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Psychological Correlates of Opium-Dependence in Rural Community

Sushila Pareek
University of Rajasthan, Jaipur

Role of intelligence, subjective well-being, purpose in life, personality and locus of control in opium-dependents and non-dependents in a rural community was studied. A sample of 100 opium-dependents and 100 non-dependents was drawn from the village population of the Jodhpur district in Western Rajasthan. They were administered tests of Subjective Well-being, Purpose in Life, Karolinska Scale of Personality, Standard Progressive Matrices and Social Reaction Inventory. To identify the nature and minimum number of psychological components necessary to describe the opium dependence, factor analysis following principal component solution with a varimax rotation was performed both for opium-dependents and non-dependents. Finally, 7 factors for the opium-dependent group and 9 factors for non-dependent group were extracted.

Keywords: Opium-dependence, Intelligence, Subjective well-being, Personality

Drug dependence has turned into the shape of uncontrollable and unmanageable problem for medical professionals and social scientists. It is widely believed now that no country or society is devoid of drug dependence. As a matter of fact, it has afflicted all groups including old or young, rich or poor, literate or illiterate, urban or rural people alike because of pleasurable considerations or as a means of escaping from the realities of life.

Important factors responsible for this dreadful scenario of drug dependence may include: advertisement or communication media, incapable legal and police control measures, enhanced individual purchasing power, profitable business, unrestricted production, distribution and sale of drugs, weakened social controls, and transfer of intercultural practices and finally the valuable adjuncts of socio-cultural rituals (Arneja & Sen, 1990). Moreover, acceptance of drugs as a means of relieving pain and distress is an important contributory factor. According to the "World Drug Report" (2007) of the United Nations Office on Drugs and Crime, about 200 million people use drugs each year globally. Unsurprisingly ,the main problem drugs at the global level continue to be opiates, which account for the bulk of drug related treatment demand (62% and 58% respectively in 2005) in Asia and Europe (World Drug report,2007).

In country like India, where majority of the population is rural and belongs to low-socioeconomic status, illiteracy, ill-health, unhygienic environmental conditions, and insufficient living resources, prevalence of any physical or psychiatric problem is very serious. Report on drug abuse (2007) by the International Narcotics Control Board, United Nations reveals of drug abuse on the rise in India. Drugs commonly abused in India include more or less all types of drugs prevailing all over the world. More recently, National survey on extent, pattern and trends of drug abuse in India (2004) by United Nations Office on Drugs and Crime reported that alcohol, cannabis and opiates are the major substances of abuse in India, where

number of dependant users 'not in treatment' is significant. In this connection, Nathawat and Pareek (1997) specifically found that opium is one of the most important drugs of dependence to be discussed in Indian context.

In India, opium is cultivated and used in many of the states. In rural areas of Uttar Pradesh (Sethi & Trivedi, 1979), Punjab (Singh & Lala, 1978) and Rajasthan (Purohit, 1986; Purohit & Sharma, 1990), the prevalence of opium dependence has been reported as 0.7%, 12.5% and 12-12.5% respectively. In these regions, the behaviour of opium intake is considered socially sanctioned, accepted and desirable one, especially in rural Rajasthan. The reasons for this common social practice of offering opium on various occasions and routine consumption include medicinal remedy for physical ailments, means of recreation and enjoyment, stresses of farming and cultivation, need to enhance the working capacity and keep off fatigue and above all the poverty, which is closely related to the causes of opium use.

Numerous clinical studies and research reports suggest that depression is a central issue in opiate addiction (Woody *et al*., 1983). Further depression focused primarily around issues of self-criticism, guilt and shame has an important role in opiate addiction (Blatt *et al*., 1984). Mattoo *et al*. (2001) suggested that opiate addicts have greater difficulties in self regulatory functioning. In addition to opiate addiction, these addicts were also diagnosed for major depressive disorder, alcoholism, anti-social personality, chronic minor mood disorders, anxiety disorders, and border line personality disorder (Rounsaviille *et al*., 1982). Moreover Khantzian (1974) described that pseudo culture of the addict also plays a part in filling his social vacuum and providing an alternative to the establishment of meaningful attachments to other people.

