Moral Development in Individuals with Cannabis Use Disorder: A Comparative Multi-level Study

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Abstract

This study investigated the difference in the moral development of individuals with Cannabis Use Disorder (CUD) and non-users as well as variance in the moral development of individuals with mild, moderate, and severe CUD. The sample size consisted of 204 participants. The participants were approached by visiting rehabilitation centres and universities. The participant's ages ranged between 15-34 years. In this paper, purposive sampling and snowball sampling techniques were employed. Furthermore, Moral Development Interview Inventory and DSM-V criteria were used for assessment. SPSS®21 software was used for analysis. The t-test revealed individuals with CUD scored significantly lower on moral development as compared to non-users. One-Way ANOVA indicated that moral development significantly differs on levels of severity of CUD. Furthermore, Post Hoc Analysis showed that individuals with severe and moderate CUD had significantly lower moral development than individuals with mild CUD. The study has implications for parents in the upbringing of children and for mental health practitioners in the rehabilitation of individuals with CUD.

Disciplinary: Psychology, Moral Philosophy, Medical Cannabis Science and Therapeutics, Social Engineering, Herbal & Alternative Medicine.

1 Introduction

Substance-related disorders are common, with an incidence in the Pakistani population of around 4 percent of the population [1]. They are found to have adverse effects on the psychological functioning,

physical health, and social life of an individual [2-4]. The current study used the updated terms that are "Substance Use Disorder or Cannabis Use Disorder (CUD)" to describe the drug-related disorder of interest in this study. The defining characteristics of these disorders are the presence of various cognitive, physiological, and behavioral symptoms, which are an indicator that an individual is using drugs. An individual is said to have Substance Use Disorder when he continues to use the drug despite problems associated with its consumption [5].

Cannabis is the most widespread ingested psychoactive drug globally [6]. The most recent national survey revealed that the psychoactive substance which is most commonly used in youth and young adults of Pakistan is cannabis. It has a prevalence of 3.1% of the Pakistani population. Among all the provinces the drug use is more prevalent in the province of Punjab, Pakistan [1]. Cannabis is thought to be a recreational substance [7]. The use of drugs among females is a hidden, discreet, and individual activity as compared to males who use drugs in the form of a group. The reason behind it is that female drug users experience more stigma or discrimination in Pakistani society as compared to male drug users Cannabis use is more prevalent among males than females [8].

Cannabis is used as a recreational drug and it is derived from a female Cannabis Sativa plant [9]. This drug is known by several names, for example, weed, ganja, bang, herb, grass, marijuana, etc. However, cannabis is the most appropriate scientific term for this drug [5]. Cannabis is used in various ways in Pakistan. It may be inhaled in the form of hashish (also known as Charas). It can be drunk in the form of Bhang, which is made of cannabis leaves [10]. Cannabis is smoked in cigarettes, in water pipes (hookahs or bongs), or in paper form hollowed-out cigars (blunt). Sometimes cannabis may be eaten by mixing it in food [2]. The most recent way to use cannabis is through vaporization. The vaporization involves heating the plant material and inhalation of the release product. Many methods are available to consume cannabis however the smoking cannabis causes a quick and intense experience of desired effects [5].

CUD is induced by the long-term consumption of cannabis [11]. The daily use of cannabis can lead to the onset of tolerance symptoms. When an individual stops the use of cannabis for several months this discontinues the tolerance symptoms. The abrupt cessation of regular cannabis use can cause withdrawal symptoms. Cannabis drug-induced withdrawal symptoms, however, are less severe as compared to those induced by alcohol and opiate drugs. Furthermore, withdrawal symptoms that occur due to cannabis can cause clinically significant distress in an individual's life [12]. Also, CUD could lead to an impairment in cognitive functioning, which places the person at risk; when performing activities that can involve physical harm, for example, when running machinery or diving [13]. CUD negatively impacts family life or interpersonal functioning. In CUD, individuals continue to consume Cannabis even though it causes harmful impacts on psychological (in the form of over-sedation, etc.) as well as physical health (for example, long-term cough related to smoking) [5]. Individuals with CUD have lower educational achievements [5].

