# Personal Growth Initiative and Chances of Relapse Among People with Substance Use: Moderating Role of Polysubstance Use

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Relapse is an inevitable part of recovery from substance use such that polysubstance users have high chances of relapse (Andreas et al., 2015). In Pakistan, approximately 70% of people with substance use have history of relapse (Masood & Sahar, 2014). Actively changing substance use behavior have a protective effect against relapse (Hartney, 2020) which is basic component of personal growth initiative (Robitschek, 1998). The overall personal growth initiative however has not yet studied in this context. The present study thus aimed to assess relationship of personal growth initiative and chances of relapse along with the moderating role of polysubstance use for this relationship. Personal Growth and Initiative Scale-II-Urdu (Zaman & Naqvi, 2020) and Advance Warning of Relapse (AWARE-Urdu) Questionnaire (Sahar & Naqvi, 2021) were administered on sample of people with substance use ($N = 240$) ranging in age from 20-60 years. The sample was recruited from rehabilitation centers within Islamabad and Rawalpindi. Findings demonstrate that personal growth initiative negatively associates and explains 15% variance in chances of relapse. Results from moderation analysis suggest that the interaction effect for polysubstance use and personal growth initiative explains about 5% of variance in chances of relapse ($\Delta R^2 = .05$) such that, significant decrease in chances of relapse is observed with increasing personal growth initiative among the drug addicts with lower polysubstance use. It was found that the most commonly used drugs among the sample were cannabis ($n = 109$), cocaine ($n = 74$), and alcohol ($n = 67$). These findings could help address relapse among drug addicts.

*Keywords.* Personal growth initiative, polysubstance use, chances of relapse, cannabis

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Substance use is a globally prevailing problem (United Nations Office on Drugs and Crime [UNODC], 2017). It is associated with recurrent relapse which might be associated to genetic factors (Jabeen, 2016) or neural adaptations (Auriacombe et al., 2018). Many psychosocial factors like poor self-regulation, adverse family environment, lack of parental warmth, and peer influence also play a contributory role (Kushner, 2014; Masood & Sahar, 2014; Melemis, 2015). Relapse is thus very difficult to fight because the individual has to again overcome effectively all the biological as well as the psychosocial factors which are associated with the relapse condition.

There are a variety of warning signs which relate to the chances of relapse in an individual and can be divided into three main categories i.e., emotional, mental, and physical relapse (Melemis, 2015). Emotional warning signs are characterized by isolation, absence of self-care, denial of the relapse, and bottling up the emotions the second category is mental warning signs signified by frequent thoughts of substance use, memories about people and places that had remained associated with substance use, bargaining to oneself, and looking for substance using opportunities. The last category is of physical warning signs which is evident by using substance just once (i.e., lapse) and eventually returning to the uncontrolled substance use (i.e., relapse). The higher warning signs associate with higher chances of relapse in an individual.

It is also evident from literature that personal growth initiative prevents relapsing back to substance use through change orientation (Best, 2012). The change model of relapse by Hartney (2020) also demonstrates that change in substance use behavior is a sequential process and could help reduce chances of relapse. Personal growth initiative is of great significance in this context whose theoretical basis lies in personal growth initiative (PGI) theory (Robitschek, 1998). Its core component is active and intentional self-changing behavior. The individuals who grow and change unintentionally are more like to have low positive relations, autonomy, self-acceptance, and a purpose in life which are associated with psychological wellbeing as proposed by Ryff (1989). It is thus reasonable to state here that the personal growth which followed an unintentional process, don't sustain for long especially when a person is encountered with life stressors. Secondly, personal growth initiative involves the distinct skills that help in transition during the personal growth (Robitschek, 2003).

Relapse is an issue that needs to be addressed in Pakistan because of the growing rate of substance use and relapse (UNODC, 2013). Statistics demonstrate that about 70% of drug addicts in Pakistan are

with a relapse history (Masood & Sahar, 2014). The researchers of Pakistan have studied pattern of substance use and its relapse (Abdullah et al., 2020; Afaq et al., 2022; Batool et al., 2017). The chances of relapse and associated protective factors, however, aren't yet studied. The present study thus attempted to assess relationship between personal growth initiative and chances of relapse. Relapse is also found in literature to closely associate with dependency on more than one addictive substance (i.e., polysubstance use) (Connor et al., 2014; Crummy et al., 2020); such that, polysubstance users are found to have high chances of relapse (Andreas et al., 2015; Hoxmark et al., 2010). The moderating role of polysubstance use was thus also assessed for relationship of personal growth initiative and chances of relapse among people with substance use.