Indian observation on drug dependence in general centered around the issues of mental illness, euphoric effect, avoidance of boredom and fatigue, enhancement of the working capacity, modernization, form of risk taking and exploratory behaviour, fall in traditional controls, hard work involved in agriculture, etc. (Dube and Handa, 1971; Sethi *et al*., 1975; Mohan *et al*., 1978). Indian studies on opium dependence in particular suggested the similar trend of causative factors (Chopra & Chopra, 1965). Satiza and others (1991) found childhood traumatic events and social factors as important antecedents of opiate addiction. In addition, in opium addicts a significant prolongation of visual and auditory reaction time was found (Preet Kamal *et al*., 1998). Basu and Others (1995) explained the sensation seeking alienation combination model of opiate addiction. According to Arya et al. (2007) subjects with opioid dependence have a longer duration of illness with very high ratios of psychiatric co- morbidity warranting a comprehensive treatment approach.

The above mentioned correlates of drug dependence in general and opium-dependence in particular are important issues, yet the presence of large number of non-vulnerable people living in the same socio-cultural milieu can not be ignored. The detailed findings of the vast number of Indian studies make it clear that drug dependence in India has received attention mainly from the subjects from big towns and industrialized areas. Surprisingly enough, studies on drug dependence have been over looked from rural areas, where the homogeneous subjects in terms of occupation (agriculture / farming) and social cultural milieu make the psychological explanations of drug dependence more plausible. However, recently Chavan et al. (2007) conducted a community survey on prevalence of alcohol and drug dependence in rural and slum population.

Further, the homogeneous sample in terms of socio-economic, demographic and literacy variables attributes the causality of drug dependence to the personality constellation and individual characteristics. In this relation Grekin and others (2006) revealed that anti-sociality and certain core personality traits predicted multiple types of substance pathology. Hypothesized with the role of personality and individual variables as the possible causes of opium dependence, the present study focused at rationalizing the effect of individual differences in opium-dependence in a homogeneous rural sample.

To understand such a behavior, the role of some psychological correlates appeared to be a reasonable explanation. In this connection, the investigators explored the relationship of intelligence, subjective well-being, purpose in life, locus of control and personality variables with the opium-dependence and non-dependence of the rural population.

Method

Sample:

A purposive sample matched on socio-economic status of 100 opium-dependent and 100 non-dependent persons (all males, age ranging from 21-50 yrs.) was drawn from the village population of the Jodhpur district of Rajasthan. It was difficult for the researchers to go door to door to the village houses and to diagnose the opium-dependent and non-dependent persons, so the sample of four homogeneous villages namely *Mandore, Manakloa, Aaunsia* and *Mathania* (distances of the villages were also not far off from the centre) was drawn from the Opium-De-addiction Treatment, Training and Research Trust, *Manaklao*, situated in the *Manaklao* village territory, Jodhpur, Rajasthan. The criteria of opium-dependence were based on the diagnosis by psychiatric consultant who was also attending such cases at the centre. Homogeneous cases in terms of amount and duration of opium intake etc. were selected. The non-opium dependent or normal controls were the informants, relatives, and other villagers drawn from the same villages from where opium-dependents hailed.

Tools:

