

Children Abusing Inhalants: Causes and Consequences

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To

Sikkim University



In Partial Fulfilment of the Requirement for the
Degree of Master of Philosophy

By

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The work embodied in the dissertation entitled “*Children Abusing Inhalants: Causes and Consequences*” was conducted at the Department of Psychology under School of Human Sciences, Sikkim University, in partial fulfilment of the required for the award of M.Phil degree of Sikkim University. The work has not been submitted in part or full to this or any other university or institution, for any degree or diploma.

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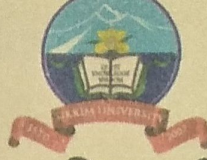
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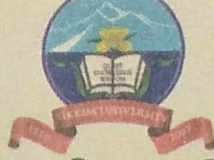
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Children Abusing Inhalants: Causes and Consequences

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ABSTRACT

Addiction to alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics, anxiolytics, stimulants, tobacco and other unknown substances are common amongst the youngsters in the society. The most common and popular substance for abuse among the children is inhalant generally used for the regular household works and industrial use. Inhalants are volatile substances easily accessible, legal and misunderstood by many as not being addictive. The children working as daily wagers are prone to the inhalants. The absence of large-scale study comprising of different areas of India and the comparison to find out the definite reason and concrete findings was lacking behind. In the studies related to the North-eastern states, it was prominent that the entire time one or the other state was left behind as with the passing years a rise in the inhalant use was observed.

The study explores the risk factors and consequences of inhalant abuse among street children in the community. The explorative study was conducted at New Jalpaiguri (W.B.) and Guwahati (Assam) areas by using the qualitative approach and; the technique of snowball sampling. An inhalant risk factor checklist was prepared to understand the characteristics and attitudes towards the inhalant use. In the pilot study, the prevalence of inhalant intake mainly among preadolescents was observed along with the causative factors and consequences of inhalant use among these children. The respondent enjoyed using dendrite, despite experiencing lack of appetite, aggressive, dizziness, dryness of mouth, burning sensation in the oropharynx and whole body cramps. A face to face in-depth-interview was carried out randomly at New Jalpaiguri (West Bengal) and Guwahati (Assam), among the 20 children who fulfill the criteria of Diagnostic and Statistical Manual of Mental Disorders-5 of inhalant abuse and also among 2 NGO counsellors, NGO Social worker and Police personnel of the respective areas. The Socio-Demographic Data-sheet, Inhalant Risk Factor Checklist, and questionnaire for the in-depth interview were used for the study. Qualitative data were analyzed using content analysis and case vignette. The information gathered were analyzed into two broad phases—first descriptive and second interpretative. The huge popularity of the inhalant was reported among the preadolescent street, school dropout children belonging to nuclear family following Hindu religion with the parental history of substance abuse and working as a beggar, ragpicker and oil collector. The major causes of inhalant abuse are the influence of identity crisis, stress, anxiety, depressed feelings, peer pressure, abusive parents, faulty family environment, lack of proper guidance, to escape loneliness and boredom. The main attraction to inhalants for the preadolescents is easy availability, accessibility, to carry and use the inhalant and cheap price of the product accompanied by the false belief of the inhalants suppressing hunger and pain. The preadolescents are reported of being irritable and aggressive with a presence of cognitive impairment, pessimistic and negative thoughts about self and others, being sad and unwillingness to work along with suicidal ideations. The physical problems faced are dizziness, burning sensation of oropharynx part of the throat, chest pain, lack of appetite, fatigue gnawing headache, vomiting and watery red eyes. The isolation from the family, risk-taking behaviour the inability to earn, a threat to legal consequences for anti-social behaviour with fear of being caught by police were prominently reported during the study.

Keywords: Inhalants, preadolescents, dropout, children, counsellor

CHAPTER I

INTRODUCTION

Substance use has been a topic of interest to many professionals in the area of health. Having enormous implications for public health, it has generated a substantial amount of research. Substance use includes the use of illicit substances such as alcohol, tobacco, and prescription drugs, as well as illicit substances such as heroin, cocaine, etc. Even though the word substance refers to any physical matter, substance abuse indicates the overconsumption and dependence to drug or other chemical leading to effects that are destructive to the individual's physical and mental health, or the welfare of others (Nutt et al., 2007).

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 (American Psychiatric Association, 2013). The substances produce such an intense activation of the reward system that normal activities may be neglected. Individuals who have the lower level of self-control, which may reflect impairment of brain inhibitory mechanisms, may not be able to control their desire, making him the addict. Addiction leads to the adverse effects of health, both mentally and physically.

Addiction is an innate condition where the body of a human being habituates to the existence of a drug so that it does not show any more effects; it is the situation of exaggeration by the brain to the drug. People who are addicted are not aware of their habits and practices, which are harming them physically, mentally and socially preventing normal life and distracting others too. Some individuals feel compelling towards drugs when they are in the anxious state of mind. When someone is addicted to any kind of substance it is necessary to find out the reason instead of presuming anything vague. Addiction has nothing to do with contentment, virtues and toughness of persona (Psychology Today, 2016).

1.1 Substance Abuse Defined

Substance abuse is defined by World Health Organization (WHO) as “persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice” (WHO, 1994). This study is to venture in a way which will assist in perceiving and recognizing the main issues related to the psycho-socio-economic problems associated with the drug substance, abusive pre-adolescent children. Substance abuse among pre-adolescents children zone is developing worry within the society which has a direct impact on their health both physically and mentally and hampering the social life too (Population Council & UNICEF, 2013). Most of the pre-adolescent children desire to be accepted by a certain circle of the friend whom they admire, have the idea of being comfortable and able to do what they think is right. Circle of friend depend on the situation and environment they have been brought up and the popularity of that particular group either in a positive way or negative way.

Dependence involves taking a substance over a selected amount of your time at a selected stripped rate; the time and rate required for dependence vary with the substance. Drug dependence explains the differential incidence in population subgroups in an exceedingly manner that doesn't suppose individual temperament factors. The massive variety of various styles of folks that became drug dependent makes it unlikely that they share specific temperament traits. The three-prolonged theory (Winick, 2017) suggests that the incidences of drug dependence are high in those teams within which there is:

- a. Access to dependence-producing substances;
- b. Disengagement from proscriptions against their use; and
- c. Role strain and/or role deprivation.

A role may be a set of expectations and behaviours related to a selected position in an exceedingly social organisation. Rather than having to mention that individuals become drug dependent so as to fulfil their temperament desires, we tend to area unit suggesting that it's potential to find the structural sources of role strain and deprivation at intervals the social organisation.

1.2 Vulnerable Groups

In the recent days, addiction to various substances by individuals of almost all the ages is on the rise. Pre-adolescent and adolescent are becoming more prone to the addictive substances either due to mere curiosity or peer pressure or poverty. The early exposure to the addictive substances has increased the risk of addiction to those substances. Addictions to different addictive substances are being seen the most prevalent one is inhalant amongst the pre-adolescents because it is easily accessible found in household and commercial products (e.g., glues, correction fluid, paint products, petrol, lighter fuels and aerosols), cheap, legal and less doubtful. According to DSM-5 (2013), volatile substances which produce toxic gases can be inhaled to induce psycho-active or mind-altering effects are inhalants, it mixes directly with blood and effects brain and other structures of the central nervous system. They are called inhalants as they are rarely if ever taken by any route other than inhalation. The inhalants are often called the 'gateway' drug leading to the abuse of alcohol and other addictive drugs as they are inexpensive and obtainable at negligible cost. The 4th most typically abused drugs after alcohol, tobacco, and marijuana are inhalants. By the help of the National Survey on Drug Use and Health Data (2003), the age of first time inhalant use was compared with the age of onset of alternative drugs among 6466 inhalant users who conjointly used a minimum of one among 14 alternative drugs to seek out whether or not inhalants typically said as gateway drug is correct or not. The results denoted that solely 4.2% multiple drug users who used inhalants before alternative drugs, particularly alcohol, tobacco, and marijuana. Thus, the speculation that inhalants are gateway drugs weren't supported (Ding et al., 2009).

The pre-adolescent street children are more prone to inhalants while working as rag pickers, domestic help, in a company and shops where they are used on daily basis for cleaning, mending or repairing and burning the discarded items. The street children are generally from the poor economic background they mostly don't have a proper house to stay and work for food but due to inadequate food intake they are starved and they are bound to fall for the inhalants which produce the pleasurable experiences which make them forget the hunger (Baydala et al., 2010). Inhalant abuse is a global problem now mainly among the developing countries where the poverty level is high, pre-adolescent

homeless children are more in number due to various reasons like violence at home and loss of both parents at young age and lack of proper guidance by appropriate and responsible persons (Sakai et al., 2004).

1.3 Prevalence of Inhalant Use

In an epidemiological study, a widespread use of inhalant was found among the population of Brazil, Mexico, Paraguay, Chile, Columbia, Nicaragua, Spain, Canada, New Zealand, and Australia (Medina-Mora et al., 2008). Inhalant abuse is a global problem now mainly among the developing countries where poverty is high, pre-adolescent homeless children are more in number due to various reasons like violence at home, loss of both the parents at young age and lack of proper guidance by appropriate guardian. According to the desk review done by United Nations Children's Emergency Fund is a United Nations (UNICEF), in India, there are ranges of substance use starting from inhalants such as petrol, glue, correction fluids and adhesives, the use of oral ingestion of non-prescription drugs such as painkillers and cough syrups to the injection of non-prescription drugs and opioids (Population Council & UNICEF, 2013).

There are about 1000 to 1400 legal products that are termed inhalants which are used in household, business and medical settings. These products are chemically different but comprise of unspecified thing that evaporates quickly and easier to inhale. Inhalants are classified reckoning on the mixture of their physical and chemical properties and their useful role in either therapeutic or business setting and upon their similar or distinctive pharmacologic actions. Inhaling Gasoline is a dangerous and largely used inhalant nowadays and as per the history, it began from 1940's and 1950's. In the early 1960's gasoline addiction of a youth was published in the scientific literature. In the same year, 1960's sniffing of glue; a variety used in building model planes became prevalent among youths. Glue sniffing of different varieties of products persists as most accepted substance abuse till present day (Encyclopedia.com, 2003).

The observation, in the long run, estimates that over a million adolescents have abused associate degree inhalant in the past year; these numbers are as high as 18.8% within the developing world (Akoijam et al., 2013). There is additionally growing recognition of

inhalant abuse within the armed forces, due partly to their low value, present accessibility and undetectable nature of standard drug screening tests (Lacy & Ditzler, 2007). Despite the severity of the consequences following inhalant use additionally as their comparatively high abuse rates, inhalants represent one among the smallest amount studied areas inside the sphere of dependency analysis.

As stated in the National Survey on Drug Use and Health (NSDUH, 2010), there were 793,000 persons aged 12 or older who had abused inhalants for the first and foremost within the past 12 months; 68.4 percent were under the age of 18. The popularity was greater amid children who are of age 12 to 17, highest between 14-year-olds. Demographic differences in inhalant use have been identified at different ages (Substance Abuse and Mental Health Services Administration, 2011).

The survey analyses are often misleading if done in the disproportionate population. A survey by The University of Michigan involving randomly sampled thousands of students in grades 8, 10, 12, by administering the Monitoring the Future student drug survey for 24 years showed the use of inhalant among the children (Johnston & O'Malley, 1999). Center for Disease Control and Prevention conducted a national school-based Youth Risk Behavior Survey among a representative sample of 15,394 high school students in grades 9-12, as part of the Youth Risk Behavior Surveillance System found out that Hispanic (17.4%) and white (18%) students were significantly more likely than black students (6.6%) to report inhalant use (Kann et al., 2000). From the results, it becomes clear that the students of grades 9-12 have mostly tried inhalants and some misuse them.

Nowadays in the United States, the most prevailing and frequently abused substances are inhalants by the adolescents. In a review of epidemiological studies done by Lorenc (2003), it was validated that there is a decline in the occurrences of inhalant abuse but gross pace persists. The future perspectives of inhalant abuse are the high priority of suffering from vital organ system failure sometimes leading to the death blow.

Inhalant abuse is a widespread problem and frequently missed in regards to substance abuse by children and adolescent. In some studies, it is seen over 20 percent of mid-school and high school going children have experience of inhaling. The ways of

inhalation, as well as solvents they inhale, differ from one child to other, mainly on the basis of availability of any cleaning substance at home. Abusing inhalant gives an ecstatic state of mind leading to addiction. A dire consequence comprises of sudden sniffing death syndrome, asphyxia and serious damages like falls, burns, frostbite, etc. Children who have been using inhalant for the longer period of time can suffer from cardiac damage as well renal, hepatic and neurologic systems. Proper history taking and on over the top hint the prognosis of inhalant abuse could be proven as there is no provision of laboratory examination to assure it. Caring and understanding is the best way to treat and revive the inhalant abusers. Children and their guardian should be educated about inhalants and its consequences of inhaling it (Anderson & Loomis, 2003). Most of the drug and alcohol rehabilitation centre doesn't accept the inhalant abuser, it is difficult to track the inhalers all the time and they don't turn up for treatment.

1.4 Classification of Inhalants

The inhalant is a volatile substance that produces toxic gases that can be inhaled to induce psycho-active or mind-altering effects (American Psychiatric Association, 2013), it mixes directly with blood and effects brain and other structures of the central nervous system.

Inhalants are classified on the basis of their intended function, their product category, effects and the chemical structure. The four general categories are defined below:

- a. *Volatile Solvents*: Liquid or semi-solid solvents which vaporize at the room temperature and commonly contain xylene and toluene (Drug and Alcohol Office, Government of Western Australia, 2013). These substances are the most inexpensive and easily accessible household products and commonly used for industrial purposes. Some of the volatile solvents are paint thinners and removers, dry-cleaning fluids, degreasers, gasoline, glues, correction fluids and felt-tip markers (National Institute of Drug Abuse, Advancing Addiction Science, 2012). Toluene could be a volatile organic solvent found in an exceedingly big selection of client and industrial merchandise as well as paint diluent, glues, and petrol. Due partly to its ability to dissolve hydrophobic organic compounds, dissolving agent is sort of universally

enclosed as an emulsifying agent across a various array of business merchandise and thus remains one among the foremost wide accessible of the abused inhalants (Garland et al., 2009; Howard et al., 2011).

- b. *Aerosols*: They are sprays that contain propellants and solvents. They include spray paints, deodorants and hair sprays, vegetable oil sprays for cooking and fabric protector sprays (National Institute of Drug Abuse, Advancing Addiction Science, 2012).
- c. *Gases*: Include medical anaesthetics as well as gases used in household or commercial products. Medical anaesthetics include ether, chloroform, halothane, and nitrous oxide (commonly called “laughing gas”). Nitrous oxide is the majorly misused gas and particularly found in whipped cream dispensers and products that boost octane levels in racing cars. Many other household or commercial products which contain gases comprises of butane lighters, propane tanks and refrigerants (National Institute of Drug Abuse, Advancing Addiction Science, 2012).
- d. *Nitrites*: They often are considered a special class of inhalants. Unlike most other inhalants, which act directly on the central nervous system (CNS), nitrites act primarily to dilate blood vessels and relax the muscles. Most of the inhalants are used to uplift the mood; nitrites are particularly used as sexual enhancers. Nitrites include cyclohexyl nitrite, isoamyl (amyl) nitrite, and isobutyl (butyl) nitrite and are often recognized as “poppers” or “snappers.” Amyl nitrite is used in certain diagnostic procedures and it was advised by doctors in the past to be used for the treatment of some patients suffering from heart pain. Nitrites now are banned by the Consumer Product Safety Commission yet it is seen being sold in small containers with a tagline as “video head cleaner,” “room odorizer,” “leather cleaner,” or “liquid aroma”. Usually, inhalant dependents would inhale whichever substance they get. Nevertheless, an effect induced by exclusive inhalants differs, and several abusers will venture out of their style to acquire their preferred inhalant. In the definite areas of some countries, “Texas shoeshine,” a shoe-shining spray which contains the

chemical toluene, is ideal for natives (National Institute of Drug Abuse, Advancing Addiction Science, 2012).

1.5 Methods Typically Used for Inhalation

According to National Institute on Drug Abuse, Advancing Addiction Science (2012), the inhalant abusers deliberately inhale the available vapours 15-20 times over a relatively brief period (for e.g. 10-15 minutes). The way of inhaling is breathing in through the nose or the mouth in a variety of ways, such as:

- “sniffing” or “snorting” fumes involves direct inhalation from containers or a piece of clothing sprayed with the substance;
- spraying aerosols directly into the nose or mouth;
- “bagging” further increases the concentration of inhaled vapours, and involves sniffing or inhaling fumes from substances sprayed or deposited inside a plastic or paper bag;
- “huffing” when some users attempt to increase the number of available vapours by heating the substance first or from an inhalant-soaked rag stuffed in the mouth or nose; and
- inhaling from balloons filled with nitrous oxide.

There is usually a marked variability within the kind and pattern of inhalants utilized by adolescents, most medical speciality and clinical studies tend to explain inhalant users as a consistent cluster, with very little attention paid to variations within the chemical composition or noxious profile of drugs inhaled. Additionally, several of those studies embody little samples of adult populations, with solely restricted psychological science and/or neuroimaging assessment. The shortage of fittingly matched management teams and thought of background academic, psychological, emotional and social factors more hinders the interpretation of the offered information (Lubman et al., 2008).