**Objectives**

1. To study the relationship between personal growth initiative and chances of relapse among people with substance use.

2. To determine the moderating role of polysubstance use on relationship of personal growth initiative and chances of relapse among people with substance use.

**Hypotheses**

1. Personal growth initiative negatively predicts chances of relapse among people with substance use.

2. Polysubstance use moderates the relationship between personal growth initiative and chances of relapse among people with substance use.

## Method

**Sample**

The study sample ($N$ = 240) was approached through purposive sampling technique from eight rehabilitation centers within Islamabad and Rawalpindi. The age of the sample ranged from 20-60 years ($M$ = 29.3; $SD$ = 8.2). The main demographic characteristics of the sample are shown in Table 1:

Table 1

*Demographic Characteristics of the Sample (N=240)*

| Variables | | Frequency | Percentage | Missing |
|---|---|---|---|---|
| Education | Illiterate | 38 | 17% | |
| | Matric | 119 | 54% | 21 |
| | Graduation | 41 | 24% | |
| | Post-Graduation | 11 | 5% | |
| Family system | Joint | 131 | 58% | 14 |
| | Nuclear | 95 | 42% | |
| Marital status | Married | 100 | 44% | |
| | Unmarried | 128 | 55% | 10 |
| | Divorced/Widowed | 2 | 1% | |
| Employment status | Employed | 78 | 70.3 % | 37 |
| | Unemployed | 21 | 18.9% | |
| Polysubstance use | 1 | 81 | 34% | 19 |
| | 2 | 87 | 36% | |
| | > 2 | 53 | 23% | |
| Duration of substance use | < 6 years | 143 | 68% | 30 |
| | 6-10 years | 50 | 24% | |
| Relapse history (in terms | Never | 97 | 44% | |
| of number of relapses) | 1 time | 53 | 24% | |
| | 2 times | 29 | 13% | 21 |
| | 3 times | 16 | 7% | |
| | 4 times | 6 | 3% | |
| | 5 times | 7 | 3% | |
| Current duration in rehab center | 1-2 months | 79 | 36% | 24 |
| | 3-4 months | 74 | 31% | |
| | > 4 months | 63 | 29% | |
| Substance use by family | Yes | 102 | 45% | 11 |
| | No | 127 | 55% | |
| Substance use by friends | Yes | 195 | 85% | 11 |
| | No | 34 | 15% | |

Table 1 demonstrates that the majority of the sample has matriculation (secondary) as the highest level of education i.e., 54%, are unmarried i.e., 55%, are employed i.e., 70%. Majority of sample are using two or more substances i.e., 59%. Also, most of the participants informed that they were using substance for less than 6 years (i.e., 68%) and have a history of relapse (i.e., 50%). The maximum proportion of participants exhibit friends' history of substance use (i.e., 85%) but lack family history of drug addiction (i.e., 55%). Findings also demonstrate that the most common substance are cocaine, cannabis, and alcohol. It is also mentioned by the figure below:

*Figure 1.* Substance Used by Sample of *People with Substance Use* (*N*=240)
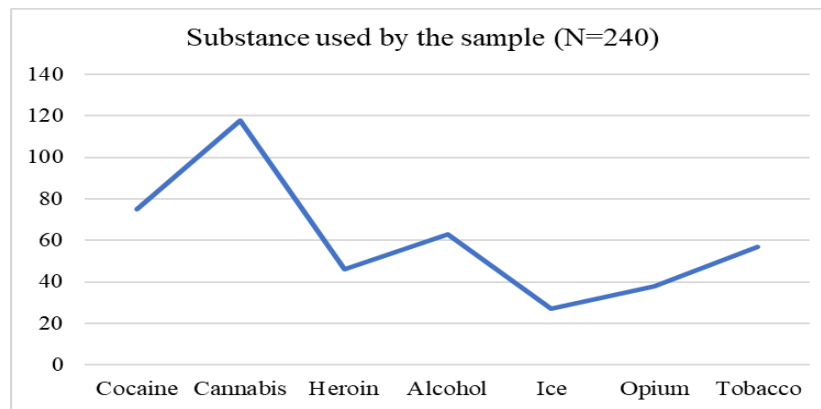