A combination of ethics and psychology is known as Moral Psychology. The moral development of an individual consists of three domains. These three domains include thoughts, feelings, and behavior of an individual about the norms that differentiate right from wrong [7]. The Social Control Theory states that loosening of emotional bonds with such components of society that cause one to accept or behave following social norms or expectations (such as family, schools) leads to deviant behavior. In other words, the theory states that loosening of moral values leads to deviant behavior. Social control theory proposes that loose moral values are associated with deviant behavior e.g. drug addiction [14].

2 Literature Review

The nationwide survey of Pakistan revealed that cannabis is linked with various social problems, in the form of issues related to health, parent/family relationship, employment, legal or policy, and peer relationship

[1]. The high prevalence of cannabis use and the deterioration effects of drugs on an individual's life intrigued the researcher to study CUD and associated factors. Literature states that cannabis use may lead to the use of a higher level of drugs that have more deterioration effects on an individual's life [15]. A nationwide survey in Pakistan concluded that individuals who were engaged in the use of the high level of drugs, like opiates, first initiated drug use with cannabis. As 76% of daily users of opiate disclosed cannabis to be the first-ever drug they consumed [1].

Western literature has shown that loose morals predict substance use [16]. Many studies have revealed the association between criminal activities and substance use in Pakistan [1, 17]. A study on self-reported criminal behavior among drug abusers revealed that 67 drug abusers out of 100 reported different crimes related to their drug abuse problems. Out of all drug abusers, 64% were cannabis abusers and among them, about 20% of cannabis users were involved in pickpocketing, robbery, and gambling [1]. Criminal behavior is a strong indicator of weak morality [18]. However, no such association between moral development and substance use has been examined in the Pakistani cultural context.

Researchers have highlighted the significance of considering the variance within the different severity levels of a single drug. Researchers found that level of criminality differs across the level of drug use: the study revealed that high criminality is associated with high drug use [19]. The current study is aimed to find out the difference in moral development among mild, mode, rate, and severe CUD. Hence, this study will be an extension of the literature on CUD in Pakistan.

The surveys conducted by researchers identified many risk factors associated with drug use in Pakistan. The survey identified various underlying reasons for drug use i.e. influence of friends, cope with pain/sorrow/death, use as a medicine, enjoyment, by event, and other reasons. The most significant factor found to be associated with cannabis use was peer pressure. Except that the youth age range was found to be the most vulnerable age to be exposed to drug use. Adolescence is an age range when individuals get exposed to new behaviors and ideas. This is the age period when peers are very important and there is a need for acceptance in the group [1].

In Pakistan, we could not find researches directly related to the difference in moral development between non-users and individuals with CUD. Furthermore, no study investigated the difference in moral development among individuals with different severity levels of CUD

The current study aimed to investigate the difference in the moral development of individuals with CUD and non-users. In addition, the study also intended to investigate the difference in moral development across mild, moderate, and severe levels of CUD. The results of the current study will help to comprehend the moral development of individuals with CUD in Pakistan's cultural context. This can facilitate the professionals, working in the field of mental health of addicts, to plan and design effective interventions for individuals with CUD. This can lead to the improved prognosis of such individuals.

It was hypothesized that individuals with CUD will have lower moral development as compared to non-users. It was also hypothesized that moral development will differ across mild, moderate, and severe levels of CUD. Finally, it was further hypothesized that peer influence will be the most frequent reason for using cannabis among individuals with CUD.

3 Methodology

3.1 Sample

The sample comprised of 104 individuals diagnosed with CUD and 100 non-users. The individuals diagnosed with CUD are those who fulfilled the diagnostic criteria of DSM-V for the disorder. The participants with CUD were further categorized as having mild (n = 32), moderate (n =

37), and severe (n = 35) CUD. All the male participants with CUD were found admitted to drug treatment centres and involved in drug use in public places of universities. Non-users are those individuals who do not have a history of any illicit drug use. Most of the data of non-users were collected from educational institutes and few data were obtained from offices of Rawalpindi and Islamabad. The sample consisted of an almost equal number of youth (n = 93) and young adults (n = 111). The age range of youth and young adults was 15 to 24 years and 25 to 35 years respectively. All the participants had at least 12 years of education. The participants were from the cities Rawalpindi (n = 130) and Islamabad (n = 74) of Pakistan.

3.2 Assessment Measures

The following scales were used for the assessment.

3.2.1 Diagnostic and Statistical Manual of Mental Disorder (DSM-V)

The DSM-V is a manual that helps mental health practitioners to diagnose individuals with mental health disorders. It provides strong, reliable, and objective scientific validation for each mental disorder. It is a tool widely recognized by the scientific community on mental disorders [5].

