

# Locus of Control and Spirituality in Opioid Dependence

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## Abstract

*The aim of this study was to find out if Locus of Control and Spirituality play a role in opioid dependence (opioid user group). The participants (N=120; 60 opioid user group and 60 non-user gender matched group) completed a questionnaire comprising of demographic information, Multidimensional Locus of Control Scales (Levenson, H., 2009) and Spiritual Attitude and Involvement List (SAIL; De Jager Meezenbroek, E et al., 2012). The results indicated that the opioid user group scored higher in the external locus of control scales (Powerful others scale and Chance scale) as compared to the non-user group in the Multidimensional Locus of Control Scales. There was a significant difference between the two groups in the Spiritual Attitude and Involvement List (SAIL) where the non-user group scored higher in all the subscales. Correlational analysis indicated that in the opioid user group, Internal Scale was significantly positively related to SAIL (Caring for Others), while Powerful others was significantly negatively related to SAIL (Trust). In the non-user group, there was a significant positive relationship between Chance Scale with both Internal Scale and the Powerful Others Scale while Internal Scale was significantly positively related to all the SAIL subscales such as Trust, Caring for Others and Transcendent experiences. The results were found to be consistent with similar researches done in the past and has hence reiterated the importance of religious and spiritual based intervention in substance treatment programs as well as the necessity to readjusting one's locus of control to deal effectively with substance use.*

**Keywords:** Locus of Control, Spirituality, Opioid dependence

The excessive and unregulated use of drugs which is popularly known as drug addiction and drug abuse has presented and continued to present a significant public health concern and burden to the society. Substance or drug addiction is a devastating condition and prolonged use of substance progresses into dependence impacting the mind, body and spirit of individuals. It affects individuals, and eventually their families and the society as a whole (Sussman and Ames, 2001).

The Ministry of Social Justice and Empowerment, Government of India conducted a National Survey on Extent and Pattern of Substance Use in India between December 2017 and October 2018 (Ambekar et al., 2019). According to this survey, about 2.1% of the country's population (2.26 crore individuals) use

opioids. Mizoram has the highest prevalence (25.67%) of opioid use and has the highest opioid dependence (3.26%) as compared to other states in India.

**Substance Dependence Syndrome** (ICD 10; World Health Organization, 1993) is a cluster of physiological, behavioral and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often strong, sometimes overpowering) to take psychoactive drugs (which may or may not have been medically prescribed), alcohol, or tobacco.

**Locus of Control** refers to the extent to which people believe they can control general life outcomes.

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Specifically, internally oriented individuals believe outcomes are primarily related to internal factors (e.g., their own actions), whereas externally oriented individuals believe outcomes are influenced mostly by external factors (e.g., powerful other people), or due to chance factor which has been constructed to measure belief in chance expectancies as separate from a powerful others orientation (e.g., fate controls their lives; Levenson, 1976; Rotter, 1990).

Researchers have found that substance abuse and dependence is often associated with external locus of control and these individuals often scored higher on external locus of control as compared to non-abusers (Niazi et al., 2005 & Prakash et al., 2015).

**Spirituality** is defined as ‘one’s striving for and experience of connection with the essence of life’, which encompasses three main dimensions: connectedness with oneself (meaningfulness, trust, and acceptance), connectedness with others and nature, and connectedness with the transcendent (transcendent experiences and spiritual activities) (De JagerMeezenbroek, et al., 2012). Robinson et al. (2011) investigated the effect of spiritual and religious (SR) change on subsequent drinking outcomes and for this purpose they included both alcohol-dependent individuals in treatment and not on treatment. They found significant changes after 6-months in SR measures such as private SR practices, beliefs, daily spiritual experiences, measures of forgiveness, negative religious coping, and purpose in life. The impact of spirituality can also be seen in a past study by Stewart (2001) who found that spirituality had a moderate buffering effect upon the decision to use drugs such as alcohol and marijuana.

