

**FAMILY ENVIRONMENT, IMPULSIVITY AND PERCEIVED
PARENTING STYLES: A STUDY OF SUBSTANCE USERS
AMONG MIZO MALE ADOLESCENTS**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

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MZU REGISTRATION NO: 398 of 2009-10

Ph.D. REGISTRATION NO. MZU/Ph.D./1147 OF 03.05.2018



**DEPARTMENT OF PSYCHOLOGY
SCHOOL OF SOCIAL SCIENCES
JUNE 2023**

FAMILY ENVIRONMENT, IMPULSIVITY AND PERCEIVED PARENTING
STYLES: A STUDY OF SUBSTANCE USERS AMONG
MIZO MALE ADOLESCENTS

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Submitted
In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in
Psychology of Mizoram University, Aizawl



CERTIFICATE

This is to certify that the present research work titled, **“Family Environment, Impulsivity and Perceived Parenting Styles: A study of substance users among Mizo Male Adolescents”** is the original research work done by Mr Samuel Vanlalruata under my supervision. The work done is being submitted for the Award of the degree of Doctor of Philosophy in Psychology from Mizoram University.

This is to further certify that the research conducted by Mr Samuel Vanlalruata has not been submitted in support of any application to this or any other University or Institute of learning.

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DECLARATION
Mizoram University
JUNE 2023

I **SAMUEL VANLALRUATA**, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

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ACKNOWLEDGEMENT

I thank the Almighty God for his guidance and care bestowed upon me throughout the course of my PhD work. His presence throughout the work has lifted me and strengthens my spirit, without which there would be no prospect for accomplishment.

I am indebted to my supervisor Prof. Zokaitluangi, who had always driven me through thick and thin so that I could complete the research. I am honored to be your mentee and will always be grateful to your mentorship. I may be unsubmissive at times but you have pulled me by the scruff of the neck and for that, I will always be thankful.

I would like to thank Prof. Zoengpari, Head, Department of Psychology for the significant support and interest shown to my quest. The pragmatic counsels will be handy in the future. I would also like to thank all the professors and faculties of the Department for the expediting assistance shown towards me.

I express my sincere gratitude to Mizoram State Child Protection Society, Social Welfare Department, Govt of Mizoram for their enthusiasm in my pursuance and readily providing with assistance for the necessary information and consent.

I appreciate all my friends working in different Districts of Mizoram, for their avail and cooperation during collection of data. All the impending struggles was made much easier with your aid. To all the respondents who willingly participate in the study, this work will be incomplete and senseless without your sincere response and I hope and pray that you lived a better life in the future.

To all my family members, especially my mother, you have blessed me with your support from the beginning. It is hard to comprehend the pain and sufferings you have gone through so that I could pursue my studies. May you be blessed with good health and a long life.

Date:

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TABLE OF CONTENTS

	Page Number
List of Tables	
List of Figures	
List of Appendices	
Chapter – I INTRODUCTION	- 1 - 50
Chapter – II STATEMENT OF THE PROBLEM	- 51 - 55
Chapter – III METHODS AND PROCEDURES	- 56 - 61
Chapter – IV RESULTS AND DISCUSSION	- 62 - 88
Chapter – V SUMMARY AND CONCLUSION	- 89 - 96
APPENDICES	- 97 - 118
REFERENCES	- 119 - 144

LIST OF TABLES

- Table -1:** Reliability and test for homogeneity of variance of all the subscales for substance user and substance non-user groups
- Table – 2a:** Mean, standard deviation, skewness and kurtosis of all the subscales for the whole sample
- Table – 2b:** Mean, standard deviation, kurtosis and skewness of all the subscales between substance user and substance non-user groups
- Table – 3a:** Independent sample t-test for substance user and substance non-user group on Cohesion subscale
- Table – 3b:** Independent sample t-test for substance user and substance non-user group on Expressiveness subscale
- Table - 3c:** Independent sample t-test for substance user and substance non-user group on Conflict subscale
- Table – 3d:** Independent sample t-test for substance user and substance non-user group on Acceptance and Caring subscale
- Table – 3e:** Independent sample t-test for substance user and substance non-user group on Independence subscale
- Table – 3f:** Independent sample t-test for substance user and substance non-user group on Active Recreational Orientation subscale
- Table – 3g:** Independent sample t-test for substance user and substance non-user group on System Maintenance subscale
- Table – 3h:** Independent sample t-test for substance user and substance non-user group on Attention subscale
- Table – 3i:** Independent sample t-test for substance user and substance non-user group on Cognitive instability subscale
- Table – 3j:** Independent sample t-test for substance user and substance non-user group on Motor subscale
- Table – 3k:** Independent sample t-test for substance user and substance non-user group on Perseverance subscale
- Table – 3l:** Independent sample t-test for substance user and substance non-user group on Self-control subscale

- Table – 3m:** Independent sample t-test for substance user and substance non-user group on Cognitive complexity
- Table – 3n:** Independent sample t-test for substance user and substance non-user group on Authoritative (M) subscale
- Table – 3o:** Independent sample t-test for substance user and substance non-user group on Authoritarian (M) subscale
- Table – 3p:** Independent sample t-test for substance user and substance non-user group on Permissive (M) subscale
- Table – 4:** Relationship between all the subscales of Family Environment Scale, Barratt Impulsiveness Scale and Parental Authority Questionnaire
- Table – 5a:** Simultaneous Linear Regression Analysis showing the predictability of Authoritative (M), Authoritarian (M) and Permissive (M) on Self- Control subscale
- Table – 5b:** Simultaneous Linear Regression Analysis showing the predictability of Authoritative (M), Authoritarian (M) and Permissive (M) on Perseverance subscale
- Table – 5c:** Simultaneous Linear Regression Analysis showing the predictability of Authoritative (M), Authoritarian (M) and Permissive (M) on Cognitive complexity subscale

LIST OF FIGURES

- Figure – 1** : Diagram representing design of the study
- Figure – 2** : Showing distribution of family size in percentage
- Figure – 3** : Showing distribution of number of siblings in percentage
- Figure – 4** : Showing distribution of types of family in percentage
- Figure – 5** : Showing distribution of types of parents in percentage
- Figure – 6** : Graphical representation of Family environment scale mean scores for substance user and substance non-user group
- Figure – 7** : Graphical representation of mean score comparison on subscales of Barratt Impulsiveness Scale between substance user and substance non-user group
- Figure – 8** : Graphical representation of mean score comparison for Parental Authority Questionnaire between substance user and substance non-user group

LIST OF APPENDICES

Appendix - I	:	Consent Form (Mizo)
Appendix - II	:	Socio- Demographic Profile
Appendix - III	:	Barratt Impulsiveness Scale -11
Appendix - IV	:	Drug Abuse Screening Test-10
Appendix – V	:	Parental Authority Questionnaire
Appendix - VI	:	Family Environment Scale

Chapter – I

INTRODUCTION

The problem of drug addiction has become a threat all over the world including India and Mizoram. The non-medical use of the drug is a menace for all societies and has attracted the attention of people from different sections of society. Using substances that are psychoactive in effect had caused divergent problems for family members of the victim, the communities where use and selling are common, to the legal authorities, to the economy of a country and to the victim itself. Indulgence in substance during any stage of life is hazardous, especially during adolescents as it profoundly affected cognitive and physiological development. Apart from the aforementioned problems, drug addiction or substance use has an indirect effect on the economy and monetary system of the country where trafficking and smuggling of psychoactive substances are common. In countries where substance use and selling are customary, masses of the government's money flows within the transactions of buyers and sellers permuting legit money to black money which is precarious to the economic condition of the country.

Substances like tobacco which is commonly abused can have a devastating impact on developing adolescents. Students who smoke tobacco and use marijuana were more likely to endorse feelings/thoughts related to avoiding going to school (Malval, 2010). Substance use during adolescence is associated with numerous undesirable as well as negative consequences, including diminished academic functioning and lower educational attainment (Engberg et al., 2006; King et al., 2006, as cited in Malval, 2010). It is a global disaster which when taking more precautions at the early stage of development, is a preventable one. About 275 million people worldwide, which were roughly 5.6 per cent of the global population aged 15–64 years, used drugs at least once during 2016. 31 million people who use drugs suffer from drug use disorders, meaning that their drug use is harmful to the point where they may need treatment. Initial estimations suggest that, globally, 13.8 million young people aged 15–16 years used cannabis in the past year, equivalent to a rate of 5.6 per cent (UNODC, 2018).

In a National Survey conducted by the United Nations Office on Drugs and Crime (UNODC) and Ministry of Social Justice and Empowerment, Government of

India for the year 2000-2001 (2004), it was estimated that about 732 lakh persons in India were users of alcohol and drugs. Of these 87 lakhs used Cannabis, 20 lakhs used opiates and 625 lakhs were users of Alcohol. The survey also indicated that other drugs such as Sedatives/Hypnotics, volatile substances, hallucinogens, stimulants and pharmaceutical preparations were also abused. Among those users, the majority were thirty years below and most of them had not undergone treatment. In addition, regions of high prevalence of Opiate use in India were Manipur, Mizoram, Nagaland, Himachal Pradesh, Punjab, Haryana and Western Rajasthan. The study further suggested alluring substance users to treatment plans, and to develop intervention programmes for vulnerable groups like street children, adolescents, women and inmates. The study highlights that tobacco followed by alcohol was the two most common substances abused lifetime, followed by cannabis and inhalants. Alcohol was more likely to be used by school-going children compared to out-of-school children. The use of inhalants and certain illicit substances (heroin, current use of cannabis) was, however, more common among out-of-school children living at home compared to school-going children (Tikoo et al., 2013). Nadeem and colleagues (2009) observed that alcohol was the most common substance used (60-98%) followed by cannabis use (4-20%).

Alcoholism is most prevalent in the age group of 18-44 when many individuals are getting married and having families. The National Household Survey on Drug Abuse (NHSDA, 2001) found that 20.5% of those 12 and over reported binge drinking (defined as more than 5 drinks on at least one occasion during the past 30 days). An additional 5.7 % (or 12.9 million people) reported heavy drinking (defined as 5 or more drinks on the same occasion more than 5 days in the past 30 days). An estimated 7.1% of the population or 15.9 million people over the age of 12 reported the use of an illicit drug within a month of the interview (SAMHSA, 2001). Half of the women who report using drugs are in the childbearing age group of 15-44 (NIDA, 1997). Substance Abuse and Mental Health Statistics sourcebook (Rouse, 1998) reports that family structure is related to illicit substance use among adolescents. Based on data collected between 1991 and 1993, adolescents in families with both biological parents present were least

likely to report substance use (approximately 11%), whereas youths from stepparent or one-parent households (approximately 18%) were most likely to use illicit drugs.

Substance use was common among children in slum areas. Among 300 children (child labourers) from 6 slums in Surat city, 135 (45%) child labourers had, at some point in time, once used some substance. Some children left it after the initial attempt, whereas others continued to take it at varying frequencies. It is more likely that substance use would be common among out-of-school children. The family condition and the environment posed greater threats and stress for youths in slum areas which may be the reason behind the popularity of substance use among them (Bansal et al., 1993).

The National Survey on Extent and Pattern of Substance Use in India (2019) identified Alcohol as the most common psychoactive substance used by Indians (among those included in this survey). Nationally, about 14.6% of the population (between 10 and 75 years of age) uses alcohol. Alcohol, Cannabis and Opioids are the next most commonly used substances in India. About 2.8% of the population (3.1 crore individuals) reported having used any cannabis product within the previous year. The use of cannabis was further differentiated between the legal forms of cannabis (bhang) and other illegal cannabis products (ganja and charas). Use of these cannabis products was observed to be about 2% (approximately 2.2 crore persons) for bhang and about 1.2% (approximately 1.3 crore persons) for illegal cannabis products, ganja and charas. States with the highest prevalence of cannabis use are Uttar Pradesh, Punjab, Sikkim, Chhattisgarh and Delhi. The survey indicates that a sizeable number of individuals use Sedatives and Inhalants. About 1.08% of 10-75-year-old Indians (approximately 1.18 crore people) are current users of sedatives (non-medical, nonprescription use). States with the highest prevalence of current Sedative use are Sikkim, Nagaland, Manipur and Mizoram. However, Uttar Pradesh, Maharashtra, Punjab, Andhra Pradesh and Gujarat are the top five states which house the largest populations of people using sedatives. Inhalants (overall prevalence 0.7%) are the only category of substances for which the prevalence of current use among children and adolescents is higher (1.17%) than adults

(0.58%). Alcohol and other psychoactive substance are much costlier and not easily available to minors in India and this may be the reason why the use of inhalants is common among children, especially on the streets and adolescents. There may be a valid relationship between economic status and substance use, especially in India where a larger section of the population is backward in income and economic status.

In northeast India, the prevalence of substance use was higher among the younger age group as compared to youth and older. Males consume more substances than females and the main reasons for the high prevalence of substance use were substance use by younger age group, sex of a person, economic status, social group and lower educational status (Yadav et al., 2016). Lists of substances abused commonly in decreasing order of frequency; tobacco, alcohol, cannabis and inhalants, pharmaceutical opioids, injectables, heroin and prescription drugs. Alcohol was more common among school-going children compared to out-of-school children. Inhalants and certain illicit substances (heroin, current use of cannabis) were more common among out-of-school children living at home compared to school-going children (Tikoo et al., 2013).

In Mizoram, the problem of drug abuse and use had constantly risen since the first detection of drug-related death in 1984 and has become a bigger modern-day concern. The baseline survey conducted by the Social Welfare Department, Government of Mizoram (2017) reported that 87.9% of their respondents had ever injected any drugs, of which 91.9% had initiation into injecting occurred before coming into police custody. This shows that by the time substance users had a conflict with law officers, they had been indulging for a substantial period. The median age of injection among the respondents was 19.0 years with a standard error of ± 4.4 years. The majority reported dextro-propoxyphene-based opioids (58.8%) as the first drug injected, followed by heroin (39.1%). Tikoo and colleagues (2013) revealed that Mizoram had the highest proportion of the sample with Injectable use (88.6%) compared to the rest of the states in India.

According to the statistic of the Excise and Narcotics Department, Govt. of Mizoram (2020), a total of 1410 men and 190 women, a total of 1600 have died due to the use of psychoactive substances in Mizoram from 1984 to 2020. The majority of youths who seek psychiatric services at Kulikawn Hospital indulged in alcohol which was the highest (96.1%) and the remaining used other substances only. Some patients had a history of substances like opioids, proxyvon etc other than alcohol abuse. Among the total respondents, apart from alcohol, 33.8% used cannabis, 31.2 % were opioids users and proxyvon (dextropoxyphene) users constitute 5.2% (Lalmuanpuii, 2014).

History of substance use

Archaeological pieces of evidence have shown us that the use of psychoactive substances has been practiced since prehistoric times. The plant kingdom has a wide variety of substances capable of altering neurochemical processes and functions, and many of them were discovered by ancient food-gatherers on their ventures in search of food. In comparison to the modern world, our forefathers of the Old World have only used a small variety of substances that altered consciousness. Those substances used mainly were plants like poppy from which opium and morphine are derived, hemp or cannabis plants which contain a psychoactive substance in its resin (hashish) and leaves and by fermenting of various organic materials like rice and wheat from which alcohol is produced (Vetulani, 2001). Anthropological evidence has shown that our ancestors lived as hunter-gatherers and as exhibited by the cultures who retained this lifestyle in the modern world (eg, Australian aborigines, Amazon Indians, or Kalahari desert Bushmen)—our ancestors have knowledge about this psychoactive substance containing plants by collecting information and learning the effects. Tradition has it that ingesting roasted coffee beans have awakening effects which Ethiopian priests have used to stay awake through nights of prayer discovered by a shepherd who noticed that his goats were frisking and elating after feeding on coffee shrubs. The recreational use of substances for pleasure was much lesser during pre- historic times (Crocq, 2007).

Psychoactive substances have been acknowledged by cultures of China, India, the Middle East and Africa. The pattern of substance use has changed recently over the past hundred years because of modifications by refining and changing the mode of ingestion which may have more profound effects on the nervous system. Natural hallucinogens permeate nearly every aspect of life in primitive societies. Psychoactive substances in the past played important roles especially in the promotion of health and treatment of sickness, in times of peace and war among them, within the home life and while travelling from place to place, during hunting and in agriculture (Shultes, 1976).

Hallucinogenic and psychoactive plants have been utilized by our ancestors for thousands of years, probably by gathering foods and experimenting on plants. The therapeutic essence of cannabis has been reported in Indian medical writing, compiled before 1000 B.C. The early Hindus of the Vedic culture appreciated the application and effects of cannabis which is demonstrated positively by naming it as ‘heavenly guide’ and ‘soother of grief’, meanwhile the ancient Chinese referred to Cannabis as “liberator of sin” and “delight giver”. Greek physician, Galen in A.D 160 determined that the general use of hemp in cakes produced narcotic effects (Shultes, 1976). Three psychoactive substances such as opium, cannabis and alcohol which are acknowledged from prehistoric times in the Old World hold on and keep an important position in the present times (Vetulani, 2007). The approach to psychoactive substances is a bit different compared to ancient times compared to the innumerable substance abused today. Observation of historical data revealed that dependency may not be an issue in the past as they are consumed only by the shamans/priests and not by the commoners and there are only three substances recognized that are used in ancient times.

In the pre-Christian Mizo society, all gatherings and meetings at the chiefs’ abode were accompanied by alcohol and traditional feasts and celebrations were incomplete without alcohol. Wealthy families of the village would organize a banquet for the whole village known as ‘Khuangchawi’ which sometimes lasts for a week or weeks. There is no known bigger event that could be organized by the

common man at the time and is considered to be an important factor for becoming “Thangchhuah” (Pachua, 2009), the highest status in the society that could be attained; an important factor for reaching ‘Pialral’; the traditional belief of a place where the spirit of the deceased could enjoy an afterlife without worries and hassles anymore. For this event, all the youths, both men and women would gather and together they would prepare alcohol and traditional bread, using rice harvested by the family. The alcohol was prepared in large amounts that could last for the whole event. Although large volumes of alcohol are prepared and consumed, no one was expected to drink and be affected, acting out of control and is considered a shame to be one.

Most men and women of the tribe smoked tobacco in a pipe called ‘Vaibel’. The smoking pipe was part of the traditional Mizo men and women which is one of their valuable belongings. Many references to the Mizo history and cultures have shown the offering and use of alcohol and tobacco has taken part in any socialization, especially during cultivation. Particularly the use of tobacco was popular due to the prevalence of mosquitoes in the paddy field which disturbed their working and as a mosquito repellent, the whole community utilized it. The majority of women use it as a continuation of the habit which was inculcated in their early years of life starting as young as before reaching 13 years of age and the data has shown that tobacco consumption is more prevalent among middle-age women between the age group of 36 years and 60 years in both rural and urban communities. (Elizabeth, 2014).

Opium was not originally known by the early Mizos and it is believed to be brought in and introduced by the late seventies. In the early 80s, opium derivative commonly known as Heroine which is a more refined form and more potent than crude opium was becoming common. This refined opiate was soluble in water and the solution is then injected into the bloodstream. This mode of ingestion is considered to be most effective in inducing pleasure than other modes as it is directly pumped into the blood. Many users who had recovered and live to this day had been often told that during that time, this heroine was a costly substance for use considering the economic status of the common people.

According to the statistics of the Excise and Narcotics Department, Mizoram had its first case of drug-related death in 1984, for which the reason was heroine related. In 1987, the death toll started rising and by the late 80s, a new type of drug known as Proxyvon (Dextropropoxyphene based opioids) was common as it is much cheaper than heroine and was more available. This drug is originally manufactured for its pain-killing effects and was to be orally ingested. Unlike heroine, it is insoluble in water. The original intention of ingestion was less effective compared to direct injections to veins and like heroin, it was prepared with water and pumped into the bloodstream which had a more profound effect. This infamous substance, due to its insolubility, leaves residuals in the bloodstream in and around the site of injection blocking the blood vessels. This blockage causes tissue damage and swelling at the sites of injection. In extreme cases, the tissue started rotting and often results in amputation leaving the victim crippled. Even in milder ones, as the blood vessels are ruptured, it resulted in excessive bleeding intermittently or continuously and be-laming the victims. By the 90s through the early 20s, the statistics of users and their related problems/deaths were rising to peaks where it became a major concern for the judiciary, the religious community and society as a whole. Besides the cognitive effects of the substance, at the social level, many youths of the time incorrectly sensed that it was attractive to women that being high on the substance and having swelling hands was a way of expressing masculinity, which when combined with peer influence was a menace and a disaster for the youths of the time for which they are completely unaware of the fatal impacts. Other classes of psychoactive substances like dendrite and correction fluids (inhalant), diazepam and alprazolam (both benzodiazepines), and cough syrup (codeine, dextromethorphan etc) were the most common substance of abuse which can be easily obtained from pharmacies. Despite the intervention of substances like opium, cannabis etc, alcohol has always been a general consumption and has always been taking a prominent role in various traditional rituals and feasts even today.

Apart from Heroine and Proxyvon, other psychoactive substances like cannabis (hemp) were consumed and recognized by the substance user population. The

reason for its unpopularity is that Cannabis was not a major choice during the 80s as it was considered to induce psychosis or madness and users were despised. However, the statistics for cannabis users had risen recently and it served mainly as a comorbid with other substances. The baseline survey conducted by the Social Welfare Department, Government of Mizoram (2017) showed that 56.6% of their respondents have used cannabis which is much lesser than Heroin (65.8%) with a low percentage of users for cocaine (2.5%), Amphetamine type stimulants (2.0%) and hallucinogens (0.3%).

Mizoram shared its international borders with countries like Myanmar and Bangladesh and is geographically located near the Golden Triangle of South-East Asia which covers three countries Thailand, Laos and Myanmar. The Washington Times (2013) reported Myanmar is the next largest opium producer in the world second to Afghanistan has always been the top producer. According to the UN office on Drugs and Crime (2018), Myanmar had 37,300 hectares of land devoted to cultivating illicit opium poppies, which is quite large in area. The average opium yield remained rather stable at 13.9 kilograms per hectare, with a 4% increase compared to 2017. Potential opium production was estimated at 520 metric tons in 2018. The largest share of the 2018 opiate market value was income generated by heroin manufacturing and trafficking. Domestic heroin consumption of 7.6 tons was valued at \$ 238 - 401 million, whereas the export of heroin (20 - 45 tons) was worth between \$782 and 1,798 million. The sharing of this international border with one of the largest opium producers has put Mizoram on the smuggling route and increased the availability of opiate products in the region. Increased availability could be the result of the rise in its use which has been a problem for law enforcers and the community. According to the Baseline Survey on the extent & pattern of drug use in Mizoram (2017), Heroin use was very common in Champhai district which neighbours Myanmar. 95.3% of the respondents from the Champhai district were using Heroin and heroine is much cheaper in the said district because it is the nearest district to the border of Myanmar which is one of the largest producers of heroine. Users from different parts of the state often travelled in pursuance of a cheaper and more concentrated form of the substance.

Family and its environment

The family is traditionally seen as the basic foundation of society, generally, the family can be seen as a group of people who have biological, emotional or legal ties to each other (Bauserman, 2002; Ninaniya et al., 2019). In different cultures, the term "family" may mean different things and a wide variation of families, usually, people of two generations and two genders are involved (Ciechetti et al., 1995). "Familism is a cultural value that emphasizes interdependent family relationships that are warm, close, and supportive" (Campos et al., 2014). In the present period it is an institution in which, by and large, households are assumed to be organized based on close kinship relations. It is an institution in which households are assumed to be organized, by and large, based on a division of labour between a primary breadwinner (male) and a primary child-rearer (female) (McIntosh & Barrett, 2015). The traditional family system in Mizo culture is generally a nuclear family though there are some joint families. The wedded son has to start an independent household from the parent family, forming a new family with an exception for a single son or he is the youngest son within the family. Although such is the case, inter-clan marriage is uncommon among the forefathers of the Mizo society and each clan endeavours to maintain the family bloodline (Vumson, 1987). The case is exceptional for the youngest son who is the heir and the wedded daughter leaves the family and joined the husband's family.

Home is the principal context in which human development occurs; it is one of the several environments or ecological systems that influence human lives (Rich, 1998) and it has an important role in the personality development of an individual undergoing a structural, emotional and interactional transformation. Home is the first environment within which the individual interacts with others. Family members like mother, father and other members influence each other, directly and indirectly (Minuchin, 2002); it is critically important in providing the human with stimulation, support and nurturance (Pelto et al., 1999). The so-called 'environment' in the opinion of Epstein and Franklin (1970) is a social, cultural and physical condition, and to develop one's personality.

The family is where most of us begin to understand and comprehend the world around us and the experiences that await us. The influence of each member is the foundation of our psychological make-up. The relationship between the child and the mother is influenced by the father and vice versa. The indirect effects imposed by each member on each other and the interaction between two members of the family are altered by the behaviour of the other member (Sigelman et al., 2012). Therefore, to understand the nature of substance abuse, the role of the family environment cannot be ignored. Poor family relationship is psychological hazards at any age, but especially during adolescence because at this time they are typically ensured of themselves and depends on their families for the feeling of security.

Drug users and non-users showed differences in Family Cohesion, Expressiveness level within the family, Conflict experienced among members, Independency exerted among members, Achievement-Oriented, Intellectual-Cultural Orientation, Active-Recreational activities within the family and Organization and Control imposed by the authority inside the family (Jogsan, 2012; Kothari et al., 2010). Drug abuse is a complex contemporary social problem including - psychological, social, and biological that has some effects on society, law, economics and politics (Schilit & Comberg, 1991; as cited in Jogsan, 2012). Dysfunctional behaviours and activities occurring within the family environment predisposed the development of maladaptive behaviours mediated by hypersensitivity to threats resulting in the development of addiction especially eating disorders (Loxton, 2005)

Research has repeatedly demonstrated that there are multiple pathways to adolescent substance use, which implies that there are many possible points for early intervention. The transactional model also delineates how variables recognized as final common pathways for risk, such as having friends who smoke and drink, themselves have antecedents in family factors and self-control processes (Wills & Yaeger, 2003). A great number of indicators of family functioning are associated with antisocial behaviour in adolescence. These indicators of family functioning are,

of course, interdependent, and therefore their roles may be confounded (Dekovic et al., 2003). The influence of a parental role model was strongest concerning drug use, although it appears that parental influence is not entirely substance specific i.e. parental drinking has a greater impact on adolescent smoking than on adolescent drinking (Mc Vie et al., 2005). Apart from familial influence, there are factors such as peers, cultural influences etc that contribute to the lives of adolescents. Culture influences the lives of adolescents in many ways: language, values, beliefs, as well as social norms and expectations. Through an adolescent's own experience of familial and cultural norms, he/she learns how to control culturally acceptable and unacceptable behaviours. In addition, culture affects parenting strategies, and the development of emotions and self-concept, which are all key components of adolescents' lives (Farokhzad, 2014).

Fanai (2018) observed that a large number of Mizo children in Aizawl came from broken families, about half of the children examined have a family member who abuse substance, with alcohol being the major one and the educational level of the parents was low. Adolescent boys having drug-abusing siblings perceived significantly more paternal hostility/aggression, indifference/neglect, undifferentiated rejection and overall rejection from fathers compared to adolescents having normal siblings. When mothers are perceived to be warm, adolescent boys having alcohol- abusing siblings would have less depression. In other words, it could be predicted that even if boys have alcohol-abusing siblings, they are likely to have fewer symptoms of depression if their mothers were perceived to be warm (Pachau et al., 2018). More than a third of the female substance abusers in institutional care had family members who abused substances, among whom their sibling is the highest (Ralte, 2017). The major reason for abusing substances was experimentation, peer pressure, experiencing abuse in the past, depression followed by family problems, spouse pressure, poverty, environment and abandonment.