1.6 Epidemiology of Inhalant Use

Children use the inhalants to gain the pleasure and achieve the anaesthetic feeling that steadies the body functions it depends on the amount of dose they take to undergo infinitesimal excitement, the desire of repression or disappearance of responsiveness. A serious abnormality in brain SPECT pictures, as well as hypo-hyper perfusion foci and non-homogeneous uptake of the radiopharmaceutical, is determined in case of inhalant dependents. An additional study with a bigger range of patients and long-run follow-up could facilitate to succeed in additional specific results (Küçük et al., 2000). The abusers suffer from 'Sudden Sniffing Death Syndrome' too, it was found out that abuser can die the 1st, 10th and 100th time they use an inhalant ("Signs of Inhalant Use", 1997).

Children who are addicted to inhalants generally could be identified by the following signs such as red eyes, runny nose or eyes, stains in the cloth or body, breath smell of chemical odour, abnormal spots and sores around the mouth, they complain of the low level of appetite and feels nauseated. They get excited easily, gets anxious and irritable, shows dizzy looks and are drunk ("Signs of Inhalant Use", 1997).

Chronic inhalant intake can cause damage to different parts of the brain creating numbers of sensory and psychological problems. Inhalants damage the protective myelin sheath which surrounds neurons brain cells by dissolving it causing cell death. Permanent personality changes, memory impairment, hallucination and learning disabilities are developed due to cellular death of cerebral cortex. Inhalant abusers experience loss of coordination and slurred speech. A chronic user suffers tremors and uncontrollable shaking due to damages to the cerebellum. It also affects ophthalmic nerve resulting insight disorders ("Damage Inhalants can Do to the Body", 1997). The association between chronic solvent abuse and depression was observed among solvent abusers with histories of severe social and emotional deprivation ensuing higher rates of depression (Zur & Yule, 1990). Among the inhalant abuser, the substantial rise in the rates of suicidal ideation, suicide attempts, cases of inhalant-induced manic and psychotic episodes (Dinwiddie et al., 1990; Byrne & Kirby, 1989).

Inhalant abuse causes various physical harm and the damages vary depending on the type of inhalants chemically. The oxygen-carrying capacity of the blood is blocked by continuous use of substances such as nitrites and methylene chloride (paint thinners) and daily abuse of spray paints causes lung damage. The liver damage could occur by the halogenated compounds such as trichloroethylene, the component of aerosol paints and correctional fluid. The capacity of the kidney to restrict the amount of acid in the blood is damaged by toluene contents of inhalant. It may reverse during the output of toluene from the body yet kidney stones appears after prolong abuse of toluene. Muscle wasting, reduced muscle tone and strength may occur due to long-term use of an inhalant. Leukemia is also a cause of concern due to continuous abuse of nitrous oxide (whipped cream propellant), and hexane (the component of some glues and camp stove fuels) leads to impairment to the peripheral nerves with signs like numbness, a tingling sensation or total paralysis. Habitual use of toluene may lead to damage to acoustic nerve and muscles which transmits sound to the brain making the users deaf. "Sudden Sniffing Death Syndrome", occurs due to abrupt and unpredicted disruption of the hearts pattern. The entire range of inhalants causes Sudden Death Syndrome ("Damage Inhalants can Do to the Body", 1997). The deaths from inhalant use among youth are for the most part related to "sudden sniffing death" or injury associated with impulsive speculative behaviours and impaired motor skills whereas intoxicated. The 43rd of the person, who died along with the 30th other individuals in 1999 from inhalant use within the United Kingdom, had no previous history of inhalant use (Field-Smith et al., 2001).

The children using inhalants are in danger of suffocation or burns from exploding solvents, highlighting the importance of effective harm-reduction ways. There is no apparent safe level of use, with even first-time experimental users being in danger of "sudden sniffing death" as a result of internal organ arrhythmias (particularly when misuse of solvent, chlorofluorocarbons and butane) (Bass, 1970). Inhalants seem to sensitize the cardiac muscle to endogenous catecholamines, which can end in fatal cavity arrhythmias if the user is surprised or agitated (Kurtzman et al., 2001). The application of spraying inhalants directly into the mouth is additionally probably fatal because the cooling agents inside aerosols will turn out death by asphyxiation (via a frozen larynx) or pulmonic swelling (Chalmers, 1991).

1.7 Operational Definition

Pre-adolescent Children: Pre-adolescent is a stage of human development following early childhood and prior to adolescence. The pre-adolescent age ends with the beginning of puberty but generally defined as ending with the start of the teenage years. This stage comprises of mainly the period between childhood and the onset of puberty, often designated as between the ages of 10 and 12 in girls and 11 and 13 in boys (The American Heritage Science Dictionary, 2002). If we see according to Erik Erikson's classification of life, "eight stages of life", the pre-adolescent stage will fall in between the middle and late childhood (6-11 years of age) (Baron & Kalsher, 2009). At this stage, the children are very enthusiastic to learn new things and their minds are open to adventure and varied ideas. During this developmental stage, children are motivated to learn because of their natural curiosity and their desire to understand more about themselves, their bodies, their world and the influence that different things in the world have on them (Whitener et al., 1998).

Throughout the middle childhood years the collaboration of three essential vehemence is important to see impact on children's composure and commitment in tasks and activities: (1) cognitive transformation that enhances children's capacity to contemplate on their own successes and failures; (2) the expansion of children's worlds to incorporate peers, adults, and activities outside the family; and (3) introduction to collective differentiation and competitiveness in school classrooms and peer groups (Jacquelyne, 1999). The children start questioning whether they will be able to survive and keep up with the expectation of the world of people and things.

Children at this stage start to doubt the future if they fail to expert the art of trust and autonomy and industrious skills, which leads to shame, guilt and encounter of defeat and inferiority. They feel incompetent if they are not able to learn the new skills which are must for survival and is part of life. This stage is the most influential one as they have some perceptual cognitive developmental traits which are specific for this age (Allen & Maratz, 2003). Children are able to grapple the concepts of space and time in more logical and practical ways. In this age to achieve attention from elders, teachers, parents

and peers they display various talents like drawing pictures, solving addition problems, writing sentences, etc. If they are complemented and applauded they start validating perseverance by being attentive and determined at duties and assignments until accomplished and put their tasks before delight. They start questioning their capabilities and grow an inferior complex as they fail to reach the parents or teachers expectation when they are shamed or punished for the efforts (Crain, 2011). At this age the children are capable of deciding where his interest lies and wish to join to practice it, some interest may be in games and sports with athletic abilities and joining the music classes and become the musician in the near future. The passion within the child must be given exposure and allowed to thrive for the perfection their own time. If their intellectuality is stopped to be explored at that time they will develop a feeling of low self-esteem, lack of enthusiasm and become lethargic.

The pre-adolescence go through phases of changes in physical growth and psychomotor skills, with the rate of developing, differing from child to child. They think more objectively, are willing to listen to others, and will selectively use questioning to find answers to the unknown. The children are compelled to join the bad company and bad habits if proper guidance is not met at this stage. The children are concerned about winning the acceptance from their peer groups and the conflict of managing the group with the acceptance in the society. They often are misled by the adamant ideas which are raw and without any knowledge about outcomes and future consequences. This stage of life is crucial to understand if the upbringing is without the guidance of parents, teachers and professionals and people with positive vibes. They struggle within themselves to be accepted in the society and gain recognition. The children should be encouraged to raise the self-motivation, self-concept and readiness to take on challenges. It is important to study the mental development of the pre-adolescent, especially who are facing poverty, estrangement from the family, natural calamities and man-made disasters (Evans, 1982).

Mental Health: Mental health includes a person's emotional, psychological and social wellbeing. When the person fully appreciates other people, form positive relationships, realize their full potential, perform work productively, make meaningful contributions to the community, can cope with their communities and our environment he/she is mentally

well. According to the World Health Organization (2014), the mental health is a state of well-being by which every individual realizes his or her own potential, has the ability to cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. The favourable aspect of mental health is emphasized in WHO's explanation of health as held in its constitution: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." A person's well-being is bound by the realization of their abilities to cope up with normal stresses of life. According to Sigmund Freud, a famous psychoanalyst defined mental health as the capacity "to work and to love" (Freud, 1962).

In the present day, mental illness has become more common than cancer, diabetes or heart disease. The emotional health of an individual also impacts physical health and poor mental health can lead to problems like substance abuse (Richards et al., 2010). In their study, they found out that people who lack people emotional expression are inclined to anti-social behaviours (e.g., drug and alcohol abuse, physical fights, vandalism), this actions are the straight indication of their mental health and suppressed emotions. Psychological dysfunction may appear due to biological characteristics such as genetics, chemistry and hormones, when person suffering from long-term acute stress, use of alcohol, drugs, and other substances, when has low self-esteem and constant negative thoughts and social factors such as isolation, financial problems, family breakdown or violence, repeated exposure to physical and sexual abuse.

Psychosocial: The term psychosocial consists of 2 words psychological and social. The combination of these two words reflects the individual on the pretext of having an additional influence of psychological factors and surrounding social environment on their physical and mental well-being and their ability to work. Most of the people are not aware of the relationship between the mental and emotional wellbeing with the environment. Erik Erikson, the famous psychologist, was the first person to describe the stages of psychosocial development. He identified series of eight stages of comprehensive psychoanalytic theory in collaboration with Joan Erikson about the healthy development of individuals throughout the phase from infancy to late adulthood. This stages though present at birth starts unfolding as per the upbringing of the child by

the natural scheme and one's ecological and cultural background. All the challenges that a child goes through during this stages reappears as problems in future. But each time a challenge comes in front of a child if they pass, it is virtuousness. The failure creates a hope in mind for the later stages of life. A person cannot be judged by the mental presentation until and unless how they react in the environment is observed. Psychosocial refers to psychological functioning, social functioning as well as the support of the surroundings.

Psychosocial was described by United Nations Educational, Scientific and Cultural Organization. (UNESCO, 2017), as psychosocial aspects of our experiences (like our thoughts, emotions, and behaviour) have a close relationship with our wider social experience (like relationships, tradition, culture). The issue is about enduring every learner an environment which will be physically safe, emotionally secure and psychologically enabling. To assist in confronting the imbalance that starts from home and community background generating unfairness the emphasis should be put on the well-being of the children including recognition of various groups following the factors as their genders, physical ability and socio-economic status.

The socioeconomic disadvantage has systematically been involved as a crucial risk issue, notably in communities, wherever isolation (both geographical and social), economic condition and unemployment are additional doubtless to be prognostic of inhalant use than cultural problems. Inhalant misuse is usually related to severe family dysfunction. Children who use inhalants generally come from separated or divorced families (Oetting et al., 1988), with high levels of family conflict and an absence of family support and cohesiveness. Some children who use inhalants usually have a history of physical or regulatory offence, and parental substance misuse and criminalism seem to be extra risk factors (Howard and Jenson, 1999). Chronic inhalant users generally have histories of diverse social difficulties, underprivileged backgrounds and high levels of psychological issues, suggesting that these adolescents could abuse inhalants to assist address underlying emotional and social distress (Lubman et al., 2006).

CHAPTER II

REVIEW OF RELATED LITERATURE

Literature is a collaborative frame of efforts done by the earlier great researchers. It is important to review the literature to know what has been written about the topic the researcher desires to study. By reviewing the literature many facts related to the variables and the information of studies conducted by other researchers could be obtained. It helps in identifying the weaknesses and strengths of the previous research which will help in the study to counter the reasons for the findings. A proper and thorough literature will impart ambience inside which to place the future research. The complex set of skills should be developed by the researcher to do the literature review. The maximum time should be given to read up the literature and understand what it really defines, how it does work and the results whether the literature met the requirements of the study to be conducted. Reading different literature the researcher starts to and the related literature review is essential because:

- 1) Acquire a clear knowledge regarding principal characteristics of the topic,
- 2) Recognizes the origin of evidence and data,
- 3) Recognizes the style of writing that is adapted,
- 4) Recognizes the association and link of opinion.
- 5) Recognizes the concepts related to the future reference.
- 6) Prevent the repetition of work and to avoid mistakes.
- 7) Develop the reading and evaluating the strategies.
- 8) It gives the recent knowledge about the subject and
- 9) It helps in identification the methods used in the previous studies.

10) What questions should be included for the purpose of research?

11) By literature review, the knowledge of a requirement for further research could be obtained.

12) It gives direction to what kind of research is necessary.

2.1 Researches on Inhalant Use

In a study conducted by Oetting et al. (1988) the inhalant abusers were classified into three discrete groups young inhalant users, adolescent polydrugs users and inhalant dependent adults. Modal age of young inhalant users is of 12 to 13 years along with inhalant they might use alcohol and marijuana users. They are always looking out for the youths who share the same feelings like anger and alienation and the form peer groups, discover best buddies in them or form a small gang with greater risk to fall for drugs. Some of the youth of the peer group use inhalant once a month and others use it daily due to boredom and lack of work. The young inhalant users should be given therapeutic treatment along with drug avoidance approaches as they have more emotional issues than either non-drug users or young marijuana users. Every youth should not be sent for therapy as some of them seen using the drug are not really interested into drugs and exaggeration may harm them, above all the emotional issues they are going through are not same. It was found out that older adolescent who was already using inhalants are likely not to use in the later life but generally falls for other drugs. They turn to adolescent polydrugs users with the modal age of about 15 to 16 years, uses the large scale of other drugs along with inhalants and certainly getting high frequently. This adolescent becomes rough, confused with aggression and commits the crime. An inhalant-dependent adult faces serious problems and takes inhalant as the preferred drug having extended history of alcohol and other drug use and usually in their mid-twenties to early thirties.

Beauvais et al. (1998) established that a large number of Indian youth are more prone to inhalant abuse compared to the non-Indian peers as they reside in the underprivileged and frequently anxiety-ridden surroundings, which acts as a triggering agent to fall for drugs

to get satisfaction. The level of inhalant use is higher as it is cheap and easily available for young children. Most of the Indian youth inhalant user shows the decline of use as they reach senior year only 4 percent keeps using it seriously. The attempt to prevent this 4 percent of youth inhalant user should be made much earlier to avoid extent of hardship. Moreover remarkably there are large numbers of school dropouts most of whom are inhalant user for a long time and the age pattern shows that they have started using it from very young age.

Dinwiddie (1994) established that inhalants which are a chemically heterogeneous classification of psychoactive drugs mainly found in cleaning agents, typewriter correction fluid, adhesives, lighter fluids and spray paints could be abused by 10% of the children. Many health hazards, epidemiology, the possibility of leading to different drug abuse and dependence and co-occurring psychological problems may arise when inhalants are used.

The Japanese have an opinion that chronic psychosis is a cause of drug abuse where else the overseas psychiatrists recognize it as double prognosis of drug abuse and psychosis, the study was conducted by Okudaira et al. (1996) to find out the main issues behind it. They reviewed 120 inhalant users, in-patients and out-patients in Kanagawa Prefectural Center of Psychiatry, Serigaya Hospital from 1991-1995. The cases were divided into three groups: 23 cases as psychosis group, 51 cases as dependence group and 46 cases as abuse group on the basis of their clinical sequence and psychiatric signs. The cases that have psychiatric signs such as thought disturbance for a long time, delusion and hallucination after detoxification are placed in psychosis group. The cases whose inhalant dependence was critical and fulfil the DSM-IV Diagnostic Criteria for Substance Dependence but chronic psychiatric symptoms are absent after detoxification is placed in the dependent group. The cases that are at the premature level of inhalant abuse without any chronic psychiatric symptoms are placed in abuse group. The modal age for initiation of first inhalant use was 14.7 years old in psychosis group, 14.8 years in the dependence group and 14.7 years in the abuse group. The mean years of inhalant use were 9.0 years in the psychosis group and 8.5 years in the dependence group. The psychosis cases showed chronic symptoms 5.7 years on average after the first initiation of inhalants. A

significant difference was seen where approximately one fourth (26.1%) of the psychosis cases and about 5.9% of the dependence cases had a family history of schizophrenia. It was found out that chronic psychiatric symptoms are not the only result of inhalant abuse but also due to genetic determinants of psychosis of each patient. The cases that are diagnosed with both substance dependence and other mental disturbances are polydrug users. 43.4% of psychosis group cases and 19.6% of the dependence group cases had a previous history of use of other drugs like methamphetamine and marijuana, although it was insignificant.

There is a growing trend of use of inhalants among adolescent especially in the lower economic groups like street children. Benegal et al. (1998) showed in their study that street-based children start off with tobacco use when they are 10-11 years when they are little older they graduate to use inhalants. Other studies in special population like juvenile delinquent also show that inhalants are one of the commonly used in drug abuse. They described as gateway drugs, which supposedly causes its users to move on to harder drugs. All the gateway drugs like inhalants are easily available to the children and cause severe addiction.

In a western state of the United States study was carried out by Howard and Jenson (1999), for the current (2.9%), annual (19.6%), and lifetime (34.3%) prevalence of inhalant use among 475 youth, who was on probation, with a mean age of 15.5 years. With the help of method of logistic regression analysis it was found out that most of the inhalant user had significantly less family support and cohesiveness with low self-esteem, and significantly more lifetime thoughts of suicide and suicide attempts, got engaged in neighborhood gang activity, prevalence of peer and parental substance abuse were reported, there were intentions to engage in illegal behavior, substance-related criminality, and substance abuse than the non-users of inhalant. And with multiple linear regression analyses, it was found out that age, perceived school ability, age at initiation of alcohol use, self-esteem, and substance-related criminality significantly predicted age at the onset of inhalant use. The lifetime frequency of inhalant use was significantly predicted by age at initiation of inhalant use, gang membership, truancy, and substance-related criminality. In the end, it was found out that inhalant-using delinquent's had

greater tendency to antisocial attitude, personal and familial dysfunction, and substance abuse, as compared to their non- inhalant-using counterparts.