### Statement of the problem

The increasing population of opioid dependent users in Mizoram is a source of ongoing concern and has generated increasing problems within the individual using the substance as well as their family and society as a whole. In addition, studying factors such as Locus of control and Spirituality together will help in giving a

more comprehensive understanding of the difference between people who currently meet dependence syndrome criteria and people who have never done so, as well as throw light upon the importance of these variables in prevention and intervention programmes. Although locus of control (LOC) is one of the most extensively studied constructs in psychological and social science literature (Carton & Nowicki, 1994; Rotter, 1990), its use by substance abuse researchers has been limited. The focus in this particular study is also on Spirituality as a whole which also includes Religiosity factor. This may resonate better with the individuals with non-theistic (inner strength, moral values) interpretations of spirituality (Kaskutas, Turk, Bond & Weisner, 2003). Religiosity has played a pivotal role in the Mizo society and its impact can be seen in the way Substance use problem is dealt with by various religious organizations within the community. For example, rehabilitation homes run by religious institutions and use of spiritual counselling play centre role in terms of recovery and rehabilitation in Mizoram. Hence studying Spirituality and its impact may create more avenues to approach this ever increasing problem within the Mizo Society.

### Objectives

1. To examine the Locus of Control and Spirituality of Opioid User and Non-User control group
2. To study the relationships between Locus of Control and Spirituality in Opioid Use (Opioid User Group and Non-User Group)

### Hypothesis

- 1) It is expected that the Opioid User Group will score significantly higher on Powerful others scale and Chance scale, whereas they are expected to score significantly lower on Internal Scale and Spirituality than Non-User Group

- 2) There will be a significant relationship between Locus of Control and Spirituality in the Opioid User Group and Non-User Group:

i) Internal Scale will be significantly positively correlated with Spirituality, whereas Powerful others scale and Chance scale will be significantly negatively correlated with Spirituality in the Opioid User Group.

ii) Internal Scale will be significantly positively correlated with Spirituality, whereas Powerful others scale and Chance scale will be significantly negatively correlated with Spirituality in the Non-User Group.

## **Method**

**Sample:** The participants (N=120) from Aizawl District, Mizoram comprised of 60 Opioid Users (male= 45 and female= 15) and 60 Non-Users (male= 45 and female= 15). The Opioid User Group comprised of individuals who currently meet dependence syndrome criteria for Opioid use (ICD-10 criteria) and were selected randomly from various hospitals and rehabilitation centers. The Non-User Group comprised of individuals who have never met criteria for dependence syndrome for any substance.

## **Tools Used**

1. Sociodemographic and Clinical data sheet (prepared for this study)

2. **Multidimensional Locus of Control Scales** (Levenson, 1974) is an instrument for assessing the locus of control of adults. It comprised of three scales (Internal, Powerful Others, and Chance—I, P, C) and each of the I, P, and C scales consists of 8 items and these are presented to the subject as a unified attitude scale of 24 items. Internal consistency reliability was satisfactory with a Cronbach's alpha above 0.70 for all LOC dimensions (Kourmoussi, Xythali & Koutras, 2015).

3. **Spiritual Attitude and Involvement List (SAIL):** (de Jager Meezenbroek, Garssen, Van den Berg, Tuytel, Van Dierendonck, Visser, & Schaufeli, 2012) is a 26-item Spiritual Attitude and Involvement List developed to examine spirituality among religious and nonreligious people. It has 7 subscales: Meaningfulness, Trust, Acceptance, Caring for Others,

and Connectedness with Nature, Transcendent Experiences and Spiritual Activities. However, for the purpose of this study only 3 subscales were included namely, Trust, Caring for Others and Transcendent Experiences to study aspects of Spirituality. The internal consistency and test-retest reliability were found to be adequate and the subscales successfully withstood most of the convergent and discriminant validity tests (De JagerMeezenbroek, *et al.*2012)

## **Results and Discussion**

The age range for the Opioid User group was 21-50 years (M=30.13, SD= 5.5) out of which 45 were male, 15 female and for the Non-User group was 23-43 years (M=33.35, SD=5.39) out of which 45 were male and 15 female. In terms of educational status, in the Opioid User group only 15% studied upto graduation while upto 30% studied till post-graduation among the Non-User group. Majority of the Opioid User group (38.3%) were unemployed while majority of Non-Users (46.7%) were employed in an organized sector. Among the Opioid Users 26.7% were married, 8.3% were separated while 23.3 % were divorced from their spouses. Whereas majority of the Non-Users, 35% were married, 3.3% were divorced and no instance of separation was reported. A majority of the Opioid User group(50%) were hailing from a joint family type while majority of the Non-User group were hailing from a nuclear family type (58.3%).The presence of history of family substance use was higher among the Opioid User group (46.6%) as compared to the Non-User group (13.3%).