Family cohesion and conflicts

Family cohesion was related to lower levels of alcohol use, although no protective factors were found to lower the probability of drug use. Family cohesion examines the togetherness and supportiveness within a family. More support and closeness among family members lead to a lesser need to turn to substances for comfort and support. Weaker family ties or cohesion is observable among families who had substance-dependent individuals (Jedrzejczak, 2005). The family environment of substance users highlights less cohesion which reflects less concern and commitment to taking family responsibilities (Kothari et al., 2010). A cohesive family may also tend to engage with friends and acquaintances that the entire family enjoy and have a more open and honest relationship about recreational activities (Grossman, 2005). The environment within the family which permits a minimal level of family cohesion and more conflicts between family members is often the factor that leads the child to rely on deleterious coping mechanisms. Ineffective parenting methods were characterised by high levels of parent/child conflict, poor parental monitoring and lack of leisure time spent doing activities together (Mc Vie et al., 2005). Juvenile offenders often come from environments where there is low cohesion among family members with higher conflicts/disputes and control from authority figures. Besides these factors, the expression of one's emotions and thoughts is suppressed largely within the family environment of juvenile offenders. Such a hostile and indifferent family environment often leads to relying on social support such as peers. (Jin et al., 2016)

Greater family cohesiveness and open family communication are negatively related to overall drug use severity and marijuana use (Volk, 1989). Families of cocaine users reported lesser family cohesion than alcohol users (Marchi et al., 2017). The essence of family cohesion and reduced conflict is also reflected not only in substance use but also in other behavioural problems. When there are more conflicts experienced within the family, children tend to involve in behavioural problems which is the same for lower family cohesion (Sapp, 2003). Several studies have conjunctive results regarding the influence of problems in the family on

adolescents relying on activities that give positive and rewarding emotions which they are deprived of in the family. These activities may be indulging in substance that directly activates the reward system, computer games, internet addiction etc. The results of such studies showed evidence for the relationship between activities that directly stimulate the reward circuit and the relationship between their factors. The perceived family environment has relationships with adolescents' involvement with alcohol use, smoking behaviour and involvement with 'hard drugs'. The relationships varied across the type of substance and males and females had differing relations regarding the use of substance (Foxcroft et al., 1995).

Substance dependents come from families where there is hostility and ill will (Jedrzejczak, 2005; Bernardy et al., 2010). Although such may be the case in some cultures, violence may be considered a norm in other cultures. Caballero and colleagues (2010) observed that among Mexicans, the magnitude of physical and psychological violence is high, given that nearly 6 in 10 adolescents reported being a victim. The explanation of their result could be connected to prevailing socio-cultural traditions in Mexico, where family education and discipline standards still contain violent components. Punishment and insults, but also spanking and slapping, are still part of families' disciplinary dynamics and are not necessarily viewed as violent expressions. But this violent correctional method may be a devastating way of grooming a child. The longitudinal study supports that familial conflicts in childhood intensify the possibility of maintaining substance use disorders in late adolescents and early adulthood although factors like social support may mitigate the association. Intervention programs may focus on tackling conflicts and stresses within the family (Skeer et al., 2009)

Expressiveness

Individuals' self-expression is not endorsed in substance-user families (Kothari et al., 2010; Bernardy et al., 2010) which suppresses the confidence of the children in the families. The child in the family is the recipient of whatever constructive influences may result from the interrelations of his family with the social order. These constructive influences are through communications between the

child and family members and also include the way family members communicate with each other. Fitzpatrick and Caughlin (2002) noted, “family is where most of us learn to communicate and even more important, where most of us learn how to think about communication” (p. 726). The child examined the behaviour and way of communication between family members and it is this way of communication that will shape his style of responding to others. Children learn how to communicate and interpret family members’ verbal and nonverbal communicative behaviours through family interaction. Across the life span, family members share experiences and meanings associated with those experiences (Fitzpatrick & Badzinski, 1994; Goodnow, 2005; Socha, 2009). Although there are several socializing agents (peers, neighbours etc), family serves as the best agent as the child is connected biologically. Parents have a profound impact on youths’ behavioural outcomes, specifically during the developmental period of adolescence (Miller-Day, 2008; Miller-Day & Kam, 2010). Family is the primary and most powerful agent of socialization of children. It is always changing and behaviour can be understood only in terms of its interactions with this environment because it is somewhat different for each child. Moreover, the difference within the family does not run in one direction; while children are being socialized by others, they are also achieving socializing agents (Dhillon, 2005; as cited in Farokhzad, 2014). Primary socialization theory (Oetting & Donnermeyer, 1998) suggests that parents shape adolescents’ pro-social and/or deviant norms and behaviours, emphasizing the role of communication between parent and child in establishing norms and standards of behaviour, preventing adolescent involvement with deviant behaviours such as substance use. This parental influence on adolescent norms has a long and significant history in many disciplines such as psychology and prevention science (Biglan, Flay, Embry, & Sandler, 2012). Substance use disorder in one family member influences the other family members. Adult children of parents with Substance use experience little satisfaction within their own families and a lack of communication between their family members (Hrafnsdóttir & Ólafsdóttir, 2016).

Family functioning is related to adolescent substance use; family communication, but not specific parent-adolescent communication, is related to

adolescent substance use; the number of parents in the home did not predict adolescent communication; and hyperactivity, inattention, and family history of Substance use disorder did not alter the strength of the above relationships. These results suggest the importance of directing research attention and intervention resources towards improving the family environment, specifically family functioning and communication, to attenuate adolescent substance use (Brechtling, 2004). In families where the parents or the child uses illicit drugs, communication and the overall mood within the family are negative.

Shin and Miller-Day (2007), in their longitudinal studies, examined the direct effects of family communication environments on the parental anti-substance use injunctive norms and parent-adolescent prevention communication about substance use in the media. The findings suggested that the three dimensions of family communication environments predicted different relationships among the study variables. Expressiveness and conflict avoidance were significantly related to parental injunctive norms, whereas structural traditionalism was not. Those adolescents who reported high levels of expressiveness in family communication also believed their parents would disapprove if they used substances. Expressiveness and conflict avoidance dimensions each had a significant indirect effect on early adolescents' recent substance use behaviours via parental injunctive norms and the adolescent's norms. That is, expressive family communication environments were positively related to early adolescents' perceptions of parental disapproval of substance use, which, in turn, predicted stronger personal anti-substance use norms and consequently, reduced recent substance use (Choi et al., 2017; Shin & Miller, 2007, 2019). In contrast, Ryngala (2006) found that Adolescent substance abuse was not related to the marital status of parents or to adolescents' perception that they were allowed to drink alcohol by their parents. There may be inconsistencies about the influence of parents endorsing the use of substances. Family environments that are generally expressive with parents who directly address the topic of substances and substance use (Active-Open) are the most effective combination overall, with the least effective being family environments that are not expressive and parents who avoid directly addressing the topic of substances or

substance use. (Choi et al., 2017).

Independence or self-sufficiency for adolescents is often not witnessed in families where there is a substance user. Discouraging efforts from family members of addicts hinder the path of becoming self-sufficient to make their own decisions independently (Kothari, 2010). A study among 30 drug users and non-user with equal groups had shown a significant difference between the two groups on Independence with a low score from drug users (Jogsan, 2012).

Acceptance and Caring are common when relationships between family members are satisfactory. The two are quite fairly different among Substance users and non-user (Jogsan, 2012; Kothari, 2010). Poor relationship with family members or whom we live with is significantly associated with drug use. (De Micheli et al., 2004).

The degree of family factors in preventing and treating adolescents' involvement in substance abuse and use may be a prominent one. An adolescent substance abuse treatment program, using family systems therapy as the model of treatment for the adolescent abusing substances, was successful in improving family functioning, decreasing drug use, improving school performance, and decreasing court involvement. Both parents/guardians and adolescents alike agreed that family systems therapy was helpful with the research areas of interest (Wallis, 2013). The inclusion of family members in an adolescent's treatment can lead to a higher chance of success and involvement. The most effective intervention for adolescent substance use disorder is family therapy and the involvement of family in an adolescent's recovery (Anderson, 2016). Wylly (1989) observed the effects of structurally oriented individual family therapy among in-patient adolescent substance users determining that adolescents who receive the therapy as part of substance abuse treatment have higher self-esteem, less depression and better family relations than those who did not receive the treatment. Those adolescents who receive the treatment indicated a greater sense of competence, likableness, attractiveness, individuality and self-confidence. Adolescents with substance-abusing parents who enter treatment programs with

greater problem severity in a range of areas resulted in outcomes similar to adolescents with no substance-abusing parents (Leichtling et al., 2006).

The Adolescent Community Reinforcement Approach (A-CRA) promoted positive skill building and helped adolescents learn how to enjoy their lives while maintaining sobriety. The major focus of their intervention was to focus on learning a happy, enjoyable, and safe way to live their life by incorporating improved communication with family, teachers and friends as well as learning coping and problem-solving skills. The combination of the Adolescent Community Reinforcement Approach (A-CRA) and assertive continuing care helps to improve retention and long-term abstinence from substance use among adolescents. A-CRA is effective across different ethnical backgrounds and genders (Anderson, 2016).

Family economic support and engagement in targeted treatment play an important role in helping people with dual disorders reduce substance use. Access to economic resources and informal assistance can have a significant impact on clinical outcomes. People without family support are at a significant disadvantage and may require more formal treatment services and public assistance than those whose relatives give such support. Caregiving hours were significantly associated with substance use reduction but not with cumulative substance use (Clark, 2001).

Yen et al. (2007) examined the differences in the diversity of family factors between adolescents with and without internet addiction and substance use experience. Family factors like high parent-adolescent conflict, habitual alcohol use of siblings, perceived parents' positive attitude to adolescent substance use, and lower family function could be used to develop a predictive model for Internet addiction.

The family environment may exert significant indirect effects on adolescent alcohol use through peer influence, self-efficacy, and stress, and parental expectations significantly moderated all structural paths. Parental expectations of adolescent alcohol use significantly moderated all structural relationships, and greater parental disapproval was associated with less involvement with friends and peers who use alcohol, less peer influence to use alcohol, greater self-efficacy for

avoiding alcohol use, and lower subsequent alcohol use and related problems (Nash et al., 2005). Similarly, early adolescents in conflict-avoidant families were likely to perceive parental disapproval of substance use, which then led to stronger personal anti-substance-use norms and consequently, reduced recent substance use. Peer substance

use is a significant main effect for the number and frequency of cigarettes smoked and amount of alcohol use, and was more influential when the attitude towards family was average to poor. Although peer influence is a significant factor, low substance uses by family and maintaining a working relationship with the child in reducing substance use is important (Barrett et al., 1991)

Family attachment

When controlling for family conflict attachment does not show a significant relationship with delinquency (Perron, 2013). Weak attachments among family members might not be solely responsible for the child to commit delinquent activities but rather family conflict alone can lead to it. An increasing number of conflicts is likely to develop morbidity towards substances as conflict usually initiates negative feelings instead of positive ones. Family conflict is correlated with substance dependence and depression, with depression correlating to dependence symptoms (Wu et al., 2004).

High levels of substance use among adolescents residing with step-families would be explained by low parental attachment, whereas heightened opportunities for participating in deviant activities would account for the substance use behaviours of individuals living in single-parent households. More generally, the findings suggest that family structure has a moderate effect on youth substance use; that parental and peer relations are better predictors than the family structure of levels of alcohol and marijuana consumption (Crawford et al., 2007)

The emotional and physical attachment that the child develops with the family members will further predict how the child will deal with future social attachment. A meta-analysis conducted by Hoeve et al (2012) found that poor

parental attachment was significantly linked to delinquency in both girls and boys. However, attachment to one's mother had a stronger effect size than attachment to one's father. Also, the effect size was stronger when the parent was of the same gender as the child. The link between attachment and delinquency was stronger when attachment and delinquency were measured at a younger age (Hoeve et al., 2012). Russian youth who viewed their families as conflicting, non-supportive, and without close relationships with their parents reported feeling more depressed; and substance users were not as close to their parents and families as non-users (Scheer & Unger, 1998)

Weak attachments to parents may be due to hostility towards the children. Hostility and lack of warmth from the parents resulted in children's development of alcohol and marijuana use and the former was more strongly determined by the use and attitudes of the same-sex parent. In general, hostility and lack of warmth contributed most to children's use of illicit drugs. Hostility displayed by both parents helped to determine the incidence of delinquency among sons and the use of dysfunctional coping methods among sons and daughters (Johnson & Pandina, 1993). The hostility and absence of warmth from parents may drive the child to adapt to situations where these needs can be obtained, through peers and the use of illicit drugs to directly invoke pleasure that must be naturally received from parents. Family cohesion, warmth, love and happiness are protective factors while, hostility and weak family ties are predictors of substance use (Jędrzejczak, 2005)

The greater the risk factors an adolescent endures the greater the likelihood he/she will use substances. The risk factors for adolescents with addicted parents were parental chemical health modelling (parents who use substances are modelling such behaviour to their children), traumatic experiences in adolescence or adulthood and genetic predisposition, the protective factor themes were engagement with others and in activities, resilience and faith in God (Chaput, 2013). Implementing a program that decreases the risk factors and builds protective factors will reduce substance use among adolescents. Protective factors that need to be present are parents' negative views on substance use, positive parenting skills,

and pro-social peer relationships. An effective intervention to prevent substance use among adolescents is comprehensive. Interventions that focus on educating the adolescent on the dangers of substances fall short of preventing substance use. Effective intervention strategies need to include the parents of the adolescents for best results (Logan, 2014).

Parenting Styles

The parenting styles identified by Baumrind (1966) which encompassed the majority of families were: authoritative, being responsive to the child's feelings and needs while also being demanding; authoritarian, being controlling with beliefs that the child should be kept in place, and permissive, accepting and non-punitive, with few demands on the children. Maccoby and Martin (1983) extended this model by separating neglectful parenting, characterized by low demandingness and low responsiveness, from permissive parenting, and thus introduced a fourfold classification of parenting styles based on the four combinations of high/low on the aspects responsiveness and demandingness. This classification has become widely used in the context of adolescent substance use (Becoña et al., 2012). Several studies have shown the significance of parenting style on adolescent drug abuse accounting for a whopping 64% of the variance in adolescent drug use (Mwania & Njagi, 2017). *Perceived parenting styles* are defined as an opinion of adolescences or children about styles of parental behaviours during their childhood. According to the definition, assessment of children about parental behaviours is important. There are four types of types of perceived parenting styles but the present study concentrates on the original model laid out by Baumrind (1966).

The Authoritarian Style- In this family, everything is black and white. The father rules with an iron fist and the mother supports him in all ways. The kids learn early on not to argue with their parents, and not to question any rules of the house. Things are done one way and one way only. Anything else results in punishment. Right is right and wrong is wrong. The kids have no input, no bargaining power and no voice.

Authoritarian style is linked with substance use (Cox, 2001; Diggs et al., 2015; Bronte-Tinkew et al., 2006) and diminishing overall well-being (Alkhafal, 2015). Authoritarian father parenting style was strongly associated with adolescent substance use and specifically, tobacco use (Cox, 2001). Diggs et al. (2015) observed a significant association between fathers' harsh parenting in middle adolescence and substance use in late adolescence. Substance use in middle adolescence strongly resulted in substance use during emerging adulthood, indicating the impact of fathers' harsh parenting style in early adolescence. The association between fathers' harsh parenting in early adolescence and substance use in emerging adulthood was not significant but was mediated through substance use in late adolescence. Adolescents who reported experiencing an authoritarian parenting style had a higher delinquency score than the authoritative group (Terry, 2004).

The Authoritative Style - The parents have strong ideas about what they believe is right and wrong, but they do not force them on their children as absolutes. Early in life, kids learn that there will be consequences for breaking the house rules, but the reasons behind the rules are explained calmly and with loving care. The kids are allowed to ask questions, voice their opinions and possibly even change their parents' minds about some things. They talk about the pros and cons of experimentation and the consequences both at home and out in the world for drinking and doing drugs. The discussion is ongoing and based on facts. As the kids learn more from their peers, they ask their parents more. They get straight answers and they become well-informed.

Authoritative parents who are highly demanding and highly responsive were remarkably successful in protecting their adolescents from problem drug use, and in generating competence (Henry, 2010). Authoritative upbringing, although sufficient, is not a necessary condition to produce competent children (Baumrind, 1991). A literature review by Newman et al. (2008) revealed that adolescents of authoritative parents who have positive parental relationships, healthy open communication and perceived parental support, are less likely to report symptoms of depression or engage in substance use, sexual risk and violent behaviours. The

review extends the existing literature by demonstrating that adolescents benefit from authoritative parenting practices across numerous domains. Among Nigerians, both authoritarian and authoritative had a low positive correlation with substance use. Stern and meticulous methods of rearing may prevent the child, to some extent, from involvement with the substance of misuse during adolescence (Onukwufor et al., 2017). The role of an authoritative parenting style was highlighted by Soenens et al. (2006) in which parents who create a warm and involved family climate, who avoid the use of psychologically controlling strategies, and who provide sufficient and clear expectations concerning their adolescents' behaviour promote the disclosure of personal whereabouts among their offspring, which in turn provides them with more knowledge concerning their adolescents' behaviour. High responsiveness and high behavioural control additionally give rise to an increase in parental knowledge. Mosquera (2019) revealed that among Jamaicans there is higher self-esteem and self-efficacy among adolescents whose mothers employ authoritative and permissive parenting styles. Authoritative parenting style acts as a protective factor against drinking behaviour and substance use (Henry, 2010; Posey, 2014; Becoña et al., 2015; Berge et al., 2016). Non-authoritative parenting styles have a greater repercussion on adolescent binge drinking than parent's drunken behaviour (Zuquette et al., 2019) which clearly showed that it is solely the absence of an authoritative parenting environment that results in such behaviour.

Permissive Style- The parents were loving, affectionate and kind to the kids, but there are very few hard-and-fast rules in this household, and since there are very few rules, there are very few consequences. The parents believe that children intuitively know what's best for them, and believe that the best policy is to let them be, and simply support and love them. The kids learn at a young age that they can set their bedtimes, eat what they want, play how they want and come and go as they please.

Child tobacco and alcohol use was associated with child perception of lower authoritativeness, and higher permissiveness and parenting styles and adolescents' perceptions of them are associated with child achievement and substance use

(Cohen & Rice, 1997). Several studies have found that differing parenting styles have different outcomes on adolescent substance use. Children who perceive an authoritative style of parenting are more protective against substance use (Adalbjarnardottir & Hafsteinsson, 2003; Calafat et al. 2014; Posey, 2014). Females who perceived warm-directive families reported less alcohol use but were more likely to say that they would smoke to cope with a problem and these females also tended to report more stimulant/sedative-related behaviour (Foxcroft et al., 1995). Having a father with an authoritarian parenting style is associated with an increased risk of engaging in delinquent activity and substance use while permissive parenting also predicts less risky behaviour when the father-child relationship is positive (Bronte-Tinkew et al., 2006). While the authoritative style may stand out among other styles of parenting, a study among Swedish youths revealed that parenting style may be less important for adolescent substance use outcomes than association with deviant peers. Widom and White (1997, as cited in Ryngala, 2006) found that women who grew up in neglectful homes and women who have been physically abused as children were more likely to be diagnosed with a substance use problem. Parent with a permissive parenting style who is the same gender as the respondent can directly influence control processes and indirectly influence alcohol use and abuse (Patock-Peckham et al., 2006). Among college-age individuals, permissive parenting imposes greater risks for drinking problems mediated by beer consumption. Although the relationship is indirect, it is often found that a permissive parenting style influenced alcohol use (Patock-Peckham et al., 2006; Whitney & Froiland, 2015; Zuquette et al., 2019)

Parental and peer support act in a different way to an adolescent, in that, often it is revealed that more parental support is inversely related to adolescent substance use while greater peer support is positively related to it. Parental support has a powerful impact on adolescents' coping with stress, competence with peers, and self-control ability. An adolescent who indulged in substances or drugs has parents who are uninvolved in their child, more conflicts with their partner and with the child themselves, and more physical punishment in the absence of moral providence. Having a good relationship with mothers may inhibit adolescents from smoking,

drinking and indulging in illicit drugs. Illicit drug use was more common among those who reported a poor relationship with their mother. In contrast, the absence or presence of the father in the family does not influence the habitual use of a substance. Verbal and physical aggressions from fathers were related to lower frequencies of substance use among adolescents. Although contradicting other studies, the authoritative/supportive parenting style of the mother and the hard/authoritarian parenting style of the father seem to be protective against adolescents' substance use (Brassai & Piko, 2009). Children of joint families are more susceptible to the use of substances either habitually or occasionally than those of nuclear families or single-parent families. There was a stronger statistical association between fathers' substance use problems and male children's alcohol use. In addition, there was a significant relationship between grandparents' substance use and youth sexual behaviour for both genders (Brown et al., 2015). The reason might be that single parents are more committed and have more time for their children. In joint families, although the general idea gives the sense that there would be more opportunity for social support, contradictorily it could be that children do not receive the required attention in particular due to the larger number of siblings and family members among which the commitment is divided.

Johnson (2011) found evidence for an inverse relationship between a strong parent-child relationship and teen substance use. There is a positive correlation between family volatility and substance use and an inverse correlation between family bonding and family volatility. Parents and teens need to spend enjoyable time together, have clear rules and maintain a balanced level of parental monitoring. The time spent together between a parent and a child subsides the chances of the child indulging in substance. Teens who used reported fewer positive parenting practices and more negative parenting practices by their parents also indicated more substance use and related problems. Lack of positive parenting and negative parenting practice is a predictors of substance use, and poor monitoring is associated with binge drinking (Brewer, 2017). Positive parenting practices are negatively related to child substance use and poor monitoring of children is positively related to their substance use (Vermeulen-Smit, Verdurmen, Engels, & Vollebergh, 2015).

An increase in deviant peers was associated with an increase in the frequency and quantity of alcohol, marijuana and nicotine use, and an increase in the maximum number of drinks consumed in 24 hours. Effective intervention and prevention programs should be aimed at disrupting deviant or deviant substance-using peer groups in college students at risk of problem substance use (Holth, 2014). The conjoint influence of the paternal history of substance abuse and difficult temperament in fathers and sons influenced the family and interpersonal processes that, in turn, influenced the developmental trajectory of the child toward deviant peer affiliations (Blackson et al., 1996).

Parents need to try to maintain a healthy relationship with their children. The quality of family life and parenting practices play a critical role in the initiation and experimentation with alcohol (Miller-Day, 2008). Parents should be involved in their teens' lives and engage them in the decisions that they make. When a good foundation for values is established, it helps to protect teens from becoming involved in risky behaviours. For teens, parenting practices can foster resilience against anti-social activities and substance use (Miller-Day, 2008). It is crucial for teens to feel comfortable talking to their parents about what is going on in their lives. The more they talk to their parents, the less likely they are to engage in substance use. Teens need to have some set rules to follow, a good example to follow and to model their lives after (Johnson, 2011). Parenting style has a definite effect on Mizo adolescents in terms of their decision-making on whether to affiliate with substance use. Rejection and favours from parents lead to drug addiction among them (Rai, 2008). Consistently, among Mexican-American adolescents, higher maternal acceptance was associated with lower levels of alcohol and marijuana use (Ozer et al., 2013).

Apart from the different parenting styles and their direct and mediational role, parents' substance use and involvement, in particular, may have an indirect effect on the child. Parental drug use on child control problems has important implications since conduct problems in childhood and early adolescence are thought to be one of the most important precursors of adolescent drug use as well as delinquency

(Kandel, 1990). A correlation has been shown to exist between parent usage and increased adolescent substance usage. Increasing parental attitudes toward illicit substance use have been incremental for adolescent substance use.

Choquet et al. (2008) have shown that as parents exert more control the child's substance use decreases. Parental control is more markedly related to substance use in girls than in boys. These tendencies were observed for intact families as well as for single-parent families or reconstituted families. Parental control has a greater impact than emotional support. Among girls, emotional support has a greater impact than among boys. The amount of control exerted by the parents nullifies the effects of emotional support, intact and non-intact families. Emphasizing parental control may reduce the cost and effect of formulating strategies for familial and emotional support.

Some studies have also revealed that the effect of parenting is mediated by other factors which have a significant influence on the relationship between parenting style and adolescent substance use. Parenting style predicts emotion regulation, emotion regulation predicts pro-social tendencies and pro-social tendencies predicts poly-substance use. Encouraging parenting styles marked by autonomy-granting and support for emotion expression early in development may improve a constellation of outcomes throughout development (Thomas et al., 2020).

Parenting style among Mizo can be classified as conservative to some extent and is commonly a Patriarchal family system like most family systems in other regions of the world. It is generally similar to Baumrind's authoritarian style where the father plays the main role with control of power and authority over the family and was almost unlimited resulting in an imbalanced diffusion of power within the family (Mahapatra, 2008; Gangte, 2016; Lalsangkimi, 2016). In the past, the patrilineal system was a common practice with the power of the family residing at the head of the family; who is the father. But it seems this trend had slowly been understated today where in some cases the mother is the head of the family or at least power diffusion is balanced between the father and mother.

Response from adolescents regarding the parenting style they are aared with showed that a permissive parenting environment, repudiated relationship, and corporal punishment including over-protection from parents increased the chance of developing psychopathology (Zothanmawii, 2016). The child needs a balanced environment where it has to satisfy the needs and necessities for socialization. Canonical correlation analysis reveals that substance use is the aftermath of a combination of low-level caring and a high level of protection from the parents (Clausen, 1996).

Impulsivity

According to Oxford Learner's Dictionary (2020), impulsive means, "(of people or their behaviour) acting suddenly without thinking carefully about what might happen because of what you are doing". Impulsive behaviour is one of the characteristics of a person and therefore qualifies for being a factor in determining personality. Eysenck (1993, as cited in Bakhshani, 2014) holds that impulsivity is characterized by unplanned risky behaviours, and making up one's mind quickly. Another possible definition could be the tendency to act with less forethought than most individuals of equal ability and knowledge (Dickman, 1993). Impulsiveness, however, defined, is essentially related to the control of thoughts and the resulting behaviour. Hence, the historical and philosophical underpinnings of the social sciences, jurisprudence and the mental and behavioural sciences are replete with relevant concepts – self-control, free will, volition, inhibition, executive functions of the brain and social control (Barratt, 1972 as cited in, Monahan & Steadman, 1994). Most definitions and those mentioned above clearly highlight that it involves unplanned actions that are not the result of cognitive reasoning and pre-evaluation of the consequences of that action. Impulsive behaviours have been examined from different perspectives including, crime, gambling, substance abuse, decision-making regarding business deals etc.