3.2.2 Moral Development Interview Inventory (MDII)

MDII [20] is a complete and concise instrument in the native language of Pakistan i.e. Urdu [20]. The purpose of the instrument is to test the moral development of individuals with the age 4 years and above. The scale has an English Version as well. MDII was developed and validated indigenously. The scale was developed based on the six stages of moral development proposed by [16]. It comprises 10 speculative stories that measure different moral values. The story characters are in accordance with Pakistani culture. The research subjects were provided with the stories and they were required to give answers to the question as the story ends, with the explanation behind their answer. The researcher had to compare the answers of the subjects to the key particularly developed for each dilemma of the inventory. The stage of moral development at which an individual lie is indicated by calculating the aggregate of scores on all ten stories. In this instrument individuals' scores can range between 1 to 6 based on the stages of moral development. It showed Cronbach's alpha of 0.95 [20]. In this research, it indicated the internal consistency of .87.

3.2.3 Socio-Demographic Questionnaire

The Socio-demographic Performa revealed details related to participant's attributes such as age and reasons for cannabis use.

3.3 Procedure

The data of individuals with moderate and severe CUD was collected through purposive sampling from individuals admitted into drug detoxification and rehabilitation centres of Rawalpindi and Islamabad. The verbal consent was taken from the head of eight drug treatment and rehabilitation centres to approach individuals with CUD. The diagnosis of CUD was seen from the case files of each individual. Moreover, DSM-V criteria were employed by the researcher to confirm the diagnosis. The data of individuals with mild CUD was collected using snowball sampling from educational institutes. The data comprising of non-users were collected from educational institutes and offices of twin cities through purposive convenience sampling. Initially, information was obtained verbally to check whether the individual fulfils the inclusion criteria of the study. Participants were given a brief introduction of the current study and they were ensured about the confidentiality of their data. Informed consent was taken from the respondents. The socio-

demographic questionnaire, moral development interview inventory, and DSM-V criteria were used for the assessment purpose. Finally, research scales were administered to the participants. It took at least 40 minutes to complete the assessment process of each participant.

4 Results

Table 1 represents on average, participants with CUD (M = 3.31, SE = 0.05) scored lower on moral development than non-users (M = 4.57, SE = 0.05). This difference, 1.26, 95% CI [−1.40, −1.12], was significant at t(193.9) = −17.69, p = <0.001; it represented small effect size, d = 0.28.

Table 1: Difference in Moral Development between Individuals with CUD and Non-Users (N = 204).

Variable	Individuals with the cannabis-use disorder (n = 104)		Non-Users (n = 100)		*t-test* (202)	*P*	95% CI		*Cohen's d*	
	M	SD	M	SD			LL	UL		
MDII	3.31	.56	4.57	.44	-17.77	<.001	-1.40	-1.12	0.28	0.25

Table 2: Comparison of Moral Development on Severity Levels of CUD (N = 104).

Variables	Individuals with CUD						*df*	*F*	*Ω*	*P*
	Mild (n = 32)		Moderate (n = 37)		Severe (n = 35)					
	M	*SD*	*M*	*SD*	*M*	*SD*				
MDII	3.81	.54	3.07	.46	3.11	.38	3	27.32	.33	<.001

Table 2, the one-way analysis of variance (ANOVA) was conducted to find out differences in three groups of individuals with mild, moderate, and severe CUD, to compare them on moral development. Further, Post Hoc analyses using Tukey's HSD (using α 0.05) were applied to see the specificity of differences. One-way ANOVA showed a significant difference in moral development in individuals with mild, moderate, and severe CUD (see Table 2). Post Hoc Analysis showed that individuals with severe and moderate CUD had significantly lower moral development than individuals with mild CUD. However, individuals with moderate CUD and severe CUD did not differ significantly.
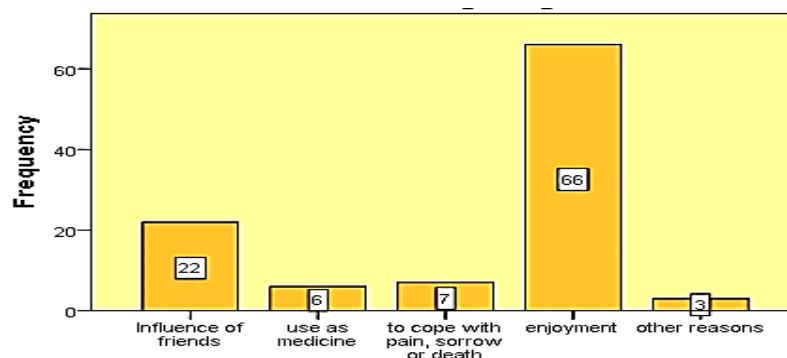

Figure 1: Reasons for using cannabis in individuals diagnosed with CUD (*N = 104*).

