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A Study of Personality Profiles of Marijuana Users

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Abstract
This study was carried out to assess the personality changes of marijuana users and to examine whether marijuana users are prone to psychotic or neurotic features. Purposive sampling method was used for collecting the data. 16 PF and E.P.Q.-R were administered for assessing the personality changes and to detect the development of psychotic and neurotic features for both the groups. The mental condition of the normal individual was worked out by using the General Health Questionnaire 12 items. All the subjects were male because female marijuana users were not available during study period. The study shows that there is difference between the two groups by the primary factors on factor E (Humble vs. Assertive) and M (Practical vs. Imaginative). But there is no difference in Global factors between the two groups. On factor E (Humble vs. Assertive) user tend to accommodate others wishes, and are cooperative and agreeable, willing to set aside their own wishes and feelings. On factor M (Practical vs. Imaginative) users are more oriented to abstract ideas than the external facts practicalities. Being focused on thinking, imagination and fantasy, high scorers generate many ideas and theories and often creative. Extreme scorers can be so absorbed in thought that they can be absentminded and impractical. Highest percentage in extraversion for the control group and highest percentage in neurotic for the case group were found in assessment of three dimensions-psychotic, extraversion and neurotic according to E.P.Q.-R. Extraversion as opposed to introversion, refers to the outgoing, uninhibited, sociable proclivities of a person whereas, Neuroticism refers to the general emotional liability of a person, his emotional over-responsiveness and his liability to neurotic breakdown under stress. Severe and prolong case of neuroticism may lead to the development of psychotic illness in the later stage of life.
Keywords: *Marijuana, 16 PF, E.P.Q-R, GHQ.*

Introduction
The word Personality first appeared in English in the 14th century, it meant the quality of being a person, as distinct from an inanimate thing. 'Personality' referred to the capacities such as consciousness and rational thought that were believed to give humans a special place in creation[1]. Personality refers only to psychological differences between people, differences having to do with thought, emotion, motivation and behaviour[2].
Cannabis, known as marijuana or ganja has been

used as an agent for achieving euphoria since ancient times; it was described in a Chinese medical compendium traditionally considered to date from 2737 BC[3]. Cannabis and Marijuana are the two terms used interchangeably to refer to the world's most common illicit substance. Cannabis is the abbreviated name for the hemp plant CANNABIS SATIVA[4].

The most potent form of Cannabis comes from the flowering tops of the plants or from the dried, black-brown resinous exudates from the leaf, which is referred to as hashish or hash[5]. When marijuana is smoked, its active ingredient, THC, travels throughout the body including the brain to produce various effects[6]. Cannabis use is a risk factor for Schizophrenia[8]. High novelty seeking is characteristic of ecstasy consumers[9]. Earlier studies suggest an association between suicidal ideation, depression symptoms and cannabis use in adolescents[10]. A review research showed that the effects of cannabis on humans can be divided into two broad categories. Physiological classification will include cardio pulmonary system Teratogenicity and central nervous system. The psychological, on the other hand, will discuss the relationship of cannabis use to social adjustment, driving behaviour, toxic psychoses and Schizophrenia[11]

Prevalence and Recent Trends

Based on the 2006 National Survey on Drug Use and Health[5], among Americans aged 12 and older, 14.8 million were found to be current users of marijuana and 4.2 million Americans was classified with dependency or abuse of marijuana. Addiction is a real threat. Another 2006 report found that 16.1 % of drug treatment admissions were for marijuana as the primary drug of abuse. This compares to 6 % in 1992. According[12], there is a 5 % lifetime rate of cannabis abuse or dependence, but this figure may be too low according to NSDUH.

Materials and Methods

The present study has been carried out in the Department of Psychiatry, Jawaharlal Nehru Institute of Medical Sciences (JNIMS), Imphal East. To determine the personality changes of marijuana users and to examine whether marijuana users are prone to psychotic or neurotic features Two groups of sample consisting of 60 subjects ages ranged of 18 to 40 years are selected for the proposed study. The entire 30 normal individual were chosen randomly from Assembly Constituency, Imphal, for the control group. Another 30 case group (marijuana user), were selected from Patients diagnosed as having substance abuse (cannabis) at Psychiatry Department, JNIMS, Imphal which has a history of substance used (cannabis) for at least 2 years. All the study subjects are male as women subjects are hard to encounter. Purposive sampling method is used for collecting the data.

Inclusion Criteria

1. Males within the age group of 18 to 40 years.
2. Patients diagnosed as having substance abuse (cannabis) attending the Department of Psychiatry, JNIMS, Imphal East.
3. History of substance use (cannabis) for at least 2 years.

Exclusion Criteria

1. Males above the age of 40 years and below the age of 18 years are excluded.
2. History of substance use (cannabis) less than 2 years.
3. History of head injury and having severe mental disorders.

Assessment Tools

1. General Health Questionnaire (GHQ)[13]
2. 16 PF Questionnaires[14]
3. Eysenck Personality Questionnaire Revised[15]

Procedure

Purposive sampling method is used for collecting the data. 16[14] PF and E.P.Q.-R[15] are administered for assessing the personality changes and to detect the development of psychotic and neurotic features for both the groups. The mental condition of the normal individual is worked out by using the General Health Questionnaire[13]12 items.