**Instruments**

**Personal Growth Initiative Scale (PGIS-II)-Urdu.** It is a translated version (Zaman & Naqvi, 2020) of the Personal Growth Initiative Scale-II developed by Robitschek et al. in 2012. It provides a multidimensional measure of the complex process of Personal Growth Initiative (PGI). The items of the scale are derived from conceptual ideas of Personal Growth Initiative (PGI) Theory. The scale comprised of 16 items. These items are distributed in four subscales; such that, items 2, 8, 11, 16 belongs to "readiness for change", items 1, 3, 5, 10, 13 belongs to "planfulness", items 6, 12, 14 belongs to "using resources", and items 4, 7, 9, 15 belongs to "intentional behavior". The scale is 6-point Likert type such that 0 denotes *strongly disagree,* and 5 denotes *strongly agree.* No items are reverse scored. The reliability coefficient for Personal Growth Initiative Scale-II (Urdu) is significant for all the subscales; that is, .95

for readiness to change, .93 for planfulness, .85 for using resources, and .95 for intentional behavior. The reliability for total scale is also significant; that is .83 (Zaman & Naqvi, 2020). The high scores on respective subscales and total scale demonstrate high degree of higher involvement of a person to bring about personal change.

**Advance Warning of Relapse (AWARE) Questionnaire-Urdu.** It is the translated version (Sahar & Naqvi, 2021) of Advance Warning of Relapse Questionnaire (Miller & Harris, 2000). The questionnaire was devised with intent to assess the warning signs that are associated with relapse condition, as described by Gorski and Miller (1982) and originally comprised of 28 items. The translated version comprised of 24 items scale as items 8, 14, 20, 26 have poor factor loadings (>.30) and thus not contributing to the construct (Gaskin et al., 2017). This is a self-report questionnaire. The items are scored on 1-7 rating scale; such that, 1 denotes *never,* and 7 denotes *always.* The scoring for item no. 24 is reversed. The range of scores is from 24 to 168. The coefficient of reliability for the scale is .90 (Sahar & Naqvi, 2021). High score on the questionnaire demonstrates high warning signs of relapse.

## Procedure

The sample was approached at drug rehabilitation centers within the cities of Islamabad and Rawalpindi after seeking of permission from the authorities. They were also briefed about research objectives. Informed consent was also taken from the sample and they were given right to leave at any time. Prior rapport was developed with the participants to make them comfortable during administration of questionnaire. They were also assured about the anonymity and confidentiality of the information provided by them. Psychological safety of the participants was also given consideration by not asking them any question that could harm their psychological wellbeing. The participants were thanked at the end of the administration.

## Results

Hypotheses were tested through correlation, regression, and moderation analyses.

Table 2

*Correlation Estimates for Study Variables Among People with Substance Use (N=240)*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Age | - | .20** | .14* | .56** | .04 | .40** | -.01 | .08 |
| 2. Education | | - | -.05 | -.15* | -.16* | .14* | .04 | .03 |
| 3. Polysubstance use | | | - | .14 | -.02 | .29** | -.05 | .04 |
| 4. Duration of substance use | | | | - | .23** | .42** | -.23** | .04 |
| 5. Current duration in rehab center | | | | | - | .09 | -.19** | -.09 |
| 6. Number of relapses | | | | | | - | -.03 | .13 |
| 7. Personal growth initiative | | | | | | | - | -.29** |
| 8. Chances of relapse | | | | | | | | - |

*$p < .05$. **$p < .01$.

Table 2 indicates that polysubstance use has a significant positive associated with number of relapses. Duration of substance use demonstrate significant positive relation with current duration of in rehabilitation center and number of relapses experienced. Duration of substance use and current duration in rehabilitation center has a significant negative relation with personal growth initiative. Correlation coefficients also suggest that personal growth initiative has a significant negative relationship with chances of relapse. Regression analysis was also carried out which indicates that personal growth initiative predicts about 15% of the variance ($R^2 = .152$; $p = .000$) in the chances of. These finding supports our hypothesis 1 stating that "personal growth initiative negatively predicts chances of relapse among people with substance use."

Moderation analysis was also carried out to determine the role of polysubstance use as moderator for relationship of personal growth initiative and chances of relapse. Results obtained are mentioned as follows:

The Table 3 shows that personal growth initiative and polysubstance use negatively predicts chances of relapse ($p < .001$). The interaction effect that is, combined effect of polysubstance use (moderator) and personal growth initiative (predictor) is also found to be significant in nature ($B = .203$, $p < .001$). This interaction effect explains about 5% variance ($p < .001$) in chances of relapse among people with substance use. Findings thus reveal the moderating role of
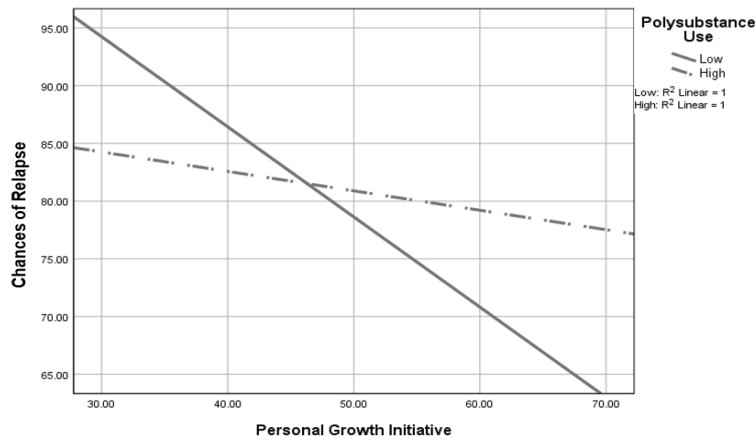
polysubstance use for the effect of personal growth initiative on chances of relapse. The mod graph for these results was also obtained which is given as follows:

Table 3

*Moderating Role of Polysubstance Use for Personal Growth Initiative in Predicting Chances of Relapse Among People with Substance Use (N=240)*

|  | Chances of Relapse | | | |
|---|---|---|---|---|
|  | B | LL | UU | p |
| Constant | 121.43*** | 104.95 | 137.90 | .00 |
| Polysubstance Use (Moderator) | -9.40*** | -15.53 | -3.27 | .00 |
| Personal Growth Initiative (Predictor) | -.86*** | -1.17 | -.541 | .00 |
| Polysubstance Use x Personal Growth Initiative | .203*** | .083 | .322 | .00 |
| $R^2$ | .13*** | | | |
| F | 11.15*** | | | |
| $\Delta R^2$ | .05 | | | |
| $\Delta F$ | 11.22 | | | |

***$p < .001$.

*Figure 2.* Moderation Effect of Poly Substance Use On Personal Growth Initiative In Predicting Chances Of Relapse



The mod graph above indicates that at the given point of personal growth initiative the chances of relapse is decreasing at both levels of polysubstance use. The computation of slopes indicates that $t = .781$ ($p < .001$) for low poly substance use and $t = -.168$ ($p > .05$) for high polysubstance use. These values show that the moderation is

significant for low level of polysubstance use. The moderation effect is such that a significant decrease is observed in the chances of relapse with respect to increasing personal growth initiative among the people with lower degree of polysubstance use. These findings support hypothesis 2 of the study that is, "lower the level of polysubstance use lower is chances of relapse among people with substance use."

## Discussion

Relapse is a very important issue in the field of substance use treatment as there is a persistent risk of the relapse for many years after the treatment (National Institute on Drug Abuse [NIDA], 2016). Preventing it could thus help ensuring better life for substance users. It is also evident from literature that the polysubstance users have high chances of relapse (Andreas et al., 2015; Hoxmark et al., 2010). Literature also suggests that personal growth initiative decrease the chances of relapse by increasing the substance user's readiness to change (Hartney, 2019; Hendershot et al., 2011) which help in changing the behavior of substance use. The present study thus aimed to assess the effect of polysubstance use on relationship of personal growth initiative and chances of relapse.

The demographic characteristics of the sample demonstrate that the most common substances used by the sample are cocaine, cannabis, and alcohol (see Figure 1). Literature from Pakistan also demonstrates cannabis as most commonly used substance (Ayub et al., 2015; Ghazal, 2019; Malik et al., 2012; Mansoori et al., 2018; Rasool et al., 2014). Correlation estimates between demographic variables, personal growth initiative, and chances of relapse were also determined. Results suggest that personal growth initiative is negatively correlated with the chances of relapse (see Table 2). It is also estimated through regression analysis that personal growth initiative is a significant negative predictor of chances of relapse among people with substance use explaining about 15% variance in it. Literature also provide support for these findings (Best, 2012; Hartney, 2020). Moderation analysis demonstrates that polysubstance use is a significant moderator for personal growth initiative in predicting chances of relapse (see Table 3). Findings also suggest that the decrease in chances of relapse is more evident among the one with lower level of polysubstance use (see Figure 2). Research also supports these findings (Andreas et al., 2015; Hoxmark et al., 2010).

## Conclusion

The study findings concluded that personal growth initiative negative predicts the chances of relapse among people with substance use. Also, polysubstance use is a significant moderator for the relationship of personal growth initiative and chances of relapse such that, the individuals with lower level of polysubstance use have significant decrease in chances of relapse with increase in personal growth initiative.

## Limitations and Suggestions

The study lacks women sample and comprised only of male substance users. The variable sample using random sampling from all the provinces could help in generalization.

## Implications

The findings of present study could help establish an intervention focusing on interaction effect of polysubstance use and personal growth initiative to decrease chances of relapse.

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