Impulsivity may be used to describe socially appropriate actions, such as deciding to surprise a friend with an unannounced visit, as well as more problematic behaviours, such as attending a party instead of studying for an exam. It is thought to

encompass a range of behaviours including lack of persistence and planning, risk-taking, acting on a whim, boredom susceptibility, sensation-seeking, reward-seeking, components of hyperactivity, behavioural disinhibition, and inability to delay gratification (Depue & Collins, 1999; Evenden, 1999; Petry, 2001; Smith et al., 2007; Whiteside & Lynam, 2001)

Patton et al. (1995) identified six primary factors and three second-order factors for Impulsivity based on Barratt Impulsiveness Scale – 10. The six primary factors were: Factor 1, *attention*, “focusing on the task at hand”; factor 2, *motor impulsiveness*, “acting on the spur of the moment”; factor 3, *self-control*, “planning and thinking carefully”; factor 4, *cognitive complexity*, “enjoy challenging mental tasks”; factor 5; *perseverance*, “a consistent lifestyle”, factor 6, *cognitive instability*, “thought insertions and racing thoughts”. These primary factors combined to form second-order factor structure, the three factors were Attentional Impulsiveness (attention and cognitive instability), Motor Impulsiveness (motor impulsiveness and perseverance) and Non-Planning Impulsiveness (self-control and cognitive complexity) each encompassing two primary factors each. Motor Impulsiveness was defined as acting without thinking, non-Planning as present orientation and lack of “futuring”. The second-order factors, Motor impulsiveness and Non-Planning Impulsiveness are similar to Eysenck’s (Eysenck & Eysenck 1977, as cited in Patton, 1995) impulsiveness subtraits of impulsive narrow and non-planning respectively.

Evenden (1999) and colleagues carried out a series of psychopharmacological studies which suggest that impulsivity can be influenced by several neurochemical mechanisms and that impulsive behaviour has no neurobiological foundation and further mentioned that impulsivity may be multifactorial comprising of independent factors which correspond to modulate behaviour providing recognition into the pathology.

Smith and colleagues (2007, as cited in Knezevic, 2013) assessed similarities and distinctions between related personality constructs and identified a hierarchical model of impulsivity with three distinct personality factors. Lack of planning and

lack of persistence were identified as facets of a 5 common, higher-order construct, while urgency and sensation-seeking were identified as two separate constructs. Verheul (Verheul, van den Brink, Geerlings, 1999; Verheul, 2001, as cited in Knezevic, 2013) also proposed a three-pathway model of impulsivity. Within this model, behavioural disinhibition, stress reactivity, and reward sensitivity pathways are proposed as antecedents to antisocial behaviour, avoidant personality style, and sensation seeking, respectively. Although the studies described above demonstrate variability concerning the distinct factors of impulsivity, there is an overarching theme that suggests a multidimensional nature of impulsivity. In particular, empirical studies have identified at least three distinct facets of impulsivity utilizing personality measures (e.g., lack of planning, urgency, and sensation seeking) and have linked them to the development of pathological behaviour. It is not clear at this time how these factors interact across the life span and whether different measures of impulsivity would yield additional factors. Knezevic (2013) examined the multifactorial nature of impulsivity and the results revealed the existence of two distinct, yet related factors of impulsivity. Cognitive and Behavioural facets of impulsivity were differentially related to psychopathology and engagement in risky behaviour. The integrated results of these three studies examined in this study identified a link between childhood impulsivity and subsequent personality development and emotional dysregulation.

Research with juvenile offenders has shown that impulsivity, measured both cognitively and behaviourally, is one of the strongest predictors of delinquency (Loeber et al., 1998; White et al., 1994 as cited in Baskir, 2006) and substance use (Diemen et al., 2008). The majority of adolescents 16 years old and younger showed significantly high levels of cognitive impulsivity as compared to adults. Additionally, the unique effects of high cognitive impulsivity and negative peer relationships predicted minor delinquency whereas, the unique effects of high behavioural impulsivity, high familial conflict, and the highest levels of negative peer relationships predicted moderate/serious delinquency (Baskir, 2006).

The role of impulsivity in substance abuse has recently received increased attention from both researchers and clinicians. Although past studies and treatment primarily focused on compulsive aspects of substance use associated with craving, it is becoming apparent that impulsivity is also a factor in the initiation and maintenance of substance use disorders. Impulsivity is also a factor in the initiation and maintenance of substance use disorders. Examination of covariation between impulsivity and exploratory excitability reveals that impulsivity has greater ramifications on substance use and is independently related to several classes of substance abuse (Bidwell et al., 2015). Children and adolescents who have high frequencies of recent adverse life events are among illicit drug users (Hayaki et al., 2005).

Mathias and his colleagues (2017) examined pubertal development from pre-adolescence to mid-adolescence and related it to substance use risk and behavioural impulsivity among boys who are at increased risk for substance use and revealed that boys who had the accelerated progression through puberty had the highest proportion of family histories of substance use disorder and perform more impulsively on reward choice measures (Mathias et al., 2017). Charles et al. (2016) examined impulsivity and sensation-seeking from pre-adolescent to mid-adolescence who were identified as being at risk for developing substance use disorder and found that substance users were more impulsive (Allen, 1998; Hudson, 2018), more sensation-seeking (Mansour et al., 2017) during pre-adolescence and that greater sensation seeking in pre-adolescence were related to heavier substance use by mid-adolescence. The Developmental Stage Termination hypothesis suggests that the early onset of pubertal development increases the risk for adverse outcomes like problem substance use (Petersen and Taylor, 1980 as cited in Mathias et al., 2016). The early onset of puberty poses problems because physical changes precede the psychological development necessary for adjusting to changes that come with puberty. As a result, individuals who mature earlier than their peers may be exposed to difficulty in coping with the stress that comes with changes to their environment, relationship with others and expectations from others. The study of bidirectional effects between alcohol use and impulsivity revealed that

alcohol use positively predicted greater impulsivity at the end of the drinking occasion and impulsivity reported the next morning. Thus, there is support that impulsivity may fluctuate within a person, variability may be observed post-drinking and impulsivity may play a role in the aetiology and maintenance of alcohol use (Stamates, 2019).

Impulsivity and addictive behaviours

The action on the spur of a moment or premature thoughts that trigger actions which are elements of impulsivity poses not only a problem in substance use. Often, impulsivity is collaborated by poor choice or decision making and as the degree of impulsive thoughts increased, the individual may likely face a variety of problems in different areas of life, like choosing partners, bidding high stakes in business etc. Impulsivity may be linked with other addictive behaviours like gambling along with substance use. Attention Deficit/Hyperactivity Disorder mediates with the element of impulsivity in the development of disordered involvement with gambling in some patients. The relationship between impulsivity and addiction to gambling arises, whether behavioural scales or questionnaires about personality have been used. Moreover, the higher the measured impulsivity of the patient, the more serious the symptoms of dependence. Abnormalities in neurotransmitter systems have been found both in patients with dependence on gambling, as well as in patients with impulsive behaviour (Lazaratou et al., 2017). Vitaro et al. (1998) determined that problem gamblers are more at risk of being a substance users and vice versa. Comorbid subjects i.e. having both problem gambling and substance use are more impulsive than those who are only problem gamblers or only substance users. These give the idea that the more a person is impulsive, he/she is likely to develop multiple addictive disorders. Over-eating behaviour, Nicotine and Nicotine plus Marijuana users have higher overall impulsivity while Marijuana alone does not raise the overall impulsivity (Beaton et al., 2014). They are likely to take risks and involve in actions relating to increased risk. Pathological Gambling and Substance Use were similar in terms of their poor performance in neurocognitive tasks, specifically to impulsive choice and response tendencies and compulsive

features. Dysfunctions of several brain regions including the ventromedial prefrontal cortex and striatum and similar neurotransmitter system including dopaminergic and serotonergic exist among substance user (Leeman, 2012).

Eysenck's theory is also significant because it has inspired other noteworthy biologically based theories, such as those of J. A. Gray (1987), C. R. Cloninger (1987), and M. Zuckerman (1984). All of these theories converge on the importance of impulsivity as related to substance use--sometimes using different names for impulsivity, such as behavioural approach (Gray, 1987), novelty seeking and reward dependence (Cloninger, 1987), and sensation seeking (Zuckerman, 1984).

Gray (1987) proposed a neuro-psychologically based two-dimensional model of personality and motivation with the trait of impulsivity being based on an appetitive behavioural approach system (BAS) and the trait of anxiety being based on an avoidance behavioural inhibition system (BIS). Impulsivity in Gray's model is closely related to extraversion in Eysenck's model, whereas anxiety in Gray's model is closely related to neuroticism in Eysenck's model (Gray, 1987).

Impulsivity and substance use

In cross-sectional analyses on a large-scale community sample of adolescents, impulsivity alone had little direct effect on heavy drinking or drinking-related problems. The combination of high impulsivity and high urgency (the latter being composed primarily of items reflecting social dominance and positive emotionality) made aversive motives for drinking (i.e., drinking to cope with negative emotions) more influential (Cooper, Agocha, & Sheldon, 2000). Thus, impulsivity has an indirect interaction effect on heavy drinking and drinking-related problems.

Measurement of impulsive traits like delay discounting, behavioural inhibition and inattention reveals alteration of performance among substance abusers (de Wit, 2008). Cocaine dependents scored higher on non-planning (lack of future orientation) than control groups (Lane et al., 2007) and scored higher on several motor impulsivity measures like delayed discounting along with alcohol users (Stevens et

al., 2015; Winstanley et al., 2010). Methamphetamine users scored high on attentional and motor impulsivity and those with greater problems of impulsivity among them have initiated at an early age (Cservenka & Ray, 2016). This effect of early commitment to substance use leading to a greater impulsive score is the same for cocaine users (Lister et al., 2015). Attentional and motor impulsivity increases as the intensity of heroin-use increases and heroin use is related to depression symptoms and stress levels and is inversely related to positive perception (Reid et al., 2018). Kustepe et al. (2018) determined a significant difference between substance users and the control group on motor impulsiveness, non-planning impulsivity and on overall impulsivity while there was no substantial evidence between the two groups on attentional impulsivity.

Deficits in attentional, motor and non-planning impulsivity can be observed among alcohol patients right after withdrawal (Salgado et al., 2009). Supporting this statement, Duclos (2017) observed motor impulsiveness to contribute a role in a total amount of alcohol consumption in a lifetime among adolescents and non-planning impulsiveness contributed to the amount of alcohol consumption during the previous month although the relationship is mediated by several other factors. When impulsivity is elevated along with sensation seeking, it leads to addiction rather than alone (Delibas et al., 2018). The risk for Opioid analgesic misuse is related to impulsivity but not sensation seeking (Marino et al., 2013). Impulsivity can predispose to substance use and vice versa and is higher among individuals with past substance use (Ozten et al., 2015; Moeller et al., 2001). It plays a prominent role among early drug users and as impulsivity increases substance involvement tends to increase (Martinez-Loredo et al., 2015). Although the subtypes of impulsivity specifically contributed to substance use, a recent study by Marin-Navarrete et al. (2018) found that overall high impulsivity displayed more severity to substance use and this expression of severity is mediated by rates of co-occurring disorders.

The inability to withhold urges or to control oneself when necessary is a feature common among substance users. Reduced amount of the impact of three risk

factors; family life events, adolescent life events and peer substance use, occurs when the individual is proficient on self-control (Wills & Ainette, 2008). An inspection into the impulsivity of cocaine users, Cocaine users with attention hyperactivity disorder (ADHD) and healthy individuals signifies that cocaine-only users and cocaine users with ADHD scored worse than those healthy individuals on sub-traits of impulsivity such as the ability to sustain attention, cognitive instability, inability to withheld motor movements, ability to persevere, self-control and cognitive complexity (Stevens et al., 2015; Kustepe, 2018). Impulsivity in its total is a significant predictor of daily use of cocaine and cocaine withdrawal symptoms and should be one of the main targets in treating cocaine dependence (Moeller et al., 2001). Adolescent substance users had always been more impulsive than non-users at the stage of pre- adolescence, before any indulgence in substance. The disparity in impulsivity increases between users and non-users as they developed into mid-adolescence (Charles et al., 2016) which determined the additivity of substance use impact on impulsivity. Early interaction with the substance of abuse presented high impulsivity while the speculative approach to substance presented low impulsivity (Martinez- Loreda et al., 2018).

Greater impulsivity score is common among substance users due to the ramification of such substances incapacitating the ability to draw and sustain attention. The lifetime history of cannabis users tends to be more disinhibited and has lesser thoughts and plans for the future (Liraud & Verdoux, 2000). Heavy users when compared to abstainers and moderate users were more impulsive than the other two groups (Walton & Roberts, 2004).

Neurobiological perspective on impulsivity

A considerable amount of research over the past years has led to the understanding of impulsivity and its underlying variables. One of the key areas of such eye-opening research was the neurobiological framework which is based on the observation of dissimilarities in neurological functions and structures between substance users and non-user. It also observed changes that take place following the use of substances recently and the repercussions of each substance.

Increasing evidence and contribution from pharmacological studies suggest examining the neurochemical influences on impulsivity to have a deeper understanding of the root of impulsivity in substance use disorder and inversely the effect of substance use on impulsivity (Kozak et al., 2019). Studies on several animal species showed converging results in that impulsivity is the root of addiction and that substance intake itself could inversely impact impulsivity. The frontal cortex is a vital part of impulse control and in making a response to reward-paired stimuli (Winstanley et al., 2010). Conversely, alcohol dependence has an impact on the neurobiology of the users resulting in dysfunction in domains such as memory, intelligence and perception (Ambekar & Goyal, 2017).

Adolescent

According to World Health Organisation (n.d., para. 1), Adolescence (10–19 years) is a stage in development where changes take place briskly. Adolescents are vulnerable to behavioural problems caused by a blend of physical, emotional and social changes with poverty, abuse and violence. It is a stage where they gravely require support regarding their health and developmental needs. During adolescence, knowledge and abilities increase which is required for later in adulthood and they learn to manage their emotions necessary for involving in several types of relationships. From 10 to 19 years (as per WHO standards) there is a drastic change physically and mentally (Najmi et al., 2019). Thus from physical shape to personality including behaviour will also change dramatically. These physical and mental changes can be partly due to the realization of sexuality, the monthly cycle and an increase in hormone functioning which alters mood (National Health Portal, 2015). “Adolescence” can be defined in many different ways. Some researchers say that an individual is an adolescent when they reach puberty; others suggest reaching a voting age while others considered the time of military induction and others conclude that when physiological development is absolute at around the age of 25 (Stages of adolescence, 2015, as cited in Anderson, 2016). Whatever the definition of adolescent may be, we can be certain that it is a crucial period of growth and development where the decisions and choices they make influences their future

stages in life (Najmi et al., 2019)

It was estimated that there are nearly 1.2 billion adolescents (10-19 years old) worldwide which cannot be a small quantity nonetheless. There are several countries where adolescent accounts for a quarter of their population and the number of adolescents is expected to rise through 2050 (World Health Organisation, n.d., para. 1). In India those aged between 10 and 19 years of age constitute almost 22% of the general population (UNICEF, 2013) which may increase by the time. This is almost a quarter of the population which signifies the principality of the adolescent population within the country. In Mizoram, the Department of Economics and Statistics (2018) identified adolescents aged 10 – 19 years comprising 20.71% (227,324) of the total population based on the 2011 census (p. 9) which is nearly a quarter and will be increased in number at present.

Many risk-taking behaviours for health, such as substance use or sexual risk-taking, start during adolescence. Risk-taking behaviours can be both an unhelpful strategy to cope with poor mental health and can severely impact an adolescent's mental and physical well-being. Worldwide, the prevalence of episodic drinking among adolescents aged 15–19 years was 13.6% in 2016, with males most at risk. The use of tobacco and cannabis is an additional concern. In 2016, based on data available from 130 countries, it was estimated that 5.6% of 15–16-year-olds had used cannabis at least once in the preceding year. Many adult smokers have their first cigarette before the age of 18 years. Perpetration of violence is a risk-taking behaviour that can increase the likelihood of low educational attainment, injury, involvement with crime or death. Interpersonal violence was ranked the second leading cause of death of older adolescent boys in 2016 (World Drug Report, 2018).

A typical Mizo adolescent today may not be very much different from that of the Western countries and other regions in terms of the information they acquired because they have more access to the internet which had opened the world before them. They could see and hear about their peers on the opposite side of the globe and acknowledge all of their activities and behaviour. This wide access has provided a gateway to different activities taking place on the other side of the globe.

An adolescent, in general, is easily influenced by novel ideas and activities, be they good or bad actions. Much of the thoughts and ideas influencing adolescents of today are usually a result of modelling from their Western and Far Eastern peers and the diverse information they accessed from the internet. Family factors may be one of the major reasons for Mizo adolescents' involvement with substance use and abuse.

Over-protection from the mother and favouring the subject from the father are the factor of drug addiction, while emotional warmth from both parents is the most effective factor in preventing adolescent drug addiction (Rai, 2008). Emotional warmth, stronger attachment, freedom to express feelings, and lesser family conflict are crucial when considering the factors that influence adolescents' substance use. In contrast, over-protection, weak attachments and more conflicts within the family environment lead an adolescent to rely on unhealthy coping strategies. Negative affection and emotions between the family members at an increasing level lead them to endorse staying away from homes and lingering with peers who share the same problems.

Adolescent drug use has been the focus of numerous studies in recent years and it has been reported that the use of the drug during adolescence may "interfere with normal cognitive, emotional and social development" (Guo, Hill, Hawkins, Catalano and Abbott, 2002). Surveys on drug use among the general population show that extent of drug use among young people remains higher than that among older people, although there are some exceptions associated with the traditional use of drugs such as opium or "khat". Most research suggests that early (12–14 years old) to late (15–17 years old) adolescence is a critical risk period for the initiation of substance use and that substance use may peak among young people aged 18–25 years (World Drug Report, 2018). There can be several reasons as to why young people and adolescents use drugs and it depends on the social and economic status of the region and the psychological experiences from childhood. In lower socio-economic status countries, the drive for drug use is mainly to cope with their difficult livelihoods while in higher socio-economic countries, the main drive is

recreational and to add more excitement and enhance experiences. Children of poor countries usually indulged in substances which are much cheaper and readily available like inhalants which can be obtained from paint thinners, glue etc while children in countries of higher income abuse drugs such as Ecstasy, methamphetamine, cocaine, LSD etc which are much costlier and not easily available.

The initiation of drug use is influenced by factors which are not usually under their control; at the individual level – behavioural and mental health and neurological developments, at the micro level – parenting styles and family functioning, school and peer influences, at the macro level – socioeconomic status and physical environment. None of these factors alone are sufficient to lead the adolescent to substance use and the individuals are not equally vulnerable. This means that the use of substances by adolescents is multi-factorial and the combination of these factors results in the most vulnerability.

Substance Use

The term ‘substance use disorder’ refers to a condition in which an individual’s recurrent use of alcohol and/or drugs causes significant behavioural, physical, social, and psychological impairments (American Psychiatric Association, 2013a). Nomenclatures like substance abuse, addiction and dependence have not been used officially after the development of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) although the term has been introduced in 1980. The DSM V (2013) combined the DSM-IV categories of substance dependence (addiction marked by a pattern of compulsive use or loss of control) and substance abuse disorders (using in a manner that causes problems but does not have a pattern of compulsive use) into one broad category of substance-related disorder. All drugs that are taken in excess have in common direct activation of the brain reward system, which is involved in the reinforcement of behaviours and the production of memories. They produce such an intense activation of the reward system that normal activities may be neglected. Instead of achieving reward system activation through adaptive behaviours, drugs of abuse directly activate the reward

pathways. The pharmacological mechanism by which each class of drugs produce reward is different, but the drugs typically activate the system and produce a feeling of pleasure often referred to as “high” .

The DSM V (2013) substance-related disorders encompass ten separate classes of drugs: Alcohol; Caffeine; Cannabis; Hallucinogens (with separate categories for phencyclidine [or similarly acting arylcyclohexylamines] and other hallucinogens); Inhalants; Opioids; Sedatives, Hypnotics and Anxiolytics; Stimulants (amphetamine- type substances, cocaine and other stimulants); tobacco and other (or unknown) substances.

There are two groups of substance-related disorder – Substance Use Disorders, which are patterns of symptoms resulting from the use of a substance which the individual continues to take, despite experiencing problems as a result; Substance-Induced Disorder – which includes intoxication, withdrawal, substance-induced mental disorder, including substance-induced psychosis, a substance-induced bipolar and related disorder, substance-induced depressive disorders, substance-induced anxiety disorders, substance-induced obsessive-compulsive and related disorders, substance-induced sleep disorders, substance-induced sexual dysfunctions, substance- induced delirium and substance-induced neuro-cognitive disorders.

Substance Use Disorder spans a wide variety of problems arising from substance use and criteria for satisfying the disorder include the inability to control oneself from intake of the substance, tolerance towards the effect induced by the substance, unsuccessful attempts to abstain despite the problems caused in life, a substantial amount of time spent to obtain the substance, withdrawal effects which arise from the use of a substance, incompetence towards social, occupational and individual obligations and inability to stop or cut down the use of a substance. Depending upon the number of symptoms emerging as the result of substance intake, there are mild, moderate and severe levels as identified by the manual. (DSM V, 2013). The severity of drug use has a negative impact on domains of life such as knowledge and understanding of one’s health condition and unhealthy coping styles (Nyamathi, et al., 2010).

Considerable evidence exists to suggest that both parental substance use and attitudes towards drug use are major factors affecting substance use among adolescents (Baer, Garnezy, Mc Laughlin, Pokorny, & Wernick, 1987; Brook, Brook, Whiteman, Gordon, & Cohen, 1990; Chassin, Curran, Hussong, & Colder, 1996; Li, Pentz, & Chou, 2002; Thompson & Wilsnick, 1987). By contrast, the non-use of substances by parents has been identified as serving a buffering function in protecting adolescents from using alcohol and other drugs (Li, Pentz, & Chou, 2002). The parent-adolescent conflict has been strongly associated with youth involved with alcohol and other drugs (Baer et al., 1987; Hops, Tildesley, Lichstein, Ary, & Sherman, 1990). Adolescents use alcohol and other drugs to ease tension at home or to show rebellion against parental authority (Thompson & Wilsnick, 1987). On the other hand, positive family relations including parental affection and support are a deterrent to adolescent drug use (Bowser & Word, 1993; Stewart & Brown, 1993). Brook, Whiteman, Gordon, and Cohen (1990) found that adolescent drug use is inversely correlated with parent-adolescent attachment, which includes parental involvement in limit setting, parental assertiveness, affection and child-centeredness, and identification of children with parents. The aetiology of substance use and addictive behaviours is complex and involves multiple factors including genetic, neurobiological, psychopharmacological, personality-related and environmental.

While substance abuse has historically been seen as a problem of the individual, substance abuse frequently affects the entire family. Despite the stereotype of the “loner” alcoholic or drug addict, the vast majority of substance abusers (male and female) live in family settings (Wynne et al., 1996). Additionally, most of those who are under the age of 35 either live with or have at least weekly contact with one or both parents (Stanton & Shadish, 1997). As a consequence, it is important to consider how the role of family and the family relationship relates to the incidence and occurrence of substance abuse. The importance of considering the impact of substance abuse from a family perspective is supported by numerous examples. One example is the importance that family often plays in affecting the initiation of alcohol or other drug use, the intensity of that use, and the choice of

substances. The decision to use or abstain is often dependent on an individual's relationship status with the family, the family coping mechanisms, and other family member's substance use. Another example of family import is the extent to which the family serves as a protective factor or buffer against substance use and its deleterious effects. In families where alcohol and other drugs are disapproved, family members are less inclined to use them. A third example is the effects that the abuse of alcohol and other drugs often has on family members and their relationships with, and behaviour towards, the family. Substance use is frequently associated with child abuse and domestic violence. It also is a leading contributor to marital dissatisfaction, family breakups, and rejection of family members. The importance of the family in understanding alcohol and drug use and abuse is underlined by these highly destructive consequences of alcoholism and drug dependency on the abuser and the family.

Substance abuse is identified as a family problem by exploring its occurrence within families as well as its impact on the marital relationship, family violence, and child abuse and neglect (Gruber & Taylor, 2006). According to the World Health Organisation, "Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Psychoactive substance use can lead to dependence syndrome - a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state". While substance abuse has historically been seen as a problem of the individual, substance abuse frequently affects the entire family. Despite the stereotype of the "loner" alcoholic or drug addict, the vast majority of substance abusers (male and female) live in family settings (Wynne et al., 1996). Additionally, most of those who are under the age of 35 either live with or have at least weekly contact with one or both parents (Stanton & Shadish, 1997). As a consequence, it is important to consider how the role of family and the family relationship relates to the incidence and occurrence of substance abuse.

Strong interaction and association exist between dimensions of family environment, negative child-rearing practice and personality traits like impulsivity. Low cohesion, low expressiveness with high conflicts in association with authoritarian and permissive parenting with high impulsivity are strong predictors of delinquent behaviours (Jin et al., 2016).

Permissive, Authoritarian and Authoritative styles of parenting showed a significant impact on the impulsivity of the child (Malakar & Mullick, 2018). Among the three styles, Authoritative parenting is expected to inculcate positive traits such as intrinsic motivation and conscientiousness in the child (Dordi & Pol, 2018) which are crucial in later stages of development.

Review of Literature

Addicts give the opinion that their parents hardly have any time for them. This may not be directly linked to addiction but certainly could be a factor of family alienation and hence indirectly could be responsible for addiction. The drug habit of elders and particularly of parents is an important factor for the status-imitation for the child and the father's habit in particular, influenced the male children (Grichting & Barber, 1989; Ministry of Welfare, Government of India, 1992). Broken families, tension in family relationships, lack of parental control over children, and addiction among parents have been cited as some of the family conditions conducive to drug abuse. It is inferred that stressful life combined with inadequate social support is also one of the major predisposing causes of drug addiction. Young people seek to become established and achieve independence. In this period, they face many problems including- lack of job, homesickness, transfer of job, loose parental control, disturbed and broken exposure to drugs, being out of school etc. are the factors related to high risk for drug abuse (Forney, et al., 1990).

Drug users are more susceptible to feelings of alienation, low self-worth and resentment. All these problems lead to a variety of social and psychological problems such as delinquency, depression and drug use (Miller, 1990). They do not perceive the situations realistically nor do they execute the response effectively, drug addicts

lose their capacity to discharge normal functions towards their family and society. They develop the tendency of carelessness due to which discrimination between good and bad, and the capacity to initiate is lost by an individual.

A study on Perceived parenting style on drug addiction among Mizo male adolescents indicates that rejection from the father and mother leads to drug addiction whereas emotional warmth from the father acts as a protective factor. In addition, over-protection from mothers and favouritism from fathers is a determining factor of drug addiction. The study further indicates that the most effective protecting factor is emotional warmth from both parents (Rai, 2008).

Regression analysis of parenting styles among 220 medical students of Medical Ilam University showed that 38% of the variation in addiction potentiality is explained by parenting. Authoritative parenting style is negatively related to addiction potentiality while permissive parenting seems to be positively related to it. The study further suggested parenting style as one of the most effective reasons for student's tendency to drug abuse (Ahmadi et al., 2014).

Authoritative parenting is associated with the best outcomes regarding adolescent substance use, and neglectful parenting with the worst (Becoña et al., 2015). Specifically, many studies have shown that authoritative parenting is associated with less use of alcohol, tobacco and illicit drugs in children and adolescents (Becoña et al., 2015; Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005)

Children of authoritarian parents generally report more substance use than children of authoritative parents, but some studies found no difference or even an inverse association (Becoña et al., 2015). Findings related to the permissive parenting style are mixed; some studies have shown that permissive parenting is associated with higher rates of substance use, while others demonstrate the opposite association (Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005; Shucksmith et al., 1997) Neglectful parenting style is almost consistently found to be associated with higher rates of substance use

(Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Shucksmith et al., 1997). A recent review called for more longitudinal research on this topic as most previous studies were cross-sectional, and also because the cultural context may influence associations between parenting style and substance use (Becoña et al., 2015; Adalbjarnardottir & Hafsteinsson, 2001; Bolkan et al., 2010; Cohen, 1997; Garcia & Garcia; 2009; Mason et al., 2004).

