

Perceived Harmfulness of Substance Use: A Pilot Study

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ABSTRACT

Background: Harm ratings of substances help in understanding the perception toward substance use and formulating policies. Evidence of such harm ratings by substance users and their caregivers provides a clearer perspective of those who experience and observe such harm closely. **Materials and Methods:** Substance users and their caregivers were recruited from the Drug Addiction and Treatment Centre of PGIMER, Chandigarh. Sociodemographic details of the subjects were noted. The subjects were then asked to rate a list of psychoactive preparations according to the harms they thought the preparation caused. The list of substances was developed taking into consideration substance commonly encountered in the geographical area. The harm ratings were transformed on a scale of 0-100. **Results:** All subjects were males and majority of them were educated above 10th standard, were not employed and belonged to urban background. Most of them had taken psychoactive substances in their lifetimes but were currently abstinent. Most of the subjects endorsed intravenous drugs as the most harmful, followed by heroin. Beer and chewable tobacco considered the least harmful substances. Greater degree of education was associated with lower harm rankings for heroin, cannabis, dextropropoxyphene, and raw opium; while urban residence was associated with greater harm ratings for cannabis and raw opium. Differences in the harms were perceived for different preparations of the same active compound for alcohol and nicotine. **Conclusion:** Harm ratings of substances can be a useful guide while formulating policies and allocating resources. Need for further research extending this pilot study is emphasized.

Keywords: Alcohol, illicit, perceived harms, substances, substance users, tobacco

Introduction

Harms and detrimental effects due to psychoactive substances are among the most important reasons why they are considered as a “disorder.” Consequently, a reference to harms due to substance use is incorporated in the definitions of substance dependence in the current nosological systems.⁽¹⁾ However, what constitutes harm due to substance use remains a matter of contention. It is not clear whether only physical and physiological disturbances should be considered as harm or does

harm extend to psychological and social domains.^(2,3) Quantification of harms has been attempted to resolve such quandaries. Measurements of harms help not only with the comparison of one substance over the other, but to make decisions regarding degree of clinical interventions and urgency to make legislations for curbing substance use. A quantified estimate can help in drawing priorities while implementing measures to reduce substance use.

Literature on harm estimation has quite often relied on expert opinion of those who treat substance use disorders.⁽⁴⁻⁶⁾ Fewer studies have explored the perception of harm toward substances in the community or substance users themselves.^(2,7-9) Perception of substance users and the community in general calls into attention the discrepancies from the actual harms and points toward need for educative measures. Such studies from the developing countries are virtually nonexistent.

Access this article online	
Quick Response Code:	Website: www.ijcm.org.in
	DOI: 10.4103/0970-0218.126350

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Received: 30-03-13, Accepted: 27-06-13

This study was thus planned to assess harm ratings of different substances in population attending a de-addiction center.

Materials and Methods

The study was conducted at the Drug De-addiction and Treatment Centre (DDTC) of PGIMER, Chandigarh, India. The DDTC is tertiary care center, which provides inpatient as well as outpatient services for the treatment of substance use disorders. The present study recruited the outpatients of DDTC and their caregivers through purposive sampling. Inclusion criteria included age of the participant more than 18 years and ability to read or write Hindi or English. Those subjects who had severe medical or psychiatric illnesses which precluded cooperation during interview were excluded. Informed consent was obtained from the participants who met the inclusion and exclusion criteria. They were then asked to rate a list of substances according to the harmfulness of the substances perceived by them.

The alphabetical list of substances was drawn by consultation with experts in the field and comprised of 20 substances, commonly encountered in the deaddiction services. The list of the substances included the colloquial names of the substances (e.g., "afeem" for raw opium) for easy understandability.

The participants were asked to grade the perceived harmfulness of the substances on a scale of 0-100, with 100 being the highest possible harmfulness. The participants rated the substances that they heard of and were free to not rate any particular substance if they were unsure of. The participants rated the substances on whatever perspective they considered "harm" and were not asked to differentiate physical, psychological, or social harms. The data collection lasted from May-June 2012, and the study had institutions ethics committee approval. No alteration in the usual treatment accrued with the participation in the study.

Analysis was conducted with SPSS version 17. A scalar rating was used instead of ordinal scale, as it makes intersubject and intersubstance comparison more robust. The harm ratings of each participant were transformed into 100-point scale. For each participant, the lowest harm rating with any substance was ascribed a score of 0 and the highest rating as 100. The ratings of other substances were adjusted in proportionate manner. Rating of each substance for an individual was done by the formula:

$$\frac{[\text{Rating for substance } x - \text{Minimum rating of the person}]}{[\text{Maximum rating of the person} - \text{Minimum rating of the person}]} \times 100$$

From this transformed ratings, average of ratings was computed for each of the substances. Average harm ratings of different substances were compared among themselves and with demographic variables using appropriate statistical tests.