McGarvey et al. (1999) carried out a survey of 285 adolescents who were subjected to Juvenile Correction home in Virginia with the administration of the Inhalant Use Questionnaire to establish the environment which enhances the inhalant abuse. The youths were categorised into two groups the one who experimented with inhalant and other who were heavy users. It was found out that only 1.4% of black youths vulnerable to inhalants in the past as compared to 36% of white youths and 44.4% of youths from other ethnic backgrounds. The first age of exposure to inhalants was 13 years and 60% of them gave preference to huffing as a way of intake of inhalants. 52% of the youths informed of taking inhalants with friends and 34% used to take it alone. 68% of the youths inhale it at the friends home, 54% at home, 40% on the street, 28% on parties, 26% on school grounds and 18% at school. No significant gender difference was observed in case of age of onset of inhalant abuse, lifetime frequency of inhalant abuse, the rate of inhalant abuse in the past year and preferred technique of taking inhalant. The five most common and usually used inhalants are 57.4% informed gasoline, 40.45% were Freon, 38.3% were butane lighter fluid, 29.8% to glue and 23.4% to nitrous oxide.

In the WebMD (1999), American Academy of Pediatrics (AAP) expressed concerns about the increasing number of misuse of common household products as inhalants by young children in the last decade. Most of the young children are well aware of the “huffing”. The AAP arranged a nationwide survey where 600 children of age 10-17 years were approached for interviews. It came to light that 20% of the eight graders respondent of trying inhalant to get “high”, two third are aware of what “huffing” means and also about “glue sniffing” or bagging and some over one-quarter had seen or heard about it from friends who huffs. According to Ed Jacobs, MD, Chairman of the Committee on substance abuse for American Academy Pediatrics, expressed through WebMD that the use of inhalant among young children is common and it is par with drugs and alcohol. In the survey it was found out that average age of initiation of inhalant was 12 years, making it a phenomenon of pre-adolescent involvement. The kids of 8, 9, 10, 11, 12 years old are well aware of what is the outcome of inhalant use. The consequences related to

inhalant abuse had been conveyed by many children to the parents but most of the younger children of age 10-14 don't. The open availability of inhalant items at the house makes it more vulnerable to children and for parents not to consider it as an abusive substance.

Giancola and Parker (2001) carried out to examine a developmental model of drug use in male adolescents. The model postulates that low executive functioning and a difficult temperament are related to aggression and affiliations with delinquent peers which, in turn, are related to elevated drug use. Boys (N = 187) with and without a family history of a substance use disorder (SUD) were followed over a 6-year period. Executive functioning and temperament were measured at age 10-12, aggression and affiliations with delinquent peers were assessed at age 12-14 and drug use was measured at age 16. Low executive functioning and a difficult temperament were related to increased aggression and affiliations with delinquent peers. These latter variables were related to increased drug use. Furthermore, the relation between difficult temperament and drug use was fully mediated by aggression and affiliations with delinquent peers. They have concluded that drug abuse prevention efforts may benefit from clinical interventions aimed at strengthening executive functioning, regulating temperament and improving socialization strategies in antisocial children.

A comparative study of non-inhalant substance use disorders, posttraumatic stress disorder, conduct disorder, major depression, previous suicide attempts, and physical/sexual abuse and neglect was conducted among 847 admitted patients who had completed structured diagnostic assessment by Sakai et al. (2004). They classified into 3 categories one adolescent with inhalant use disorders, second adolescents who reported using inhalants without inhalant use disorder and third adolescent patients drawn from an adolescent drug and alcohol treatment program. A higher significance to fulfil life criteria for abuse or dependence on alcohol, hallucinogens, nicotine, cocaine, and amphetamines, to possess had major depression, and to possess attempted suicide was ascertained in case of adolescents with inhalant abuse or dependence as compared to adolescent patients who reported never using inhalants. And those adolescents with the inhalant use disorder showed considerably higher abuse and neglect. No vital distinction was ascertained

between adolescents with inhalant abuse or dependence and adolescents who reported using inhalants without an inhalant use disorder. They concluded that a correct screening of non-inhalant substance use disorders, major depression, suicidality, abuse and neglect ought to be done in case of adolescent patients with a history of inhalant use, abuse, or dependence coming back for treatment.

Basu et al. (2004) presented five cases with age range of 10-25 years old of inhalant use, except one case the other 4 cases abused typewriter erasing fluid and thinner which contains toluene. The cases started abuse from the early age accidentally or as for the experimentation purpose and most were from the lower to socio-economic and had a decline in scholastic performance. They found out that all the cases got physically and psychologically dependent on inhalants they abused it and became intoxicated the withdrawal symptoms being uncertain. A possible withdrawal syndrome of inhalants, beginning 24-48 hours after stoppage of its use, includes sleep disturbances, psychomotor retardation, tremor, irritability, diaphoresis, dry mouth, lacrimation, nausea, and fleeting illusions, lasting from 2 to 5 days. The identification and prognosis of inhalant abuse are wearisome and depends largely on in-depth history taking and the excessive hint of intuition as no particular laboratory examination affirms solvent inhalation. They established that the inhalant abuse undeniably holds an obvious hazard for noticeable morbidity and mortality rate in adolescent populations of our country.

Inhalant abuse has become the growing public health problems in almost all the developed and developing countries around the world. The new steps are required to be taken to study the inhalant abuse among pre-adolescents, adolescents and youths. In the Canadian Addiction Survey (Adlaf et al., 2005), a randomized telephone survey it was found out that there are $1.3 \pm 0.3\%$ of 15 years of age and older Canadians who have the record of lifetime use of inhalants whereas in 1994, it was $0.8 \pm 0.2\%$ only. The inhalant abuse was in rising due to easy availability, cheap prices, as well as they, are legal and accessible at home.

A qualitative study was conducted by Seth et al. (2005) among 45 homeless street (n = 30) and working (n = 15) children in Delhi who misused whitener fluid containing

toluene, to explore the perceptions of street children indulging in whitener fluid misuse; the social, economic, and cultural determinants of use; and users' views regarding effective preventive and control strategies. The sample was selected by using the snowball technique, during the in-depth interviews and three focus group discussions it was found that the beginning age for the use of toluene ranged from 6 to 14 years (median 10). Notwithstanding the fact that whitener fluid containing toluene was the most chosen substance, among children simultaneously they use other substance including tobacco, alcohol, cannabis, and to a rare extent heroin.

A baseline assessment was administrated among 80 male adolescents who were admitted for treatment to a residential treatment program preceded by a follow-up assessment at 2 years post admission by Sakai et al. (2006). A comparison was made on four outcome variable like conduct disorder, to report abuse and neglect, and to own antecedently attempted suicide between 34 adolescent with any period of time inhalant use and 46 other adolescents. At biennial follow-up, adolescent with any period of time inhalant use well-read of double as several past-years conduct disorder symptoms. The link between inhalant use and conduct disorder symptoms remained vital in analyses that controlled for age, time in jail or restricted environments within the 6-months preceding follow-up, also as the baseline-reported period of the time range of conduct disorder symptoms. Inhalant users were not considerably worse on these different outcome measures: crime within the last month, days of nontobacco substance use within the last 6 months, or, commission of chosen crimes within the last 6 months. Inhalant use among adolescent males in treatment for substance and behaviour issues could predict additional severe conduct disorder symptoms after treatment.

The face to face survey by Substance Abuse and Mental Health Services Administration (2007) in the United States done approximately on 67,500 persons came to conclusions that among most of the respondents who were of age 12 years and older, 66.3% of the respondents were children when they had the first experience with the inhalants, 10.7% of the respondents recalled the inhalants to be the first drug they started abusing. In the past month of the survey, 1.1% of youth aged 12 to 13 years old had used inhalants.

The study was conducted by Ridenour et al. (2007) to obtain reliable estimates for the new Substance Abuse Module DSM-IV inhalants diagnoses for four types of inhalants: aerosols, gases, nitrites, and solvents and to find out the different diagnostic configurations of inhalant use, in 162 community adolescents or young adults with a mean age 20.3 years, Two-thirds of them was male and 83.3% was Caucasian. Results suggested (a) abuse was more common than dependence (34.6% vs. 12.3%), (b) reliabilities of abuse criteria and diagnosis were good to excellent across subtype, and (c) reliabilities of dependence criteria and diagnoses were poor to good across subtypes. Alternative configurations of DSM-IV criteria that were consistent with previous research on adolescents provided excellent reliabilities across subtypes of inhalants. Moreover, 11.1% of participants experienced inhalants withdrawal. Their study provides a basis for using these alternatives to identify and gauge pathological inhalant use at least for use with adolescents and young adults.

Kumar et al. (2008) studied 21 cases of continuous remedy soliciting inhalant misusers for a sociodemographic and clinical account with the help of semi-structured interview scheme. They came up with archetypal patient account 100% was an unmarried male with an average age of 19 years, 76% of them coming from the background of Govt. School, 38-43% was unemployed or student, 86% belongs to the urban nuclear family, 76% from middle socio-economic status, 62% with poor social support. 81% of them were an inhalant addict, 33% reported abusing only inhalants and 76% informed inhalant to be their first or second choice. The period of inhalant abuse varies from 6-60 (average 6) months. The subjects had a history of abusing typewriter erasing fluid by the method of intake 67% of them by sniffing, 19% by huffing and 14% by bagging. The reason for the commencement of inhalant abuse for 62% was out of curiosity, 24% were under peer pressure and 24% of them took it as a substitute. 90% of them admitted to having a strong desire for inhalant and 57% has withdrawal symptoms. 48% of the cases had a family background for substance abuse and weak in keeping the good relationship with others, academic area as well as the vocational section. They concluded that inhalant is a substance of dependence among urban youth due to easy accessibility, the lower range of price and rapid inception of effect and a regular high.

A study was carried out by Maclean (2008) to review the relationship linking the significance and real satisfaction attained in substance abuse exposure bearing in mind the inhalant abuse by youngsters in Melbourne, Australia. Most of the time inhalant related disorder is mentioned in most of the researches by policymakers and in health education but it is always forgotten that children abuse it for amusement along with other types of drug. The survey was done among 27 youngsters with the history of using inhalant presently and at past, for one and three times respectively. They were interviewed about likes and dislikes of inhalant use; a narrative interpretation was made about their physical experience with inhalants after repeated exposure to it. Two main narratives were found out, one of them was indescribable occurrences within the body and the second is the relationship of the extremity of satisfaction triggered by inhalant abuse with the administration of brain injury and the possibility of loss of life. The disastrous viewpoint regarding the hazards related to inhalant abuse assist in some occurrences to emphasize on the satisfaction it gives to abusers and simultaneously undermine their ability to transform. Mostly inhalant abusers are known as self-harming instead of seekers of satisfaction, the alternatives for policy likely to be applied is inadequate. The proper way of treatment along with educating the abusers about the damage caused by inhalant use can bring change.

A study led by Perron et al. (2009) established that inhalant use is the intentional inhalation of vapours from commercial products or specific chemical agents for the purpose of achieving intoxication. Inhalants are among the most common and pernicious forms of substance use and the least studied of the major drugs. In the DSM-IV it was stated that Diagnosis of inhalant dependence, eliminates the inhalant withdrawal symptoms, as the experts have a suggested opinion that an inhalant withdrawal syndrome is neither common nor clinically significant. A clinical significance of withdrawal symptoms being part of inhalant dependence was suggested from the multiple sources of data which requires the careful assessment to assure the diagnostic validity of inhalant use disorders. So in this study clinical, survey and animal studies were reviewed to establish the clinical significance of withdrawal symptoms as a part of inhalant dependence disorder.

A Cross-sectional survey was conducted by Howard and Perron (2009) to examine the prevalence, clinical features, and latent structure of DSM-IV inhalant use disorders in a Missouri State Division of Youth Services' (MDYS) residential population of antisocial youth. Many of the youth in juvenile justice system had a history of inhalant abuse, yet there were less awareness about inhalant use disorders (IUDs) in antisocial youth populations. Out of 740 youth residing in treatment facilities at the time of the study 723 (97.7%) completed interviews, 279 were inhalant users, 52 (18.6%) met DSM-IV inhalant abuse criteria and 79 (28.3%) met inhalant dependence criteria. Five of 10 inhalant use disorder criteria were met by more than 10% of the total sample. A considerable order was seen between inhalant use disorders defined by DSM-IV and classification derived empirically based on responses to DSM-IV inhalant use disorder diagnostic criteria by latent class analyses. A considerably higher level of inhalant use disorders was observed in the large sample of youth facing juvenile justice system than the general community samples of the adolescents. Two distinct classes of symptomatic and highly symptomatic inhalant users were evident by way of latent class analyses of DSM-IV inhalant abuse and dependence criteria. The results of this investigation establish the need for inhalant use disorder screening, prevention, and treatment interventions directed to the more than one million youth who are annually involved with the juvenile justice system.

A national study was conducted by Ray et al. (2009) on misused toluene products among street children in India. A total of 100 inhalant users and 30 non-users were assessed. The mean age of users was 12.8 (SD: 2.4) with age of first use being 9.3 + 2.8 years. Only 4 of the users were girls. All the users were working, whereas 16% of non-users were students. Most users lived alone on footpaths, streets or railway platforms. The most commonly misused product containing toluene was eraser fluid (83%), followed by glues (34%) and petroleum products (3%). Although toluene was the primary substance of misuse, most children used other drugs concurrently, most frequently tobacco, followed by alcohol, cannabis, and raw opium, heroin, sleeping tablets, cough and syrups.

There is a steady decrease of inhalant abuse in Japan but inhalants can always turn out to be leading to other drugs. Many of the inhalant users are ignorant about their physical and mental changes and corporality in drastic and persistent stages (Mizuhara et al., 2010).

A multistage national survey the National Epidemiologic Survey on Alcohol and Related Conditions was conducted among 43,093 adult U.S. residents with antisocial personality disorder by Howard et al. (2010) to analyze the lifetime prevalence of 20 childhood and adult antisocial behaviors in inhalant users with inhalant-use disorders (IUD+) and without inhalant-use disorders (IUD-), the characteristics and intensity of associations between inhalant use, inhalant-use disorder, and specific delinquent behaviors by multivariate analyses and therefore the relationships between inhalant use, inhalant-use disorders, and delinquent behaviors with a structured psychiatric interview. The characteristics in each the inhalant users with the inhalant-use disorder and while not inhalant-use disorders respondents were considerably younger and a lot of possibilities to be idle, to be male, to possess ne'er married, and to report family and private histories of alcohol and drug issues than inhalant nonusers. Prevalence of family histories of alcohol issues and private histories of drug issues were considerably bigger among respondents with an inhalant-use disorder, as compared to while not inhalant-use disorder respondents. A significantly higher lifetime levels of all childhood and adult antisocial behaviours was found out by bivariate analyses, as compared to respondents without inhalant-use disorders and with inhalant-use disorders than inhalant nonusers. By multivariate analyses it was found out that respondents with inhalant-use disorders showed a high risk for childhood and adult antisocial behaviours, as compared to the inhalant nonusers, with the powerful force to use dangerous weapons, to harm people and animals physically. In the measurement of the interpersonal violence, a significant difference was observed between the respondents without inhalant-use disorders and with inhalant-use disorders. They finished that respondents with inhalant use disorders had the higher level of delinquent conduct, together with various types of early-onset and interpersonally violent behaviours.

An inhalant is an underestimated substance of abuse, but it has a widespread presence among the children and adolescent all over the world. A study was carried at a tertiary

level multi-speciality hospital by Verma et al. (2011) among adolescent who is getting treated from drug de-addiction centre. The assessment records of the cases with inhalant use and dependence for more than 1 year was analyzed and information was assembled. Most of the cases were of average age 16.24 years and 22 percent were illiterate. There are problems of alcohol abuse at home in 40 percent of the cases and of tobacco in 48 percent of them. Around 40 percent of the cases had the history of restraining from using and the range of the age is starting from 9-18 years with the mean age of 11.6 years. They concluded that it is an area of much-needed research in psychiatry.

Inhalants are one of the popular and hazardous forms of substance use. Using data from the National Epidemiologic Survey on Alcohol and Related Conditions, the study conducted by Perron et al. (2011) had examined the prevalence of withdrawal symptoms among inhalant users. To check the existence of an inhalant withdrawal symptom the prevalence of inhalant withdrawal symptoms for inhalants the prevalence of cocaine withdrawal symptoms were compared. Three or more inhalant related withdrawal symptoms which were clinically significant were reported to be experienced by approximately 47.8% of persons who met criteria for inhalant dependence. The withdrawal symptoms of the inhalant dependents were as prevalent as the corresponding withdrawal symptoms experienced by persons with cocaine dependence. Furthermore, the percentage of persons with inhalant dependence reporting clinically significant inhalant withdrawal symptoms was almost equal to the percentage of persons with cocaine dependence reporting clinically significant cocaine withdrawal symptoms. Their study found support for the presence of withdrawal symptoms and an inhalant withdrawal syndrome among persons who meet criteria for inhalant dependence.

Praveen et al. (2012) conducted a cross-sectional study of 174 children in observation homes in Hyderabad, India, to determine the prevalence of inhalant (whitener) use among the street children. A high prevalence was seen mainly among boys about 61% of them with the mean age of 12.2 years (range 5–18 years), 35% of the children were into it along with the concurrent use of other substances. The most common cause for initiation reported was peer pressure.