One factor that may contribute to adolescent substance use is parenting styles and how adolescents respond to different types of parenting. Forms of parenting styles and the application of specific parenting behaviours are important in the upbringing of children and adolescents. If parenting styles are not enforced properly then parents do not develop a healthy form of attachment with their child, which can result in long-term consequences (Ainsworth, Blehar, Waters, & Wall 1978). Studies have shown that parenting styles that include low parental involvement, inconsistent discipline, and poor monitoring of adolescents can lead to teens having mood disorders and depression (Timpano, Carbonella, Keough, Abramowitz, & Schmidt, 2015). Also, the four types of parenting (i.e. neglectful, permissive, authoritative, and authoritarian) and the way they are applied (neglectful and permissive may lead to more negative outcomes) in a parent-to-child relationship are linked to children having psychological disorders and anxiety issues (Timpano et al., 2015).

Permissive parenting and authoritative parenting have been shown to correlate with the level of delinquency an adolescent exhibit in that permissive parenting relates to a child having a higher number of incidents with the police and more serious delinquencies, whereas authoritative parenting is associated with little to no serious delinquency incidents (Hoeve, Blokland, Dubas, Loeber, Gerris, & Van Der Laan, 2008).

A longitudinal study by Loukas et al. (2001) showed that parental alcoholism and anti-social behaviour are indirectly linked to children's externalizing behavioural problems. Lack of control mediated parental alcoholism and child externalizing behaviour and family conflict mediates maternal and paternal lifetime

antisocial behaviour effects.

Family import is the extent to which the family serves as a protective factor or buffer against substance use and its deleterious effects. In families where alcohol and other drugs are disapproved, family members are less inclined to use them. A third example is the effects that the abuse of alcohol and other drugs often has on family members and their relationships with, and behaviour towards, the family. Substance use is frequently associated with child abuse and domestic violence. It also is a leading contributor to marital dissatisfaction, family breakups, and rejection of family members. The importance of the family in understanding alcohol and drug use and abuse is underlined by these highly destructive consequences of alcoholism and drug dependency on the abuser and the family (Gutierrez, Russo, & Urbanski, 1994; McCrady, Epstein, & Kahler, 1998). Available literature strongly suggests that families are important stakeholders who both aid the process of change and benefit from the improvement of an addiction problem (Copello & Orford, 2002). A review of the literature by Velleman et al. (2009) revealed the weight of the involvement of family processes, and structures in young people's initiation and misuse of substances. In conclusion to their review, they strongly suggest the indispensability of family in preventing substance use and later misuse amongst young people.

Based on data collected between 1991 and 1993, adolescents in families with both biological parents present were least likely to report substance use (approximately 11%), whereas youths from step-parent or one-parent households (approximately 18%) were most likely to use illicit drugs (Rouse, 1998). Genetically influenced factors have been found to account for 60% of the variance of risk for an alcohol use disorder, with the remaining 40% thought to be socio-cultural and environmental (Shuckit & Smith, 2001).

Family and other social environmental factors can impede any genetic predisposition to use and/or abuse alcohol (Goodwin, 1985; Jang, Vernon, Livesley, Stein, & Wolf, 2001). Researchers have found that there are other important factors linking substance abuse directly to the family (Grant, 2000; Juliana & Goodman,

1997; McCrady & Epstein, 1995; Steinglass, Bennett, Wolin, & Reiss, 1987). Children who grow up with an alcoholic parent are at increased risk of abusing alcohol (Baer et al. 1987). Families where alcohol and other drugs are used or attitudes towards their use are positive, the incidence of children's usage is higher than in families where usage is low and where attitudes towards drugs are not as permissive (Brook, Brook, Whiteman, Gordon, & Cohen, 1990; Johnson, Schoutz, and Locke, 1984). Gfroerer (1987) reported that among a sample of adolescents and their older siblings and parents, youths were twice as likely to try marijuana if there was parental or older sibling drug use. Alcohol-related behaviours have become embedded in family routines, rituals, and problem-solving strategies, and changing the alcoholic's drinking status can be challenging for the family (Steinglass et al., 1987). Avoidance of conflict with the drug user can reinforce the substance-abusing behaviour (McCrady & Epstein, 1995; O'Farrell & Fals-Stewart, 2000).

Studies conducted on college students (30 drug users and 30 non-users) within the state of Gujarat showed that drug users and non-user differ significantly on all the subscales of the Family Environment Scale; Cohesion, Expressiveness, Conflict, Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active- Recreational Orientation, Moral-Religious emphasis, Organization and Control having a higher mean score in all of them (Jogsan, 2012).

Bernardy & Oliviera (2010) analyze the role of family relationships in the initiation of street drug abuse by institutionalized youths in Brazil using a descriptive, cross-sectional and case series design. Negligence and abandonment, physical abuse, lack of family dialogue and especially a culture of drug use in the family environment determined the initiation of drug use.

Kothari & Nair (2010) examined the differences in family environment between addicts and non-addicts which resulted in lower family cohesion or little mutual understanding, lesser expressiveness and non-supportive in encouraging individual's self-expression of emotions, higher conflicts with incapability to solve the conflict, lower independency due to discouraging efforts and hindrances from

family members, lower achievement orientation activities and discouraging the individual to face competitive environment, lesser intellectual cultural orientation as members are less concerned about political, social and cultural activities, lesser active recreational orientation, lower moral and religious emphasis as these subjects are seldom discussed among family members, weak organization or unstructured and lesser control exerted between family members among addicts.

Jedrzejczak (2005) observed that drug addiction in a family result from three factors: (1) the effect of pathological families on young people's behaviour, (2) easy access to drugs, and (3) the influence of groups of people of the same age. The study investigated to what extent individual factors related to family and environment affect the extent of drug addiction among recruits. The study included 559 subjects. The results proved direct interdependence between the family condition and the extent of narcomania. Drug addicts came mostly from incomplete and pathological families.

The main family factors of drug addiction, according to the results obtained, are family atmosphere, the strength of family ties or cohesion, a sense of family happiness, the structure of authority in the family, and alcoholism. In families where there is warmth and love, children do not or rarely take drugs. Drug addicts come from families where there is ill will and hostility. Drug addicts have weaker family ties than those who do not take drugs. In families where there was contact with drugs, authority belonged to the mother to a greater degree (54.4%) than to the father (23.6%).

Adolescents who initiate substance use at an early age are at increased risk of substance use disorders, poor academic performance and impaired social functioning (Grant & Dawson, 1998; Dewit et al., 2000; Ellickson et al., 2004). In the European School Survey Project on Alcohol and Drugs, a survey from 2011 estimated that 87% of European adolescents aged 15–16 years had ever used alcohol, 54% cigarettes and 18% illicit drugs, including cannabis. Among Swedish adolescents in the age range 15–16 years, 46% reported alcohol use in the past year, 14% were cigarette smokers, and 8% reported lifetime illicit drug use (Hibell et al., 2012).

Parental alcohol use, attitudes to adolescent drinking, and supervised drinking have repeatedly been shown to increase unsupervised drinking and other drug use in adolescents (McMorris et al., 2011; Foley et al., 2004; Hawkins et al., 1992; Ryan et al., 2010). However, not only substance-specific parenting practices are of important, but general aspects of parenting may also contribute to the adolescents' propensity to engage in substance use.

Considerable evidence exists to suggest that both parental substance use and attitudes towards drug use are major factors affecting substance use among adolescents (Baer, Garmezzy, McLaughlin, Pokorny, & Wernick, 1987; Brook, Brook, Whiteman, Gordon, & Cohen, 1990; Chassin, Curran, Hussong, & Colder, 1999; Li, Pentz, & Chou, 2002; Thompson & Wilsnick, 1987). By contrast, the non-use of substances by parents has been identified as serving a buffering function in protecting adolescents from using alcohol and other drugs (Li, Pentz, & Chou, 2002).

The parent-adolescent conflict has been strongly associated with youth involved with alcohol and other drugs (Baer et al., 1987; Hops, Tildesley, Lichstein, Ary, & Sherman, 1990). Adolescents use alcohol and other drugs to ease tension at home or to show rebellion against parental authority (Thompson & Wilsnick, 1987). On the other hand, positive family relations including parental affection and support are a deterrent to adolescent drug use (Bowser & Word, 1993; Stewart & Brown, 1993). Brook, Brook, Whiteman, Gordon, and Cohen (1990) found that adolescent drug use is inversely correlated with parent-adolescent attachment, which includes parental involvement in limit setting, parental assertiveness, affection and child-centeredness, and identification of children with parents.

A study on cocaine-dependent users (n=50) showed that overall impulsivity and self-reported average daily cocaine use as significantly related which indicates that higher impulsivity resulted in greater cocaine use severity. Apart from this relationship, impulsivity significantly predicted treatment retention which implies the importance of targeting impulsivity among individuals with cocaine use for better treatment outcomes (Moeller, 2001). Self-control which is a dimension of BIS-11 (Patton et al., 1995) was associated with drug use among adolescents of high

school standard. Cigarette smoking, marijuana use, hard drug use and problem drug use were found to predict lower social self-control. (Pokhrel et al., 2007)

Chapter – II

STATEMENT OF THE PROBLEM

Substance use must be understood as a universal problem, as it affects the individual, the family, the society and ultimately the whole world. The related effects of the substance itself are devastating as it usually involves powerful and influential people. Apart from the wars among drug dealers resulting in death, the substance by and of itself had caused more deaths worldwide. About 275 million people worldwide, which were roughly 5.6 per cent of the global population aged 15–64 years, used drugs at least once in 2016 (United Nations Office on Drugs and Crime, 2018). In a National Survey conducted by the United Nations Office on Drugs and Crime (UNODC) and the Ministry of Social Justice and Empowerment, Government of India for the year 2000-2001 (2004), it was estimated that about 732 lakh persons in India were users of alcohol and drugs. Of these 87 lakhs used Cannabis, 20 lakhs used opiates and 625 lakhs were users of Alcohol. Regions with a high prevalence of Opiate use in India were Manipur, Mizoram, Nagaland, Himachal Pradesh, Punjab, Haryana and Western Rajasthan. The year-wise drug-related death report of the Excise and Narcotics Department (2018) between 1984 and 2018 showed that of the total death relating to drug use in Mizoram, 88.85% of them were males and only 11.14% of the total death was represented by females. The statistic may have already risen to a more concerning state. The statistic mentioned above may underestimate the real outcome of the impact of psychoactive substances.

Some of these psychoactive substances occur naturally while some are synthetic and produced by pharmacological industries due to their importance in medical treatments. As such, these psychoactive substances will always be in existence due to their importance and exist naturally. So, the most important point is understanding the protective factors such as the family, parenting style and personality factors such as impulsivity and those who are most vulnerable to these psychoactive substances; the adolescents.

Hawkins, Catalano, and Miller (1992) in a review of risk and protective factors for alcohol and other drug problems in adolescence and early adulthood concluded that family and family environment-related factors, such as (a) family

alcohol and drug use and attitudes toward/ permissiveness of use, (b) family behaviour and activity management practices, (c) family conflict, and (d) low family bonding, contributed to youth substance use.

Protective family and family environment factors include (a) high family bonding and parental attachment, (b) stable family environments, and (c) supportive family environments. They suggest that parental attachment, positive role modelling, and vigilant monitoring resulting in compensatory actions by parents to intervene may reduce youth initiation in or patterns of use of substances that result in problematic drug or alcohol use. Interventions that focus on protective factor development through improvement of parenting and family functioning have been able to show positive results in improvements in children's social and emotional functioning and reduction in anti-social behaviour linked to adolescent substance use (Hogue, Liddle, Becker, & Johnson-Leckrone, 2002).

Jogsan (2012) and Kothari et al. (2010) observed that substance users differ from non-users in family cohesion and degree of expressing emotions and opinions, acceptance and caring, Independence, Active-Recreational orientation, Organization and Control. Substance users also be at odds with non-users of conflict experienced within their family (Jedrzejczak, 2005; Bernardy et al., 2010; Jin et al., 2016). Hostility displayed by both parents helped to determine the incidence of delinquency among sons and the use of dysfunctional coping methods among sons and daughters (Johnson & Pandina, 2009). Independence and self-sufficiency are not encouraged among family members of substance users. Discouraging efforts from family members of substance users hinder the path of becoming self-sufficient to make their own decisions independently.

Several studies have examined the role played by personality factors in addiction and substance use. Personality traits such as impulsivity have been shown to play a consistent and prominent role in delinquency and substance use (Loeber et al., 1998; White et al., 1994 as cited in Baskir, 2006; Diemen et al., 2008; Bidwell et al., 2015; Charles et al., 2016; Hudson, 2018; Stamates, 2019). Cocaine dependents scored higher on non-planning (lack of future orientation) than control

groups (Lane et al., 2007) and scored higher on several motor impulsivity measures like delayed discounting along with alcohol users (Stevens et al., 2015; Winstanley et al., 2010). Methamphetamine users scored high on attentional and motor impulsivity and those with greater problems of impulsivity among them have initiated at an early age (Cservenka & Ray, 2016). This effect of early commitment to substance use leading to a greater impulsive score is the same for cocaine users (Lister et al., 2015). While the role of impulsivity in substance use is undisputable, the interaction with other vulnerability factors mentioned before such as family environment and parenting

styles will be of great importance as a single factor may not be the strongest predictor of substance use. Apart from the factors under consideration, sensation-seeking behaviour, self-control, peer pressure etc plays a deep role in addictive behaviours although the current study could not concentrate on large due to economic issue.

A parent-child relationship is one factor that requires attention among the target population i.e. adolescent substance users. While some parenting styles positively impacts the child, some parenting style may prove to be damaging to the child. Authoritative parenting is associated with the best outcomes regarding adolescent substance use, and neglectful parenting with the worst (Becoña et al., 2015). Specifically, many studies have shown that authoritative parenting is associated with less use of alcohol, tobacco and illicit drugs in children and adolescents (Becoña et al., 2015; Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005). The authoritarian style of parenting is a common practice in a culture where traditions are still valued. The impact of authoritarian parenting may not be generalized across cultures due to the difference in cultural values. Asian adolescents are often accustomed to an authoritarian parenting style and it may be a protective factor for them while the case may be inverse for Western cultures.

A study on Perceived parenting style on drug addiction among Mizo male adolescents indicates that rejection from the father and mother leads to drug

addiction whereas emotional warmth from the father acts as a protective factor (Rai, 2008).

Most of the studies that form the basis of this study are conducted mostly in Western cultures where parents are less authoritarian compared to Eastern cultures. Therefore, it is profoundly necessary to establish more studies on the Mizo culture which is generally oriented towards authoritarian and permissive. Literature available regarding the study of adolescent substance use among the target population is in short supply so, it is clear that more studies needed to be done to have a better view of the concept under study.

A basic task in refining prevention programmes is to identify risk factors for the early onset of substance use. It is thus important to study pathways to adolescent substance use to facilitate the development of prevention programs. Substance abuse and addiction are a major ongoing concern in Mizoram as many adolescents and adults have lost their lives because of it. And for those who have not, it has tremendously reduced the quality of life of the person using it and the lives of others around them.

The reason for its high prevalence could be any of the mentioned factors – biological, individual psychological components and psychosocial factors. The family environment of substance users, perceived parenting style and impulsivity play a major role in adolescent substance use. The three main factors are likely associated with each other. It has all been understood by now that substance use has to be tackled from its root. The results of this study could help in tackling substance use and other forms of addictive behaviours that are maladaptive. Factors like family environment, parenting styles and impulsivity are considered to be the major determinants of substance use. The present study hopefully aids in understanding the role of these factors and in formulating intervention strategies among the observed population.

Objectives of the study:

The majority of the findings and literature posits that substance use and abuse have a deep root within the family environment and the relationship between members.

In light of the previous findings and research, the present study endeavoured to establish a well-defined presentation of the nature of substance use/addiction among Mizo adolescents. The following objectives were framed to identify whether family environment, parenting styles and personality (impulsivity) were determinants of substance use among Mizo male adolescents:

- 1) To examine differences in family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.
- 2) To determine the relationship between family environment, impulsivity and perceived parenting style.
- 3) To examine the predictability of perceived parenting styles on 'impulsivity' among adolescent substance users.

Hypotheses:

To meet the objectives of the study, the following hypotheses will be attempted in the study:

- 1) There will be significant mean difference in the family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.
- 2) There will be a significant relationship between the dependent variables such as family environment, impulsivity and perceived parenting style.
- 3) There will be a significant predictability of perceived parenting styles on 'impulsivity' among adolescent substance users.

Chapter – III

METHODS AND PROCEDURE

Sample: 100 Mizo Male adolescent substance users who are registered as Substance Users in the Observation Home, managed by the Social Welfare Department, Government of Mizoram and from privately run rehabilitation centres were selected. The sample age ranged from 13-19 years of age, who have been taking psychoactive substances for the past 3 to 4 years regularly. 100 substance non-users were identified aiming to match the substance user sample on age and locality serving as the control in the study. Substance users were screened using the Drug Abuse Screening Test-10 (Skinner, 1982) and substance non-users were selected with the help of DAST-10 and Socio-Demographic profiles constructed for the present study which include age, permanent address, birthplace, family type, size of the family and number of siblings to maintain a better representation of substance non-user among Mizo male adolescents. Majority of the samples were literates who could understand English though some of them required translation for some items.

Design:

200 Mizo Male adolescents, comprising 100 substance users and 100 substance non-users served as a sample in this study. The study incorporated a control-group design with substance-user and non-user groups. The substance non-user group serves as a control in the study to highlight the contrasts between the two groups. The design was an intent to examine mean comparison and relationship between Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active Recreational Orientation, System Maintenance, Attention, Motor, Self-control, cognitive complexity, perseverance, cognitive instability, authoritarian, authoritarian and permissive scales.

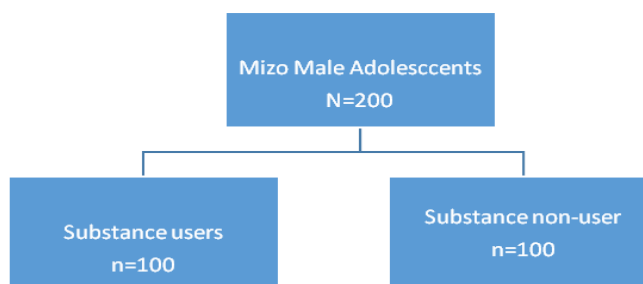


Figure 1: Diagram representing the design of the study

Tool used

(1) *The Drug Abuse Screening Test (DAST; Skinner, 1982)* was originally designed by H. A Skinner to provide a brief, self-report instrument for population screening, clinical case finding and treatment evaluation research. The DAST yields a quantitative index of the degree of consequences related to drug abuse. This instrument takes approximately 5 minutes to administer and may be given in either a self-report or interview format. The DAST-10 is a 10-item self-report instrument that has been condensed from the 28-item DAST. The various classes of drugs may include cannabis, (e.g., marijuana, hash), solvents or glue, tranquillizers (e.g., Valium), barbiturates, cocaine, stimulants, hallucinogens (e.g., LSD), or narcotics (e.g., heroin). The DAST 10 applied to various populations and settings including psychiatric patients (Cocco & Carey, 1998; Maisto et al., 2000; Staley & El Guebaly, 1990), prison inmates (Peters et al., 2000), substance-abuse patients (Gavin et al., 1989), primary care (Maly, 1993), in the workplace (El-Bassel et al., 1997), and adapted for use with adolescents (Martino et al., 2000).

(2) **Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995).** The Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995) is a questionnaire designed to assess the personality/ behavioural construct of impulsiveness, and the most widely cited instrument for the assessment of impulsiveness (Stanford et al., 2009). The BIS-11 factor structure includes 30 items scored in a four-point Likert format ranging from; 1 – Rarely/Never, 2 – Occasionally, 3- Often, 4 – Almost/Always to yield six first-order factors: (a) **Attention** - Focusing on the task at hand (Item no - 5, 9*, 11, 20*, 28), (b) **Cognitive instability** - Thought insertions and racing thoughts (Item no- 6, 24, 26), (c) **Motor** - acting on the spur of the moment or making decisions and actions which are sudden and done without planning (Item no - 2, 3, 4, 17, 19, 22, 25), (d) **Perseverance** - Maintaining a consistent lifestyle (Item no - 16, 21, 23, 30), (e) **Self-control** - Planning and thinking carefully when making decisions and acting (Item no - 1*, 7*, 8*, 12*, 13*, 14), (f) **Cognitive complexity** - Enjoy challenging mental tasks (Item no - 10*, 15*, 18, 27, 29*). The three second-order factors (**attentional, motor, and non-planning impulsiveness**).

Item numbers marked with an asterisk (*) indicate reversed items. Higher total scale scores indicate the individual is becoming more and more impulsive as the score increases. The reported internal consistency coefficients for the BIS-11 total score range from 0.79 to 0.83 for separate populations of undergraduates, substance-abuse patients, general psychiatric patients, and prison inmates (Patton et al., 1995).

(3) ***The Family Environment Scale (FES; Bhatia & Chadha, 1993)***: Family Environment Scale developed by Dr. Harpreet Bhatia and Dr. N.K Chadha (1993) which is a modified version of the family environment scale by Moos & Moos (1974) was used to measure the social-environmental characteristics of the family. It was developed to measure the social and environmental characteristics of all families. The scale consists of three dimensions adapted from Moos's scale with 69 items further subdivided into 8 subscale dimensions. The Relationship dimension includes measurements of **Cohesion** (Positive items - 1, 9, 24, 37, 43, 55, 60, 63, 66, 69 and Negative items - 17, 31, 49), **Expressiveness** (Positive items - 10, 25, 38, 44, 56 and Negative items - 2, 18, 32, 50), **Conflict** (Positive items - 11, 19, 39, 51, 61, 67 and Negative items - 3, 26, 33, 45, 57, 64) and **Acceptance and Caring** (Positive items - 8, 16, 36, 42, 48, 54, 59, 62 and Negative items - 23, 30, 65, 68). Cohesion is the degree of commitment and supports family members provide for one another, expressiveness is the extent to which family members are encouraged to express their feelings directly, conflict is the amount of openly expressed anger and conflict among family members and Acceptance and Caring is the extent to which the members are unconditionally accepted and the degree to which caring is expressed in the family. Two subscales refer to Personal Growth: **Independence** (Positive items - 4, 27, 46, 52 and Negative items - 12, 20, 34, 40, 58) and **Active-recreational orientation** (Positive items - 5, 13, 21, 28, 47 and Negative items - 35, 41, 53). Independence assessed the extent to which family members are assertive, self-sufficient and make their own decisions while Active-Recreational Orientation concerns the extent of participation in Social and Recreational activities. The final two subscales, **Organization** (Positive items – 14 and Negative items – 6) and **Control** (Positive items – 7, 22 and Negative items – 15, 29) are for System Maintenance. Organization concerns the degree of importance

of clear organization structure in planning family activities and responsibilities while Control measures the degree of limit set within a family. To establish the reliability of each subscale Split-Half method was employed and the reliability coefficient obtained using the Spearman-Brown formula for each subscale is as follows: Cohesion (.92), Expressiveness (.88), Conflict (.84), Acceptance and Caring (.86), Independence (.70), Active-Recreational Orientation (.48), Organization (.75) and Control (.48). The scale is Content and Face Validated.

4. ***Parental Authority Questionnaire (PAQ; Buri, 1991)***: The PAQ is designed to measure parental authority, or disciplinary practices, from the point of view of the child (of any age). Buri (1991) developed a self-report measure asking respondents to rate how their parents acted toward them. The PAQ has three subscales: ***authoritarian, authoritative and permissiveness***. The PAQ is scored easily by summing the individual items to comprise the subscale scores. Scores on each subscale range from 10 to 50 with no reversed items. The measure consists of 30 items, 10 for each of the different styles of parenting in a five-point Likert format ranging from strongly agree to disagree. The Permissive Parenting subscale includes items; 1, 6, 10, 13, 14, 17, 19, 21, 24 and 28, Authoritarian Parenting subscale includes items; 2, 3, 7, 9, 12, 16, 18, 25, 26 and 29, the Authoritative Parenting subscale include items; 4, 5, 8, 11, 15, 20, 22, 23, 27, and 30. There is a separate form for the mother and a form for the father, but the questions are identical and aligned in the same order. The PAQ had separate reliability coefficients for the three subscales on both forms of Mother and Father using Cronbach's alpha coefficient; .75, .85 and .82 for the mother's permissiveness, authoritarianism and authoritative respectively and .74, .87 and .85 for father's permissiveness, authoritarianism and authoritative respectively. Validation of the test was done using Content Validity and Criterion Validity methods.

Procedures

The present study was designed to compare substance users and non-users of Mizo adolescents on Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active Recreational Orientation, System Maintenance, Attention, Motor, Self-control, cognitive complexity, perseverance, cognitive instability, authoritative, authoritarian and permissive scales.

To meet the objectives, the following steps were taken: (i) collection and compilation of the psychological tools which include- The Family Environment Scale, Barratt Impulsiveness Scale-11, and Parental Authority Questionnaire. The psychometric applicability was checked through a pilot study and their reliability coefficient falls between .71 to .83 (Cronbach's α) and was deemed suitable for the population. Socio-demographic profiles were prepared by the researcher for sampling for a better representation of the population. The consent form was also prepared following the APA code of ethics for research (2002). The Substance user samples were identified from Observation Homes maintained by the Social Welfare Department, Govt of Mizoram, who are currently registered and has been regular user of psychoactive substances for 3 to 4 years with age ranging from 13-19 years.

Apart from observation homes, privately run rehabilitation centres were visited to meet the insufficiency. Necessary permission was taken from the authorities of the Observation homes for the conduction of the psychological measurements on their clients. Rapport was formed to calm and maintain the trust of the participants as they are still young and active. 100 non-users were sampled from 8 districts of Mizoram; one school from each district. The researcher sampled the non-users in randomly selected schools from each district to match substance users in terms of ecology, and data were collected in groups. The samples were informed about the purpose of the research, the psychological measurements, expected participation to complete the scales, and assurance of confidentiality of their identity and responses. The scales are then administered in the original form and the researcher provides assistance and explanation of items whenever

necessary. The questionnaires were administered as per instructions given in the manual. All test booklets were checked for any missing responses and they were then collected. Most of the administration process was done in groups due to time constraints though in some instances conducted at the individual level.

Chapter – IV

RESULTS AND DISCUSSION

The present study aimed to study the influence of family environment and parenting styles on Mizo male adolescents' substance use and how congenital traits such as impulsivity contributed to the relationship. Focusing on several components of the family environment such as cohesion, expressiveness, conflict, acceptance and caring, independence, and active-recreational orientation, System Maintenance was necessary for better renditioning of the substantial family environment component. The study also compared substance users and substance non-users about their scores on the three parenting styles, namely Authoritarian, Authoritative and Permissive. The study also focused on the facets of impulsivity, namely, Attentional impulsiveness, Cognitive instability, Motor impulsiveness, Perseverance, Self-Control and Cognitive complexity. The predictability of parenting styles on subscales of impulsivity was determined among substance user groups to explore the relationship between variables and how parenting style could lead to the development of impulsive behaviour.