Cronbach's Alpha reliability coefficients showed generally good reliability of the scales (above .70; Nunnally, 1978) except for a less than perfect coefficients of .58 and .61 for Chance Scale in both the groups and .60 for Caring for Others in the Opioid User Group, which however may be accepted considering the disadvantages of small sample sizes (Table 1&2). Levene's test for Equality of variances (Table 1& 2) were not significant which indicated that the scores were homogenous. Kurtosis and Skewness showed non-probability curve indicating a normal distribution of the test scores.

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**Table 1: Descriptives and group differences (Opioid User Group and Non-User Group) in Multidimensional Locus of Control**

Scales	Groups	Cronbach's Alpha	Mean	SD	Levene's test for equality of variances		<i>t</i>	Cohen's <i>d</i>
					f	Sig		
Internal Scale	Opioid User	.73	34.60	6.99	2.172	.143	.947	.172
	Non User	.60	33.50	5.65				
Powerful others Scale	Opioid User	.60	22.70	8.16	5.39	0.22	<b>2.15*</b>	.386
	Non User	.76	19.83	6.37				
Chance Scale	Opioid User	.58	32.90	6.44	.046	.830	<b>4.83**</b>	.809
	Non User	.61	27.35	6.14				

**\*\* significant at .01 level**

**\* significant at .05 level**

The present study examined Locus of Control and Spirituality of individuals with opioid dependence. A gender matched control group of Non-Users were taken from the general population for comparison. As hypothesised, the Opioid User Group scored significantly higher in Powerful Others Scale with moderate effect size (Cohen's  $d = .386$ ) and significantly higher in Chance Scale with large effect size (Cohen's  $d = .809$ ) as compared to Non-User Group (Table1).

Niazi et al. (2005) in their study found that substance abusers significantly scored higher on external locus of control. Prakash et al. (2015) also found that amongst Alcohol Dependent patients, their locus of control was externally oriented in comparison to their

normal counterparts. Chaudhury et al. (2015) also found that as compared to their counterpart, alcohol-dependent patients tend to have external locus of control.

However, in this current study, there was no significant difference between the two groups in terms of Internal scale as was expected (Table 1). One explanation maybe that this particular factor may be more prominent during periods of abstinence and treatment as can be seen in previous researches. Past researches have revealed a significant correlation between internal locus of control and abstinence during the period of the study (Sadava, 1986) and a tendency to move toward a more internal locus of control during treatment (Abbott, 1984).

**Table 2: Descriptive and group differences (Opioid User Group and Non-User Group) in Spiritual Attitude and Involvement List (SAIL)**

Scales	Groups	Cronbach's Alpha	Mean	SD	Levene's test for equality of variances		<i>t</i>	Cohen's <i>d</i>
					f	Sig		
Trust	Opioid User	.70	14.32	3.62	2.65	.11	<b>6.84**</b>	-1.06
	Non User	.73	18.48	3.02				
Caring for Others	Opioid User	.60	17.78	2.94	1.59	.21	<b>4.84**</b>	-.809
	Non User	.69	20.27	2.68				
Transcendent Experiences	Opioid User	.65	19.53	4.36	.64	.43	<b>4.41**</b>	-.749
	Non User	.69	22.85	3.86				

**\*\* significant at .01 level****\* significant at .05 level**

The study also examined Spirituality of individuals with opioid dependence and they were compared with a gender matched control group. As hypothesized, the Opioid User Group scored significantly lower in all the SAIL subscales included namely Trust with large effect size (Cohen's  $d = -1.06$ ), Caring for Others with large effect size (Cohen's  $d = -.809$ ) and Transcendent Experiences with large effect size (Cohen's  $d = -.749$ ) as compared to the Non-User Group (Table 2).

Majority of researches done in this area have focussed on religiosity and not the broader scope of spirituality. Robinson et al. (2011) found significant 6-month changes in spiritual and religious (SR) measures which included private SR practices, beliefs, daily spiritual experiences, three measures of forgiveness, negative religious coping, and purpose in life amongst alcohol dependent individuals. Stewart, C. (2001) also found that spirituality had a moderate buffering effect upon an individual's decision to use alcohol and marijuana.

**Table 3: Table showing the Pearson Correlation of the scales and subscales in the Opioid User Group**

OPIOID USER GROUP						
	Internal Scale	Powerful others	Chance	Trust	Caring for others	Transcendent Experiences
Internal Scale	1	.117	.212	.150	<b>.375**</b>	.007
Powerful Others		1	.204	<b>-.424**</b>	-.093	-.223
Chance			1	-.105	.141	-.053
Trust				1	<b>.408**</b>	<b>.485**</b>
Caring for Others					1	.233
Transcendent experiences						1

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed).