Results

In this present study, 48 participants were enrolled. The demographic details of the participants are shown in Table 1. The mean age of the sample was 32.6 years (± 10.7 years) with a median of 29 years (range: 18-59 years). The transformed harm ratings are shown in Table 2. Not all the respondents endorsed

Table 1: Socio-demographic characteristics of the sample

Variable	N (%) of sample
Gender	
Male	48 (100%)
Education	
Up to X th grade	13 (27.1%)
Above X th	35 (72.9%)
Employment status	
Employed	19 (39.6%)
Not employed	29 (60.4%)
Residence status	
Urban	34 (70.8%)
Rural	14 (29.2%)
Ever taking psychoactive substances	
Yes	31 (64.6%)
No	17 (35.4%)
Currently taking psychoactive substances	
Yes	15 (31.2%)
No	33 (68.8%)

Table 2: Harm ratings

Substance type	Number of respondents	N (%) endorsed as most harmful substance	Average harm ratings
IVDU	47	37 (78.8%)	95.2
Heroin	46	35 (76.1%)	94.6
Cocaine	36	13 (36.2%)	84.4
Cannabis	47	15 (32%)	77.9
Capsule DPP	44	12 (27.3%)	75.5
Carisoprodol	27	9 (33.4%)	74.5
CCCS	45	9 (20%)	67.7
Hard liquor	48	8 (16.7%)	66.3
Volatile solvents	30	8 (26.7%)	63.1
Afeem (raw opium)	48	9 (18.8%)	62.8
Doda (poppy husk)	46	7 (15.3%)	59.4
Sedative hypnotics	45	6 (13.4%)	56.5
Cigarettes	48	10 (20.9%)	56.3
Zarda (chewable tobacco)	48	6 (12.5%)	32.5
Beer	48	1 (2.1%)	11.2

CCCS: Codeine-containing cough syrup, DPP: Dextropropoxyphene, IVDU: Intravenous drug use

harms for all the substances. The highest harm ratings were given for injecting drug use followed by that of heroin (chased or otherwise). Alcohol in the form of beer was given the lowest harm ratings.

The comparison of harm ratings across select variables was done using nonparametric (Mann-Whitney U) test because sample sizes were small in many of the groups and normality approximation was not met. The results showed that greater degree of education was associated with lower harm rankings for heroin, cannabis, dextropropoxyphene, and raw opium (Mann-Whitney U values 143, 85, 114, and 104.5, respectively, *P* values of 0.020, 0.002, 0.038, and 0.042 respectively). Urban dwellers considered cannabis and raw opium more harmful than those with rural residence (Mann-Whitney U = 122.5, 151.5; *P* values of 0.017 and 0.049, respectively). Beer use was considered less harmful by those who had never used substances (Mann-Whitney U = 183.5, *P* = 0.023). Poppy husk was considered to be significantly less harmful by those who were currently taking substances (Mann-Whitney U = 126.5, *P* = 0.013).

The harm ratings were compared between the substances with the same active compounds. Ratings of alcohol preparations were significantly different, with hard liquor being rated higher than beer (Mann-Whitney U = 180.5, *P* < 0.001). Among nicotine containing products, cigarettes were rated to have greater harm than chewable tobacco (Mann-Whitney U = 690.5, *P* = 0.001). Morphine containing substances of afeem and doda did not have significant differences in harm ratings (Mann-Whitney U = 1030, *P* = 0.574).

Discussion

The present study studied the harm ratings of substances according to substance users and their caregivers. The participants endorsed injectable drug use and heroin as the most harmful substances, which echo the findings from Spain, England, and Latin Americas, where illicit substances like cocaine and heroin are rated as more harmful than licit substances.⁽⁷⁻⁹⁾ However, some researchers assert that licit substances like alcohol may cause greater harm, as their use is widely prevalent and physical impairments caused are considerable.⁽⁵⁾ The high ratings given to some substances may reflect an opinion based upon hearsay about contraband substances, reflection of media portrayal of certain substances or actual experienced, and observed harm in others.

The finding that more educated participants rated some substances to be less harmful (heroin, cannabis, dextropropoxyphene, and raw opium) suggests that they might be more aware of the actual risks involved with these substances than mere portrayal. Lower harm

rating of cannabis and raw opium by rural residents may be attributed to these products being used for a long time and being easily available in the rural setting, less restrictive enforcement, and ethnographic acceptance.⁽¹⁰⁾ Beer being considered a less harmful substance, especially by nonusers of substances may suggest the usual cultural belief in the region or the actual knowledge of the substance users of the harms of beer.

This is perhaps the first study which tried to differentiate the perception with regards to different substances derived from the same active compound. Differences were encountered in the harm ratings for hard liquor and beer, as well as for smoked and smokeless forms of tobacco. The awareness of various substances and their harms had varied, and was especially low for some substances like carisoprodol and volatile solvents. This is also the first study from the region which has looked harm perception of substances from the standpoint of substance users and their caregivers which may help the decision makers for drawing up plans while allocating resources.

Attention must be drawn toward certain limitations of this study. The pilot study was based upon a small sample size of clinic attendees. The work can further be expanded to a larger size community population. The ratings of harm in this study represent what was perceived and does not necessarily reflect actual harm. The perceived harm may have been influenced by many factors. In this regard, it should be borne in mind that harm ratings given by experts are also based on educated guess on secondary information. The study also did not classify substances users according to the substances consumed. The study assessed a limited number of substances, and did not include country made liquor ("desi sharaab") as one of the substances. All possible colloquial terms could not be incorporated in the questionnaire, and only the common ones were used. These harm ratings reflect the perception in a particular geographic region and extrapolation to other areas and settings should be done with caution.

To conclude, this study focuses on harms perceived by deaddiction clinic attendees toward various substances. Injection drug use and heroin are considered as the most harmful forms of substances. Taking these harm ratings into consideration can help in drawing up resource allocation plans. This preliminary estimate provides a valuable starting point from where evidence base can further be extended.

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How to cite this article: Sarkar S, Balachander S, Basu D. Perceived harmfulness of substance use: A pilot study. *Indian J Community Med* 2014;39:26-9.

Source of Support: Nil, **Conflict of Interest:** None declared.