Sample characteristics:

The sample characteristic of the study as follows:

(i) The distribution of the family size was presented in three groups with 30% of the respondents living with 1-2 family members, 57 % lived with 3-4 family members, and 13% lived with 5 and above family members.

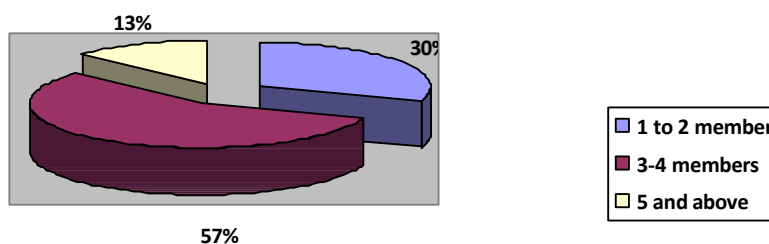


Figure-2: showing the distribution of family size in percentage

(ii) The distribution of the size of siblings resulted with 56% having 1-3 siblings, 27% having 4-6 siblings and 17% having 5 and above siblings among the samples

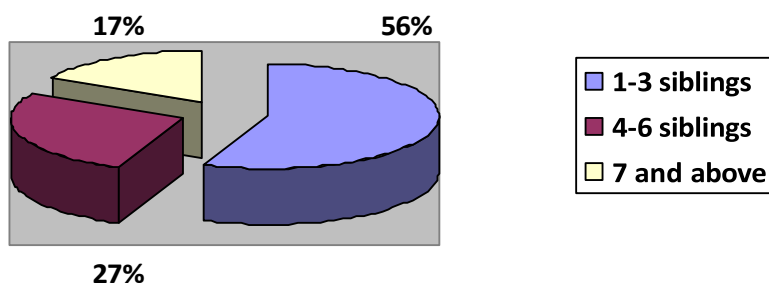


Figure-3: showing the distribution of number of siblings in percentage

(iii) Among the samples, the types of families were recorded as 36% belonging to joint family and 64% belonging to nuclear family.

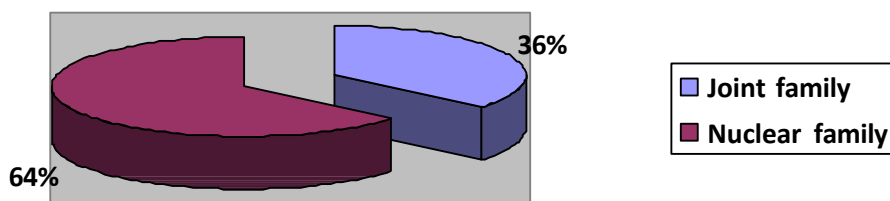


Figure-4: showing the distribution of the types of families in percentage

(iv) Among the samples, 46% are living with a single parent whereas 54% lived with both parents.

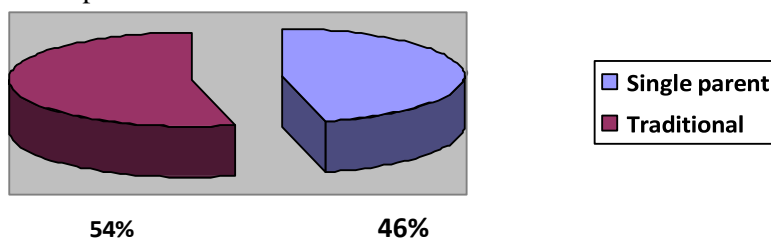


Figure-5: showing the distribution of types of parent in percentage

Data Analysis

The analysis data of the study was done in the following manner:

1. Checking of missing data and outliers
2. Establishing the psychometric adequacy of the scales
3. Descriptive statistics (mean, standard deviation, skewness and kurtosis)
4. Independent t-test between substance user and substance non-user on all behavioral measurement
5. Relationship between the dependent variables
6. Simultaneous Linear Regression

1) Checking missing raw data and outlier

The raw data were checked for missing values and extreme outliers for the appropriate statistical test application. No missing values or extreme outliers were detected and the analyses proceeded.

2) Psychometric adequacy of the scales

The analysis was done with the aid of IBM's Statistical Package for the Social Sciences (SPSS 25). Since the population under investigation were adolescents, thorough verification of the appropriateness of the scales was essential. Furthermore, the scale was constructed and standardized in a culture distinct from the culture of the target population, adding to the indispensability of checking the psychometric adequacy of the scales.

Firstly, the internal consistency of all the subscales of the three behavioural measures was estimated by calculating Cronbach's alpha. The equality of variances across the substance user and substance non-user groups was calculated using Levene's test and included in the first table.

Table -1: Reliability and test for homogeneity of variances of all the subscales for substance user and substance non-user groups

Scales/Subscales	Cronbach's alpha	no of items	Levene's test for equality of variances	
			F	Sig
Cohesion	.81	13	.301	.58
Expressiveness	.80	9	.074	.78
Conflict	.77	12	.448	.60
Acceptance and Caring	.81	12	.476	.49
Independence	.80	9	.027	.86
Active Recreational Orientation	.67	8	.326	.56
System Maintenance	.86	6	.086	.76
Attention	.83	5	.781	.67
Cognitive instability	.77	3	.011	.92
Motor	.89	7	.003	.96
Perseverance	.89	4	.153	.69
Self-Control	.87	6	.331	.56
Cognitive complexity	.87	5	.202	.65
Authoritative (M)	.76	10	.217	.71
Authoritarian (M)	.79	10	.97	.62
Permissive (M)	.71	10	.98	.62

From Table - 1 we can see that all subscales have good internal consistency ranging from .71 to .89, except for Active-Recreational ($\alpha=.67$, $n= 8$ items) subscale with lesser internal consistency. We can also say that all items of the scales are reliable and will show a consistent measurement within the target population. The test for equality of variances across the comparison groups was determined using Levene's test of equality of variances. Results revealed that the variances between substance user and substance non-user groups are approximately equal on Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-Control, Cognitive complexity, Authoritative, Authoritarian and Permissive subscales ($p>.05$).

3. Descriptive statistics (Mean, SD, Skewness and Kurtosis) to check the assumption of parametric statistics for the selection of appropriate statistics.

The descriptive statistics for the data consisting of mean, standard deviation, skewness and kurtosis are used to determine the distribution and mean scores for substance users and substance non-user on all the subscales i.e Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative, Authoritarian and Permissive. The descriptive statistics for the whole sample were separately displayed in Table - 2a.

Table-2a: Mean, Standard deviation, Skewness and Kurtosis of all the subscales for the whole sample

Dependent variables	Mean	SD	Skewness	Kurtosis
Cohesion	32.77	4.68	-.02	-.77
Expressiveness	23.74	4.05	.06	-.80
Conflict	31.50	5.62	-.04	-.81
Acceptance and Caring	29.55	6.40	.10	-.68
Independence	21.62	4.87	.01	-.62
Active Recreational Orientation	25.37	3.51	-.05	-.46
System Maintenance	17.72	3.26	-.40	-.72
Attention	11.48	3.39	.02	-.79
Cognitive instability	7.05	2.10	.10	-.69
Motor	15.03	3.68	.01	-.84
Perseverance	9.41	2.93	.03	-.84
Self-Control	13.31	3.41	.08	-.80
Cognitive complexity	11.85	3.27	-.07	-.73
Authoritative	49.67	7.77	-0.08	-.66
Authoritarian	49.39	6.87	0.17	-.77
Permissive	50.19	7.60	0.17	-.74

Table-2a showed the mean score, standard deviation, skewness and kurtosis statistics on all the dependent variables for all the samples disregarding the independent groups. The descriptive statistics for the whole sample can be utilised

for comparison with the descriptive statistics of substance users and substance non-users groups.

Table - 2b: Mean, Standard deviation, kurtosis and skewness of subscale scores between substance user and substance non-user groups

Variable	Substance user				Substance non-user			
	m	sd	Skewness	Kurtosis	m	sd	Skewness	Kurtosis
Cohesion	29.60	3.59	.44	.37	35.93	3.29	-.14	-.63
Expressiveness	26.71	2.79	-.11	-.32	20.76	2.70	.33	.20
Conflict	35.42	3.77	-.03	-.49	27.58	4.26	.45	-.04
Acceptance and Caring	24.53	3.84	-.04	-.61	34.57	4.08	.37	-.66
Independence	18.03	3.37	.13	-.12	25.20	3.22	.27	-.71
Active Recreational Orientation	27.64	2.74	-.29	.17	23.09	2.60	-.18	-.39
System Maintenance	15.23	2.06	.09	-.78	20.21	2.14	-.11	-.66
Attention	9.27	2.76	.61	.00	13.68	2.36	.20	-.96
Cognitive instability	8.63	1.40	.00	-.50	5.46	1.35	.23	-.96
Motor	17.46	2.74	.62	1.4	12.60	2.79	-.69	.47
Perseverance	7.13	1.82	.11	-.41	11.69	1.84	.09	-.80
Self-control	10.79	2.16	-.08	-1.12	15.83	2.41	-.12	-.72
Cognitive complexity	9.24	2.05	-.23	-.49	14.45	1.89	.23	-.95
Authoritative (M)	20.76	3.21	-.23	-.62	28.21	2.94	.30	-.45
Authoritarian (M)	20.55	2.93	.24	-.50	25.97	3.15	.02	-.66
Permissive (M)	27.54	3.60	.00	-.78	21.48	3.20	-.09	-.99

Table-2b displayed the descriptive statistics separately for substance user and substance non-user groups for Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative, Authoritarian and Permissive subscales. The skewness and kurtosis statistics of the two independent groups for all the subscales were within standard error/deviation which shows that the distribution of substance users and substance non-users approximates the normal bell curve. The results in the descriptive statistics on all subscales of the psychological scales showed the criteria of the parametric assumptions were met which permit the use of parametric statistics for further analysis.

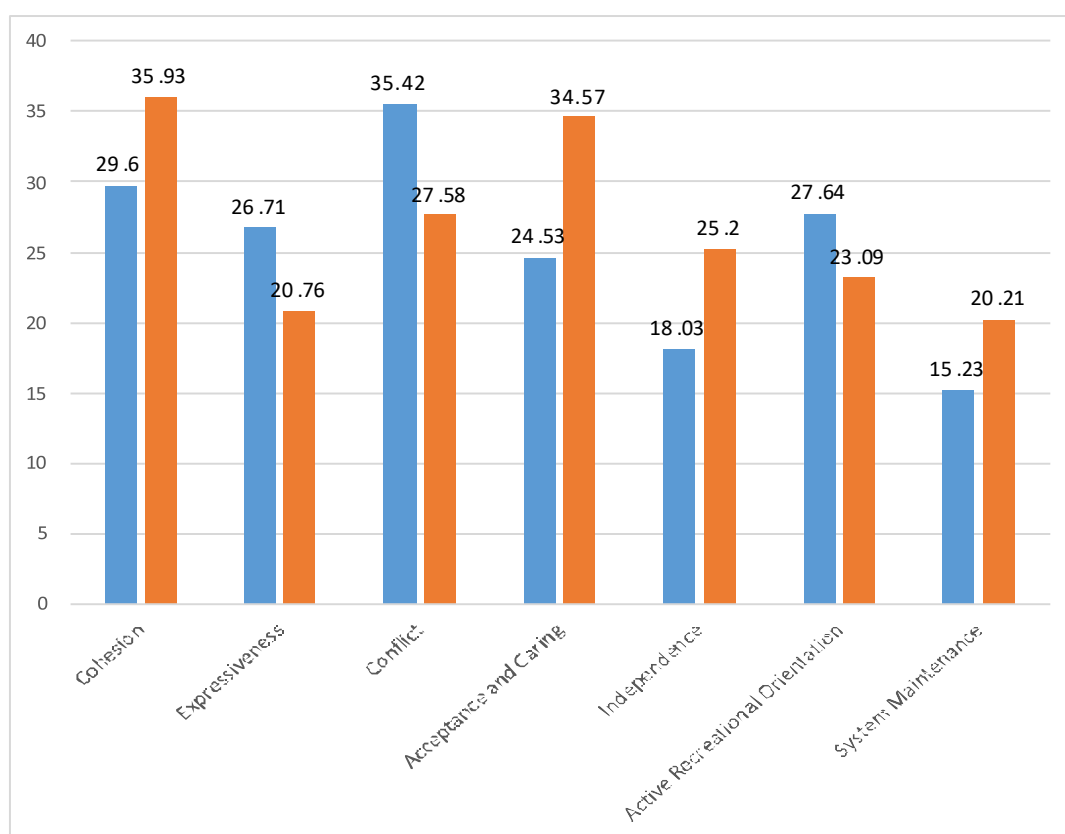


Fig - 6: Graphical representation of Family Environment subscale mean scores for substance user and substance non-user groups.

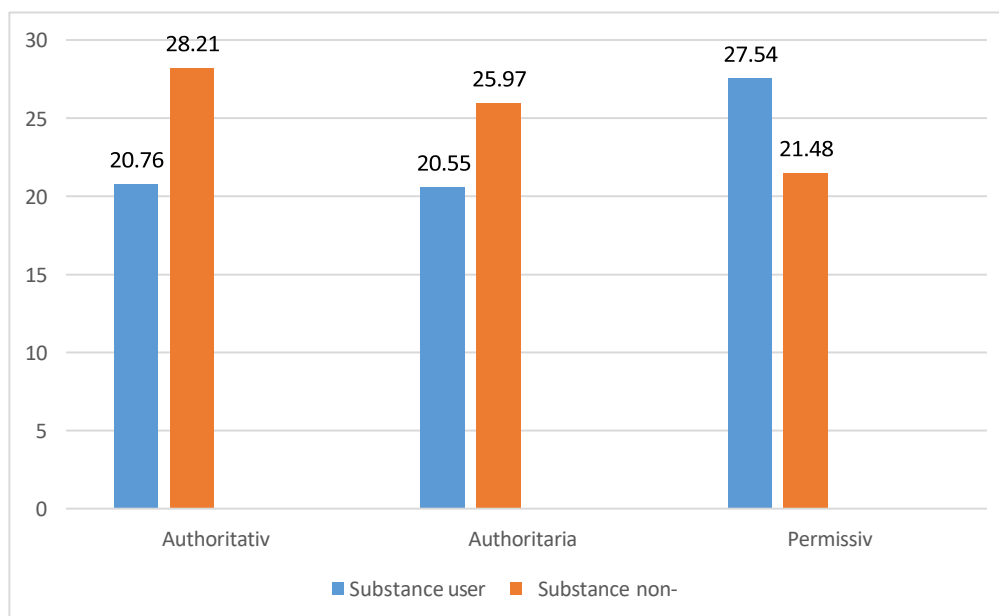


Fig - 7: Graphical representation of mean scores comparison on subscales of Barratt Impulsiveness Scale between substance user and substance non-user groups

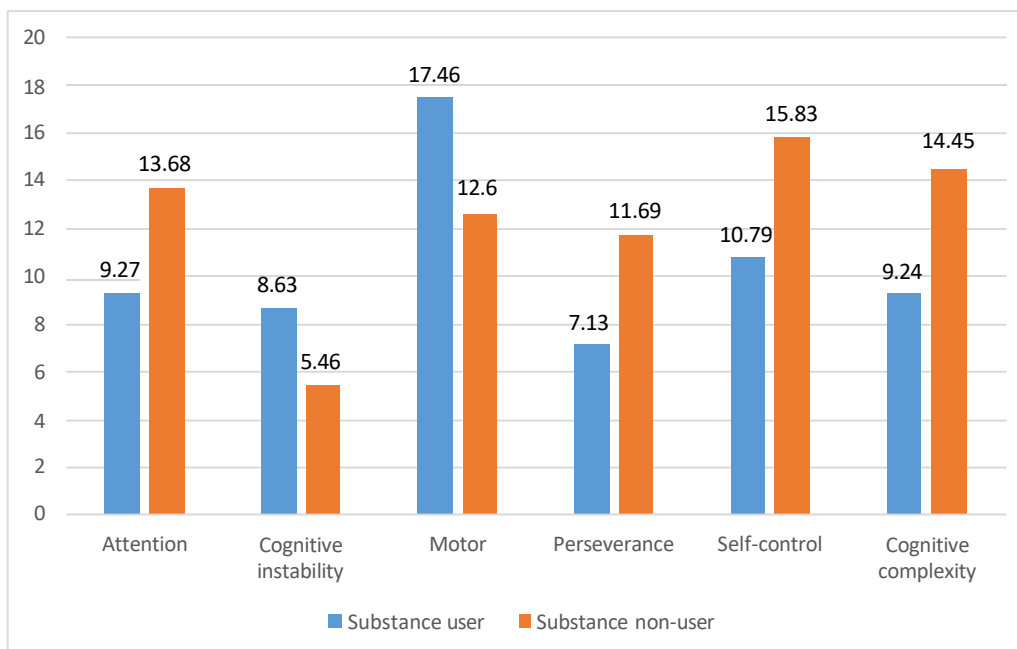


Figure - 8: Graphical representation of mean score comparison on Parental Authority Questionnaire between substance user and substance non-user groups

4. Examination of significant mean differences between substance user and substance non-user group on all the subscales of Family Environment Scale, Barratt Impulsiveness Scale and Parental Authority Questionnaire

The Independent t-test was applied to examine significant differences between adolescent substance users and non-users on family environment, impulsivity and perceived parenting styles, and the results were given in Tables-3a to 3p.

Table- 3a. Independent t-test for Substance user and substance non-user group on Cohesion subscale

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
Cohesion	29.60	3.59	35.93	3.29	-12.98	.00	-1.35

From Table 3a we can see that there is a significant difference between Substance user and non-user groups on Cohesion. Substance non-user group has a higher mean score which indicates that families of the substance non- user group had more family cohesion compared to substance users.

Table -3b. Independent t-test for Substance user and substance non-user group on Expressiveness subscale

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
Expressiveness	26.71	2.79	20.76	2.70	15.3	.00	1.46

From Table 3b we can see that there is a significant difference between substance user and non-user groups on Expressiveness. Substance user has a higher mean score which indicates that families of substance user groups had a greater tendency of expressing themselves compared to non-user groups.

Table - 3c: Independent sample t-test for substance users and substance non-users on Conflict

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Conflict	35.42	3.77	27.58			

From the above Table, we can see that there is a significant mean difference between the two groups with a higher mean score for substance users which indicates that conflict between family members is frequent in families of substance users.

Table -3d: Independent sample t-test for substance users and substance non-users on Acceptance and Caring

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Acceptance and Caring	24.53	3.84	34.57			

Table -3d reveals that substance non-users have a family environment that is more accepting and caring compared to substance user groups. The difference is significant and large to say that substance users may have lesser acceptance and caring environments within their families.

Table -3e: Independent sample t-test for substance users and substance non-users on Independence

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Independence	18.03	3.37	25.20			

Table 3e revealed that there is a significant mean difference between substance users and substance non-user on the Independence subscale. The substance non-user group has a higher mean score which indicates that independency is encouraged among family members much more than in families of a substance user group.

Table -3f: Independent sample t test for substance user and substance non-user groups on Active Recreational Orientation

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
Active-Recreational Orientation	27.64	2.74	23.09	2.60	12.01	.00	1.3

From the above table, we can see that there is a significant difference between substance user and substance non-user on Active Recreational Orientation. Contradictorily, substance user has a higher mean score compared to non-user groups which indicate that there are more recreational activities within the family.

Table -3g: Independent sample t test for substance user and substance non-user group on System Maintenance

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
System Maintenance	15.23	2.06	20.21	2.14	-16.7	.00	1.5

From Table-3g we can see that substance users and non-users were significantly different between the mean scores on System Maintenance. Substance non-user has a higher mean score which may indicate that non-user families have more organization and control.

Table -3h: Independent sample t- test for substance user and substance non-user on Attention

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	Sd	m	sd			
Attention	9.27	2.76	13.68	2.36	-12.1	.00	1.3

From the above Table, we can see that there is a significant difference between substance user and non-user. Substance non-user group have a higher mean score which may indicates that they have more span of attention compared to substance users.

Table -3i: Independent sample t-test for substance user and substance non-user on Cognitive instability

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
Cognitive Instability	8.63	1.40	5.46	1.35	16.2	.00	1.5

From Table 3i, we can see that there is a significant difference between the mean scores of substance user and non-user groups. Substance user have a higher mean score compared to non-user which suggests that substance users may generally have racing thoughts and act briefly.

Table -3j: Independent sample t-test for substance user and substance non-user on Motor

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Motor	17.46	2.74	12.60			

From Table-3j we can see that there is a significant difference between substance user and substance non-user on Motor subscale. Substance users have a higher mean score compared to substance non-user which indicate that substance user may exhibit difficulty in withholding their urge and may act on the spur of the moment.

Table - 3k: Independent sample t- test for substance user and substance non-user groups on Perseverance

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Perseverance	7.13	1.82	11.69			

From Table -3k, we can see that there is a significant difference between substance users and non-users in the mean score on Perseverance. Substance non-user have a higher mean score which indicates that they may be more able in withholding their impulse compared to substance user groups.

Table -3l: Independent sample t-test for substance user and substance non-user groups on Self-control

Variable	Substance users		Substance non-user		t (198)	p	Cohen's d
	m	sd	m	sd			
	Self-control	10.79	2.16	15.83			

From Table- 3l we can see that there is a significant difference between substance user and non-users in the mean score on Self-control. Substance non-user group have a higher mean score on self-control which indicate that they can make planning and think before making decisions compared to substance users.

Table -3m: Independent sample t- test for substance user and substance non-user groups on cognitive complexity

Variable	Substance users		Substance non-user		t (198)	p	Cohen's d
	m	sd	m	sd			
	Cognitive Complexity	9.24	2.05	14.45			

From Table -3m we can see that there is a significant mean difference between substance user and substance non-user groups. Substance non-user have a higher mean score which indicates that substance non-user may be more engaging in challenging tasks compared to substance user groups.

Table -3n: Independent sample t -test for substance user and substance non-user on Authoritative (M) subscale

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Authoritative (M)	20.76	3.21	28.21			

From Table -3n we can see that there is a significant mean difference between substance user and substance non-user groups on Authoritative (M). Substance non-user have a higher mean score which may indicate that they perceive their mothers to be more authoritative compared to the substance-user group.

Table -3o: Independent sample t- test for substance user and substance non-user groups on Authoritarian (M) subscale

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Authoritarian (M)	20.55	2.93	25.97			

From the above Table we can see that there is a significant difference between substance user and substance non-user groups on Authoritarian (M). Substance non-user perceive their mothers to be more Authoritarian compared to substance users.

Table -3p: Independent sample t- test for substance user and substance non-user groups on Permissive (M) subscale

Variable	Substance users		Substance non-user		t (198)	p	Cohen's <i>d</i>
	m	sd	m	sd			
	Permissive (M)	27.54	3.60	21.48			

From the above Table we can see that there is significant difference between substance user and substance non-user groups on Permissive (M) subscale. Substance user have a higher mean score compared to substance non-user which indicates that they perceive their mothers to be more permissive in parenting compared to non-users.

Results shown from Tables -3a to 3p, demonstrated that Substance user group has a higher mean score on Expressiveness, Conflict, Active-Recreational, Cognitive instability, Motor and Permissive subscale. Substance non-user has a higher mean score on Cohesion, Acceptance and Caring, Independence, System Maintenance, Attention, Perseverance, Self-Control, Cognitive complexity, and Authoritative and Authoritarian subscale which is confirmed by subsequent independent sample t-test ($p < .01$). The results answer objective-1 and we retain hypothesis-1 that states that there will be significant mean difference in the family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.

Although the majority of the results are in favour of the research hypotheses, substance users may have family environment that sanctioned more Expressiveness for their children. The scenario may come along with more conflicts and openly expressed aggression among the members. Conflict among family members may be more common within their families. There may be more opportunities for engaging in recreational activities among substance-user families.

Adolescents who are untethered of substance use may have families that are supportive and committed to one another. There may be more acceptance of actions and caring with an inspiration of independency from their kin. Substance non-users generally come from families where there is a degree of importance of clear organizational structure in planning family activities and responsibilities. On top of that, there is a clear degree of limit setting within the family which encompassed how family members should abide by the rules and regulations.

Studies have shown that substance users live in a family environment where cohesion and ties between members are low (Jedrzejczak, 2005; Jin et al., 2016). Greater family cohesiveness and open family communication are negatively related to overall drug use severity, marijuana use (Volk, 1989) and alcohol (Grossman, 2005). In addition, families of cocaine users reported lesser family cohesion than alcohol users (Marchi et al., 2017). Higher conflicts, hostility and ill will have also been observed among families of substance users (Jedrzejczak, 2005; Bernardy et al., 2010; Jin et al., 2016) although the norms of violence and conflict differ from culture to culture (Caballero et al., 2010). The longitudinal study supports that familial conflicts in childhood intensify the possibility of maintaining substance use disorders in late adolescents and early adulthood although factors like social support may mitigate the association (Skeer et al., 2009). Weak attachments to parents may be due to hostility towards the children. Hostility and lack of warmth from the parents resulted in children's development of alcohol and marijuana use and the former was more strongly determined by the use and attitudes of the same-sex parent. In general, hostility and lack of warmth contributed most to children's use of illicit drugs. Hostility displayed by both parents helped to determine the incidence of delinquency among sons and the use of dysfunctional coping methods among sons and daughters (Johnson & Pandina, 2009).

The findings of the present study on the Expressiveness subscale contradict previous research where individuals' self-expression is not endorsed in substance-user families (Kothari et al., 2010; Bernardy et al., 2010) which suppressed the confidence of the children in the families. Lack of communication between family

members is a common feature among substance users. The present study on the other hand finds families of adolescent substance users have space for expressing their opinions compared to substance non-users.

Lesser promotion for independency is often observed among families of adolescent substance users which supports the findings of the study (Kothari, 2010; Jogsan, 2012). Discouraging efforts from family members of substance users hinder the path of becoming self-sufficient to make their own decisions independently.

The present study also highlights that substance users may come from families where Acceptance and Caring are minimal. Adolescent substance users often struggled to maintain acceptance of their actions and decision making which also showed that caring may not be an issue within the family (Kothari, 2010; Jogsan, 2012). Poor relationship with family members or whom we live with is significantly associated with drug use (De Micheli et al., 2004).

Active-Recreational activities may be completely absent or may happen inadequately. Since cohesion and attachment among family members are not strong, adolescents of such families may experience at the slightest; going out with families or pleasurable activities at home. Adolescent substance users may experience weak organizational structure and control exerted in their families (Kothari et al., 2010; Jogsan, 2012). Most parents of such families ignore family organizations and control their children

The results on the measurement of impulsivity sub-traits show that adolescents who are not involved in substance use compared to users have higher attention spans, may persevere before taking actions, plan their tasks carefully, and engage in activities and tasks that are challenging and complex. Substance users on the other hand are more unstable, they may have racing thoughts and make decisions without planning. Impulsivity was much higher among substance users compared to those who have never used and who are in their late adolescence (Bernstein et al., 2015) and both impulsivity and substance use are associated with

unidirectional relationships (Hudson, 2018). Cocaine dependents scored higher on non-planning (lack of future orientation) than control groups (Lane et al., 2007) and scored higher on several motor impulsivity measures like delayed discounting along with alcohol users (Stevens et al., 2015; Winstanley et al., 2010). Methamphetamine users scored high on attentional and motor impulsivity and those with greater problems of impulsivity among them have initiated at an early age (Cservenka & Ray, 2016). Attentional and motor impulsivity also increases as the intensity of heroin-use increases and heroin use is related to depression symptoms and stress levels and is inversely related to positive perception (Reid et al., 2018). Kustepe and colleague (2018) determined a significant difference between substance users and the control group on motor impulsiveness, non-planning impulsivity and on overall impulsivity while there was no substantial evidence between the two groups on attentional impulsivity. Adolescent males who accelerated progression through puberty had the highest proportion of family histories of substance use disorder and perform more impulsively on reward choice measures (Mathias et al., 2016).