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In terms of the relationship between Locus of Control and Spirituality in Opioid User Group, as was expected (Table 3) the Internal Scale was significantly

positively related to SAIL (Caring for Others) while the Powerful others was significantly negatively related to SAIL (Trust).

**Table 4: Pearson Correlation of the scales and subscales in the Non User Group**

NON USER GROUP						
	Internal Scale	Powerful others	Chance	Trust	Caring for others	Transcendent experiences
Internal Scale	1	-.062	.441**	.478**	.445**	.335**
Powerful others		1	.550**	-.225	-.221	.012
Chance			1	.012	.027	.276*

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed).

Control and Spirituality in the Non-User Group, there was a significant positive relationship between Internal Scale and Chance Scale. And the Powerful Others Scale was also significantly positively related to Chance Scale. As was expected, the Internal Scale was significantly positively related to all the SAIL subscales such as Trust, Caring for Others and Transcendent experiences (Table 4).

And finally in both the Opioid User Group and Non-User Group (Table 3 & 4) there was mostly a significant positive relationship between the different subscales of the SAIL namely-Trust, Caring for Others and Transcendent Experiences except for in the Opioid User Group, the relationship between Caring for others and Transcendent Experiences was not significantly positive.

There is very limited research studying the relationship between spirituality and locus of control. A positive relationship between religiosity and external locus of control has also been found in a past cross-sectional study done in Hamadan City, Iran on 398 male participants who uses alcohol and other illicit drugs (Farhadinasab et al., 2008).

The aim of this study was to examine the relationships between Locus of Control and Spirituality in Opioid User Group and Non-User Group. Cronbach's Alpha reliability coefficients showed less than perfect reliability of the scales being used for this study. The results indicated significant differences in Multidimensional Locus of Control Scales wherein the Opioid User Group scored higher in the Powerful others and Chance scale as compared to the Non-User Group. However, there was no significant difference between the two groups in terms of Internal scale. There was significant difference between the two Groups in all the subscales of the Spiritual Attitude and Involvement List (SAIL). Correlational Analysis indicated that in the Opioid User Group, Internal Scale was significantly positively related to SAIL (Caring for Others), Powerful Others was significantly negatively related to SAIL (Trust). In the Non-User Group, there was a significant positive relationship between Internal Scale and Chance and the Powerful Others was also significantly positively related to Chance and Internal Scale was significantly positively related to all the SAIL subscales. And finally in both groups there was mostly a significant positive

relationship between the different subscales of the SAIL.

### **Conclusions**

The results were found to be consistent with similar researches done in the past and has hence reiterated the importance of religious and spiritual based intervention in substance treatment programs as well as the necessity to readjusting one's locus of control to deal effectively with substance use. And as mentioned earlier, spirituality is not a concept that has been covered in non-theistic perspective especially in the Mizo community; more emphasis has been towards religiosity. Hence, including the larger perspective of Spirituality may widen the scope for intervention and ultimately prevention.

### **Limitations and future prospects**

The generalizability of the findings may be limited by the small sample size was small in both the groups. Incorporation of gender as a variable would have enriched the study. However, this was restricted due to limited opportunity for collecting female sample as there were less number of female opioid use cases. Some of the participants had a prior history of other substance use. It would have been ideal to tease out these effects. Additional qualitative data could have enriched the findings of the study by giving an understanding of other psychological and social factors playing a role in substance use and dependence.