Socio-Economic Status Scale–Rural (SESS-R) by Pareek and Trivedi (1964); Standard Progressive Matrices (SPM) by Raven *et al*. (1985); Subjective Well-Being Inventory (SWBI) by Nagpal and Sell (1985); Purpose In Life (PIL) by Crumbaugh and Maholick (1964); Karolinska Scale of Personality (KSP) by Schalling (1978); and Social Reaction Inventory (SRI) by Rotter (1966). Of the above tests, two tests namely SWBI and KSP were adapted in Hindi and their reliability and suitability was established in a pilot study. These tests were administered individually to all the subjects of both the groups in two sessions. In first session, SESS-R, SWBI, PIL and SRI were administered and in the second session, SPM and KSP had been administered. Data were processed and analyzed through computer. To identify the nature and minimum number of psychological components necessary to describe the opium dependence, factor analysis following principal component solution (Hotteling, 1933) with a varimax rotation (Kaiser, 1958) was performed for both the groups. The data fed for factor analysis consisted for the data obtained on all the 19 variables namely SRI, SPM, SWBI, PIL and 15 measures of KSP viz., Somatic Anxiety (SA), Psychic Anxiety (PA), Muscular Tension (MT), Detachment (De), Impulsiveness (I), Monotony Avoidance (M), Psychasthenia (Ps), Social Desirability (SD), Socialization (So), Indirect Aggression (IA), Verbal Aggression (VA), Irritability (Irr), Suspicion (S), Guilt (G), Inhibition of Aggression (InhAg). Following the procedure of principal component, 7 factors were extracted for the opium-dependent group and 9 factors were derived for the non-dependent group. To retain different factors from the

variables taken in this study, the cutting point of eigen value was taken as 1.0 and above. While discussing these factors, only those variables with loadings above ±0.40 were considered, as these are significant at 0.01 levels.

The discussion of results has been based on the varimax rotated factor matrix as the correlation matrix and the un-rotated factor matrix were involved in the process of obtaining the rotated varimax factor matrix in accordance with the criterion of Kaiser's varimax solution.

Results

Factor structures of cognitive and non-cognitive measures in opium-dependent and non-dependent groups are presented in tables below:

A. Opium-Dependent Group (OD)

Seven factors were derived for this group that accounted for 68.2% of the total variance.

Factor 1 Social-Hostility: The first factor accounted for 25.1% of the total variance and has got significant loadings of the variables G, S, So, SWB, IA, InhAg.

Factor 2 Inactivated-Anxiety: This factor accounted for 11.2% of the total variance with loading of the variables SA, Ps, De, MT, PA.

Factor 3 Socio-Excitation: The third factor accounted for 7.7% of the total variance with loading on M, I, SD.

Factor 4 Cognitive-Disability: This factor accounted for 7.0% of the total variance with loading on SPM only.

Factor 5 Social-Irritation: Factor accounted for 5.9% of the total variance with loading on Irr, LOC and SD.

Table 1. Opium-Dependent (OD) Group. Rotated factor matrix showing items with high loadings (above ± 0.40)

Factor -1		Factor-2		Factor-3		Factor-4		Factor-5		Factor-6		Factor-7	
V*	FL**	V	FL	V	FL	V	FL	V	FL	V	FL	V	FL
G	.795	SA	.803	M	.813	SPM	.850	Irr	.845	VA	.879	PIL	.864
S	.712	Ps	.770	I	.632			LOC	.521	I	.477		
So	.692	De	.745	SD	.602			SD	.414				
SWB	.602	MT	.695										
IA	.525	PA	.609										
InhAg	.464												

* V = Variable ** FL = Factor Loadings

Table 2. NON Opium-Dependent (NOD) Group. Rotated factor matrix showing items with high loadings (above ± 0.40)

Factor-1		Factor-2		Factor-3		Factor-4		Factor-5		Factor-6		Factor-7		Factor-8		Factor-9	
V*	FL**	V	FL	V	FL	V	FL	V	FL	V	FL	V	FL	V	FL	V	FL
SD	.725	LOC	.760	Inh Ag	.833	VA	.822	SPM	.790	De	.707	Irr	.794	SA	.853	S	.891
PA	.595	Ps	.631	I	.707	MT	.509	G	.412	PIL	.645	SWB	.590	SQ	.428		
IA	.410	IA	.495			M	.455			SWB	.424						
		SQ	.428			IA	.404										

* V = Variable ** FL = Factor Loadings

Factor 6 Impulsive-Verbality: The factor accounted for 5.7% of the total variance with loading on VA and I.

Factor 7 Inadequacy of Purpose: The factor is loaded only on purpose in life.