Research with juvenile offenders has shown that impulsivity, measured both cognitively and behaviorally, is one of the strongest predictors of delinquency (Loeber et al., 1998; White et al., 1994 as cited in Baskir, 2006) and substance use (Diemen et al., 2008). Charles and colleague (2016) examined impulsivity and sensation-seeking from pre-adolescent to mid-adolescence who were identified as being at risk for developing substance use disorder and found that substance users were more impulsive (Allen, 1998; Hudson, 2018), more sensation-seeking (Mansour et al., 2018) during pre-adolescence and that greater sensation seeking in pre-adolescence were related to heavier substance use by a mid-adolescence period.

Substance users perceived their parents to be more permissive in their rearing style. Though their parents may be loving and caring to them, there may be few hard-and-fast rules in the household. Although permissive parenting style was found to be predicting alcohol consumption (Whitney & Froiland, 2015; Vermeulen-Smit et al., 2015; Brewer, 2017), it may sometimes predict less risky behaviour when the father-

child relationship is positive (Bronte-Tinkew et al., 2006). Substance non-users on the other hand, perceive their parents to be more authoritative although significant result was also found for authoritarian parenting style. It may be that substance non-users perceived their mothers to be authoritarian considering permissive style. Therefore, it is evident that non-users perceived their mothers to exert at least some form of authority. In a household where parents exert an authoritative style of rearing, children must abide by the rules and regulations. Additionally, children have the freedom to express their ideas and parents teach them to act with reason. The authoritative rearing style is considered to be the most complete method of rearing a child, though it may not guarantee a competent child (Baumrind, 1991). Studies have shown that an authoritative parenting style acts as a protective factor for drinking behaviour and substance use (Newman et al., 2008; Henry, 2010; Calafat et al., 2014; Posey, 2014; Becoña et al., 2015; Berge et al., 2016) and absence of authoritative rearing style may result in greater consequence on adolescent binge-drinking compared to their parents involving in drinking behaviour (Zuquette et al., 2019).

4. Examination of the relationship between family environment, impulsivity and perceived parenting style

To determine significant relationship between the subscales of the family environment, impulsivity and perceived parenting style and the results are displayed in Table-4.

Table -4: Relationship between all the subscales of Family Environment Scale and Barratt Impulsiveness Scale and Parental Authority Questionnaire

Variable	Expressiveness	Conflict	Acceptance & Caring	Independence	Active Recreational	System Maintenance	Attention	Cognitive instability	Motor	Perseverance	Self-control	Cognitive complexity	Authoritative (M)	Authoritarian (M)	Permissive (M)
Cohesion	-.53**	-.47**	.78**	.74**	.59**	.66**	.50**	-.68**	-.55**	.73**	.68**	.75**	.74**	.48**	-.61**
expressiveness	-	.91**	-.63**	-.60**	-.50**	-.61**	-.56**	.59**	.57*	-.64**	-.64**	-.64**	-.62**	-.50**	.59**
Conflict			-.62**	-.58**	-.46**	-.58**	-.54**	.55**	.59**	-.60**	-.64**	-.60**	-.59**	-.49**	.59**
Acceptance & Caring				.84**	.64**	.73**	.64**	-.77**	-.68**	.85**	.77**	.86**	.80**	.60**	-.69**
Independence					-.57**	-.67**	.62**	.72**	.63**	.80**	.74**	.80**	.79**	.58**	-.71**
Active Recreational						.67**	.52**	-.61**	-.51**	-.60**	-.55**	-.62**	-.55**	-.57**	.58**
System Maintenance							.66**	-.70**	-.62**	-.73**	.75**	-.73**	-.65**	-.64**	-.70**
Attention								-.65**	-.53*	.67**	.70**	.62**	.54**	.53**	-.63**
Cognitive instability									.62**	-.79**	-.74**	-.78**	-.73**	-.61**	.65**
Motor										.62**	.63**	.64**	.64**	.53**	-.63**
Perseverance											.78**	.86**	.80**	.56**	-.68**

Cohesion has significant positive correlation with Acceptance & Caring, Independence, Active-Recreational, System Maintenance, Attention, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative correlation with Expressiveness, Conflict, Cognitive Instability, Motor and Permissive (M).

Expressiveness has a significant negative relationship with Acceptance & Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant positive relationship with Cognitive instability, Motor, Conflict, Permissive (M).

Conflict has a significant negative relationship with Acceptance & Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant positive relationship with Cognitive instability, Motor and Permissive (M)

Acceptance and Caring has a significant positive relationship with Independence, Active-Recreational Orientation, System Maintenance, Attention, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Cognitive instability, Motor and Permissive (M)

Independence has a significant positive relationship with Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Active-Recreational Orientation, System Maintenance and Permissive (M).

Active Recreational Orientation has a significant negative relationship with Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant positive relationship with System Maintenance, Attention and Permissive (M).

System Maintenance has a significant negative relationship with Cognitive instability, Motor, Perseverance, Cognitive Complexity, Authoritative, Authoritarian and Permissive (M) and a positive correlation with Attention and Self-Control.

Attention has a significant positive correlation with Perseverance, Self-Control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Cognitive Instability, Motor and Permissive (M).

Cognitive instability has a significant positive correlation with Motor and Permissive (M) and a significant negative relationship with Perseverance, Self-control, Cognitive complexity, Authoritative (M) and Authoritarian (M).

Motor has a significant positive correlation with Perseverance, Self-Control, Cognitive Complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M) .

Perseverance has a significant positive correlation with Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M).

Self-control has a significant positive correlation with Cognitive Complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M).

Cognitive complexity has a significant positive correlation with Authoritative (M) and Authoritarian (M) and a significant negative relationship with Permissive (M).

The results in Table -4 showed significant relationship between the dependent variables which provides answer to Objective -2 of the study, and also confirmed hypothesis no-2.

The strongest association was found between Acceptance and Caring and Cognitive complexity. Acceptance and Caring were also strongly associated with Perseverance wherein the more Acceptance and care received by the adolescent

substance user the more the chances for acquiring the ability to persevere.

Although such may be the case, confounding variables may involve in the strength of the relationship. Acceptance and Caring were also associated strongly with the Authoritativeness of the mother. Authoritativeness of the mother has several positive relationships that are strong with variables such as Acceptance and Caring, Independence, Perseverance and Cognitive complexity.

Strong interaction and association exist between dimensions of family environment, negative child-rearing practice and personality traits like impulsivity. Low cohesion, low expressiveness with high conflicts in association with authoritarian and permissive parenting with high impulsivity are strong predictors of delinquent behaviours (Jin et al., 2016). Permissive, Authoritarian and Authoritative styles of parenting showed a significant impact on the impulsivity of the child (Malakar & Mullick, 2018). Among the three styles, Authoritative parenting is expected to inculcate positive traits such as intrinsic motivation and conscientiousness in the child (Dordi & Pol, 2018) which are crucial in later stages of development.

6. Examination of the predictability of perceived parenting styles on 'impulsivity' among adolescent substance users.

The Linear Regression analysis was calculated to examine the predictability of perceived parenting styles on impulsivity (self-control) among the samples.

Results are displayed from Table-5a to 5c.

Table 5a: Simple Regression analysis of Self Control from Authoritative (M), Authoritarian (M) and Permissive (M) subscale

Variable	Beta	SE	95% CI		β	<i>p</i>
			LL	UL		
Authoritative	0.30	.05	0.19	0.40	0.47	.00
Authoritarian	0.08	.05	-0.02	0.19	0.12	.11
Permissive	-0.18	.04	-0.27	-0.08	-0.31	.00

The Simple Regression analysis of Self Control revealed that all predictor variables are significant except for the Authoritarian subscale. Permissive parenting style has the highest predictability followed by Authoritative parenting style. Permissive parenting style granted lower self-control while Authoritative parenting granted better self-control.

Table -5b: Simple Regression analysis showing the predictability of Authoritative (M), Authoritarian (M) and Permissive (M) on the Perseverance subscale

Simple Regression analysis of Perseverance revealed that all predictor variables are significant except for the Authoritarian subscale. Authoritative parenting subscale was the strongest predictor among the three parenting styles.

Variable	Beta	SE	95% CI		β	<i>p</i>
			LL	UL		
Authoritative	0.22	.05	0.12	0.32	0.40	.00
Authoritarian	0.02	.05	-0.07	-0.12	0.04	.62
Permissive	-0.15	.04	-0.25	-0.06	-0.31	.00

Authoritative parenting style may promote Perseverance while Permissive parenting style may demote perseverance among adolescent substance users.

Table -5c: Simple Linear Regression analysis showing the predictability of Authoritative (M), Authoritarian (M) and Permissive (M) on Cognitive complexity subscale

Variable	Beta	SE	95% CI		β	<i>p</i>
			LL	UL		
Authoritative	0.15	.06	0.03	0.28	0.23	.01
Authoritarian	0.05	.07	-0.08	0.17	0.06	.48
Permissive	-0.22	.05	-0.33	-0.11	-0.37	.00

Simple Linear Regression analysis of cognitive complexity revealed that all predictor variables are significant except for the Authoritarian subscale. Authoritative parenting style may promote cognitive complexity while Permissive parenting may be decremental towards cognitive complexity.

The result for the examination of predictability of parenting styles on Impulsivity for the samples was found to be significant. Accordingly, the results also confirmed hypothesis no-3 as expected.

The present study resulted in significant predictability of Self-control, Perseverance and cognitive complexity: a first-order factor of the Barratt Impulsiveness Scale from Permissive, Authoritarian and Authoritative styles of parenting. There was no significant predictability for other first-order factors; Attention, Motor and cognitive instability. A Simultaneous entry method was employed to discern the predictability of the three parenting styles on the dependent measures. Each dependent variable is regressed using three separate models. All three regression models revealed that the authoritarian parenting style may not involve in predicting Self-control, Perseverance and Cognitive complexity while the authoritative parenting style may positively contribute to all the criterion variables. Authoritative and Permissive parenting styles have shown a significant impact on the impulsivity of the child (Malakar & Mullick, 2018) and these parenting styles have been found to predict impulsivity (Basharpoor et al., 2020). They are a predictor of risky behaviours such as substance use among former

substance abusers and non-abusers had a significant difference in non-planning impulsiveness; a second-order factor for Self-control and Cognitive complexity (Garfinkel, 2015). On the other hand, the authoritativeness of the mother eliminates engagement in risky behaviours (Gordon, 2016), promotes grit which is closely related to perseverance (Mushtaq et al., 2019; Fabella, 2022) and is negatively related to overall impulsivity (Basharpour, 2020). The severity of risky behaviours such as addiction to computer games is reduced by authoritative parenting mediated through self-control development (Abedini et al., 2012). Additionally, an authoritative parenting style was predicted to improve self-control capacity among delinquent adolescents (Rezaei et al., 2019). These studies are in slight support of the findings wherein the Authoritativeness of the mother may promote self-control which is vital for resistance to substance use while Permissive parenting may demote the development of self-control in adolescents especially those who are into substance use.

Chapter – V

SUMMARY AND CONCLUSION

The results of the present study can be summarized in accordance with the hypotheses statement as follows:

Family Environment:

The present study highlights the importance of family environment, impulsivity and parenting styles by comparing the mean scores of substance users and substance non-user. Family ties and cohesion is weaker among substance users compared to substance non-user. Contrastingly, substance users have a family environment where they have much freedom to express their ideas and feelings. Conflict and amount of openly expressed aggression among family members may be common among substance users compared to substance non-users. Substance non-users have a family environment where they are accepted unconditionally and family members are more caring to each other, while substance users may not have such effects within their family. Family members are assertive and they make independent decisions more in substance non-user families while substance users have significantly lesser Independence within their families. Substance users live in a family environment where participation in social and recreational activities is promoted compared to substance non-user families. Families of substance non-user have a clear organizational structure in planning family activities and responsibilities and a clear limit setting within the family compared to substance-user families.

Discernment of the results of the study highlighted the prominence of a healthy and constructive family environment. Response and contact between family members are crucial as psychological problems that may arise could be dealt with efficiently with the help of family members. Frequent exposure and proximity between family members may prevent adolescents from involving in substance use and other delinquent forms of behaviour. One of the first social problems faced by adolescents often comes from their family members. Persistent conflicts, disputes and strife create cracks in the bonds of the family members. Adolescents often abscond and flee from conflicts and to deal with such emotional and psychological problems arising from family conflicts, they rely on immediate gratification like psychoactive substances.

In the present study, substance users perceived their family environment to grant more space for expression compared to substance non-users. Expressiveness within the family may not always result in positive outcomes. The quality and nature of expression accounted for the result, wherein a large amount of negative expression may not be favourable for children, especially male adolescents. Harsh altercations may negatively impact such that expressiveness may not always be beneficial.

Adolescent male substance users may not generally get the opportunity of Care and acceptance of their abilities and for the mistakes, they might have committed. Affection and understanding is a necessary support, especially for male adolescents which is highlighted in the result of the present study.

The present study also highlights the difference between adolescent substance users and substance non-users regarding the Independence experienced within their family environment. Self-sufficiency or decision-making is not encouraged among families of substance users. The adolescent may have to rely on either of the family members for financial, psychological and emotional support. As such, independence or self-sufficiency is arduous for the adolescent in the family. They might rely on their peers which is often a perforation for engaging in delinquent behaviour.

From the above results, conflicts and open aggression are frequent within the families of substance users, therefore a lesser chance for family members to engage in recreational activities. Family members of substance users may not often engross in activities that are pleasurable for the children/adolescents. Famished for pleasantry and recreation within the family, adolescent substance users often rely on outside sources, possibly from peers. By the early adulthood stage, he/she may already develop familiarity to find recreation outside the family.

Maintenance of the family system regarding organization and control may be deficient in adolescent substance-user families. Here, the organization refers to planning family activities or providing clear instructions regarding

responsibilities and control refers to the degree of limit set within the family. Adolescent substance users often dealt with lots of dilemmas because there are no clear-cut rules and regulations mentioned and permissiveness or under control added confusion for the adolescents within the family

Impulsiveness:

Substance non-users have a greater ability to focus on the task at hand compared to substance users who may have weaker attention capacity. Substance users scored higher on cognitive instability which highlights that they have racing thoughts and tend to change their ideas abruptly. Substance users scored higher on the Motor subscale which signifies that they may act on the spur of the moment and make decisions without planning. Substance non-users scored higher on Perseverance which indicates that they can maintain consistency and withhold their actions compared to substance users. Substance non-users plan and think carefully when making decisions while substance users may disinhibit their actions. Substance non-users enjoy challenging mental tasks such as complex puzzles while substance users may not give interested in engaging in such activities.

The ability to sustain attention for longer durations may be disrupted among adolescent substance users. Substance users often find difficulty in maintaining their focus which may be the result of the substance or it may predate the substance itself. Some classes of substances like stimulants may induce overzealousness and excitability which creates difficulty in maintaining attention. The inability to conserve attention for adolescent substance users must be discerned using appropriate methodology. The current study does not focus on the antecedence or consequence of impairment in attention. Adolescent substance users may also have racing thoughts and they may be unstable compared to substance non-users. Their cognitive instability may be in close relation to the reason for their inability to focus or maintain attention.

Since adolescent substance users are unstable and excitable, the succeeding actions are hard to predict. They may act suddenly and make decisions without

planning. They may be easily convinced because they are excitable and unstable. Depending upon the individual he may be suddenly aggressive with no proper reason or behave erratically. Substances that stimulate may induce such motor impulsiveness within the individual. The individual himself may already be predisposed to motor impulsivity as impulsivity is often innate. It depends on how much innate behaviour is promoted through nurturance.

The result of the measurement of perseverance also showed that adolescent substance users may be weaker in perseverance compared to substance non-users. Perseverance in the current study, refers to maintaining a consistent lifestyle. Substance non-users may have the ability to move on despite the obstacles in their path to success which may be absent among substance users. The pathology itself could be deleterious in maintaining a consistent lifestyle.

The present study further discerned the weakness of substance users in controlling their impulses and sustaining self-control. Self-control may also be absent or weak among substance users as they have difficulty composing themselves and their actions. They could barely plan or think meticulously about their upcoming tasks or decisions. Their self-control may have been impaired by the substance or they have always been weak in self-control due to the fragile family environment. Self-control is one of the several traits that are predicting a competent lifestyle.

Adolescent substance users may also have a hard time enjoying challenging mental tasks or reasoning tests. Since they are agitated usually, they lost the ability to focus, keep their cool or persevere in engaging in the task. They may not enjoy puzzling games or games that require high attention and calmness such as chess, poker etc. The sub-traits of impulsivity are all inter-connected and they may actively work together in adolescent substance use.

Parenting Styles

The Authoritative parenting style is considered to be the most prominent style of rearing a child as the parents are low in demanding to their children but high in responsiveness. The parents have strong ideas about what they believe is right and wrong, but they do not force them on their children as absolutes. Early in life, kids learn that there will be consequences for breaking the house rules, but the reasons behind the rules are explained calmly and with loving care. The kids are allowed to ask questions, voice their opinions and possibly even change their parents' minds about some things. In the present study, substance non-users perceive their mothers to be more authoritative in their approach. Although the result does not suffice the direct impact of authoritative parenting on resilience towards substance use, it does provide the basis for understanding how the authoritative parenting style of the mother affects adolescent substance use.

The authoritarian style of parenting is a common practice in a culture where traditions are still valued. In this style of parenting, the father or mother ruled with an iron fist and the child has to abide by every rule with no argument. It is often remarked as involving high demandingness from the authority figure and low responsiveness from the subject.

Contrary to some studies, the present study found that substance non-users perceived their mothers to be more authoritarian in their rearing style. The impact of authoritarian parenting may not be generalized across cultures due to the difference in cultural values. Asian adolescents are often accustomed to an authoritarian parenting style and it may be a protective factor for them while the case may be inverse for Western cultures. Therefore, studies regarding parenting style need to be observed from different angles as the effect could be inconsistent.

In a permissive parenting style, parents are loving, affectionate and kind to their children but they barely construct hard-and-fast rules in the household. Since the children do not have rules to abide by, they are often susceptible to substance use. In the present study substance users perceived their mothers to be more

permissive compared to substance non-users. Although further investigations proved the detriment of a permissive parenting style, it depends on the individual. Some children may develop a mature way of dealing with their difficulties as they have the freedom to do so. Therefore, we cannot simply dismiss the permissive parenting style but gave a more in-depth observation to understand how to utilize it.

The correlation between Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative, and Authoritarian subscale revealed that there is a significant positive correlation between them. The strength of the relationship ranges from moderate to high correlation. One exceptionality is that the Permissive subscale has a significant negative correlation with all other subscales which is reflected in the Multiple regression analysis.

The results from Simultaneous linear regression highlighted that Authoritative and Permissive parenting styles significantly predicted Self-control, perseverance and cognitive complexity; which are the sub-traits of impulsivity. The three parenting styles cannot significantly predict Attention, Motor and cognitive instability. Among the three parenting styles, authoritative parenting of the mother resulted in positive outcomes wherein it promotes and increases the ability to self-control, the ability to persevere and interest in dealing with complex problems which is measured by cognitive complexity. Authoritative parenting is considered to provide warmth, highly demanding coping with high responsiveness. For adolescent substance users, this conglomeration may promote the ability to control situations and their emotions in times of hardship. It encouraged the ability to persevere through difficult times since they received support and warmth from their parents, especially their mother. It also creates interest to solve or deal with complex problems as they received the proper care from the parents. Since their minds are not bound by mood problems or any other pathology of some sort, they have enough resources to take on such challenging tasks in life.

Limitations

The study specified the population that is too specific and narrow resulting in difficulty in sampling. Contacting them is a strenuous task as they rarely express their true identity regarding substance use. Observation homes mostly discharge their patients amidst the pandemic which creates difficulty in the data collection process. The study included 16 variables that make the analysis and compilation of the results complicated. Another limitation is the insufficiency of prior studies on male adolescents who are substance users. These limitations create significant difficulty in planning and formulating the study. The study incorporated psychological tools that are lengthy causing a lot of exhaustion for the respondents as they are still adolescents. Though the researcher made efforts to minimize this problem, some responses are unusable.

As mentioned earlier, most district observation homes have discharged their clients and the researcher could only reach out from the lists provided by the authorities. Since the remaining observation homes have rallied adolescents from all parts of Mizoram which may prevent extreme bias and divergence of the research model from its intended objective.

Suggestions for future research

A lot of possible suggestions can be identified from the limitations section, which future research needs to learn from, such as sampling techniques and data collection as most of the data are collected individually which takes a lot of time. The longitudinal study may be interesting for studying adolescents as changes in psychological and physiological development are rapid during adolescence. Longitudinal or Cross-sectional design will provide a better and more vivid scenario. These two methods may be useful in providing how self-control, perseverance and the ability to enjoy dealing with challenging tasks contributed to resilience towards substance use in late adolescence. Future research is advised to use psychological tools that are brief as most adolescent substance users have short attention span which could impact the result of the response. Respondents may not comprehend items that are too lengthy or complicated. Lastly, it is not advisable to compile scales that are too lengthy as it drains the ability to attend to items at the end which possibly leads to responses that are random due to exhaustion.

Significance of the study

The present study is unprecedented research on the target population and hopefully, it provides the foundation for future research due to its inclusion of impulsivity sub-traits in its endeavour. Although the family environment is known to influence substance use, there are no prior studies that include the dimensions of a family environment as the present study did among the target population. The results of the study hoped to influence policy-makers in planning intervention strategies to tackle the problems of substance use that will benefit adolescents of future generations. The study highlights which variables contribute more to adolescent involvement in substance use such as the negative impact of Permissive parenting style. The results of the predictability of self-control, perseverance and cognitive complexity from parenting styles highlight what are the important mediators in adolescent substance use and what qualities needed promotion during adolescents.

APPENDICES

APPENDIX – I**CONSENT FORM (MIZO) & DEMOGRAPHIC PROFILE**

He zirna, “Family Environment, Impulsivity and Parenting Style: A study among Mizo adolescents” ah hian kei _____ Veng/Khua _ Kum ___ hian ka remtihna ngei a telin, zawhna min pek te pawh ka chhang a ni tih he form hian a entir a, ka chhanna zawng zawng hi keimah ina ka hriat dan leh tawn dan vek a ni a. Ka chhanna te hi tlangzarh a nih pawhin ka nihna thup tlat a ni dawn tih ka hria a. Heta zawhna te hian keimahah harsatna a siam emaw, rilru hrehawmna a thlen a nih chuan ka duh hunah ka inhnukdawk thei a ni tih ka hre bawke.

APPENDIX – II**SOCIO-DEMOGRAPHIC PROFILE**

Pian leh murna : _____

Chhungkaw chengho zat: _____ Unau pianpui zat : ____ (neih loh chuan X dah rawh)

Chhungkaw nihphung: 1. Joint family _____ (Pi leh pu, ni emaw patea te nena chengho)

2. Nuclear family _____ (Nu leh Pa leh unau a chengho)

3. Single parent _____ (Nu emaw Pa chauh te nena cheng)

(_____)

(SAMUEL VANLALRUATA)

Subject (chhangtu)

Research Scholar

APPENDIX – III

BARRATT IMPULSIVENESS SCALE

Directions: People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and put an X on the appropriate circle on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly

Response choices: Rarely/Never, Occasionally, Often and Almost Always/Always

1 I plan tasks carefully.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

2 I do things without thinking

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

3 I make-up my mind quickly.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

4 I am happy-go-lucky.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

5 I don't "pay attention."

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

6 I have "racing" thoughts

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

7 I plan trips well ahead of time.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

8 I am self controlled.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

9 I concentrate easily.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

10 I save regularly.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

11 I “squirm” at plays or lectures.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

12 I am a careful thinker.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

13 I plan for job security.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

14 I say things without thinking.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

15 I like to think about complex problems.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

16 I change jobs

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

17 I act “on impulse.”

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

18 I get easily bored when solving thought problems.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

19 I act on the spur of the moment.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

20 I am a steady thinker.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

21 I change residences.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

22 I buy things on impulse.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

23 I can only think about one thing at a time.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

24 I change hobbies.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

25 I spend or charge more than I earn.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

26 I often have extraneous thoughts when thinking.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

27 I am more interested in the present than the future.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

28 I am restless at the theater or lectures

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

29 I like puzzles.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

30 I am future oriented.

Rarely/Never _____ Occasionally ___ Often ___ Almost Always/Always _

APPENDIX – IV

Drug Abuse Screening Test, DAST-10

The following questions concern information about your possible involvement with drugs *not including alcoholic beverages* during the past 12 months. "Drug abuse" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions, and (2) any nonmedical use of drugs. The various classes of drugs may include cannabis (marijuana, hashish), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). Remember that the questions *do not* include alcoholic beverages.

Please answer every question. If you have difficulty with a statement, then circle the response that is mostly right.			
1.	Have you used drugs other than those required for medical reasons?	Yes	No
2.	Do you abuse more than one drug at a time?	Yes	No
3.	Are you unable to stop abusing drugs when you want to?	Yes	No
4.	Have you ever had blackouts or flashbacks as a result of drug use?	Yes	No
5.	Do you ever feel bad or guilty about your drug use?	Yes	No
6.	Does your spouse (or parents) ever complain about your involvement with drugs?	Yes	No
7.	Have you neglected your family because of your use of drugs?	Yes	No
8.	Have you engaged in illegal activities in order to obtain drugs?	Yes	No
9.	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
10.	Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?	Yes	No
		Score:	

APPENDIX – V

PARENT AUTHORITY QUESTIONNAIRE

PAQ (mother) Instructions. For each of the following statements, circle the number of the 5-point scale (1 = strongly disagree, 5 = strongly agree) that best describes how that statement applies to you and your father. Try to read and think about each statement as it applies to you and your father during your years of growing up at home. There are no right or wrong answers, so don't spend a lot of time on any one item. We are looking for your overall impression regarding each statement. Be sure not to omit any items. You may circle the options that suits best to your opinion.

1. While I was growing up my mother felt that in a well-run home the children should have their way in the family as often as the parents do.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

2. Even if his children didn't agree with her, my mother felt that it was for our own good if we were forced to conform to what she thought was right.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

3. Whenever my mother told me to do something as I was growing up, she expected me to do it immediately without asking any questions.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

4. As I was growing up, once family policy had been established, my mother discussed the reasoning behind the policy with the children in the family.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5

Strongly Agree 56

5. My mother has always encouraged verbal give-and-take whenever I have felt that family rules and restrictions were unreasonable.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

6. My mother has always felt that what children need is to be free to make up their own minds and to do what they want to do, even if this does not agree with what their parents might want.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

7. As I was growing up my mother did not allow me to question any decision she had made.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

8. As I was growing up my mother directed the activities and decisions of the children in the family through reasoning and discipline.