Statistical Analysis

Statistical package for the social sciences (SPSS) 10.0 Software package was used for statistical analysis. The group difference was analyzed using independent sample 'f' test, a generalized form of 't' test. Chi-Square (χ^2) was used to test the significance of three dimensions of E.P.Q.-R[15] between the control and case groups.

Results

The study sample size consists of 60 subjects, 30 for control group (normal group) and 30 for case group (marijuana users) in the age ranged from 18 to 40 years. All the study subjects are male. There are four sub-sections in this study, *viz.*

I. Distribution of study subject according to 16 PF[14] on primary factors.

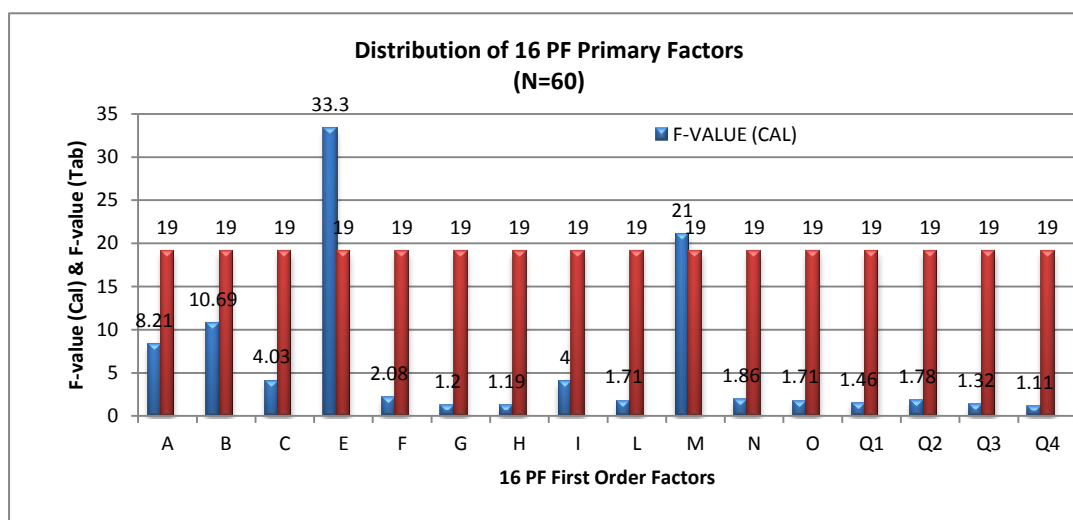II. Assessment of three dimensions - psychotic, extraversion and neurotic according to E.P.Q.-R[15].

Since χ^2 5; 0.05 (cal) > χ^2 5; 0.05 (tab). Therefore, the onset ages (of Cannabis used) are not uniform over the ages. Hence, it is further found that the onset age of Cannabis users is mainly on (16-20) years of age group according to our data. Thus one may conclude that the age group (16-20) years is one of risk age groups during which adolescent may start consuming marijuana.

I. Distribution of study subject according to 16 PF (Cattell RB, 1970) Primary factors

Table 1

Primary Factors	Variance (1)	Variance (2)	F-Value (Cal)	F-Value (Tab)	Remarks
A	19	156	8.21	19.0	IS
B	13	139	10.69	19.0	IS
C	37	151	4.03	19.0	IS
E	3	100	33.30	19.0	S
F	52	25	2.08	19.0	IS
G	109	91	1.20	19.0	IS
H	148	124	1.19	19.0	IS
I	52	13	4.00	19.0	IS
L	49	84	1.71	19.0	IS
M	4	84	21.00	19.0	S
N	91	49	1.86	19.0	IS
O	108	63	1.71	19.0	IS
Q1	52	76	1.46	19.0	IS
Q2	36	64	1.78	19.0	IS
Q3	84	111	1.32	19.0	IS
Q4	31	28	1.11	19.0	IS

*IS: Insignificant; S: Significant.

Distribution of 16 PF Primary Factors (N=60)

F-value (Cal) = Var (1)/df /Var (2)/df between the two groups as well as its F-value (Tab) and remark, on the first order factors of the 16 PF questionnaire. This result demonstrated that the

normal individual and marijuana user group differed significantly on factors E & M. On the contrary, there is no significant difference on F-

value (Cal) & F-value (Tab) between the two groups in the factors viz. A, B, C, F, G, H, I, L, N, O, Q1,Q2,Q3,Q4

II. Assessment of three dimension-psychotic, extraversion and neurotic according to Eysenck personality questionnaire (E.P.Q.-R).

Table 2

SlNo.	Dimension	Control Group	Percentage	Case Group	Percentage
1	Psychotic	0	0.0	10	33.3
2	Extraversion	21	70.0	5	16.6
3	Neurotic	9	30.0	15	50.0
4	Total	30		30	

χ^2 2; 0.05 (cal) = 0.355769; χ^2 2; 0.05 (tab) = 5.991   *Insignificant

Highest percentage is extraversion for the control group and highest percentage in neurotic for the case group was found in assessment of three dimension-psychotic, extraversion and neurotic according to E.P.Q.-R[15].