Figure 1 depicts that 66 individuals initiated the cannabis for enjoyment, 22 because of influence of friends, 7 to cope with pain/sorrow/death, 6 to use as a medicine by event, and 3 for other reasons which describe the 63.46%, 21.15%, 6.73%, 5.76%, and 2.88% respectively of the total sample.

5 Discussion

The main purpose of the study was to look at the difference in moral development between individuals with CUD and non-users. A significant mean difference was found in moral development between individuals with CUD and non-users (t= -17.69, ρ= .00, d= 0.28). Results revealed that individuals with CUD were morally less developed as compared to non-users (see table 1). In this way, the data supported that the individuals with the CUD will have lower moral development as compared to the non-users. Thus, it seems logical to conclude that individuals with CUD are significantly different from non-users in the moral development domain. It could be observed that individuals with CUD were lower on the stages of moral development than those who were not using this drug. The result of the current study supported previous empirical evidence as the finding was in line with the existing literature. As mentioned in the literature that criminal behavior shows that person is weak in mortality [18]. Khalily found that drug addicts are more rebellious than non-addicts [10]. Another research also found that 36% of cannabis users had a history of being arrested in the past year [1].

This research also found the difference in moral development among individuals at different levels of CUD. In this study, moral development was found - differ significantly among the mild, moderate, and severe levels of CUD. The individuals with moderate and severe CUD showed significantly low levels of moral development than individuals with mild CUD (see Table 2). It can be inferred that individuals with mild CUD achieved a high level of moral development, on the contrary, the individuals with moderate and severe CUD fail to acquire that higher level of moral development. Furthermore, the level of severity of drug use disorder is associated with moral development. The more severe is the drug use, the lower the moral development in individuals with CUD. The result of the current study is consistent with the existing literature. The literature examined the influence of drug use on the three levels of criminal behavior. The levels included no, moderate, and substantial crime acts. They found that drug use significantly influences the level of criminal acts committed by an individual. The substantial-crimes group was found to be associated with higher rates of alcohol and drug consumption. On the contrary, moderate crime and no crime groups did not differ in the use of drugs or alcohol [19].

The results indicated that most of the participants in the study used drugs for enjoyment rather than due to peer influence (see Figure 1). Hence the result of the present research is different from existing literature that indicated that peer pressure is a powerful factor in using drugs among multi-fold of factors in Pakistan [1].

6 Conclusion

This study assisted in explaining that the moral development of individuals with CUD is lower than non-users. The research findings indicated the need to deal with issues of moral development of individuals with CUD. It is further concluded that individuals with mild, moderate, and severe CUD significantly differ in their moral development. The present research contributed to the understanding of the difference in moral development among individuals having CUD. The result of the current study suggests the need to deal with the issues of moral development in individuals suffering from CUD. Hence, the present research has the implications for treatment and rehabilitation of individuals diagnosed as having CUD. In addition to this taking into account, these dimensions may have a positive impact on the treatment outcome of such individuals. The knowledge from the research would help mental health professionals including clinical psychologists in planning or designing interventions for individuals with CUD. The current study

can be replicated with a larger sample size and using different sampling procedures, other than convenience sampling. Furthermore. Future researches can study the female gender in association with drug-related disorders as well. The important and most frequent reason behind the cannabis use that is revealed by this study is that the cannabis drug is thought to be associated with enjoyment among youth and young adults. These findings are significant as they revealed that the negative effects of this drug use are often ignored by the drug users. Hence this study suggested that there is a dire need to create awareness among individuals with cannabis use or drug-related disorder so that the side effects of the drug weigh more than some moments of pleasure.

7 Availability of Data and Material

Data can be made available by contacting the corresponding author.

8 Acknowledgment

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