1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

9. My mother has always felt that more force should be used by parents in order to get their children to behave the way they are supposed to.

1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

10. As I was growing up my mother did not feel that I needed to obey rules and regulations of behavior simply because someone in authority had established them.

1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

11. As I was growing up I knew what my mother expected of me in my family, but I also felt free to discuss those expectations with my mother when I felt that they were unreasonable.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

12. My mother felt that wise parents should teach their children early just who is boss in the family.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

13. As I was growing up, my mother seldom gave me expectations and guidelines for my behavior.

- 1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

14. Most of the time as I was growing up my mother did what the children in the family wanted when making family decisions.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

15. As the children in my family were growing up, my mother consistently gave us direction and guidance in rational and objective ways.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5

Strongly Agree

16. As I was growing up my mother would get very upset if I tried to disagree with her.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

17. My mother feels that most problems in society would be solved if parents would not restrict their children's activities, decisions, and desires as they are growing up.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

18. As I was growing up my mother let me know what behavior she expected of me, and if I didn't meet those expectations, she punished me.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

19. As I was growing up my mother allowed me to decide most things for myself without a lot of direction from her.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

20. As I was growing up my mother took the children's opinions into consideration when making family decisions, but she would not decide for something simply because the children wanted it.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

21. My mother did not view herself as responsible for directing and guiding my behavior as I was growing up.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

22. My mother had clear standards of behavior for the children in our home as I was growing up, but she was willing to adjust those standards to the needs of each of the individual children in the family.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly

Agree 59

23. My mother gave me direction for my behavior and activities as I was growing up and she expected me to follow her direction, but she was always willing to listen to my concerns and to discuss that direction with me.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

24. As I was growing up my mother allowed me to form my own point of view on family matters and she generally allowed me to decide for myself what I was going to do.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

25. My mother has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don't do what they are supposed to as they are growing up.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

26. As I was growing up my mother often told me exactly what she wanted me to do and how she expected me to do it.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

27. As I was growing up my mother gave me clear direction for my behaviors and activities, but she was also understanding when I disagreed with her.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

28. As I was growing up my mother did not direct the behaviors, activities, and desires of the children in the family.

Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

29. As I was growing up I knew what my mother expected of me in the family and she insisted that I conform to those expectations simply out of respect for her authority.

1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

30. As I was growing up, if my mother made a decision in the family that hurt me, she was willing to discuss that decision with me and to admit it if she had made a mistake.

1 Strongly Disagree 2 Disagree 3 Neither agree nor disagree 4 Agree 5 Strongly Agree

APPENDIX – VI

Family Environment Scale

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. We enjoy doing things together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Family members often do not express their feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Breaking things in anger is quite common in our family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Making decisions independently is strongly encouraged in our family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. In our family everyone is encour- aged to play and interact with neighbors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Responsibilities are not taken seriously in our family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. All members of the family are expected to be together for at least one meal in a day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Affection is expressed openly,
quite often in our family.
9. Togetherness is the basic feeling
of our family.
10. Our feelings of happiness are
shared openly with others in
our family.
11. Beating up people in anger is not
seen in our family.
12. There are a lot of restrictions in
our family.
13. Friends and guest are always
welcomed in our family.
14. Everyone in our family is well
aware of their responsibilities.
15. Nobody in our family is bothered
about rules of my kind.
16. Everyone in our family listens to
what each one of us has to say.

17. Whenever any work comes up,
everyone tries to get out of the
situation.
18. It is difficult to express ourselves
openly for fear of someone
reacting to it angrily.
19. Everyone tries to sort things out
if there is a disagreement in the
family.
20. Thinking for ourselves is not
encouraged in our family.
21. We often go out together for
movies in our family.
22. Going for programmes without
informing at home is not accepted
in our family.
23. Nobody bothers to look after
anyone else in our family.
24. Any new situation that arises is
discussed openly in the family in

order to get ideas and suggestions

from everybody.

25. We talk about our personal

problems to each other in our

family.

26. When members are angry, they

do not talk to each other for days

together.

27. In our family, members ask for

what they need, quite openly.

28. Having hobbies is encouraged in

our family.

29. Quite often members of our

family stay out without informing

at home.

30. Only when we do something well

we get praise and attention

from others in our family.

31. Family members do not get

along with each other.

32. Complaining about something
that we don't like is not accepted
in our family.
33. Findings faults with each other is
quite common in our family.
34. It is difficult to do something
on your own in our family,
without someone feeling rejected
or left out.
35. Watching T.V is our only form
of entertainment.
36. There is plenty of time and
attention for everyone in our
family.
37. Everyone comes together to sort
out any new situation that may
arise in our family.
38. At home we feel free to anything
we want to.

39. Shouting in anger is not common
in our family.
40. Everyone is expected to accept all
decisions made in the family,
whether they like it or not.
41. Our family members are just
confined to either work or school.
42. We are careful not to hurt anyone
in the family by making
thoughtless remarks.
43. Whenever something needs to be
done in the house, everyone joins
in, happily.
44. When any member is feeling
upset, he/she talks to someone
in the family.
45. The members of our family
constantly keep bickering
over small matters.

46. Whenever a marriage takes place
in our family the person
concerned is asked his/her views.
47. We go out often to visit friends
or relations.
48. In our family if anyone is upset,
there is always someone to
comfort them.
49. There is no sense of closeness in
our family.
50. Family members often keep their
feelings to themselves.
51. Whenever anyone in our family is
angry with another members,
he makes sure to sort out things
with him.
52. The decision to take on or
continue a particular job is taken
by the family members concerned
in consultation with other family

members.

53. Joking and laughing is not

encouraged in our family.

54. When things get taught there is

always someone in the family

whom we can turn to.

55. When someone is sick in our

family everyone participates

in looking after the person.

56. Expressing an opinion about

matters at home is strongly

encouraged in our family.

57. Whenever a family members does

something well, the other

members fell upset about it.

58. All major decisions in our family

are taken by the elders in our

family, without asking anyone

else's option.

67. Showing anger by banging
doors is rarely seen in our family.
68. Members of our family are
very critical of each other.
69. All of us participate together
in family function/programmes.

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RESEARCH PAPERS PRESENTED (INTERNATIONAL/NATIONAL)

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- 10th Online INSPA International Conference on “School Psychology: COVID19-Empowering Mental Health and Life-long learning in children” organised in collaboration with the Department of Psychology, Aligarh Muslim University, Aligarh from 5th to 7th November, 2020 through Google Meet
 - 57th National & 26th International Conference of Indian Academy of Applied

Psychology “ Relevance of Psychology in pandemic condition & it’s impact on well-being in the digital world” organised jointly by the Department of Clinical Psychology and Department of Psychology, Mizoram University from 27th January to 29th January, 2022.

- 2-Day International Conference on Health Psychology and Allied Sciences organised by Department of Psychology, Pachhunga University College on 26th – 27th May, 2023

RESEARCH PUBLICATION

- Vanlalruata, S. & Zokaitluangi (2022) Role of Authoritarian parenting style and impulsivity on Substance Abuse. *Mizoram Education Journal*, 8(1&2), (pp. 30-38).
- Vanlalruata, S. & Zokaitluangi (2022) Conflict, Authoritarian parenting and Perseverance among Male Adolescent substance users in Mizoram. *Contemporary Social Scientist*, 24(1) (pp. 82-90)

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DEGREE : DOCTOR OF PHILOSOPHY
DEPARTMENT : PSYCHOLOGY
TITLE OF THESIS : FAMILY ENVIRONMENT,
IMPULSIVITY AND PERCEIVED
PARENTING STYLES: A STUDY OF
SUBSTANCE USERS AMONG
MIZO MALE ADOLESCENTS

DATE OF ADMISSION : 27.07.2017

APPROVAL OF RESEARCH PROPOSAL

1. DRC : 17/04/2018
2. BOARD OF STUDIES : 23.04.2018
3. SCHOOL BOARD : 03.05.2018

MZU REGISTRATION NO. : 398 of 2009-10
Ph.D. REGISTRATION NO & : MZU/Ph.D./1147 OF 03.05.2018
DATE

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ABSTRACT

**FAMILY ENVIRONMENT, IMPULSIVITY AND PERCEIVED
PARENTING STYLES: A STUDY OF SUBSTANCE USERS
AMONG MIZO MALE ADOLESCENTS**

**AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

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**DEPARTMENT OF PSYCHOLOGY
SCHOOL OF SOCIAL SCIENCES**

JUNE 2023

FAMILY ENVIRONMENT, IMPULSIVITY AND PERCEIVED PARENTING
STYLES: A STUDY OF SUBSTANCE USERS AMONG
MIZO MALE ADOLESCENTS

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Submitted
In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in
Psychology of Mizoram University, Aizawl

Introduction

Family is traditionally seen as the basic foundation of society, generally, the family can be seen as a group of people who have biological, emotional or legal ties to each other (Bauserman, 2002; Ninaniya et al., 2019). It is an institution in which households are assumed to be organized, by and large, based on a division of labour between a primary breadwinner (male) and a primary child-carer (Barrett & McIntosh, 2015).

Family Environment

Home is the first environment within which the individual interacts with others. Family members influence each other, directly and indirectly (Minuchin, 2002) which provides stimulation, support and nurturance (Pelto et al., 1999). The so-called 'environment' in the opinion of Epstein and Franklin (1970) is a social, cultural and physical condition, and to develop one's personality. Culture affects parenting strategies, and the development of emotions and self-concept, which are all key components of adolescents' lives (Farokhzad, 2014). Each member affects the other through interactions between members of the family that are altered by the behaviour of the other member (Sigelman et al., 2012).

Family Cohesion is the degree of commitment and supports family members provide for one another, tend to engage with friends and acquaintances that the entire family enjoy and have a more open and honest relationship about recreational activities (Grossman, 2005). Whereas more conflicts experienced within the family invite behavioural problems (Sapp, 2003). The family environment of substance users highlights less cohesion which reflects less concern and commitment to taking family responsibilities (Jedrzejczak, 2005; Kothari et al., 2010).

Individuals' self-expression is not endorsed in substance-user families (Kothari et al., 2010; Bernardy et al., 2010) which suppresses the confidence of children in the family. Expressive family communication environments were positively related to early adolescents' perceptions of parental disapproval of substance use, which, in turn, predicted stronger personal anti-substance use norms and consequently, reduced

recent substance use (Shin & Miller, 2007; 2019). Discouraging efforts from family members of addicts hinder the path of becoming self-sufficient to make their own decisions independently (Kothari, 2010) as such drug users and non-users shows a significant difference in Independence with a low score from drug users (Jogsan, 2012).

Adolescent substance users usually come from families where acceptance of mistakes and achievement are minimal with lesser care (Kothari, 2010; Jogsan, 2012). Poor relationship with family members is significantly associated with drug use. (De Micheli et al., 2004). Russian youth who viewed their families as conflictual, non-supportive, and without close relationships with their parents reported feeling more depressed; and substance users were not as close to their parents and families as non-users (Scheer & Unger, 1998).

Family conflict may be a strong predictor of different forms of delinquency, substance dependence and depressive symptoms (Wu et al., 2004). Substance dependents come from families where there is hostility and ill will (Jedrzejczak, 2005; Bernardy et al., 2010). Hostility displayed by both parents determines the incidence of delinquency among sons whereas the use of dysfunctional coping methods among sons and daughters (Johnson & Pandina, 2009). Family cohesion, warmth, love and happiness are protective factors while hostility and weak family ties are predictors of substance use (Jêdrzejczak, 2005). Ineffective parenting methods may be characterized by high levels of parent/child conflict, poor parental monitoring and lack of leisure time spent doing activities together (Mc Vie et al., 2005).

The child-rearing style accounted for a large part of adolescent substance use (Cox, 2001; Terry, 2004; Newman, 2008; Diggs et al., 2015; Mwanja & Njagi, 2017) or protecting from substance use and other forms of delinquency (Newman et al., 2008; Henry, 2010; Posey, 2014; Becoña et al., 2015; Berge et al., 2016; Onukwufor et al., 2017).

Parenting style

Among the three original parenting styles Authoritarian, authoritative and permissiveness which are identified by Baumrind (1971), the authoritarian parenting style is the strongest, stern and most meticulous technique for nurturing children. Adolescents who reported experiencing an authoritarian parenting style had a higher delinquency score than the authoritative group (Terry, 2004). The child may not favour staying at home rather he/she may spend more time with peers or any other activities that are not stressful.

Authoritative parents who are highly demanding and highly responsive were remarkably successful in protecting their adolescents from problem drug use, and in generating competence (Henry, 2010; Posey, 2014; Becoña et al., 2015; Berge et al., 2016). Although authoritarian parenting may act as a protective factor, it may not be a necessary condition to produce a competent child (Baumrind, 1991).

The permissive parenting style was the most relaxing in that children intuitively know what's best for them and believe that the best policy is to let them be and simply support and love them. Although this parenting style seems to be the worst style of parenting, in some instances, it may have a positive effect (Bronte-Tinkew et al., 2006). Across different cultural situations, the authoritative parenting style was distinct in producing positive outcomes, while in European cultures, the indulgent style of parenting did equally better with an authoritative style (Calafat et al., 2014). Male adolescents who perceived authoritarian or neglecting families reported more alcohol, cigarette and stimulant/sedative substance use behaviour (Foxcroft et al., 1995). Child tobacco and alcohol use was associated with child perception of lower authoritativeness, and higher permissiveness and adolescents' perceptions of them are associated with child achievement and substance use (Cohen & Rice, 1997). It is often found that a permissive parenting style influenced alcohol use (Whitney & Froiland, 2015; Zuquette et al., 2019).

Parenting style among Mizo can be classified as conservative to some extent and is commonly a Patriarchal family system like most family systems in other regions of the world. It is generally similar to Baumrind's authoritarian style where the father

plays the main role with control of power and authority over the family and was almost unlimited resulting in an imbalanced diffusion of power within the family (Mahapatra, 2008; Gangte, 2016).

Impulsivity

According to Oxford Learner's Dictionary (2020), impulsive means, "(of people or their behaviour) acting suddenly without thinking carefully about what might happen because of what you are doing". Eysenck (1993) mentions that impulsivity is characterized by unplanned risky behaviours, and making up one's mind quickly. It is the tendency to act with less forethought than most individuals of equal ability and knowledge (Dickman, 1993). Impulsivity is thought to encompass a range of behaviours including lack of persistence and planning, risk-taking, acting on a whim, boredom susceptibility, sensation-seeking, reward-seeking, components of hyperactivity, behavioural disinhibition, and inability to delay gratification (Evdenden, 1999; Whiteside & Lynam, 2001 as cited in Knezevic, 2013).

This study is directed and focused on the six primary factors of impulsivity as identified by Patton and colleagues (1995). Research on juvenile offenders has shown that impulsivity is one of the strongest predictors of delinquency (Loeber et al., 1998; White et al., 1994 as cited in Baskir, 2006) and substance use (Diemen et al., 2008). Adolescents who are identified as prone to substance use were found to be more impulsive (Hudson, 2018).

Behaviours such as over-eating, nicotine and nicotine plus marijuana users have higher overall impulsivity (Beaton et al., 2014). Measurement of impulsive traits like delay discounting, behavioural inhibition and inattention reveals alteration of performance among substance abusers (de Wit, 2008). Cocaine dependents scored higher on non-planning (lack of future orientation) than control groups (Lane et al., 2007) and scored higher on several motor impulsivity measures like delayed discounting along with alcohol users (Stevens et al., 2015; Winstanley et al., 2010). Methamphetamine users scored high on attentional and motor impulsivity and those with greater problems of impulsivity among them have initiated at an early age (Cservenka & Ray, 2016). Attentional and motor impulsivity increases as the

intensity of heroin-use increases (Reid et al., 2018). Kustepe and colleagues (2018) determined a significant difference between substance users and the control group on motor impulsiveness, non-planning impulsivity and on overall impulsivity but not on attentional impulsivity. Cocaine users with attention hyperactivity disorder showed lower scores on sustained attention, cognitive instability, inability to withhold motor movements, ability to persevere, self-control and cognitive complexity (Kustepe, 2018); and tend to be more disinhibited, lesser thoughts and plans for the future (Liraud & Verdoux, 2000). Heavy users were more impulsive than abstainers and moderate users groups (Walton & Roberts, 2004).

Early commitment to substance use can lead to greater impulsivity scores among cocaine users (Lister et al, 2015). Impulsivity can predispose to substance use and vice versa and is higher among individuals with past substance use (Moeller et al., 2001). It plays a prominent role among early drug users and as impulsivity increases substance involvement tends to increase (Martinez-Loredo et al., 2015). Although the subtypes of impulsivity specifically contributed to substance use (Marin-Navarrete et al., 2018) that overall high impulsivity displayed more severity to substance use and this expression of severity is mediated by rates of co-occurring disorders.

Adolescent

According to World Health Organisation, Adolescence (10–19 years) is a stage in development where changes take place briskly. From 10 to 19 years (as per WHO standards) there is a drastic change physically and mentally (Najmi et al., 2019), and physiological development is absolute at around the age of 25 (Anderson, 2016). Whatever the definition of adolescent may be, we can be certain that it is a crucial period of growth and development where the decisions and choices they make influences their future stages in life (Najmi et al., 2019).

It was predictable that there are nearly 1.2 billion adolescents (10-19 years old) worldwide which cannot be a small quantity nonetheless. In India, aged between 10 and 19 years of age constitute almost 22% of the general population (UNICEF, 2013) which may increase over time which signifies the principality of the adolescent population within the country. In Mizoram, adolescents aged 10 – 19 years comprise

20.71% of the total population based on the 2011 census which is nearly a quarter and will be increased in number at present.

Adolescent drug use has been the focus of numerous studies that reported the use of the drug during adolescence may "interfere with normal cognitive, emotional and social development" (Guo, Hill, Hawkins, Catalano and Abbott, 2002). Many risk-taking behaviours for health, such as substance use or sexual risk-taking, start during adolescence. Interpersonal violence was ranked the second leading cause of death of older adolescent boys in 2016 (World Drug Report, 2018).

Substance use

The term 'substance use disorder' refers to a condition in which an individual's recurrent use of alcohol and/or drugs causes significant behavioural, physical, social, and psychological impairments (American Psychiatric Association, 2013a). Nomenclatures like substance abuse, addiction and dependence have not been used officially after the development of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) although the term has been introduced in 1980. The DSM V (2013) encompass ten separate classes of drugs with two groups of substance-related disorders – substance use disorder and substance-induced disorder.

Substance abuse has historically been seen as a problem of the individual, substance abuse frequently affects the entire family. Despite the stereotype of the "loner" alcoholic or drug addict, the vast majority of substance abusers (male and female) live in family settings (Wynne et al., 1996). As a consequence, it is important to consider how the role of family and the family relationship relates to the incidence and occurrence of substance abuse.

Review of Literature

The drug habit of elders and particularly of parents is an important factor for the status-imitation for the child and the father's habit in particular, influenced the male children (Grichting & Barber, 1989; Ministry of Welfare, Government of India, 1992). Broken families create tension in family relationships, lack of parental control over children, and addiction among parents have been cited as some of the family

conditions conducive to drug abuse. In the adolescent period, they face many problems including- lack of job, homesick-ness, transfer of job, loose parental control, disturbed and broken exposure to drugs, being out of school etc. are the factors related to high risk for drug abuse (Forney et al., 1990). Adolescent drug users significantly differ on all nine subscales of the Family Environment Scale by having a higher mean score than non-drug users (Jogsan, 2012).

Bernardy & Oliviera (2010) analyse the role of family relationships among street drug abusers, and institutionalized youths and found that negligence, abandonment, physical abuse, lack of family dialogue and especially a culture of drug use in the family environment determined the initiation of drug use.

Kothari & Nair (2010) found addicts/substance users have lower family cohesion or little mutual understanding, lesser expressiveness and non-supportive in encouraging individual's self-expression of emotions, higher conflicts with incapability to solve the conflict, lower independency due to discouraging efforts and hindrances from family members, lower achievement orientation activities and discouraging the individual to face competitive environment, lesser intellectual cultural orientation as members are less concerned about political, social and cultural activities, lesser active recreational orientation, lower moral and religious emphasis as these subjects are seldom discussed among family members, weak organization or unstructured and lesser control exerted between family members.

The parent-adolescent conflict has been strongly associated with youth involved with alcohol and other drugs (Baer et al. 1987). Adolescents use alcohol and other drugs to ease tension at home or to show rebellion against parental authority (Thompson & Wilsnack, 1987). On the other hand, positive family relations including parental affection and support are a prevention to adolescent drug use (Bowser& Word, 1993; Stewart & Brown, 1993).

Available literature strongly suggests that families are important stakeholders who both aid the process of change and benefit from the improvement of an addiction problem (Copello & Orford, 2002). Velleman and colleagues (2009) revealed the

weight of the involvement of family processes, and structures in young people's initiation and misuse of substances.

Impulsivity significantly predicted treatment retention which implies the importance of targeting impulsivity among individuals with cocaine use for better treatment outcomes (Moeller, 2001). Self-control which is a dimension of BIS-11 (Patton et al., 1995) was associated with drug use among adolescents of high school standard. Cigarette smoking, marijuana use, hard drug use and problem drug use were found to predict lower social self-control (Pokhrel et al., 2007).

Research on juvenile offenders has shown that impulsivity is one of the strongest predictors of delinquency (Loeber et al., 1998; White et al., 1994 as cited in Baskir, 2006) and substance use (Diemen et al., 2008).

High behavioural impulsivity, high familial conflict, and the highest levels of negative peer relationships predicted moderate/serious delinquency (Baskir, 2006). Impulsivity has greater consequences on substance use and is independently related to several classes of substance abuse (Bidwell et al., 2015).

Substance users were more impulsive and more sensation-seeking during pre-adolescence, before any significant substance use (Charles et al., 2016). Impulsivity associated with adverse childhood experiences and desirability of first sexual experience on substance use and sexual risk-taking in justice-involved male adolescents (Ross et al., 2018). Nicotine and nicotine plus marijuana users have higher overall impulsivity (Beaton et al., 2014). The levels of impulsivity increase in adolescents' involvement with substances increase (Matinez-Loredo et al., 2018),

Impulsivity is significantly associated with the risk of Opioid Analgesic misuse (Marino et al., 2013).

Rejection of parents leads to drug addiction whereas emotional warmth from the father acts as a protective factor; over-protection from mothers and favouritism from fathers are the determining factors of drug addiction in Mizo adolescents samples (Rai, 2008).

Parenting style as one of the most effective reasons for student's tendency to drug abuse (Ahmadi et al., 2014).

Authoritative parenting is associated with the best outcomes regarding adolescent substance use, and neglectful parenting with the worst (Becoña et al., 2015) and associated with less use of alcohol, tobacco and illicit drugs in children and adolescents (Becoña et al., 2015; Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005)

Children of authoritarian parents have no difference or even an inverse association (Becoña et al., 2015). Permissive parenting is associated with higher rates of substance use, while others demonstrate the opposite association (Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005; Shucksmith et al., 1997). Neglectful parenting style is almost consistently found to be associated with higher rates of substance use (Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Shucksmith et al., 1997).

Permissive parenting and authoritative parenting have been shown to correlate with the level of delinquency, a higher number of incidents with the police and more serious delinquencies whereas authoritative parenting is associated with little to no serious delinquency incidents (Hoeve et al., 2008).

The parent-adolescent conflict has been strongly associated with youth involved with alcohol and other drugs (Baer et al. 1987; Hops et al., 1990). Adolescents use alcohol and other drugs to ease tension at home or to show rebellion against parental authority (Thompson & Wilsnack, 1987). Though may be in part, the available literature tells about what happened in other cultures but is not available for the targeted population which focuses on the objectives of the present study.

Statement of the Problem

Substance use must be understood as a universal problem, as it affects the individual, the family, the society and ultimately the whole world. About 275 million people worldwide, which were roughly 5.6 per cent of the global population aged 15–64 years, used drugs at least once in 2016 (UNODC, 2018). In a National Survey

conducted by the United Nations Office on Drugs and Crime (UNODC) and the Ministry of Social Justice and Empowerment, Government of India for the year 2000-2001 (2004), it was estimated that about 732 lakh persons in India were users of alcohol and drugs. Of these 87 lakhs used Cannabis, 20 lakhs used opiates and 625 lakhs were users of Alcohol. Regions with a high prevalence of Opiate use in India were Manipur, Mizoram, Nagaland, Himachal Pradesh, Punjab, Haryana and Western Rajasthan. The year-wise drug-related death report of the Excise and Narcotics Department (2018) between 1984 and 2018 showed that of the total death relating to drug use in Mizoram, 88.85% of them were males and only 11.14% of the total death was represented by females. Still, the statistic mentioned above may underestimate the real outcome of the impact of psychoactive substances.

The most important point is understanding the protective factors such as the family, parenting style and personality factors such as impulsivity and those who are most vulnerable to these psychoactive substances are the adolescents.

The risk and protective factors for the substance of adolescents are (a) family alcohol and drug use and attitudes toward/ permissiveness of use, (b) family behaviour and activity management practices, (c) family conflict, and (d) low family bonding, contributed to youth substance use. Interventions that focus on protective factor development through the improvement of parenting and family functioning have been able to show positive results in improvements in children's social and emotional functioning and reduction in anti-social behaviour linked to adolescent substance use (Hogue et al., 2002).

Substance users differ from non-users in family cohesion and degree of expressing emotions and opinions, acceptance and caring, independence, active-recreational orientation, organization and control (Jogsan, 2012; Kothari et al., 2010), have higher conflict experienced within their family (Jedrzejczak, 2005; Bernardy et al., 2010; Jin et al., 2016).

Authoritative parenting is associated with the best outcomes regarding adolescent substance use, and neglectful parenting with the worst (Becoña et al., 2015); and associated with less use of alcohol, tobacco and illicit drugs in children and

adolescents (Becoña et al., 2015; Adalbjarnardottir & Hafsteinsson, 2001; Shakya et al., 2012; Čablová et al., 2015; Chassin et al., 2005). The impact of authoritarian parenting may not be generalized across cultures due to the difference in cultural values. Asian adolescents are often accustomed to an authoritarian parenting style and it may be a protective factor for them while the case may be inverse for Western cultures.

Therefore, it is profoundly necessary to establish more studies on the Mizo culture which is generally oriented towards authoritarian and permissive. Literature available regarding the study of adolescent substance use among the target population is very limited and more studies needed to be done to have a better understanding of the determining factors of substance use for designing prevention and intervention strategies.

The reason for its high prevalence could be any of the mentioned factors – biological, individual psychological components and psychosocial factors. The family environment of substance users, perceived parenting style and impulsivity play a major role in adolescent substance use. The three main factors are likely associated with each other. It has all been understood by now that substance use has to be tackled from its root. The results of this study could help in tackling substance use and other forms of addictive behaviours that are maladaptive. Factors like family environment, parenting styles and impulsivity are considered to be the major determinants of substance use. The present study hopefully aids in understanding the role of these factors and in formulating intervention strategies among the observed population.

