls (N = 72)	t -value	Sig ($p < 0.05$)
Daily Routine	Mean ± SD		3.349	0.001*
	19.19 ± 4.96	21.62 ± 3.51		
Dietary Harm Avoidance	9.98 ± 2.54	10.79 ± 2.23	2.086	0.039*
Dietary Healthy Choices	13.81 ± 3.71	15.51 ± 2.37	3.482	0.001*
Organised Physical Behaviour	3.31 ± 1.42	4.79 ± 1.06	5.499	0.001*
Social& emotional Balance	10.72 ± 2.70	12.86 ± 2.06	7.273	0.001*
Total	57.01 ± 15.33	65.56 ± 11.23	6.207	0.001*

SD- Standard Deviation.

Table 3
Comparison between the BMI scores in schizophrenia and control group.

Domain/ subscale	BMI	Schizophrenia N = 86 (Mean ± SD)	F-value	p-value	Control N = 72 (Mean ± SD)	F- value	p- value
Daily Routine	20-24.9	15.03 ± 4.13	0.18	0.67	15.93 ± 2.23	4.46	0.03*
	> 25	13.25 ± 3.40			14.60 ± 2.44		
Dietary Harm Avoidance	20-24.9	10.59 ± 2.35	5.32	0.02	10.46 ± 1.86	4.02	0.04*
	> 25	9.71 ± 2.60			11.47 ± 2.81		
Dietary Healthy Choices	20-24.9	17.74 ± 5.28	1.513	0.22	21.53 ± 3.57	14.97	0.001*
	> 25	19.86 ± 4.69			21.82 ± 3.47		
Organised Physical Behaviour	20-24.9	3.55 ± 1.67	1.138	0.28	4.75 ± 1.01	4.93	0.001*
	> 25	3.20 ± 1.29			4.86 ± 1.17		
Social& emotional Balance	20-24.9	9.88 ± 3.08	8.216	0.001	13.22 ± 2.25	27.76	0.001*
	> 25	11.10 ± 2.45			12.08 ± 1.31		

($p < 0.05$,*- sig).

subsequently improve the health monitoring activities (Wu et al., 2019). Hence, all these findings therefore emphasizes the importance of implementing early behavioural and lifestyle modification interventions aimed at improving physical health outcomes for this group. Evidence from studies amongst people with schizophrenia also suggests that these interventions can indeed be effective, for instance in reducing antipsychotic- induced weight gain (Gurusamy et al., 2018; Wu et al., 2019).

Overall, this study provided new empirical data on healthy lifestyle and personal control behavior among persons with schizophrenia with healthy controls. The findings emphasize the network of possible influencing factors affecting healthy life style related behavior, and suggest the need for life style behavior modification.

5. Limitations

We acknowledge some limitations of our study. The present study was cross-sectional study. However, the study is adequate for establishing the magnitude of the problem. The persons with schizophrenia and controls were recruited from outpatient settings of a tertiary care psychiatric institute in south India. The questionnaire was distributed by the post graduate students who were not involved in this study. As the study instrument was self administered, there is no possibility for interviewer bias. However, there may be chances of subject bias. Notwithstanding these limitations, the present study is the first of its kind in India to throw light on healthy lifestyle behavior and personal control among persons with schizophrenia and controls.

6. Conclusion

Person with schizophrenia may suffer with increased physical health issues compared with the healthy controls. Results showed that persons with schizophrenia are likely to give less concentration to their lifestyle and physical health needs. They appear to display greater external health locus of control mainly on powerful others. It places the mental healthcare professionals in a very favorable position to exert their possible influence by means of health promotional activities and active therapeutic intervention.

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Declaration of Competing Interest

None.

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