A study was carried out by Narayanaswamy et al. (2012) to recognize the sociodemographic and clinical account of inhalant dependent that is from a tertiary care psychiatric hospital in South India in pursuit of treatment. The clinical blueprints of patients who availed the mental health services of a tertiary care centre in South India for more than 10 years were interviewed and observed for the study. A large number of samples were mainly male from urban areas, most of them jobless and the average of initiation of inhalant abuse was 16.23 years. All samples informed the abuse of volatile solvents as inhalants whereas dependence to other substance was recognized in more than half of them. The co-occurring psychological disorders are psychosis and depression. A comparison was made between the sample that used only inhalant and others who are also into psychoactive drugs. The samples who were abusing only inhalants have a comparatively lower range of age of initiation than those into psychoactive drugs also. The abuser only on inhalant informed of having withdrawal symptoms in comparison to 77% of samples who use psychoactive drugs too. The psychoactive drugs abusers informed of experiencing notably greater aggression, externalizing symptoms and having attention-deficit hyperactivity disorder (ADHD). The study concluded that more society based studies are required in South India.

A prospective cross-sectional study was carried out by Dhoble et al. (2013) among 31 male and 1 female, the age range of about 11 to 19 years inhalant abusers who meet at least three criteria out of seven DSM-IV criteria for a period of at least 12 months in a tertiary-level multi-speciality hospital. During the study, it was found out that whitener is the commonest type of inhalant used and preferred way to inhale is by "Sniffing". It was observed that inhalant use can give rise to major dangerous psychological, emotional and neurobiological issues and marked intoxication and withdrawal characteristics. The strongest symptom found out after intoxication is the euphoric state of mind, secondly hallucination, followed by burning in eyes and oropharynx, lightheadedness, memory loss, drowsiness, slurred speech, irritability, dreamlike state, loss of appetite, giddiness, nausea, unconsciousness and delirium. Some of the withdrawal symptoms due to inhalant use were psychological craving, irritability, restlessness, insomnia, Anhedonia, attention and concentration problem, psychomotor retardation, the heaviness of head, tingling sensation, tremors and body pain. It was found out that most of the inhalant abuser

belonged to the people of low socio-economic status but in this study, it was observed it exist between the middle-class families also.

Ober et al. (2013) have conducted discrete-time survival analyses to determine the role of time-invariant and time-variant (over five waves) risk and protective factors as well as the grade in inhalant initiation among middle school students. The current study uses data from 3,215 students who were initially surveyed as sixth graders in 2008–2009 and was resurveyed in seventh and eighth grades. Students were part of a larger substance use prevention trial conducted in greater Los Angeles. Seventeen percent of youths initiated inhalants during middle school. The decrease in the initiation of inhalant use was observed with higher drug refusal self-efficacy, familism (i.e., values related to family), and parental respect. The increased risk of initiation was observed in youths who had an adult or older sibling, who used substances but linearly the adult influence declined and by the end of seventh grade was no longer a risk factor. The relationship of self-rated popularity was observed with inhalant initiation in the youths of seventh grade, and in sixth grade perceived substance use by peers. The strongest time of influence of adults, siblings, and peers on inhalant use may be in sixth and seventh grade. Interventions to prevent inhalant initiation should target sixth and seventh graders, address influence by family and peers, and provide skills training to improve drug refusal self-efficacy. Their findings highlight the need for interventions in early adolescence that focus on increasing Drug Refusal Self Efficacy and providing normative feedback to youths about substance use among their peers, both of which could help with the peer pressure that youths may feel during this time.

In this study Agarwal et al. (2013) reviewed the extent, pattern and trends of substance abuse in adolescence in India. Their review was based on published national and international literature yielded on the systematic search using PubMed, Google Scholar and the archives of the Journal of Indian Association of Child and Adolescent Mental Health. Substance abuse is one of the pressing problems in most countries and is associated with several social and economic consequences. These studies suggest that substance abuse is fast becoming a public health problem among the children and adolescents of India. Tobacco and alcohol are the common substances of use. Substance

abuse is commoner in males than in females. Inhalant use was found to be abused as a Gateway drug to a higher type of drugs. The family history of substance use is a common predisposing factor. Substance use among adolescents in India is a major health concern associated with many co-morbidities and complications. Initiation of substance use in adolescence almost always ensures the continuation of the abuse well into adulthood. Therefore it is important to plan preventive strategies aimed at this vulnerable population to reduce the burden caused by substance abuse in a developing nation like India.

In six Northeast states of India (i.e., Manipur, Nagaland, Meghalaya, Mizoram, Arunachal Pradesh, and Tripura) from the month of February to October 2012, a cross-sectional study was carried out by Akoijam et al. (2013) on 3000 school children of eighth to eleventh standard to determine the prevalence and document the inhalant use characteristics among school children within the Northeast region of India. The choice of the schools from six north-eastern states was randomly selected based on the idea of geographical location. Thirteen schools from Manipur, four from Nagaland, four from Meghalaya, seven from Tripura, ten from Arunachal Pradesh and a pair of schools from Mizoram were selected for the study. A semi-structured form with 2 components, as well as background characteristics (Part A) and inhalant use characteristics (Part B) was used to gather information. The mean age was 14.8 years and 51.2% of the participants were male. The proportion of students who had ever used inhalants (ever user) was 18.8% and adhesive/glue was the inhalant victimized by most of the students. The foremost commonplace of use was home (33.1%) being within the presence of older person victimization inhalant or tobacco was found to be related to using of inhalants among students. Nearly one-fifth of the students had used inhalants and nearly 0.5 used inhalants within the past month. Sensitization of the fogeys and school authorities to the matter, additionally as preventive and curative services, ought to be thought of.

A 1-year ethnographical study was carried out by Gigengack (2014) by multi-sited and comparative analysis, the flexibleness of strategies and writing field notes analysis style, particularly among street-oriented children to seek out the explanation for the rise in inhalant use. The most analysis was undertaken with six teams in four areas of Delhi, informative six generic classes of inhalant-using street-oriented children. The brand

names of the inhalants in India are eraz-ex diluter and whitener, factory-made by Kores, are popular throughout Delhi; along with Omni glue. The general lack of awareness and social indifference towards inhalant use was observed with the exception of the inhalant users themselves, who possess sensible information. They create by mental act inhalants as nasha, encapsulating the materiality of the substances and therefore the experiential aspects of intoxication and addiction. Fragments of cluster interviews narrate the sensory charm of inhalants, and an ethnographical vignette the dynamics of a sniffing session. These inhalant-using street children obtain intoxication in an exceedingly pursuit of delight, despite the damage that befalls them as a result. Some notice nasha lovely, even so, the disapproval, violence and bodily deterioration; others expertise it as an overwhelming force.

The retrospective chart review study was conducted at the Drug De-addiction and Treatment centre (DDTC), in 2012 in Department of Psychiatry, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India with the approval of the institutional research ethics committee (Gupta et al., 2014). The record of treatment seekers of over 10 years from 2002-2011 was scanned and 92 cases of inhalant use were identified out of which the complete record files were available for 87(94.6%) cases. While reviewing and analyzing the relevant data they found out that there was a rise per year steadily to peak at 20 cases in 2006 and annually then stabilized at 1-3 percent per new cases. All the cases studied were male mostly urban youth belonging to middle socio-economic class families. The common reason recorded for initiation was curiosity with the family history of substance dependence. The substance mostly used were the commonly available substances like typewriter correction fluids, in addition, tobacco was being taken.

A cross-sectional study was conducted by Bishwalata et al. (2014) among 1671 adolescent studying in Eighth to Twelfth standard in schools of Imphal-East District Manipur, India during March to June 2013 to assess the prevalence and determinants of inhalant substance used amongst the adolescents in Manipur. Schools were selected by the simple random method and a semi-structured self-administered questionnaire adapted from the 'UNDCP/WHO Global Initiative on Primary Prevention of substance abuse'

was used for data collection. SD) age of the students was 14.5 (1.32) years, with males constituting 923 (55.2%). Prevalence of ever users was 186 (11.1%) and glue/ dendrite was the commonest substance abused 98 (52.7%). Being male, belonging to joint family and increase in age were found to have a significantly higher risk of being a user, whereas the higher level of parental education shows a protective effect. The study does confirm the general belief of the people of the region that inhalant use among school children is prevalent. Finally, it has concluded that increasing effort for prevention, treatment along with sensitization of parents and teachers is a distinct challenge for policymakers.

A prospective study was conducted by Reddy et al. (2014) among 603 street children and adolescents of Andhra Pradesh, India. The study was carried out for six months, it was observed that the children of age group 11 to 14 and dropped out of school are the most prevalent ones. The common substances abused were smoking tobacco and inhalants (mainly correction fluid and glues) compared to other types of substances. A child works in small time job and begs for money. The major factor for drug initiation was the influence of drug use by peer pressure.

A cross-sectional study was conducted by Silva-Oliveira et al. (2014) among the 891 adolescents consisting of 352 males and 539 females with a mean age of 16.3 years studying in public and private schools at Belo Horizonte, Brazil all of them were chosen by two staged stratified cluster sampling. Two self-administered questionnaires the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) and the Alcohol Use Disorder Identification Test (AUDIT C) were used to determine the presence of inhalant use in adolescents and the relationship with the marijuana abuse, alcohol abuse and socioeconomic status. By the multivariate regression model, the prevalence of 7.9% inhalant abuse was seen having a positive relationship with the marijuana abuse and binge alcohol abuse. Statistically, no significant difference was seen between male and female inhalant abuser as at some point in life they reported of using inhalant and the relationship between the socioeconomic status and inhalant was not established. The findings of this study demonstrate that preventive public policies ought to be reinforced and targeted on adolescents, considering the high prevalence rate of inhalant use in this

cluster and the relationship with marijuana use and binge drinking demonstrate the necessity to handle multiple drug use.

A cross-sectional study was done by Bardhan et al. (2015) to understand the prevalence and pattern of substance use among adolescents living in the slum area of Guwahati. Out of 90 slums, 23 slums were selected by cluster sampling method and the equal number of boys and girls were interviewed to get a total of 414 study subjects. It was found that the proportion of the substance users was found to increase significantly with age in both the sexes. Some of the children have started using the substance before the age of 10 years. It was also found that a significant proportion of adolescent (20.7%) used glue as inhalational substance. This study found out that easy availability, accessibility and social acceptability could be attributed to early initiation of substance use in the slum area.

In the year 2009, a 2 year funded study by the World Health Organization was done to examine the inhalant use and its correlates among street children in the city of Delhi (Dhawan et al., 2015). A total of 100 (96 males and 4 females) drug using Working Street children were recruited with the assistance of five community service organizations/nongovernmental organization (NGO) already working with street children, operating in various parts of Delhi and who consented to collaborate. It was found that among adolescent substance users, inhalant use was the most prevalent and a common substance used by the street children. Given that inhalant use is strongly influenced by peer influences, the present study sample also indicated a drug using network of peers for consumption of inhalants. Therefore, it is possible that they perceived little likelihood of quitting use and seeking treatment.

A 20-year-old case was presented by Bhatia et al. (2016) who came with the symptoms of psychosis after inhalant abuse since 1 year. He used to sniff the solvent on daily basis with his friends, multiple of times a day with evidence of tolerance, withdrawal in the form of irritability, nausea, tremulousness, and sleep disturbance with a strong craving for it. Mental status examination revealed that he was apathetic with poor grooming and retarded psychomotor activity. The speech had decreased volume, tone and pressure and reaction time was increased. Thought process revealed delusions of persecution and

reference and he had second person auditory hallucination. They concluded that since Inhalants abuse remains the least studied form of substance abuse in spite of substantial prevalence and hence the knowledge of psychiatric disorders in such patients remains scarce. More studies are required to elicit the exact mechanism so that effective treatment strategies can be planned.

Inhalant abuse is a globally evolving and increasing complication of the world including developing countries like India. The prime requirement is to apprehend the essence of the adolescent inhalant users conducts to check the growing issue. Bhad et al. (2016) conducted a 6-month long explorative study in a tertiary de-addiction centre of India by using a semi-structured questionnaire and a checklist to enquire concerning the distinguishable consequences of inhalant use on 23 successive male adolescent cases around the age range of 13-18 years in search of being treated for inhalant abuse. Every sample belonged to urban sector and possesses sufficient societal support. The commonest way of inhalant use was “sniffing”, reasons for initiation was experimentation and peer pressure and recognized the outcome of inhalant abuse is the bravery and raise of confidence level promoting the inhalant use among adolescent in India.

The population of street children has been increasing in most of the developing world and it is estimated to be higher in number in India. The aim of the study by Sharma and Joshi (2017) was to investigate strategies for the prevention of substance abuse among street children in India. The literature review was based on 15 full-text academic journal articles. The articles were screened, analyzed and reviewed to draw findings and discussion for the study. Besides these, publications from government and private organizations were also included as grey literature. The study revealed that 10 % of the world’s children live on the streets in India and more than two third were boys. The abuse of nicotine and alcohol are most common among the street children, mainly due to poverty and peer pressure, for substances abuse. The common health effects of the substance abuse are damage to the vital organs and respiratory, digestive, oral, facial and heart diseases were the common health effects. The main social effects of substance abuse are HIV/AIDS, STI, violence and crime. They have concluded that programs on

empowerment, employment, equality with culturally sound interventions are required to prevent street children and substance abuse in all parts of India. It was found that there was variation in findings of the study and the study was carried mostly in the urban areas of the country. The programs need the special focus on reducing poverty in the country and peer pressure for preventing substance abuse among street children.

2.2 Significance of the Study

The globalization and urbanization, increasing natural calamities with the global warming and rapid change of weather, man-made disasters like riots and wars have displaced many persons, compelling them to move from the affected area to the makeshift area which is safe. These persons sometimes stay back in the temporary makeshift area as they have nowhere to return to. The poverty level has increased in this present era instead of decreasing for these reasons. The rich people are getting richer and a poor person getting poorer has become a saying in the present days. The people of this area leads a nomadic life they have that constant fear in their mind that they have to evacuate the place and search for a new place where again they will settle down temporarily.

The most affected are the children who suffer both physically and mentally; they are forced to work along with their family members from the very young age to gain money for one daily meal and other uses. The children sometimes losses track of their life and get influenced by the bad habits like smoking, sniffing inhalants, substance abuse, drugs and drinking alcohol. The literature from India is limited to only a few case reports and case series. This study will help in exploring the facts behind the use of inhalants by the children, the adjustment issues with their parents, and other people in the society before and after using the inhalants. This study will also help in understanding the mental health condition in which the children are compelled to fall for the inhalant abuse and the psychological changes that took place after repeated exposure to the inhalants.

Many developed countries had reported of facing inhalant related problems among the children's. In the United States, it was found out in a study by Beauvais et al. (1988) on the general population that there was 5-15% of widespread presence of inhalants among children. In Canada, 3-6% of prevalence of inhalant use in children was observed by

Smart (1986). In the United Kingdom, the popularity of inhalant was seen among 6-7% of the children by Cooke et al. (1988). According to Waraich et al. (2003), inhalant abuse had become a serious public health issue in India mainly due to its easy accessibility and absence of proper information regarding the prevalence of inhalant abuse among children amid the mental health professionals and harmful effects of solvent abuse or dependence amidst the common people due to scarcity of documentation and data of inhalant users.

The Kripa Foundation, a Non-Government Organization based in Guwahati, Assam (India) had been regularly conducting de-addiction programmes for children, especially, for the underprivileged, they reported to Staff Reporter of The Assam Tribune (2010) that dendrite an adhesive abuse is on rise among the street children, school children and college student due to easy availability in shops and cheap price. The impacts of the addiction are chronic health problems, early and unnatural death and involvement in criminal activities like theft. Social Activist mentioned that businessmen play a main role and awareness should be spread among them about the magnitude of danger and problems caused by dendrite abuse to the children. Father Lukose member of Juvenile Justice Board (JJB), Kamrup informed that addicted children when does not have money to buy dendrite/whiten, they adapt to stealing, lying and other aberrant behaviours to get money.

The absence of large scale study comprising of different areas of India and the comparison to find out the definite reason and concrete findings was lacking behind. In the studies related to the Northeastern states it was prominent that the entire time one or the other state was left behind as with the passing years a rise in the inhalant use was observed. For future the proper documentation after thorough study of the inhalant user both in the medical setup as well as the jurisdiction and record of an aggregate number about how many children are actually abusing inhalants is a must.

In the light of the aspects considered above, it would be a matter of interest and great research relevance to explore the prevalence, causes and consequences of inhalant abuse among children.

2.3 Objectives

The main objectives of the research were:

1. To explore the Psycho-social and cultural determinants of inhalant abuse among pre-adolescents.
2. To explore the psychological consequences of inhalant abuse among pre-adolescents.

CHAPTER III

METHODOLOGY

A methodology is a master design of the research procedure which is to be used at the time of research practically. It is a proper plan for data collection and utilizing it for the analysis of the result, the different study requires different techniques of methodology depending on research strategies and topic. The most necessary part of the dissertation is to state the importance of research. The major point to remember is to explain precisely about how to approach the research and give alternative methodology as well. A methodology is a presentation of the research plans, to employ in the research, it is the process used subsequently while gathering the data or information related to the research questions.

Data is a collection of information which is particularly related to the samples personal details, as well as records, findings from observations, experiments, surveys, interviews, or from the previous literature. Data collection is necessary to validate the research findings, which is generally accepted by the scientific community as factual material. The important fact of data collection is the source of data and the methodology involved determining the required time and the expenses. Data is an essential part of research representing facts and genuine maintenance of the collection, the method of interpretation and analysis. Some important points to be preserved during collection of data are:

- a) All the questions are responded correctly and properly.
- b) Research must be reproducible and approved.
- c) Precautions should be taken not to destroy or waste the sources.
- d) The results should not be misleading others should be the beneficial one.
- e) Provision should be taken about ethical issues and not harm anyone in the process of collection of data.