B. Non-Opium-Dependent Group (NOD)

Nine factors were derived for this group that accounted for 67.0% of the total variance.

Factor 1 Social-Concern: With 10.3% of the total variance, the first factor has loading on SD, PA, IA.

Factor 2 Self-Strength: With 9.9% of the total variance, this factor is loaded on LOC, Ps, IA, and So.

Factor 3 Activated De-aggression: Factor 3 accounted for 8.6% of the total variance with loading on I and InhAg.

Factor 4 Verbal-Harshness: With 7.7% of the total variance, the factor is loaded on VA, MT, M and IA.

Factor 5 Logical-Intelligence: The factor accounted for 7.2% of the total variance with loading on G and SPM.

Factor 6 Subjective-Contentment: With 6.5% of the total variance, this factor is loaded on the De, PIL and SWB.

Factor 7 Sensitiveness: This factor accounted for 5.8% of the total variance with loadings on Irr and SWB.

Factor 8 Bio-Social-Well being: With 5.7% of the total variance, this factor is loaded on SA and So.

Factor 9 Distrustfulness: This last factor with 5.4% of the total variance is loaded on S.

The nomenclature of all the factors is based on their respective inter correlations and mean scores. The Communalities of all the variables are found to be sufficiently high, ranging from 0.534 to 0.830, indicating their contribution in the factor structure of OD and NOD group.

Discussion

The significant findings emerged from this study is that the 7 factors were derived in opium-dependents that accounted for 68.2% of the total variance. On the other hand 9 factors were derived in non-opium dependent subjects that accounted for 67.0% of total variance. Factors derived in OD group were loaded with negative psychological attributes as against to positive psychological characteristics of normal. Interestingly enough, almost all these factors are highly loaded with negative personality constellations like guilt, aggression, anxiety proneness, impulsiveness, irritation and low intelligence. This distinct type of factor structure of opium-dependents predicts that the common presence of all these personality characteristics in such persons is of great relevance for their opium intake. When these factors are closely inspected, it can be inferred, that almost all of them were related to hostility, irritability, anxiety, impulsivity etc. On the other hand, the NOD group derived the 9 factors, loaded with comparatively healthier personality components. A normal person possessed with these attributes is prevented to go in for drug dependence in general and opium dependence in particular, though living in the same socio-cultural milieu. Thus, the non-opium dependents or 'normal' might be more affected by family, social norms and having subjective feeling of satisfaction regarding health, family etc. They are also having more self control and express their aggressive and hostile feelings in direct manner or verbal form.

All the characteristics of non-dependents put together make them devoid of opium intake. These findings are more or less similar in line with studies done in the past in the field of drug addiction in general and opium dependence in particular in Indian and Western setups. Results of the studies by Lal *et al*. (1991); Tondan *et al*. (1990); Krishnamurthy (1987); Ajwani (1985);

Gangrade and Gupta (1981); Khantzian (1974); Cohan *et al*. (1971); Shedler and Block (1990); Dohertz (1989); Mukhopadhyay *et al*. (1996); Bhargava and Bhargava (1999) are in line with the findings of the present study. In this connection, in a study of drug abuse among students as related to personality variables Lather and Others (1997) found that drug abusers were higher on anxiety, depression, hysteria, manic tendencies, paranoia, schizophrenia and K (lie) factor.

Therefore, it can be concluded that opium-dependence is more linked with some sort of 'psychopathology', whereas non-opium dependence is by and large associated with healthier psychological attributes such as psychological well-being. Thus while sharing the same socio-cultural milieu opium-dependent group appeared altogether a distinct group from non-dependents. Whatsoever, Pal (2005) claims that prevention of substance abuse should be understood idiosyncratically taking into consideration of socio cultural concerns. Further Daniet et al. `s (2007) research results speak to the field`s need for assessment strategies to detect, and theoretical models to explain within person across-context variations in self efficacy for avoiding addictive behaviours.

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Sushila Pareek,PhD, Assistant Professor, Department of Psychology, University of Rajasthan, Jaipur