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### **References**

- Abbott, M. W. (1984). Locus of control and treatment outcome in alcoholics. *Journal of Studies on Alcohol*, 45(1), 46–52. <https://doi.org/10.15288/jsa.1984.45.46>
- Ambekar, A., Agrawal, A., Rao, R., Mishra, A.K., Khandelwal, S.K., & Chadda, R.K. (2019). National Survey on Extent and Pattern of Substance Use in India Magnitude of Substance Use in India. New Delhi: Ministry of Social Justice and Empowerment, Government of India.
- Carton, J. S., & Nowicki, S. (1994). Antecedents of individual differences in locus of control of reinforcement: A critical review. *Genetic, Social, and General Psychology Monographs*, 120(1), 31–81.
- Chaudhury, S., Ranjan, J., Prakash, O., Sharma, N., Singh, A., & Sengar, K. (2015). Personality disorder, emotional intelligence, and locus of control of patients with alcohol dependence. *Industrial Psychiatry Journal*, 24(1), 40. <https://doi.org/10.4103/0972-6748.160931>.
- De JagerMeezenbroek, E., Garssen, B., Van den Berg, M., Tuytel, G., Van Dierendonck, D., Visser, A., & Schaufeli, W.B. (2012). Measuring Spirituality as a Universal Human Experience: Development of the Spiritual Attitude and Involvement List (SAIL). *Journal of Psychosocial Oncology*, 30:2, 141-167, DOI: 10.1080/07347332.2011.651258
- Farhadinasab, A., Allahverdipour, H., Bashirian, S., & Mahjoub, H. (2008). Lifetime Pattern of Substance Abuse, Parental Support, Religiosity, and Locus of Control in Adolescent and Young Male Users. *Iranian Journal of Public Health*. 37. 88-95.
- Kaskutas, L.A., Bond, J., & Weisner, C. (2003). The Role of Religion, Spirituality and Alcoholics Anonymous in Sustained Sobriety. *Alcoholism Treatment Quarterly*. 21. 1-16. 10.1300/J020v21n01\_01.
- Kourmousi, N., Xythali, V., & Koutras, V. Reliability and Validity of the Multidimensional. Locus ofControl IPC Scale in a Sample of 3668 Greek Educators (2015). *Soc. Sci.*: 4, 1067–1078. doi:10.3390/socsci4041067
- Levenson, H. (1974). Multidimensional Locus of Control Scales (Database record). Retrieved from PsycTESTS. doi: <http://dx.doi.org/10.1037/t04693-000>
- Levenson, H., & Miller, J. (1976). Multidimensional Locus of Control in Socio-political Activists of Conservative and Liberal Ideologies. *Journal of Personality and Social Psychology*, 33: 2, 199-208.
- Mizoram Social Defence and Rehabilitation Board, Social Welfare Department, Government of Mizoram (2015). *Situational Assessment of Substance Abuse and IRCA Program in Mizoram*. Rinawmna Press: Tuikual South, Mizoram.
- Murphy, P.N., & Bentall, R.P. (1992). Motivation to withdraw from heroin: a factor-analytic study. *British Journal of Addiction*. Feb;87(2):245-50. doi: 10.1111/j.1360-0443.1992.tb02698.x. PMID: 1555001.
- Niazi, R.S., Pervaiz, R., Minhas, F.A., & Najam, N. (2005). Locus of Control and Personality Traits of Male Substance Abusers and Non Abusers. *Journal of Pakistan Psychiatric Society*, 2 (1).

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- Prakash, O., Sharma, N., Singh, A.R., Sengar, K. S., Chaudhury, S., Ranjan, J.K.(2005). Personality disorder, emotional intelligence, and locus of control of patients with alcohol dependence. *Indian Journal of Psychiatry*, 24:40-7. Retrieved from: <http://www.industrialpsychiatry.org/text.asp?2015/24/1/40/160931>
- Robinson, E. A., Krentzman, A. R., Webb, J. R., & Brower, K. J. (2011). Six-month changes in spirituality and religiousness in alcoholics predict drinking outcomes at nine months. *Journal of Studies on Alcohol and Drugs*, 72, 660.
- Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*, 45(4), 489–493. <https://doi.org/10.1037/0003-066X.45.4.489>
- Sadava, S. W. (1986). Voluntary abstinence from alcohol: A psychosocial study. *Bulletin of the Society of Psychologists in Addictive Behaviors*, 5(1), 37–47.
- Siu, O.L., Phillips, D.R., Lin, L., Wong, T.W., & Shi, K. (2009). A study of resiliency among Chinese health care workers: Capacity to cope with workplace stress. *Journal of Research in Personality*, 43: 5, 770-776.
- Stewart, C. (2001). The influence of spirituality on substance use of college students. *Journal of Drug Education*, 31(4):343-51. doi: 10.2190/HEPQ-CR08-MGYF-YYLW. PMID: 11957390.
- Sussman, S., & Ames, S.L. (2001). *Applying Social Psychology: The Social Psychology of Drug Abuse*. Open University Press: Philadelphia.
- World Health Organization(WHO). (1993). The ICD-10 classification of mental and behavioral disorders. World Health Organization.
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