3.1 Method adopted

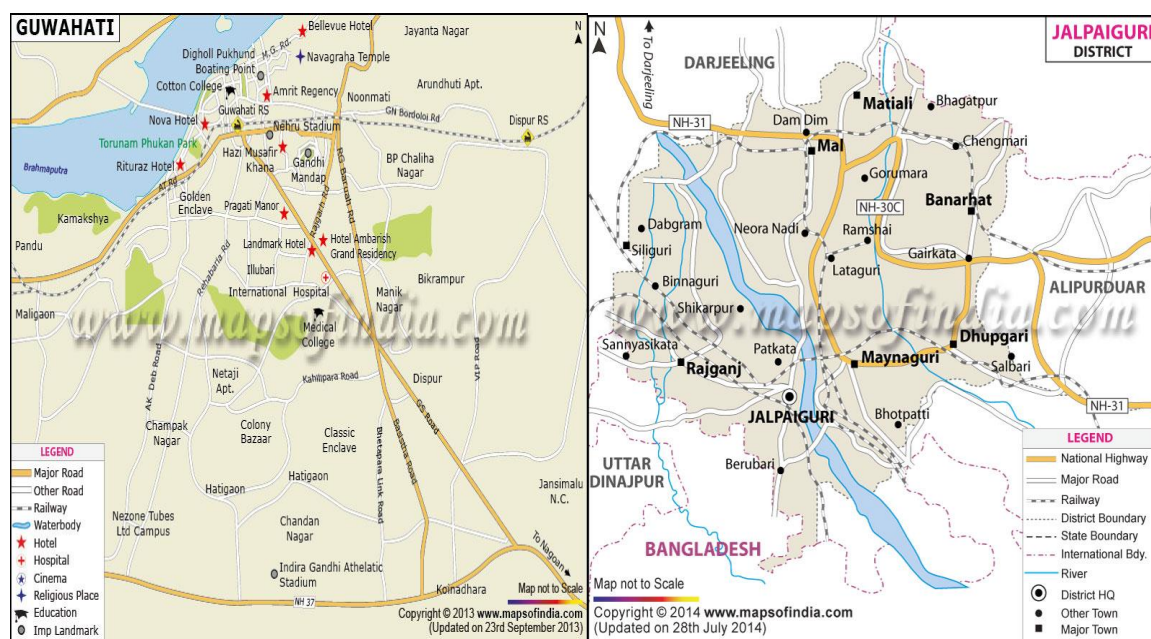
The adopted method for conducting a research study should always be valid and appropriate to the nature of the problem of the study. It also should comply with the kind of data that the problem of the study demands. The survey method is the way to collect

data information, focusing on the facts and opinion of the single individual on certain events happening innately in the society. This method guides in exploring the circumstances and establishing the truth by examining the facts of the characteristics, behaviour and opinion of the individual or group (Cherry, 2017). The main aim of the survey research is to assess the characteristics of the whole population. The three main constituents of survey research are the direct contact with the sample population, the willingness and cooperativeness of selected sample and researcher must be trained with research insight. The survey is a most widely used self-report procedure of collecting descriptive info from the group of the individual through face to face interview or a written questionnaire (Stangor, 2011). The main aim of the survey is to develop a picture about the opinions, attitudes, or behaviours of a group of individuals in a short duration at a short span of time. In survey research, the respondents impart information concerning their (behaviour, thoughts, or feelings) by answering and finishing the questionnaire or responding to the interviewer's questions (Leary, 2001).

3.2 Geographical Area

The data was collected from Areas of Guwahati (Assam) and New Jalpaiguri (West Bengal):

Location Map of the Study



The data was collected from Areas of Guwahati (Assam) and New Jalpaiguri (West Bengal):

Guwahati is a city developing rapidly, relatively with the superior standard of life. This city has everything to offer starting from accommodation, workplace with pleasant environment and climate, modernized shopping area, apartments, bungalows and noticeable societal substructure. Guwahati is a midpoint of western states with Northeast states and gateway of many Northeastern states. The city has seen swift escalating in inhabitants as many people from different parts of the state and other adjoining states immigrate to the city mainly for education and in search of job triggering the unpleasant growth of population in the city which additionally creates different types of undesirable troubles.

Jalpaiguri, West Bengal is midpoints of many states like Bihar, Orissa and gateway to Northeastern states mainly Assam and Sikkim. NJP comprises of Siliguri and Jalpaiguri and it is connected to many states of India. It is a city of major trade centre of West Bengal in addition to the main place of commercial, tourism, transportation and educational centre. A drastic transformation was observed with the beginning of the twenty-first century besides instant expansion in sections such as industry, real estate, information technology firms and education. The modifications are regarding infrastructure and increasing commercial for steel, metal, cement and knowledge-based industries. Several institutes for engineering technology, management and professional study colleges have been started.

Both the cities have a large number of migrants who come from various villages of the respective states as well as the neighbouring states in search of jobs and to escape poverty. The children run away from home to escape the domestic violence and poverty. Usually, those who run away without any proper educational background, from poor family ends up working in others house or in streets and does not earn much money. They are bound to stay in a street due to lack of money and proper shelter.

3.3 Pilot Study

A pilot study was carried out before the research design was finalized in order to understand the circumstances of the surrounding environment on which the actual research is to be carried out and the vulnerability of the group of the population to be observed and studied. It is mainly done on the pretext to design better methods and procedure or for the modifications required for a research to be carried out by keeping the ethical considerations on the mind. It helps mainly to find out the probable situation and the necessary changes to be done for the questionnaires or self-report inventories to be given to the sample of the population (Leon et al., 2011). A pilot study was done on few children initially in both the areas Guwahati, Assam and New Jalpaiguri, West Bengal in order to understand the prevalence of inhalant use in the community and what inhalant is commonly used in the area. Except this, the other purpose was to finalize the developed questionnaires for interview and to plan for the process of data collection.

Few of the questions that were asked to Rehabilitation Centres/NGOs and Police personnel during pilot study were:

- a) How long have you been working in this area?
- b) What type of children comes in the institution?
- c) How are they different from other children?
- d) In the locality, how Inhalant promotion among children takes place?
- e) What is the present scenario of the children inhalant abusers in the locality?

These questions were mainly prepared for the clear presumptions about the existence of the inhalant abuser and those institutions, shelter homes and the judicial authority are all aware of the prevalence of the problems related to it and the issues created by users.

A pilot study was carried out in the month of January 2017 in Guwahati (Assam) and New Jalpaiguri (West Bengal). During the pilot study one NGO, each situated at Guwahati and New Jalpaiguri were approached and they guided to the respective areas.

Snehalaya: Right for Children, an NGO for Children in Guwahati Assam, was visited as part of the pilot study. It is one of the Shelter home and Night Shelter cum Drop-in Shelter for homeless Boys from the railway station, footpath or any other place under Snehalaya Don Bosco, Guwahati. This NGO provides shelter, food, counselling and also educates these children under centre for Sarva Shiksha Abhiyan.

The purpose of visit and details of the research work was explained and consent was obtained from the interviewer. After the explanation and taking of consent, a good rapport was established with them. All the interviewers of the NGO were assured of confidentiality and that their responses and identity would be kept secret. If they have any problem in understanding any questions, they are free to get it clarified their doubts without any hesitation. During this interview, they reported that there is a prevalence of inhalant abuse among the children who are coming to shelter home. They also reported that most prone to inhalants is the child who comes from the slum area and sometimes other children also learn to take inhalants from them. They have a team who observes children of slum area during the day hours and encourage them to visit the shelter home. When the researcher went along with the NGO workers to the gate no. 1 and 2 of Guwahati Railway Station, prevalence of inhalants is observed among the children as small as 5 years old from slum area.

Care for Needy Children Rightfully Nurtured (CONC'RN): An NGO working for children at Jalpaiguri, West Bengal was also visited as a part of the pilot study. They have two Open Shelter Home for boys and girls and two Drop-in Centres at New Jalpaiguri Railway Station. They provide shelter, food, counselling, education and relocate the rescued children and children from slum area. The purpose of visit and details of the research work was explained and consent was obtained from the interviewer. After the explanation and taking of consent, a good rapport was established with them. All the interviewers are assured of confidentiality and that their responses and identity would be kept secret and if they have any problem in understanding any questions they are free to get it clarified their doubts without any hesitation. They were interviewed about the children who are sent to them. The NGO worker informed the following:

“Most children struggle for food, lack of work which leads them to inhalant abuse, alcohol and other drugs. Children as small as 6 years old are using inhalant and we could not do anything about it because these children don’t visit the Shelter Homes or Drop-in Centres regularly and miss the counselling sessions. Runaway children are found loitering alone in the railway station or bus stands are sent by the police personnel or railway staff to our centre and kept in the shelter home for few days till the family is identified. Most of the time these children are sent back home but always return back to railway platform due to various family and social problems and sometimes due to lack of freedom at home to do whatever they desire to”.

During the pilot study, one 9 years old male child who fulfils the criteria of the inhalant dependence of DSM-5 and ICD-10 each from Guwahati, Assam and Jalpaiguri, West Bengal was selected to be a Gatekeeper for the study. The purpose of visit and details of the research work was explained and consent was obtained from the child. After the explanation and taking of consent, a good rapport was established with the child. Some guideline was given to the gatekeepers concerning the selection of the other samples and how to recognize the inhalant abuser who fulfils required criteria, what role does he play in the study, how important is his contribution to this study. It was found out that there is a large prevalence of inhalant abuse in the area and increasing day by day from the past 5 years the commonest type of inhalant being dendrite and mostly induced by children as young as 5 years old. The preferred way of the route of intake of dendrite was huffing by clothes/handkerchief the second way is sniffing. Most of the children’s family members are aware of the habit and popularity of dendrite sniffing within the family members was also observed along with the practice of alcohol and other substance intakes among the elders of the family. Majority of the children huffs 3 times freshly per day, the effect of the single inhalation lasts for over 2 to 3 hours. The selected occupation to survive are begging, work as rag-pickers, collect anything they get from the train which halts at Railway station but mainly bottles collect oil from nearby the refueling area of train engines which they sell it for the cheap price along with the Railway tracks and sometimes cleans drain. Almost all children are dropped out from school studied until class 1-2 and very few have never attended the school. These children were so much into the dendrite huffing they carry it around in the piece of cloth inside the pocket or hand

and some children kept huffing at intervals during the interview. The few Children were caught by police for theft and the reason given by children for being caught was they don't remember the reason. After dendrite intake, the respondent feels lack of appetite, aggressive, dizziness, dryness of mouth, experience the burning sensation for some time inside the oropharynx and whole body cramps still the respondent enjoys it.

These children are malnourished and are irregular with the food intake; only into dendrite and have not started with other substances or alcohol but they do take *bimal*, one type of *sweet supari* (betel nut). During the interview, it was revealed that their mood is unpredictable and difficult to understand whether they were still high under the influence of the dendrite, restless and worried he might miss collecting bottles from a train.

Based on the pilot study, it was realized that since there is prevalence of dendrite intake mainly among slum children, it was necessary to conduct research in order to know the causative factors and consequences of inhalant use among slum children. The developed questions to be asked during interview were also given final shape after feedback from five children who were using dendrite as well as to NGO worker.

3.4 Research Design

The exploratory research design was adopted because of the character of the study. Exploratory research provides insights into and comprehension of a problem or scenario. Exploratory research may be a form of research conducted as a result of a problem has not been clearly outlined. Exploratory research helps to see the most effective research design, information collection methodology and choice of subjects. Thus, qualitative research was appropriate for this research because it was necessary to know the prevalence, causes and consequences of inhalant use among pre-adolescents.

3.5 Participants

The exploratory study was conducted using the non-probability sampling methods; the technique of snowball sampling. The primary data was also collected from various sources to find out the socio-demographic data, type of substance consumed, consequences of inhalant use, mental health issues of pre-adolescent inhalants, etc.

Snowball Sampling is a non-probability sampling method where the individual of a certain social group is identified; later on, he introduces the whole group for the research. The individual is selected on the basis of the contact and association, to obtain the basic impression of informal social relations among individuals. During the process of the present research, the selected individual led to other friends in his contact from them attain information about another group of friends and from them about another group till the growth of the sample and the saturation point was met. The process went on growing with samples just like when snow is rolled down it slowly takes a form of a large snowball.

The designs of the sample size for the two research areas were selected for the purpose of conducting an in-depth interview of participants to identify the causes and consequences of inhalant abuse among pre-adolescents:

Table 3.1

Split-up of the Sample

Categories	<u>Guwahati (Assam)</u> 1. Athgaon 2. Fatasil Harijan Colony	<u>New Jalpaiguri (West Bengal)</u> 1. Siliguri Junction Area 2. Sraban Nagar slum, Ward no. 18 and 20
Pre-adolescent children abusing Inhalants Identified (According to ICD 10 criteria)	29	
Pre-adolescent children abusing Inhalants did not give consent for participation in the study	09	
Pre-adolescent children abusing Inhalants participated	20	

in the study	
NGO Counsellors	2
NGO Social Workers	2
Police Personnel	2

Sample Inclusion Criteria:

1. Pre-adolescent male of age group between 8-13 years of age
2. Pre-adolescents who are willing to participate
3. Pre-adolescents who fulfil the ICD 10 criteria of inhalant dependence
4. Pre-adolescents who are only inhaling substance (not any other substance)

Sample Exclusion Criteria:

1. Girls
2. School Going Children
3. Other age groups
4. Pre-adolescents having any major physical/mental disorder/s

3.6 Ethical Consideration

1. Informed consent of the interviewee:

The purpose of the study, its importance and procedures were described in details to all the participants. This study was carried out considering all the ethical rules and guidance including the child rights. Informed written consent was obtained from the participants before obtaining their views during the face to face interview (*See Information Sheet and Informed Consent Form in the Appendices I and II*). All the subjects participating in this

study gave informed consent. The following ethical aspects were taken into consideration in this study:

2. *Voluntary participation and withdrawal from the study:* Participation in the study was completely voluntary. When a child agreed to participate in this research he was requested to sign the informed written consent form or give a verbal consent. Even after the agreement to participate in the study, the child had the option to withdraw before the study commences or discontinue during the data collection process.

3. *Ensuring anonymity and confidentiality of personal information:* It was ensured that no clues of participants' identity appear in the data collection tools, dissertation or any other publication. Signed informed written consent form was stored in a locked cupboard. Information obtained by the participants was held in confidence and was safely stored in a locked facility and only the researcher had access to this information on hard copy. Confidentiality was provided to the fullest extent. No name or identity was required to be filled in the demographic data sheet and interview schedule. These interview schedules were coded. Data received from the participants were entered into the computer and was password protected. The hard copy of the data was saved under lock. Written consent forms were separated from the interview schedule and secured under lock. No identity was disclosed in the dissertation or in the article publication. Data collected from the interview were coded separately and quotations of the participants were mentioned without any name or identity.

4. *No risk/ harm to the participants:* This study did not involve in any physical, psychological or mental risk/ harm to the individual respondent. Possible effect on the participants was that they could reflect on their own the ill effect of inhalant abuse while answering the questions. Thus, no disclosure of any personal information was done or no sensitive data was collected in this study.

3.7 Tools used

1. *Socio-Demographic Data-sheet:* It is semi-structured performa (*See Appendix I*). It contains information about socio-demographic variables like age, sex, education,

religion, occupation, etc. and clinical details like type, duration, methods of intake, diagnosis (according to ICD 10 criteria), etc. The socio-demographic information is important as it influences the pre-adolescent in different ways depending on the criteria basis and its environment. The objects of informed demography are the characteristics of human populations, the characteristics being studied tend to stress biological processes like population dynamics, whereas demographics is additionally involved with a large variety of economic, social, and cultural characteristics. Demographics are inquisitive about any population characteristic that may be helpful in understanding what individuals assume, how they behave.

2. An Inhalant Risk Factor Checklist was prepared to understand the characteristics and attitudes toward the inhalant use

Table 3.2

Inhalant Risk Factor Checklist

<i>Probable Reasons for Inhalant Use</i>
A. Peer pressure
B. Experimenting with the inhalants
C. To boost self-confidence
D. Relieve anger and frustration
E. Relieves boredom
F. Relaxing
G. Stress at work
H. Broken homes
I. Abandoning homes/Running away from home
J. Peer encouragement and sanction
K. Low expectation for the future
L. Personal adjustment
M. To increase self-image
N. Lack of self-control.

After the starting of inhalant abuse
A. Want to quit
B. Ever tried quitting
C. Cannot stop the urge to use when peers are using it
D. Craving for the inhalant persists
E. Not sure how to quit
F. Lack of will power
G. Don't want to stop
H. Any Other (Mention)

This checklist was divided into two categories prepared in order to see how the initiation of the inhalant abuse took place, in which circumstances did it occurred and why are they continuing it for, whether they desire to quit or not and how often they think about it.

3. *The questions asked during In-depth Interview:* The main focus of the questionnaire (See Appendix III) was to know the prevalence of the inhalant abuse among the pre-adolescent children, the psycho-social causes behind the use of the inhalants, the cultural causes and the psychological problems being faced by the children after the prolonged use of the inhalant. Two sets of the questionnaire were used one for the pre-adolescent children and second for the Non-Government Organization (Counsellors and social workers) and the police personnel having experience of dealing with the children who are into inhalant abuse.