Discussion

The present study was a modest attempt to determine the personality changes of marijuana users and to examine whether marijuana user are more prone to develop psychotic or neurotic features than the normal individual by using 16 PF[14] and E.P.Q.-R[15]. The mental condition of the normal individual was worked out by using the GHQ[13]; 28 items. Socio-demographic profile reveals no difference between the two groups by factors like age, education, income and occupation since, the calculated value of χ^2 is insignificant. The onset ages (of Cannabis used) are not uniform over the ages. Cannabis users are mainly in the age group of (16-20) years. The result shows that age group (16-20) years is the risk age groups during which adolescent may start consuming marijuana. According to 16 personality factor, the two groups differed significantly on 2 out of 16 first order factors, while the two groups do not differed significantly on second order factors. On factor E (Humble vs. Assertive), F-value (Cal) is 33.30 and F-value (Tab) is 19.0. There is significant difference between the two groups. The user tend to accommodate others wishes, and are cooperative and agreeable, willing to set aside their own wishes and feelings.

On factor M (Practical vs. Imaginative), F- value (Cal) is 21.0 and F-value (Tab) is 19.0. There is significant difference between the two groups. The users are more oriented to abstract ideas than the external facts practicalities. Being focused on thinking, imagination and fantasy, high scorers generate many ideas and theories and often creative. Extreme scorers can be so absorbed in thought that they can be absentminded and impractical. On E.P.Q.-R[15], highest percentage in extraversion for the control group and highest percentage in neurotic for the case group were found in assessment of three dimensions-psychotic, extraversion and neurotic.

Extraversion as opposed to introversion, refers to the outgoing, uninhibited, sociable proclivities of a person whereas, Neuroticism refers to the general emotional liability of a person, his emotional over -responsiveness and his liability to neurotic breakdown under stress. Severe and prolong case of neuroticism may lead to the development of psychotic illness in the later stage of life[16].

Conclusion:

These findings will help in understanding the personality of the marijuana users in dealing with proper treatment strategies and better management programme. But there are some limitations in this study small sample size, short duration and selected tools were used. Thus the findings are unlikely to generalize and therefore an in – depth study with adequate sample size, adequate tools and follow-up study is essential.

Hence, study in bigger population size is recommended.

References

1. R. Williams. Keywords: A vocabulary of culture and society 1976; London: Fontana

2. N. Haslam. Introduction to Personality and Intelligence.2007 Sage Publications Ltd.1-12.

3. M.Tauwn. The religions and medicinal uses of cannabis in China, India and Tibet: J Psychoactive Drugs1981; 13(1):23- 4

4. R. Mechoulam. "Isolation, structure and partial synthesis of an active constituent of hashish" (PDF). Journal of the American Chemical Society 1964 86 (8): 16(Bolla, et al, 2002).–1647.

5. H.I. Kaplan, M.D. and B. J. Sadock, M.D. Cannabis related Disorders: Benjamin James Sadock and Virginia Alcott Sadock, editors; Synopsis of psychiatry.10th Ed. New Delhi: Wolters Kluwer Pvt Ltd; 2007. p. 417-21.

6. H.I. Kaplan, M.D., and B. J. Sadock, M.D. Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry. 8th edition. Baltimore, MD: Lippincott Williams and Wilkins 1998.

7. J.E. Joy, S. J. Jr, Watson and J.A. Jr, Benson. Marijuana and medicine: assessing the science base" Division of Neuroscience and behavioral health, Institute of Medicine1999; 39-52.

8. U.T. Sheldon. Review shows that cannabis use is a risk factor for schizophrenia. BMJ 2003; 327:1070.

9. G. Dughiero , F Schifano ,G Forza , Personality dimensions and psychopathological profiles of ecstasy users. Hum Psychopharmacol 2001; 16(8):635- 9.

10. H. Chabrol, J.D Mabila , E. Chauchard , Influence of Cannabis use on suicidal ideations among 491 high-school students. Encephale 2008; 34(3):270-73.

11. S. Jr.William. The Marijuana a motivational Syndrome: A review of the research by Slikker 2008.

12. American Psychiatric Association, Diagnostic and statistical manual of mental disorders. 4thEd. New Delhi: Jaypee; 1995.

13. D.P Goldberg, Manual of GHQ-28: Psychological Medicine 1997; 27: 191- 7

14. R.B Cattell, H.W Eher and Tatswake, Institute of Personality and Ability testing: Handbook for the 16 PF Questionnaire (16PF) 1970.

15. Eysenck and Eysenck, Manual of Eysenck's Personality Questionnaire-(EPQ-R): 'Psychoticism: A Dimension of Personality'1975.

16. H.M. Moore Theresa, Z. Stanley, L.H. Anne et al. Cannabis use and risk of psychotic or affective mental health outcomes: a systematic review. The Lancet 2008; 370(9584):319-28.