Objectives of the study

The majority of the findings and literature posits that substance use and abuse have a deep root within the family environment and the relationship between members. In light of the previous findings and research, the present study endeavoured to establish a well-defined presentation of the nature of substance use/addiction among Mizo adolescents. The following objectives were framed to identify whether family

environment, parenting styles and personality (impulsivity) were determinants of substance use among Mizo male adolescents:

- 1) To examine differences in a family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.
- 2) To determine the relationship between family environment, impulsivity and perceived parenting style.
- 3) To examine the predictability of perceived parenting styles on 'impulsivity' among adolescent substance users

Hypotheses

To meet the objectives of the study, the following hypotheses will be attempted in the study:

- 1) There will be significantly different levels in the family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.
- 2) There will be a significant relationship between the dependent variables such as family environment, impulsivity and perceived parenting style.
- 3) There will be significant predictability of perceived parenting styles on 'impulsivity' among adolescent substance users

Methods and Procedure

Sample: 100 Mizo Male adolescent substance users who are registered as Substance Users in the Observation Home, managed by the Social Welfare Department, Government of Mizoram and from privately run rehabilitation centres were selected. The sample age ranged from 13-19 years of age, who have been taking psychoactive substances for the past 3 to 4 years regularly. 100 substance non-users were identified aiming to well match the substance user sample on age and locality serving as the control in the study. Substance users were screened using the Drug Abuse Screening Test-10 (Skinner, 1982) and substance non-users were selected with the help of the Socio-Demographic profiles constructed for the present study which

include age, permanent address, birthplace, family type, size of the family and number of siblings to maintain a better representation of substance non-user among Mizo male adolescents.

Design: 200 Mizo Male adolescents, comprising 100 substance users and 100 substance non-users served as a sample in this study. The study incorporated a between-group design with substance-user and non-user groups. The substance non-user group serves as a control in the study to highlight the contrasts between the two groups. The design was an intent to examine mean comparison and relationship between Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active Recreational Orientation, System Maintenance, Attention, Motor, Self-control, cognitive complexity, perseverance, cognitive instability, authoritarian, authoritarian and permissive scales.

Tool used: The following standardized psychological tools were used,

1) *The Drug Abuse Screening Test (DAST; Skinner, 1982)* was originally designed by H. A Skinner to provide a brief, self-report instrument for population screening, clinical case finding and treatment evaluation research. It is a 10-item self-report instrument that screens various classes of drugs and applies to various populations and settings including psychiatric patients.

2) *Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995)*. The Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995) is a questionnaire designed to assess the personality/ behavioural construct of impulsiveness, and the most widely cited instrument for the assessment of impulsiveness (Stanford et al., 2009). It has six subscales and has good reliability and validity.

3) *The Family Environment Scale (FES; Bhatia & Chadha, 1993)*: Family Environment Scale developed by Dr. Harpreet Bhatia and Dr. N.K Chadha (1993) which is a modified version of the family environment scale by Moos & Moos (1974) was used to measure the social-environmental characteristics of the family. It consists of nine subscales, and high reliability and Validity.

4) *Parental Authority Questionnaire (PAQ; Buri, 1991)*: The PAQ is designed to measure parental authority, or disciplinary practices, from the point of view of the child (of any age). Buri (1991) developed a self-report measure asking respondents to rate how their parents acted toward them. The PAQ has three subscales: authoritarian, authoritative and permissiveness. The PAQ had high reliability and validity.

Procedures

The present study was designed to compare substance users and non-users of Mizo adolescents on the dependent variables. The three scales- The Family Environment Scale, Barratt Impulsiveness Scale-11, and Parental Authority Questionnaire were collected, and translation into Mizo and back-translated into English with due care of the methodological concern. The psychometric applicability was checked through a pilot study and their reliability coefficient falls between .71 to .83 (Cronbach's α) and was deemed suitable for the population. The necessary permission was taken from authorities, and sample identification was done as per objectives following a random sampling procedure. Then, informed consent was also taken from subjects following the APA code of ethics for research (2002). The administration of the scales was done with due care to the instructions given in the manuals. All doubts and queries were cleared, and responses were checked for complete responses.

Results and Discussion

Analysis of the data for the present study as completed using Statistical Package for the Social Sciences (Version 25.0). A preliminary assessment of the data was completed in the following manner; Firstly, the data were checked for missing values and outliers. There were no missing values while some outliers in responses were dealt with. The analysis of the results was done following the objectives and hypotheses of the study.

Sample characteristics:

The sample characteristic of the study as follows:

- (i) The distribution of the family size was presented in three groups with 30% of the respondents living with 1-2 family members, 57 % living with 3-4 family members, and 13% living with 5 and above family members.
- (ii) The distribution of the size of siblings resulted in 56% having 1-3 siblings, 27% having 4-6 siblings and 17% having 5 and above siblings among the samples
- (iii) Among the samples, the types of families were also recorded that 36% belong to joint families, and 64% have the nuclear type of family.
- (iv) Types of Parents were seen as 46% are having single parent whereas 54% are taken by both parents.

Data Analysis

The analysis data of the study was done in the following manner:

1) Checking missing raw data and outlier

The raw data were checked for missing values and extreme outliers for the appropriate statistical test application. No missing values or extreme outliers were detected and the analyses proceeded.

2) Psychometric adequacy of the scales

The analysis was done with the aid of IBM's Statistical Package for the Social Sciences (SPSS 25). Since the population under investigation were adolescents, thorough verification of the appropriateness of the scales was essential. Furthermore, the scale was constructed and standardized in a culture distinct from the culture of the target population, adding to the indispensability of checking the psychometric adequacy of the scales.

Firstly, the internal consistency of all the subscales of the three behavioural measures was estimated by calculating Cronbach's alpha. The equality of variances

across the substance user and substance non-user groups was calculated using Levene's test and included in Table-1.

From Table - 1 we can see that all subscales have good internal consistency ranging from .71 to .89, except for Active-Recreational ($\alpha=.67$, $n= 8$ items) subscale with lesser internal consistency. We can also say that all items of the scales are reliable and will show a consistent measurement within the target population. The test for equality of variances across the comparison groups was determined using Levene's test of equality of variances. Results revealed that the variances between substance use and substance non-user groups are approximately equal on Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-Control, Cognitive complexity, Authoritative, Authoritarian and Permissive subscales ($p>.05$).

3). *Descriptive statistics (Mean, SD, Skewness and Kurtosis) to check the assumption of Parametric statistics for the selection of appropriate statistics.*

The descriptive statistics for the data consisting of mean, standard deviation, skewness and kurtosis are used to determine the distribution and mean scores for substance users and substance non-user on all the subscales i.e Cohesion, Expressiveness, Conflict, Acceptance and Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative, Authoritarian and Permissive. The descriptive statistics for the whole sample were separately displayed in Table - 2a.

Table-2a showed the mean score, standard deviation, skewness and kurtosis statistics on all the dependent variables for all the samples disregarding the independent groups. The descriptive statistics for the whole sample can be utilised for comparison with the descriptive statistics of substance users and substance non-users groups.

Table 2b displayed the descriptive statistics separately for substance user and substance non-user groups for Cohesion, Expressiveness, Conflict, Acceptance and

Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative, Authoritarian and Permissive subscales. The skewness and kurtosis statistics of the two independent groups for all the subscales were within standard error/deviation which shows that the distribution of substance users and substance non-users approximates the normal bell curve.

The results in the descriptive statistics on all subscales of the psychological scales showed the criteria of the parametric assumptions were met which permit to use of parametric statistics for further analysis.

4). Examination of any Significant differences in family environment, impulsivity and perceived parenting styles between adolescent substance users and non-users.

The Independent t-test was applied to examine significant differences between adolescent substance users and non-users on family environment, impulsivity and perceived parenting styles, and the results were given in Tables-3a to 3p.

From Table - 3a, it can be seen that there is a significant difference between Substance user and non-user groups on Cohesion ($p < .01$). Substance non-user group has a higher mean score ($m=35.93$) which indicates that families of the substance non-user group had more family cohesion compared to substance users ($m=29.60$).

From Table 3b we can see that there is a significant difference between substance user and non-user groups on Expressiveness ($p < .01$). Substance user has a higher mean score ($m=26.71$) which indicates that families of substance user groups had a greater tendency of expressing themselves compared to non-user groups ($m=20.76$).

From the above Table, we can see that there is a significant mean difference between the two groups ($p < .01$) with a higher mean score for substance users ($m=35.42$) which indicates that conflict between family members is frequent in families of substance users.

Table -3d reveals that substance non-users have a family environment that is more accepting and caring ($p < .01$; $m=34.57$) compared to substance user groups. The

difference is significant and large to say that substance users may have lesser acceptance and caring environments within their families.

Table 3e revealed that there is a significant mean difference between substance users and substance non-user ($p < .01$) on the Independence subscale. The substance non-user group has a higher mean score ($m = 25.20$) which indicates that independency is encouraged among family members much more than in families of a substance-user group.

The above Table-3e revealed that there is a significant difference between substance user and substance non-user on Active Recreational Orientation ($p < .01$). Contradictorily, substance user has a higher mean score ($m = 27.64$) compared to non-user groups which indicate that there are more recreational activities within the family.

Table-3g portrays that substance users and non-users were significantly different between the mean scores on System Maintenance ($p < .01$). Substance non-user has a higher mean score ($m = 20.21$) which may indicate that non-user families have more organization and control.

Results in Table -3g demonstrated that there is a significant difference between substance user and non-user ($p < .01$). Substance non-user group have a higher mean score ($m = 13.68$) which may indicate that they have more span of attention compared to substance users.

Table -3i showed a significant difference between the mean scores of substance user and non-user groups ($p < .01$). Substance users have a higher mean score ($m = 8.63$) compared to non-user which suggests that substance users may generally have racing thoughts and act briefly.

Table-3j revealed that there is a significant difference between substance user and substance non-user on the Motor subscale ($p < .01$). Substance users have a higher mean score ($m = 17.46$) compared to substance non-user which indicate that substance user may exhibit difficulty in withholding their urge and may act on the spur of the moment.

Table -3k indicated that there is a significant difference between substance users and non-users in the mean score on Perseverance ($p < .01$). Substance non-user have a higher mean score ($m = 11.69$) which indicates that they may be more able in withholding their impulse compared to substance user groups.

Table- 3l highlighted that there is a significant difference between substance user and non-users in the mean score on Self-control ($p < .01$). Substance non-user group have a higher mean score on self-control ($m = 15.83$) which indicate that they can make planning and thinking before making decisions compared to substance users.

Table -3m conveyed that there is a significant mean difference between substance user and substance non-user groups ($p < .01$). Substance non-user have a higher mean score ($m = 14.45$) which indicates that substance non-user may be more engaging in challenging tasks compared to substance user groups.

Table -3n instilled that there is a significant mean difference between substance user and substance non-user groups on Authoritative (M). Substance non-user have a higher mean score ($m = 28.21$) which may indicate that they perceive their mothers to be more authoritative compared to the substance-user group.

Table -3n demonstrated that there is a significant difference between substance user and substance non-user groups on Authoritarian (M) ($p < .01$). Substance non-user ($m = 25.97$) perceive their mothers to be more Authoritarian compared to substance users.

From the above Tables-3a to 3p, revealed that there is a significant difference between substance user and substance non-user groups on the Permissive (M) subscale ($p < .01$). Substance users have a higher mean score ($m = 27.54$) compared to substance non-user which indicates that they perceive their mothers to be more permissive in parenting compared to non-users.

Results shown in Tables -3a to 3p, demonstrated that the Substance user group has a higher mean score on Expressiveness, Conflict, Active-Recreational, Cognitive instability, Motor and Permissive subscale. Substance non-user has a higher mean score on Cohesion, Acceptance and Caring, Independence, System

Maintenance, Attention, Perseverance, Self-Control, Cognitive complexity, and Authoritative and Authoritarian subscale which is confirmed by subsequent independent sample t-test ($p < .01$). The results answer the objective-1, and also accepted the hypothesis-1.

Although the majority of the results are in favour of the research hypotheses, substance users may have a family environment that sanctioned more Expressiveness for their children. The scenario may come along with more conflicts and openly expressed aggression among the members. Conflict among family members may be more common within their families. There may be more opportunities for engaging in recreational activities among substance-user families.

Adolescents who are untethered of substance use may have families that are supportive and committed to one another. There may be more acceptance of actions and caring with an inspiration of independency from their kin. Substance non-users generally come from families where there is a degree of importance of clear organizational structure in planning family activities and responsibilities. On top of that, there is a clear degree of limit setting within the family which encompassed how family members should abide by the rules and regulations.

Studies have shown that substance users live in a family environment where cohesion and ties between members are low (Jedrzejczak, 2005). Greater family cohesiveness and open family communication are negatively related to overall drug use severity, marijuana use (Volk, 1989) and alcohol (Grossman, 2005). In addition, families of cocaine users reported lesser family cohesion than alcohol users (Marchi et al., 2017). Higher conflicts, hostility and ill will have also been observed among families of substance users (Jedrzejczak, 2005; Bernardy et al., 2010) although the norms of violence and conflict differ from culture to culture (Caballero et al., 2010). The longitudinal study supports that familial conflicts in childhood intensify the possibility of maintaining substance use disorders in late adolescents and early adulthood although factors like social support may mitigate the association (Skeer et al., 2009). Weak attachments to parents may be due to hostility towards the children. Hostility and lack of warmth from the parents resulted in children's development of

alcohol and marijuana use and the former was more strongly determined by the use and attitudes of the same-sex parent. In general, hostility and lack of warmth contributed most to children's use of illicit drugs. Hostility displayed by both parents helped to determine the incidence of delinquency among sons and the use of dysfunctional coping methods among sons and daughters (Johnson & Pandina, 2009).

The findings of the present study on the Expressiveness subscale contradict previous research where individuals' self-expression is not endorsed in substance-user families (Kothari et al., 2010; Bernardy et al., 2013) which suppresses the confidence of the children in the families. Lack of communication between family members is a common feature among substance users. The present study on the other hand finds families of adolescent substance users have space for expressing their opinions.

Lesser promotion for independency is often observed among families of adolescent substance users which supports the findings of the study (Kothari, 2010; Jogsan, 2012). Discouraging efforts from family members of substance users hinder the path of becoming self-sufficient to make their own decisions independently.

The present study also highlights that substance users may come from families where Acceptance and Caring are minimal. Adolescent substance users often struggled to maintain acceptance of their actions and decision making which also showed that caring may not be an issue within the family (Kothari & Nair, 2010; Jogsan, 2012). Poor relationship with family members or whom we live with is significantly associated with drug use (De Micheli et al., 2004).

Achievement-Oriented activities are not prominent among families of substance users and adolescents within such families may not be encouraged towards achieving their goals. Active-Recreational activities may be completely absent or may happen inadequately. Since cohesion and attachment among family members are not strong, adolescents of such families may experience at the slightest; going out with families or pleasurable activities at home. Adolescent substance users may experience weak organizational structure and control exerted in their families

(Jogsan, 2012). Most parents of such families ignore family organizations and control their children

The results on the measurement of impulsivity sub-traits show that adolescents who are not involved in substance use compared to users have higher attention spans, may persevere before taking actions, plan their tasks carefully, and engage in activities and tasks that are challenging and complex. Substance users on the other hand are more unstable, they may have racing thoughts and make decisions without planning. Impulsivity was much higher among substance users compared to those who have never used and who are in their late adolescence (Bernstein et al., 2015) and both impulsivity and substance use are associated with unidirectional relationships (Hudson, 2018). Cocaine dependents scored higher on non-planning (lack of future orientation) than control groups (Lane et al., 2007) and scored higher on several motor impulsivity measures like delayed discounting along with alcohol users (Stevens et al., 2015; Winstanley et al., 2010). Methamphetamine users scored high on attentional and motor impulsivity and those with greater problems of impulsivity among them have initiated at an early age (Cservenka & Ray, 2016). Attentional and motor impulsivity also increases as the intensity of heroin-use increases and heroin use is related to depression symptoms and stress levels and is inversely related to positive perception (Reid et al., 2018). Kustepe and colleagues (2018) determined a significant difference between substance users and the control group on motor impulsiveness, non-planning impulsivity and on overall impulsivity while there was no substantial evidence between the two groups on attentional impulsivity. Adolescent males who accelerated progression through puberty had the highest proportion of family histories of substance use disorder and perform more impulsively on reward choice measures (Mathias et al., 2016).

Research with juvenile offenders has shown that impulsivity, measured both cognitively and behaviourally, is one of the strongest predictors of delinquency (White et al., 1994 as cited in Baskir, 2006) and substance use (Diemen et al., 2008). Charles and colleagues (2016) examined impulsivity and sensation-seeking from pre-adolescent to mid-adolescence who were identified as being at risk for developing substance use disorder and found that substance users were more impulsive (Hudson,

2018), more sensation-seeking (Mansour et al., 2017) during pre-adolescence and that greater sensation seeking in pre-adolescence were related to heavier substance use by a mid-adolescence period.

Substance users perceived their parents to be more permissive in their rearing style. Though their parents may be loving and caring to them, there may be few hard-and-fast rules in the household. Although permissive parenting style was found to be predicting alcohol consumption (Whitney & Froiland, 2015; Vermeulen-Smit et al., 2015), it may sometimes predict less risky behaviour when the father-child relationship is positive (Bronte-Tinkew et al., 2006). Substance non-users on the other hand, perceive their parents to be more authoritative compared to substance users. In a household where parents exert an authoritative style of rearing, children must abide by the rules and regulations. Additionally, children have the freedom to express their ideas and parents teach them to act with reason. The authoritative rearing style is considered to be the most complete method of rearing a child, though it may not guarantee a competent child (Baumrind, 1991). Studies have shown that an authoritative parenting style acts as a protective factor for drinking behaviour and substance use (Henry, 2010; Calafat et al., 2014; Posey, 2014; Becoña et al., 2015; Berge et al., 2016) and absence of authoritative rearing style may result in greater consequence on adolescent binge-drinking compared to their parents involving in drinking behaviour (Zuquette et al., 2019).

5). Examination of the relationship between family environment, impulsivity and perceived parenting style.

Cohesion has significant positive correlation with Acceptance & Caring, Independence, Active-Recreational, System Maintenance, Attention, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative correlation with Expressiveness, Conflict, Cognitive Instability, Motor and Permissive (M).

Expressiveness has a significant negative relationship with Acceptance & Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M),

Authoritarian (M) and a significant positive relationship with Cognitive instability, Motor, Conflict, Permissive (M).

Conflict has a significant negative relationship with Acceptance & Caring, Independence, Active-Recreational Orientation, System Maintenance, Attention, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant positive relationship with Cognitive instability, Motor and Permissive (M)

Acceptance and Caring has a significant positive relationship with Independence, Active-Recreational Orientation, System Maintenance, Attention, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Cognitive instability, Motor and Permissive (M)

Independence has a significant positive relationship with Attention, Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Active-Recreational Orientation, System Maintenance and Permissive (M).

Active Recreational Orientation has a significant negative relationship with Cognitive instability, Motor, Perseverance, Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant positive relationship with System Maintenance, Attention and Permissive (M).

System Maintenance has a significant negative relationship with Cognitive instability, Motor, Perseverance, Cognitive Complexity, Authoritative, Authoritarian and Permissive (M) and a positive correlation with Attention and Self-Control.

Attention has a significant positive correlation with Perseverance, Self-Control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Cognitive Instability, Motor and Permissive (M).

Cognitive instability has a significant positive correlation with Motor and

Permissive (M) and a significant negative relationship with Perseverance, Self-control, Cognitive complexity, Authoritative (M) and Authoritarian (M).

Motor has a significant positive correlation with Perseverance, Self-Control, Cognitive Complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M) .

Perseverance has a significant positive correlation with Self-control, Cognitive complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M).

Self-control has a significant positive correlation with Cognitive Complexity, Authoritative (M), Authoritarian (M) and a significant negative relationship with Permissive (M).

Cognitive complexity has a significant positive correlation with Authoritative (M) and Authoritarian (M) and a significant negative relationship with Permissive (M).

The results in Table -4 showed significant relationship between the dependent variables which provides answer to Objective -2 of the study, and also confirmed hypothesis no-2.

The strongest association was found between Acceptance and Caring and Cognitive complexity. Acceptance and Caring were also strongly associated with Perseverance wherein the more Acceptance and care received by the adolescent substance user the more the chances for acquiring the ability to persevere. Although such may be the case, confounding variables may involve in the strength of the relationship. Acceptance and Caring were also associated strongly with the Authoritativeness of the mother. Authoritativeness of the mother has several positive relationships that are strong with variables such as Acceptance and Caring, Independence, Perseverance and Cognitive complexity.

Strong interaction and association exist between dimensions of family environment, negative child-rearing practice and personality traits like impulsivity. Low cohesion, low expressiveness with high conflicts in association with authoritarian and permissive parenting with high impulsivity are strong predictors of

delinquent behaviours (Jin et al., 2016). Permissive, Authoritarian and Authoritative styles of parenting showed a significant impact on the impulsivity of the child (Malakar & Mullick, 2018). Among the three styles, Authoritative parenting is expected to inculcate positive traits such as intrinsic motivation and conscientiousness in the child (Dordi & Pol, 2018) which are crucial in later stages of development.

6) Examination of the predictability of perceived parenting styles on ‘impulsivity’ among adolescent substance users.

The linear regression analysis was calculated to examine the predictivity of the parenting styles on ‘impulsivity’ among the samples. Results was presented under Tables – 5a to 5c.

Simultaneous Linear Regression analysis of Self Control revealed that parenting style subscales account for 26% of variation on Self -control scores ($R^2=.26$; $p<.01$). All predictor variables are significant except for the Authoritarian subscale with the Permissive parenting subscale being the strongest predictor $\beta= -.220$. Permissive parenting style granted low self-control while Authoritative parenting granted better self-control.

Simultaneous Linear Regression analysis of Perseverance revealed that Authoritative, Authoritarian and Permissive parenting style accounts for 34% of the variation in Perseverance scores ($R^2=.34$; $p<.01$). All predictor variables are significant except for the Authoritarian subscale with the Authoritative parenting subscale being the highest contributor $\beta= -.220$ to the relationship. Authoritative parenting style may promote Perseverance while Permissive parenting works in the opposite i.e. may demote perseverance in adolescent substance users.

Simultaneous Linear Regression analysis of cognitive complexity revealed that parenting style subscales account for 44% of variation on cognitive complexity scores ($R^2=.44$; $p<.01$). All predictor variables are significant except for the Authoritarian subscale with the Authoritative parenting subscale being the highest contributor $\beta= -.300$. Authoritative parenting style may promote for cognitive

complexity while Permissive parenting may be decremental for cognitive complexity ($\beta = -.17$; $p < .01$). The results examine the predictability of the parenting styles on Impulsivity for the samples as per the objective no-3 and found significant prediction of parenting styles on Impulsivity. Accordingly, the results also confirmed the hypothesis no-3 as expected.

The present study resulted in significant predictability of Self-control, Perseverance and cognitive complexity: a first-order factor of the Barratt Impulsiveness Scale from Permissive, Authoritarian and Authoritative styles of parenting. There was no significant predictability for other first-order factors; Attention, Motor and cognitive instability. A Simultaneous entry method was employed to discern the predictability of the three parenting styles on the dependent measures. Each dependent variable is regressed using three separate models. All three regression models revealed that the authoritarian parenting style may not involve in predicting Self-control, Perseverance and Cognitive complexity while the authoritative parenting style may positively contribute to all the criterion variables. Authoritative and Permissive parenting styles have shown a significant impact on the impulsivity of the child (Malakar & Mullick, 2018) and these parenting styles have been found to predict impulsivity (Basharpoor et al., 2020). They are a predictor of risky behaviours such as substance use among former substance abusers and abusers and non-abusers had a significant difference in non-planning impulsiveness; a second-order factor for Self-control and Cognitive complexity (Garfinkel, 2015). On the other hand, the authoritativeness of the mother eliminates engagement in risky behaviours (Gordon, 2016), and promotes grit which is closely related to perseverance (Fabella, 2022) and is negatively correlated to overall impulsivity (Basharpoor et al., 2019). The severity of risky behaviours such as addiction to computer games is reduced by authoritative parenting mediated through self-control development (Abedini et al., 2012). Additionally, an authoritative parenting style was predicted to improve self-control capacity among delinquent adolescents (Rezaei et al., 2019). These studies are in slight support of the findings wherein the Authoritativeness of the mother may promote self-control which is vital for

resistance to substance use while Permissive parenting may demote the development of self-control in adolescents especially those who are into substance use.

Conclusion

The present study highlights the importance of family environment, impulsivity and parenting styles by comparing the mean scores of substance users and substance non-user. Family ties and cohesion is weaker among substance users compared to substance non-user. Contrastingly, substance users have a family environment where they have much freedom to express their ideas and feelings. Conflict and amount of openly expressed aggression among family members may be common among substance users compared to substance non-users. Substance non-users have a family environment where they are accepted unconditionally and family members are more caring to each other, while substance users may not have such effects within their family. Family members are assertive and they make independent decisions more in substance non-user families while substance users have significantly lesser Independence within their families. Substance users live in a family environment where participation in social and recreational activities is promoted compared to substance non-user families. Families of substance non-user have a clear organizational structure in planning family activities and responsibilities and a clear limit setting within the family compared to substance-user families.

Limitations

The study too not free from limitations due to the short span of time and the spread of dreadful COVID-19 adding more limitations.

The study specified the population that is too specific and narrow resulting in difficulty in sampling. Contacting them is a strenuous task as they rarely express their true identity regarding substance use. Observation homes mostly discharge their patients amidst the pandemic which creates difficulty in the data collection process.

The study included 16 variables that make the analysis and compilation of the results complicated. Another limitation is the insufficiency of prior studies on male adolescents who are substance users. These limitations create significant difficulty in

planning and formulating the study. The study incorporated psychological tools that are lengthy causing a lot of exhaustion for the respondents as they are still adolescents. Though the researcher made efforts to minimize this problem, some responses are unusable.

Another limitation of the study is the inability to acquire samples from all 8 districts of Mizoram which may impose a weaker representation of the target population. As mentioned earlier, most district observation homes have discharged their clients and the researcher could not reach out as it is impracticable to do so. Since the remaining observation homes have rallied adolescents from all parts of Mizoram which may prevent extreme bias and divergence of the research model from its intended objective.

Suggestions for future research

A lot of possible suggestions can be identified from the limitations section, which future research needs to learn from, such as sampling techniques and data collection as most of the data are collected individually which takes a lot of time. The longitudinal and cross-sectional study may be interesting for studying adolescents as changes in psychological and physiological development are rapid during adolescence. Longitudinal or Cross-sectional design will provide a better and more vivid scenario. These two methods may provide how self-control, perseverance and the ability to enjoy dealing with challenging tasks contributed to resilience towards substance use in late adolescence. Future research is advised to use psychological tools that are brief and clear cut as most adolescent substance users are drop-outs and some may be illiterate. As such the respondents may not comprehend items that are too lengthy or complicated. Lastly, it is not advisable to compile scales that are too lengthy as it drains the ability to attend to items at the end which possibly leads to responses that are random due to exhaustion.

Significance of the study

The present study is unprecedented research on the target population and hopefully, it provides the foundation for future research due to its inclusion of impulsivity sub-traits in its endeavour. Although the family environment is known to influence substance use, there are no prior studies that include the dimensions of a family environment as the present study did among the target population. The results of the study hoped to influence policy-makers in planning intervention strategies to tackle the problems of substance use that will benefit adolescents of future generations. The study highlights which variables contribute more to adolescent involvement in substance use such as the negative impact of Permissive parenting style. The results of the predictability of self-control, perseverance and cognitive complexity from parenting styles highlight what are the important mediators in adolescent substance use and what qualities needed promotion during adolescents.

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