3.8 Procedure for Data Collection

The children who abuse inhalants always stay in the closed groups, difficult to be reached, gives confusing responses if a proper channel to communicate with them is not adapted. There are a lot of trust issues within them as most of the children belong to a poor socio-economic background, have seen and experienced torture, innumerable hardships where they had questioned themselves and their existence. In order to recognize the inhalant abuser in an area, at first one or two children were identified who were used as *Gate-keepers* and to identify different cases of inhalant use/abuse among pre-adolescents of the community. They were explained about the purpose of the study and briefed about how to approach the participants for interviewing them. All the

participants assured about maintenance of confidentiality and written consent was taken from them for their participation.

Gatekeeper: Gatekeeper is the person who identifies the other members of his community and he has the leadership qualities to convince others. Two Gatekeepers were chosen, one from Guwahati, Assam and another from New Jalpaiguri, West Bengal respectively. They have a clear picture of the prevalence of inhalants among children in their respective areas and aware of what kind of approach will work to talk with this people. The gatekeepers also had the habit of inhalant intake and were aware of the health hazards. These selected gatekeepers were also diagnosed as inhalant abusers as they fulfill the criteria of ICD-10 and DSM-5. They have been acknowledged with the help of local NGO of the research area. They were given brief one-day orientation about the signs and symptoms of inhalant abuse and the age criteria of the participants for the research study. They were confided about the secret identity maintenance and provided foods on the days of the survey till the data collection was over. The gatekeepers helped in recognizing the other children in his locality and facilitating to others. They managed the timing and place where others were available and comfortable to talk. The interview schedule was fixed with the participants accordingly. They guided the way to the researcher throughout till the study is complete.

Thereafter, a community-based survey with face to face in-depth-interviews was carried out among ten pre-adolescent children of New Jalpaiguri (West Bengal) and ten pre-adolescent children of Guwahati (Assam). In-depth interview was also carried out with social workers and counsellors of NGO who are working in these areas for the welfare of these children and police personnel of the area police station of Guwahati and New Jalpaiguri.

The thorough study on the area of inhalant abuse by the pre-adolescent children is very less. Most research studies are done in the age group starting from 13 onwards. The exploratory study was conducted using the non-probability sampling methods: in the area of Guwahati (Assam) and New Jalpaiguri (West Bengal) to gain further insight into the problem leading to inhalant use among pre-adolescent children from such a young age, the leading consequences in future and the mental health problems related to it. To identify what type of inhalant is prevalent in the two areas, whether they meet the criteria

of International Statistical Classification of Diseases and Related Health Problems-10th revision (ICD-10, 2010), the related issues and to prepare questionnaires, this will be used during an in-depth interview in the study.

The exploratory research study was carried out among the 20 children who fulfil the criteria of Diagnostic and Statistical Manual of Mental Disorders-5 (2013) of inhalant abuse and also among 2 NGO counsellors, NGO Social worker and Police personnel of the respective areas.

The First Phase of Data Collection: The first phase of data collection was done at Guwahati, Assam at Athgaon and Fatasil Harijan Colony. The preparations to interview the kids were all arranged beforehand all the necessary precautions were taken into considerations not to violate the child rights. The Commissioner of Police of Guwahati, Juvenile Justice Board of Guwahati, Child Helpline of Paltan Bazar Railway Station, Guwahati and Snehalaya Center for Child Rights at Paltan Bazar, Guwahati was approached with a request letter for the collection of documents related to record of inhalant abuser in the city, to interview the children, NGO workers like Counsellor and Social Worker and the Police personnel. A special permission was sought from the Director of the Snehalaya Center for Child Rights at Paltan Bazar, Guwahati to gather the Secondary Data of the Inhalant abuse of the children as well as to interview one Counsellor and one Social Worker of the institution. The purpose of visit and details of the research work was explained and a proper maintenance of confidentiality with ethical considerations was assured.

During the course of data collection, the identified Gatekeeper of Guwahati area was contacted to assist throughout the research and the inhalant users were identified. The gatekeeper was already been instructed to inform his addicted friends about the purpose of the interview and inquire their willingness for participation. He continued to provide information about the hub areas of the children where they generally meet for the purpose of using inhalants in between their works of collecting rags and bottles. Most of the children's favourite place was Paltan Bazar Railway station where they hang out and mostly sleep on the platform or sometimes roam around even nearby parking area. The children mostly don't return home and love to stay away from home due to various domestic issues. Some children even ran away from the different region of Assam and

neighbouring state like West Bengal and Nagaland. In the entire study, gatekeeper was the key person in finding out the samples based on the study inclusion criteria. All the samples were school dropouts and survive by doing meagre works around the Railway station and clean the halt train compartments regularly at the station.

The Second Phase of Data Collection: The second phase of data collection was done at New Jalpaiguri, West Bengal at Siliguri Junction Area and Sraban Nagar Slum area. For the purpose of data collection, permission was sought from the District Magistrate of Jalpaiguri, West Bengal. Different N.G.Os and police personnel (e.g. Jalpaiguri and Railway Police Force at New Jalpaiguri Railway Station, Child Helpline of New Jalpaiguri Railway Station and Mukhtangan: A branch of Praajak Organization, New Jalpaiguri Railway Station) was approached for the collection of data from Counsellors, Social Workers and the Police personnel related to children abusing inhalant in the city. A special permission was sought from the Director of Mukhtangan branch of Praajak Organization New Jalpaiguri Railway Station to interview one Counsellor and one Social Worker of the organization. The purpose of visit and details of the research work was explained and a proper maintenance of confidentiality with ethical considerations was assured.

The selected Gatekeeper of Jalpaiguri who is an inhalant user was contacted. In Jalpaiguri, the inhalant children's meeting place is New Jalpaiguri Railway Station, as it is the centre point of the region and the biggest junction of the area where they can beg and earn money by doing some petty works like picking up water bottles, rags and sweeping in the station. Some of the inhalant children who were willing to participate in the study were referred to Mukhtangan (N.G.O.) by the gatekeeper for interview purpose. Many of these inhalant children preferred to be interviewed at their own meeting place in the platform inside the railway station.

The children were thoroughly assessed using criteria for DSM-5 and ICD-10 of Inhalant dependence and then finally, the interview was conducted.

3.9 Interview Protocol

There was no fixed interview protocol for all the respondents. Order and nature of questions varied according to the respondents and their life experiences. Each participant was interviewed for more than 30 minutes, depending on the flow. For maintaining the confidentiality of participants, each patient had been given a pseudo name. In these free floating interviews the inquiry centered on eliciting the following information:

- a. Demographic variables, e.g. age, sex, religion, community, occupation, etc.
- b. Socioeconomic variables, e.g. income, education, family information, etc.
- c. Inhaler use variables, e.g. type of inhaler/, duration, route of use, etc.
- d. Reasons for starting inhaler, e.g. psychological, social, cultural and any other factors
- e. Consequences of inhalant use, e.g. Physical and mental health condition, legal, etc.

3.10 Data Analysis

Qualitative data were analyzed by using content analysis and case vignette. The information gathered were analyzed into two broad phases-first descriptive and second interpretative.

The interpretations and analysis of data are presented in the following chapters, namely, Chapters IV and V.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter deals with the result obtained in the present study as well as the discussion and interpretation of the result. It may be mentioned in this context once again that the basic aim of the present study was to explore the causes and consequences of abusing inhalants by pre-adolescent children. The respondents who participated in the present study were interviewed individually in order to understand the causes and consequences of inhalant abuse. Socio-demographic datasheet seeking personal and social information about them were also used. Besides these, few NGO workers, Police personnel and also few parents of these children were also interviewed in order to understand the prevalence, causes and consequences of inhalant abuse among children.

The respondents who participated in the study were 20 male pre-adolescents who met the criteria of DSM-5 and ICD-10 of inhalant abuse. Mean age is 10.50 (with a range of 8 - 13 years) and Standard Deviation is 1.73 and all the participants were pre-adolescent children (as per The American Heritage Science Dictionary, 2002) and school drop-outs.

4.1 Section I: Socio-Demographic Characteristic of Pre-adolescent Inhalants

1. Age:

Age of the respondents is one amongst the foremost vital characteristics in understanding their views concerning the actual problems; by an enormous, age indicates the amount of maturity of people therein sense age becomes a lot of vital to look at the response.

Table 4.1
Age wise Distribution (N=20)

<i>Age group</i>	<i>Number of Respondent</i>	<i>Percentage</i>	<i>Mean</i>	<i>SD</i>
8 years	1	5%	10.5	1.87
9 years	1	5%		
10 years	5	25%		
11 years	3	15%		
12 years	5	25%		
13 years	5	25%		
Total	20	100%		
Note: Authors Estimation.				
Source: Primary Survey.				

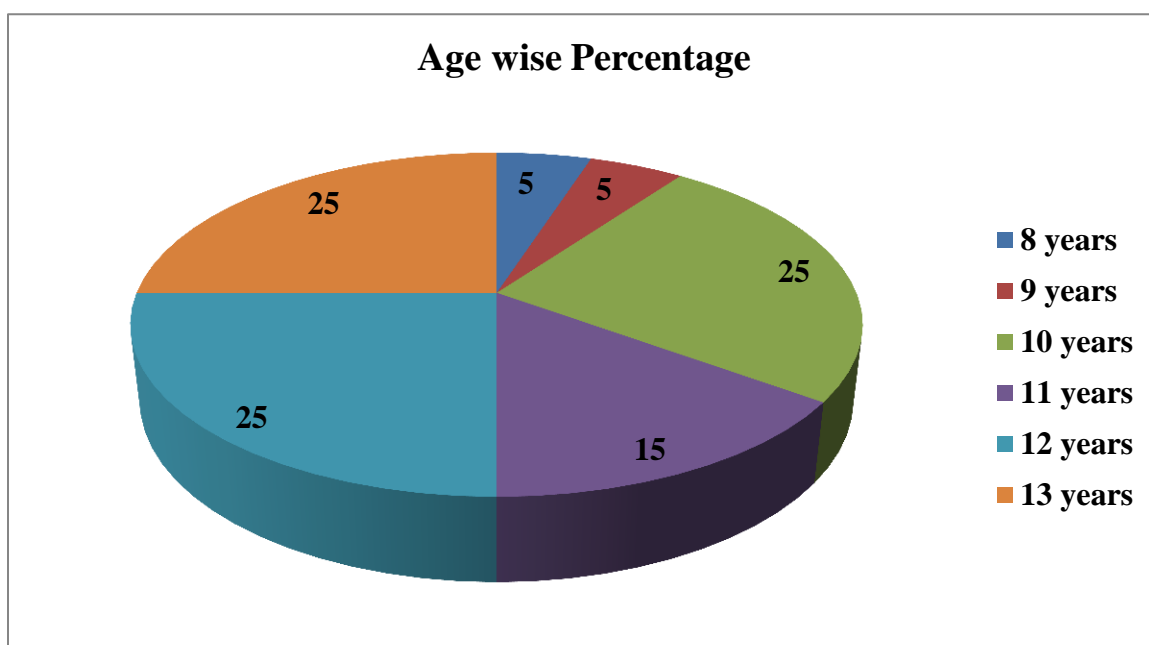
From the Table 4.1, it can be observed that abuse of inhalant is about 25% more prevalent among the pre-adolescent children of 10 years, 12 years and 13 years old, 15% comprises of 11 years age group and 5% of each in 8 and 9 years category. The children of higher age group had a history of inhaling from the early age and they tend to follow the habit.

Previous researchers also found that the children of higher age group had an initiation of inhalant from the younger age and in continuance. The children are already subjected to different drugs mainly those which are accessible like glues, dendrite, tobacco, alcohol, etc. related to their work by the time they reach the age of adolescent (Benegal et al., 1998). The abuse of typewriter erasing fluid and thinner started from the age of around 10

years or early adolescent (Basu et al., 2004); the commencement of the inhalant use was seen from range of 9-18 years with a mean of 11.6 years (Verma et al., 2011); the inception of the habit of whitener abuse occurred from the mean age of 12.2 years (age range 5-18 years) (Praveen et al., 2012); it was found out that majority of the current substance users were introduced to inhalants at the age of 10-15 years in a study by Bardhan et al. (2015).

Figure 4.1

Pie-Chart Showing Age wise Percentage Distribution (N=20)



2. Education:

Education is one among the foremost vital characteristics which may have an effect on the person's attitudes and also the manner of trying and understanding any specific social phenomena. In a way, the response of a person is probably going to be determined by his academic standing and thus it becomes imperative to understand the academic background of the respondents. The quality of education achieved in faculties is not comparable the data compound by some laymen. Several kids do not seem to be able to

afford to travel to varsities as their folks are too poor to afford the price of college fee. The oldsters will hardly afford the daily meal and different necessary merchandise.

Table 4.2

Education wise Distribution (N=20)

<i>Academic background</i>	<i>Number of Respondent</i>	<i>Percent</i>
Continuing	1	5%
Dropout	17	85%
Nil	2	10
Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

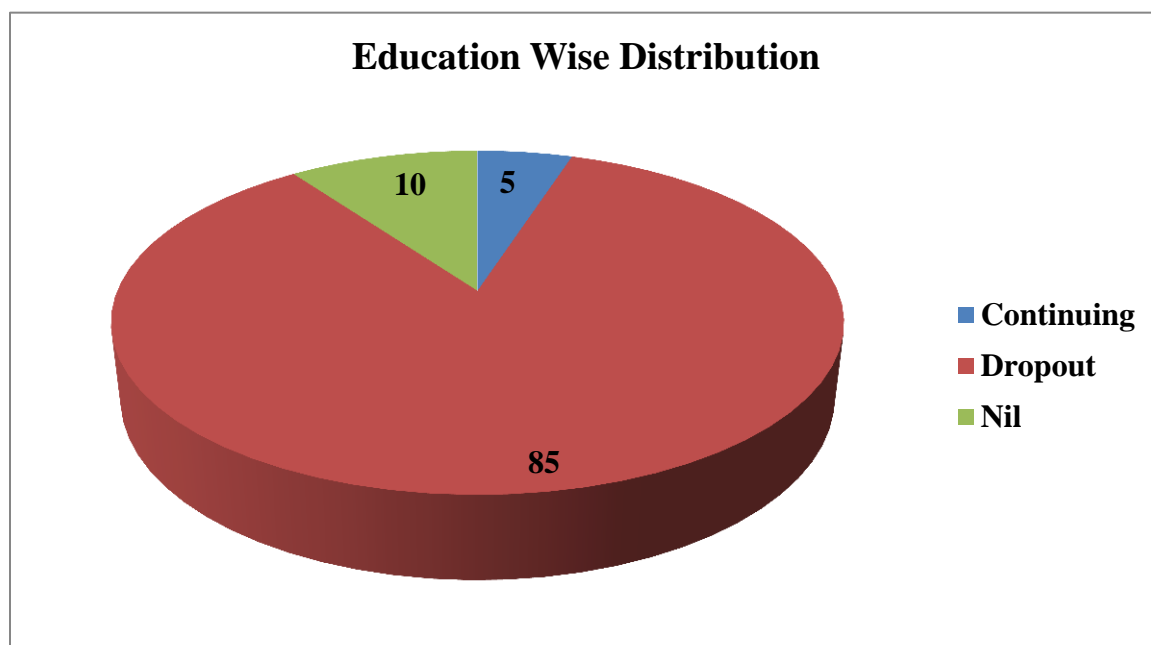
From the Table 4.2, it was observed that 85% of the respondents are school dropout which means almost half of the respondents are not school going, and 10% of them have never attended school in their entire life whereas only 5% are continuing their studies. The lack of independence and inability to use the inhalant openly at school compel them to leave the school where most of them are receiving free education with the help of Non-Government Organization.

In a study by Reddy et al. (2014) among 603 street children, the school dropout was around 299 (49.6%), 182 (30.2%) were still continuing with studies and 122 (20.2%) never attended schools, and the reason behind it was found out to be poor socio-economic

status. It was mentioned by Kumar et al. (2008), out of the 21 students observed 75% were not regular school going and rest 25% were drop-outs and used to attend the Government run schools.

Figure 4.2

Pie-Chart Showing Education wise Percentage Distribution (N=20)



3. Family Type:

The type of family within which someone lives and gets socialized has huge importance to decide his values, beliefs and behavior patterns that area unit seemingly to affect his attitudes towards a selected drawback. Therefore, the family sort plays its own role in giving the response of a person and thus it had been thought necessary to know the family style of the respondents.

Table 4.3**Family Type Distribution (N=20)**

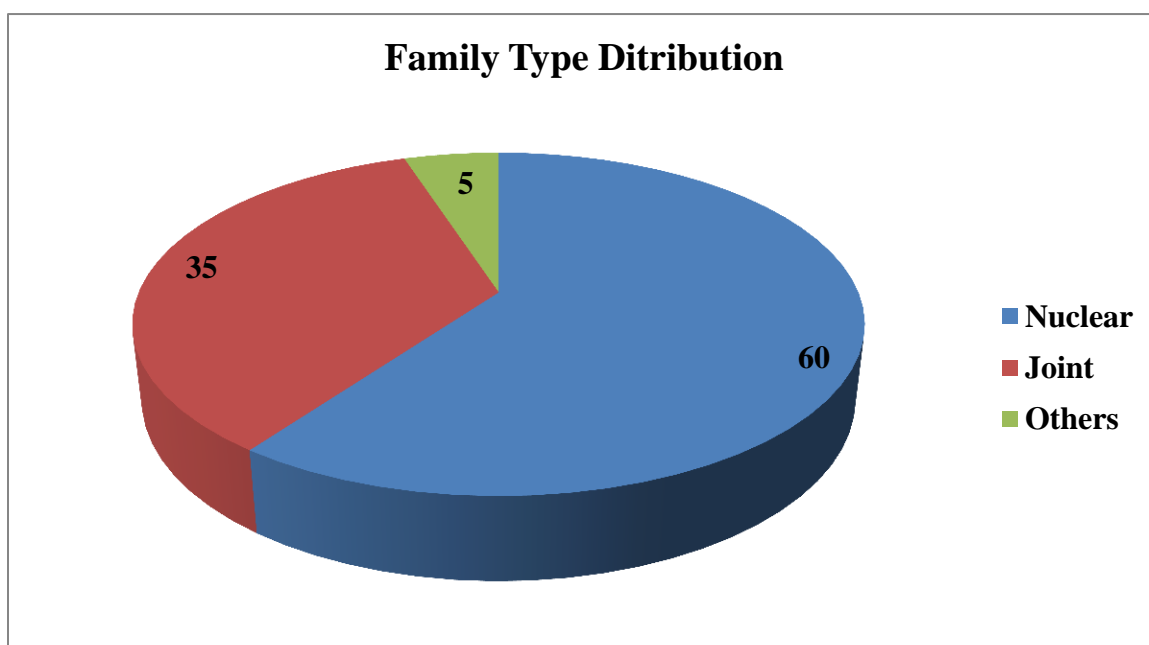
<i>Family Type</i>	<i>Number of Respondent</i>	<i>Percent</i>
Nuclear	12	60%
Joint	7	35%
Others	1	5%
Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

It can be observed from Table 4.3 that 60% of the children belong to the nuclear family, but interestingly they are runaway children from home and the revelation of domestic violence cause came up during the interview. The children visit their home at intervals, always return back and get accommodated at anywhere they are comfortable to stay. 7% of the children stay in joint family, in the platform of the railway station, the nearby railway station in the footpath and nearby slums. The whole families are into the job of rag picking, begging and/or selling of oil collected from the spilt oils nearby the refueling areas of the train near the railway station. 5% of the children do not remember anything about the birth place and have been in the station with another family for a long time without any memory of how they landed at the station. One child falls in the other family type category as he reported that he was abandoned by the family member at the very early age. He was clueless about his parents and he grew up on the railway platform with the sympathy and help of the other families staying on the platform.

In an exploratory study, Verma et al. (2011) came to the conclusion that 22 (88%) out of 25 samples included for the study belonged to the nuclear family, 1 (4%) from joint family and 2 children (8%) were living alone. In a cross-sectional study by Bishwalata and Raleng (2014) among 1671 male adolescent, about 1009 (60.4%) respondents were from nuclear family.

Figure 4.3

Pie-Chart Showing Family Type Percentage Distribution (N=20)



4. Religion:

Religion sometimes used interchangeably with religion or belief system- is unremarkably outlined as belief regarding the supernatural, sacred, or divine; and therefore, the ethical codes, practices, values, establishments and rituals related to such belief. Within the course of the event of faith, it has taken several forms in varied cultures and people. Occasionally, the word "religion" is employed to designate what ought to be added properly delineate as "organized religion" – that is, a company of individuals supporting the exercise of some faith, typically taking the shape of a legal entity. There are many

alternative religions within the world these days. Faith implies a belief in supernatural powers or beliefs.

Table 4.4

Religion wise Distribution (N=20)

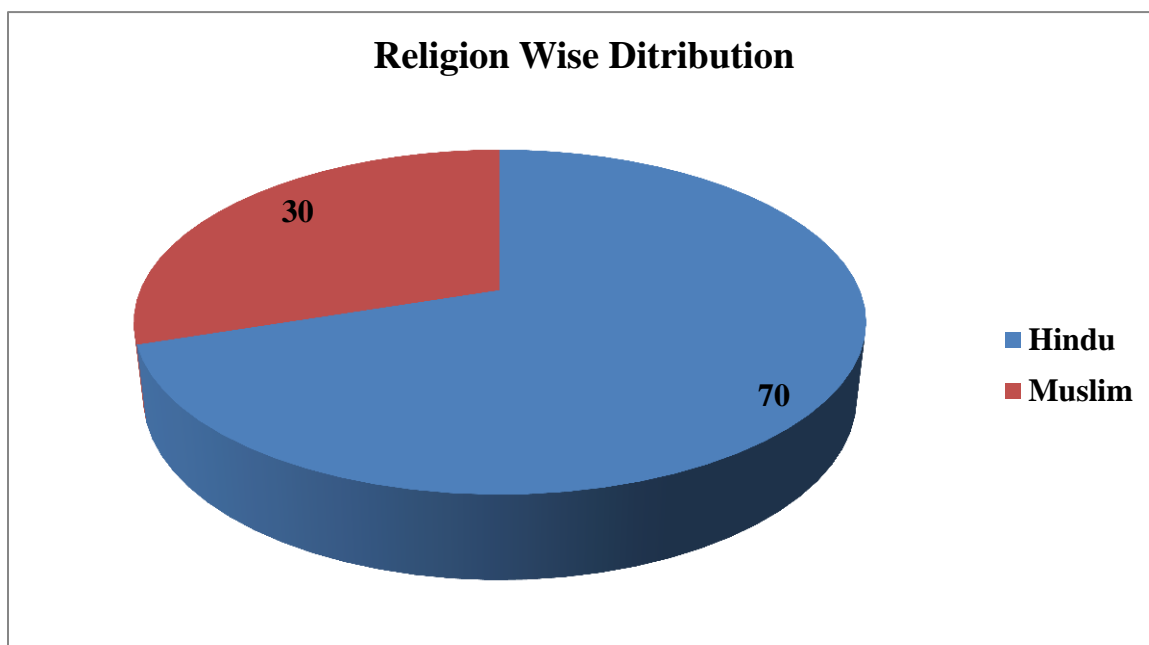
<i>Religion</i>	<i>Number of Respondent</i>	<i>Percent</i>
Hindu	14	70%
Muslim	6	30%
Total	20	100%
<p>Note: Authors Estimation.</p> <p>Source: Primary Survey.</p>		

From Table: 4.4, it can be observed that 70% of children belong to Hindu religion and 30% from Muslim religion. Many children were confused of their religion and mostly follow both the religion but they preferred the religion they responded to.

Verma et al. (2011) in the exploratory study of the inhalant abuse among 25 male adolescents found out 21 (84%) of them belonged to Hindu and 4 (16%) belonged to the Muslim. Prevalence of inhalant abuse is found in greater number in Hindu adolescents.

Figure 4.4

Pie-Chart Showing Religion Wise Percentage Distribution (N=20)



5. Occupation of Pre-adolescent Inhalants:

Person's occupation does have an effect on his temperament. The standard of life is additionally determined by associate degree of individual's occupation and also the income he derives from it. Occupation of a person additionally determines how much liberal he is and that successively reflects his pattern of behaviour and his level of understanding of specific development. In alternative words, the person's response to a problem is determined by the sort of occupation he is engaged in.

Table 4.5**Distribution of Occupation of Inhalant Children (N=20)**

<i>Occupation of Children</i>	<i>Number of Respondent</i>	<i>Percent</i>
Beggar	2	10%
Oil collector	1	5%
Begging & rag picker	4	20%
Begging & oil collector	4	20%
Begging, rag picker & oil Collector	9	45%
Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

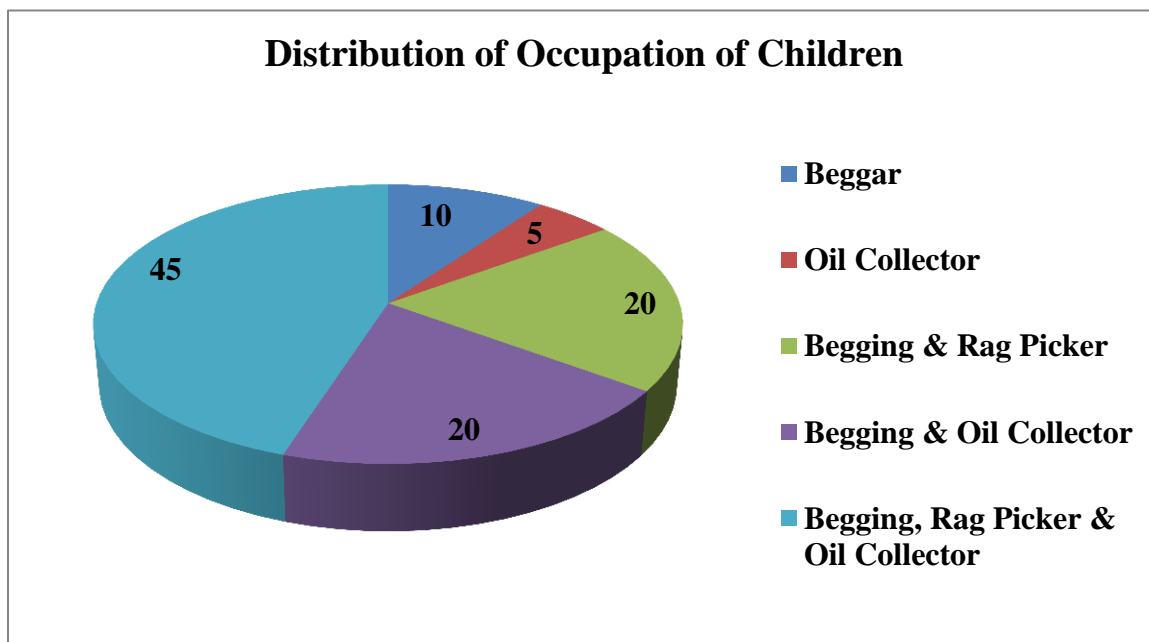
From Table 4.5, it can be observed that most of the children are into begging. 45% of the children are simultaneously engaged in rag picking and oil collecting, 20% are into rag picking, and 20 % inhalant pre-adolescent children are into oil collecting. 10% of the children are solely into begging and 5% children collect oil from the spilled oils nearby the refueling area of the train near the railway station.

A serious disturbance was seen among the inhalant users due to the lack of occupation or improper occupation which compelled them to engage in low income occupation (Kumar

et al., 2008). Rise in the intake of inhalant was observed in many children who are working as rag pickers (Gigengack, 2014).

Figure 4.5

Pie-Chart Showing Occupation Percentage Distribution (N=20)



6. Occupation of Mother of the Pre-adolescents:

Table 4.6

Distribution of Occupation of Mothers of the Pre-adolescents (N=20)

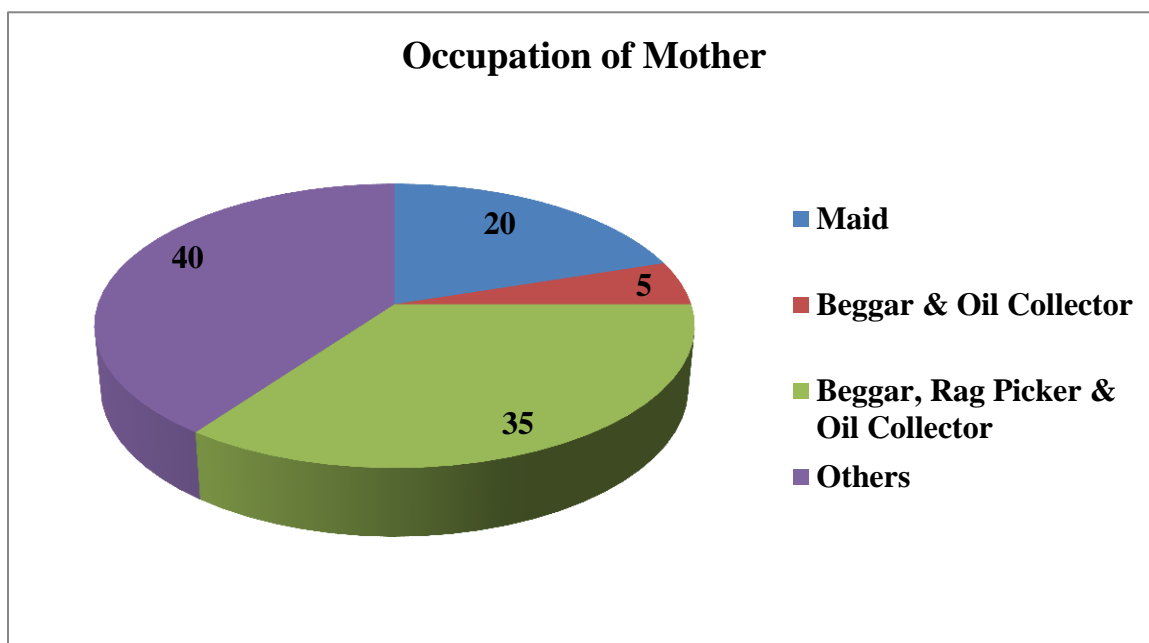
<i>Occupation of Mother</i>	<i>Number of Respondents</i>	<i>Percent</i>
Maid	4	20%
Beggar & oil-collector	1	5%

Beggar, rag picker & oil collector	7	35%
Others (orphans and unknown to children)	8	40%
Total	20	100%
<p>Note: Authors Estimation.</p> <p>Source: Primary Survey.</p>		

From Table 4.6, it can be interpreted that 40% of the mothers of inhalant abused children either do not work at all or their occupation is unknown and some of them work in various shops around the railway station as cleaner or dish washer. Some respondents either have lost their mother or dumped by their parents at early age. 35 % of the mothers are working as beggar, rag picker and oil collector where as 20% of them are working as maid servant who work in the houses nearby the railway stations. Only one mother (5%) is into begging and collects oil to sells it at cheap price nearby the railway track.

Figure 4.6

**Pie-Chart Showing Percentage Distribution on Occupation of Mothers of Children
(N=20)**



7. Occupation of Fathers of the Pre-adolescents:

Table 4.7

Distribution of Occupation of Fathers of the Pre-adolescents (N=20)

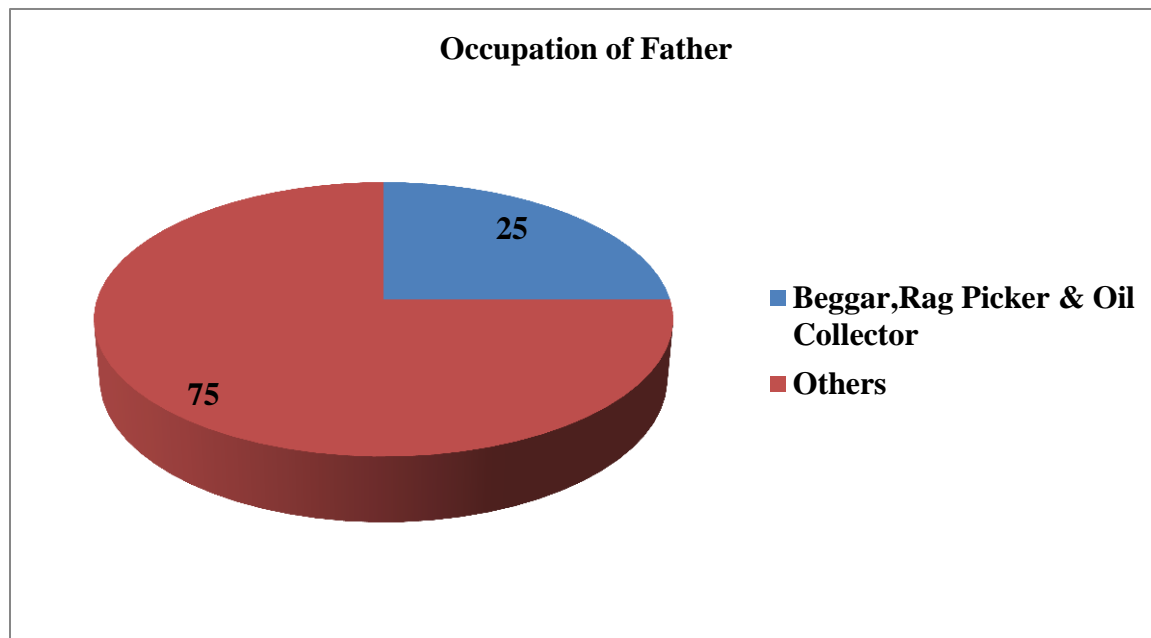
<i>Occupation of Father</i>	<i>Number of Respondent</i>	<i>Percent</i>
Beggar, rag picker & oil Collector	5	25%
Others(orphans and unknown to children)	15	75%

Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

From Table 4.7, it was observed that 75% of the children's fathers work as drain cleaner or as unskilled labour where as some of them reported that they have lost their father or dumped by father at an early age. 25% of fathers work as beggar, rag picker and oil collector.

Figure 4.7

**Pie-Chart Showing Percentage Distribution of Occupation of Father of Children
(N=20)**



8. Substance abuse in the Family of Pre-adolescent Inhalants:

Repeated exposure to substance abuse in the family creates a negative surrounding around the life of children and other members of the family. The parental substance abuse may lead to various issues at home and harm children's mental health.

Table 4.8

Distribution of Family History of Substance Abuse of Children (N=20)

<i>Family History of Substance abuse</i>	<i>Number of Respondent</i>	<i>Percent</i>
Alcoholism	14	70%
Abuse of Alcohol & other Substance	6	30%
Total	20	100%
<p>Note: Authors Estimation.</p> <p>Source: Primary Survey.</p>		

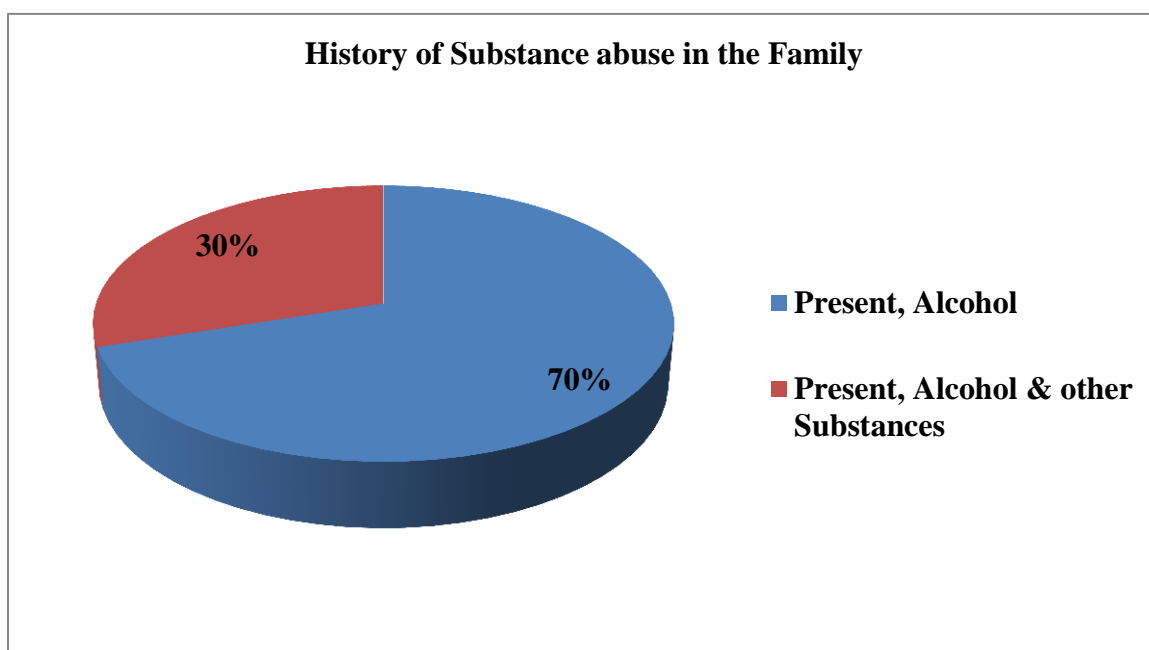
From Table 4.8, it was comprehended that 70% of the children had a family history of alcohol abuse (i.e. parents and siblings). 30% children had a family history of other substances like dendrite, whitener and injectable solutions in addition to alcohol. Similar kind of family history of alcoholism and substance abuse was also reported in earlier researches by Baydala (2010) and Verma et al. (2011).

In an interesting finding, Verma et al. (2011) established the presence of family alcohol abuse in the 40% of their study sample and 48% of tobacco abuse. A high level of substance abuse issue in parents of adolescents with inhalant use and a higher prevalence

of drug abuse among parents has been related to high rates of comparable behaviours in youngsters (Blatherwick, 1972). Parental habit had the foremost damaging effects on youngsters, the problem like psychological feature, behavioural, psychosocial, and emotional consequences were seen in youngsters which can comprise of long issues like impaired learning capacity; a propensity to develop a substance use disorder; adjustment issues, together with raised rates of divorce, violence, and also the want for management in relationships; as well as different mental disorders like depression, anxiety, and low self-esteem. Older youngsters are forced to simply accept adult responsibilities at an early age, particularly taking care of younger siblings by the time they reach the adolescence, drug experimentation might begin. The adult youngsters whose mother is an alcoholic with alcohol abuse disorders might exhibit signs of disappointing relationships and inability to manage finances, with a raised risk of substance use disorders (Center for Substance Abuse Treatment, 2004).

Figure 4.8

Pie-Chart Showing Percentage Distribution on History of Substance Abuse in the Family (N=20)



9. Income of Pre-adolescents:

Income of someone plays a vital role in shaping the economic conditions of a person and the whole family that successively is going to be the bad indicator on the downside posed to children. The income of parents also influences and shapes the life of the children.

Table 4.9

Distribution of Monthly Income of Children (N=20)

<i>Sl. No.</i>	<i>Monthly Income of Children (Rs.)</i>	<i>Number of Respondent</i>	<i>Percent</i>
1.	1500-2000	7	35%
2.	2000-6000	13	65%
3.	Total	20	100%

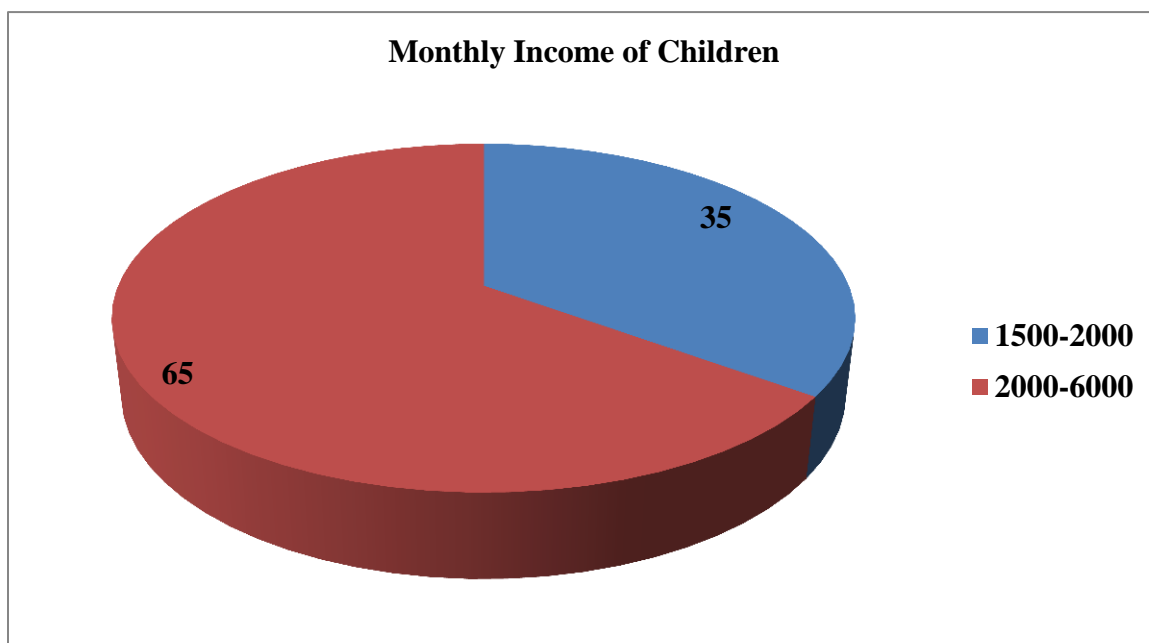
Note: Authors Estimation.

Source: Primary Survey.

From Table 4.9, it was found out that income of 65% of the children was around Rs. 2000-6000 per month and 35% of them had around Rs. 1500-2000 per month which is very low for daily survival of a person in the twenty-first century.

Figure 4.9

Pie-Chart Showing Percentage Distribution of Monthly Income of Children (N=20)



10. Family Income of Children:

Table 4.10

Distribution of Monthly Family Income (N=20)

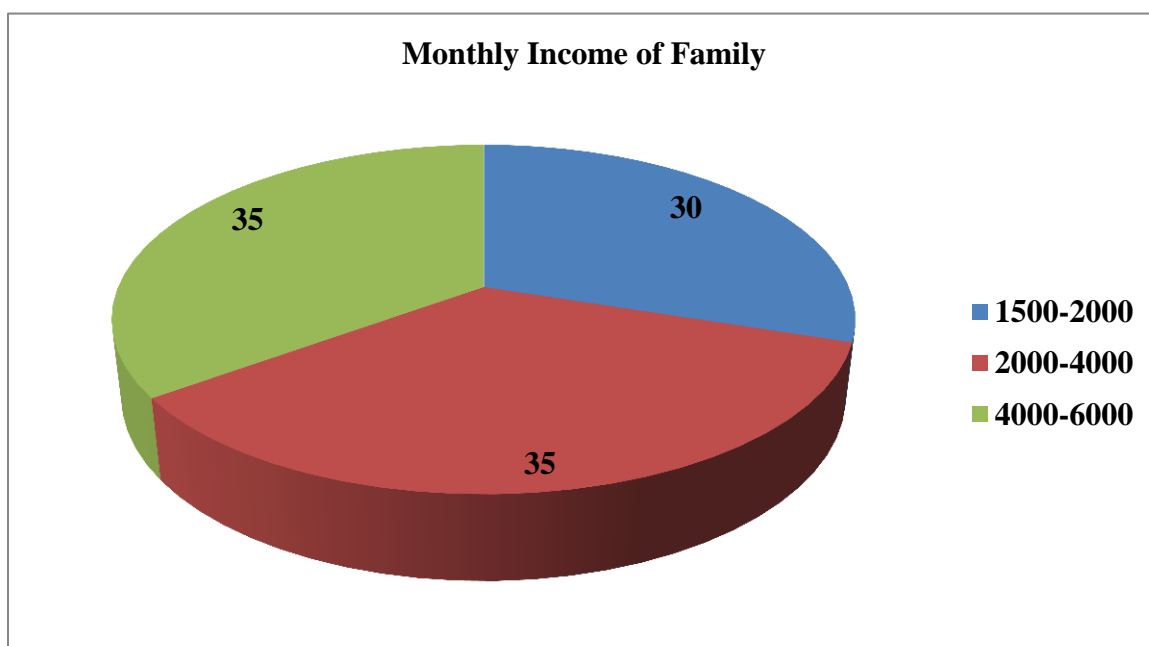
<i>Monthly Family Income (Rs.)</i>	<i>Number of Respondents</i>	<i>Percent</i>
1500-2000	6	30%
2000-4000	7	35%
4000-6000	7	35%

Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

From Table 4.10, the monthly family income is observed to be around Rs 4000-6000 for 35% of the respondents and for other 35%, it was found out to be around Rs 2000-4000 and the rest of the 30% of the children's family income was about Rs 1500-2000. The meagre monthly family cannot support the whole family and it is extremely difficult for them to manage a single meal and providing all the necessities to the family. The family members irrespective of the age, physical condition and health wise, all are required to contribute by whichever way of means and help. The involved works of the family members which is the source of income were entirely on a temporary basis.

Figure 4.10

Pie-Chart Showing Percentage Distribution of Monthly Income of Family (N=20)



11. Criminal Behaviour of Children:

Criminal behaviour is the outward reaction to harm others or property. The children usually lose touch with reality when high on inhalants and it may be difficult for them to take correct decisions or judgments and act arrogantly at times on small matters.

Table 4.11

Distribution of Criminal Behavior of Children (N=20)

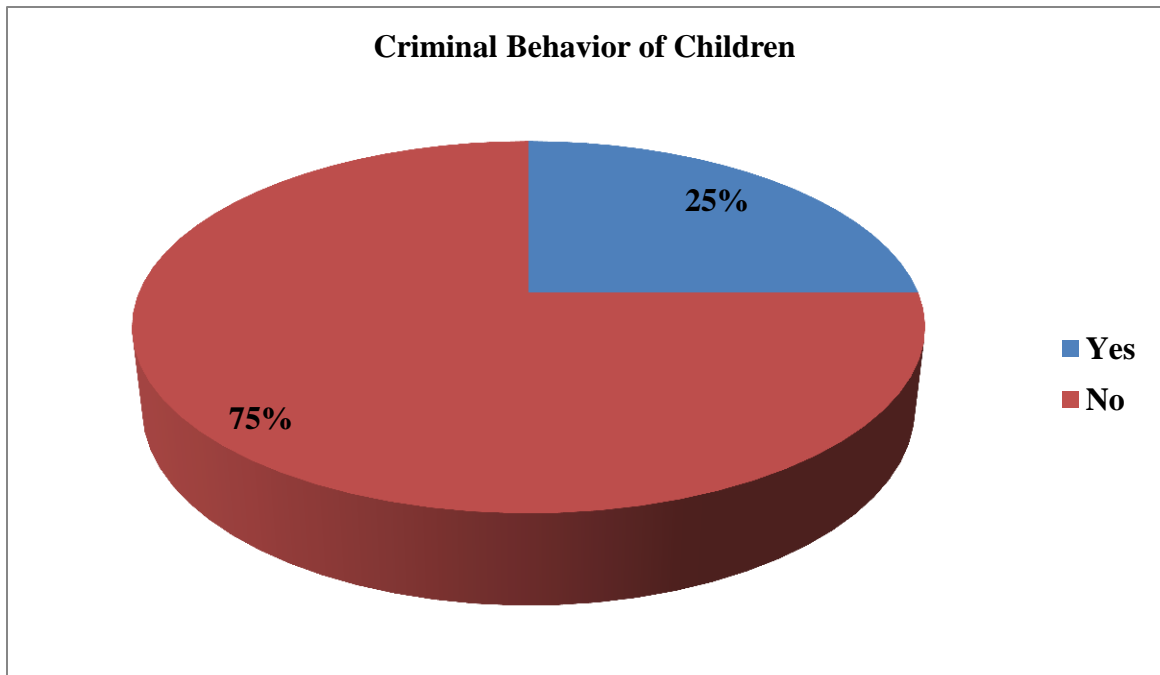
<i>Criminal Behavior of Children</i>	<i>Number of Respondent</i>	<i>Percent</i>
Yes	5	25%
No	15	75%
Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

From Table 4.11, it was apprehended that 75% of the children denied having committed any crime in the society but expressed being unhappy with some of the Police Personnel of the locality who always target them suspecting as criminals. 25% of the children accepted that they have committed some small crimes like stealing and snatching of valuables from the passerby and the passengers in the railway platform. They admitted causing troubles to the general people of the society and had spent sometimes in correction homes once or twice due to their wrong actions. The children who were in the early adolescent stage tend to commit such crimes.

In a study by Mackesy-Amiti and Fendrich (1999), a delinquent behavior was observed among the adolescents abusing inhalants.

Figure 4.11

Pie-Chart Showing Percentage Distribution on Criminal Behavior of Children



(N=20)

12. Distribution of Anti-Social Behaviour of Children:

Table 4.12

Distribution of Anti-Social Behaviour of Children (N=20)

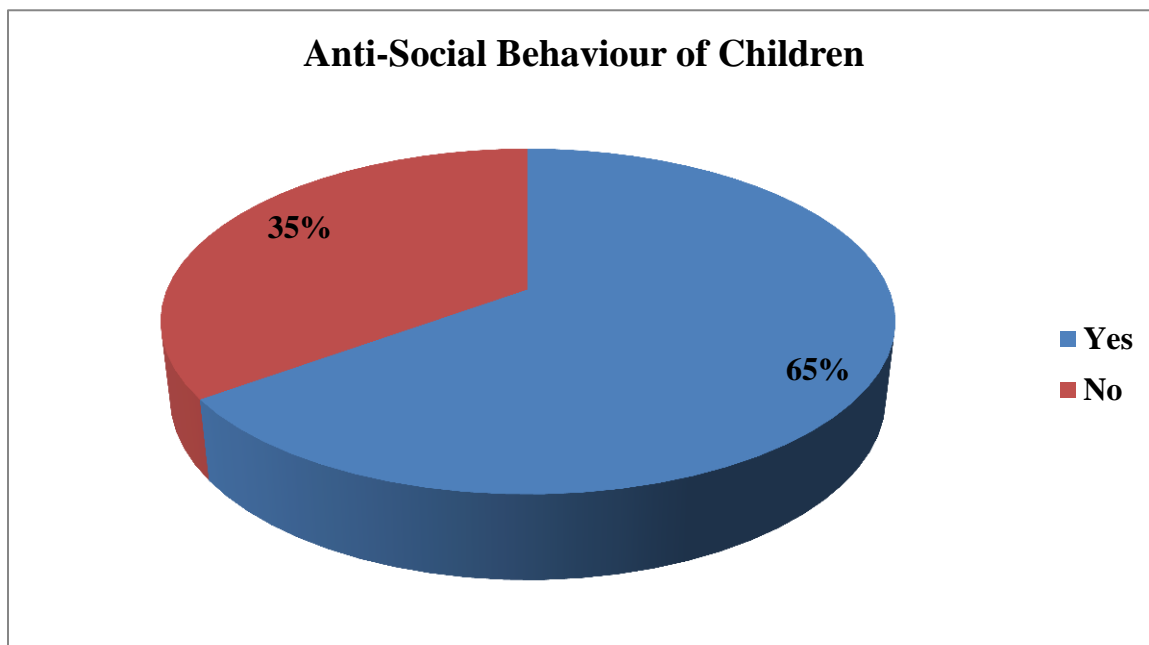
<i>Sl. No.</i>	<i>Anti-Social Behaviour</i>	<i>Number of Respondent</i>	<i>Percent</i>
1.	Yes	13	65%
2.	No	7	35%
Total		20	100%
Note: Authors Estimation.			
Source: Primary Survey.			

From Table 4.12, it was understood that some of the inhalant abusers always stay low when it comes to the behaviour in the society, afraid of being caught if they don't behave well and sent to the correction home where it is impossible to practice the use of dendrite. 65% of the children admitted to getting aggressive and rude sometimes with others; the desire to beat someone up and cutting hands in anger when not able to harm others, or involve in fights in the family. 35% of the children rejected of showing any kind of unwanted behaviour with others as they reported that they sniff dendrite and stay away from others who quarrel with other in the locality.

A greater tendency to antisocial attitude and behaviour, personal and familial dysfunction, and substance abuse were observed by Howard and Jenson (1999) in case of the delinquents using inhalant as compared to their non- inhalant-using counterparts.

Figure 4.12

**Pie-Chart Showing Percentage Distribution of Anti-Social Behaviour of Children
(N=20)**



4.2 Section II: Results of the Inhalant Risk Factor Checklist

Reason of Initiation of Inhalants:

The starting of any action requires stimulation from any character or reason. A child does not start taking inhalant without any reason, on the root level there is some reason always.

Table 4.13**Distribution of Reason of Initiation of Inhalants (N=20)**

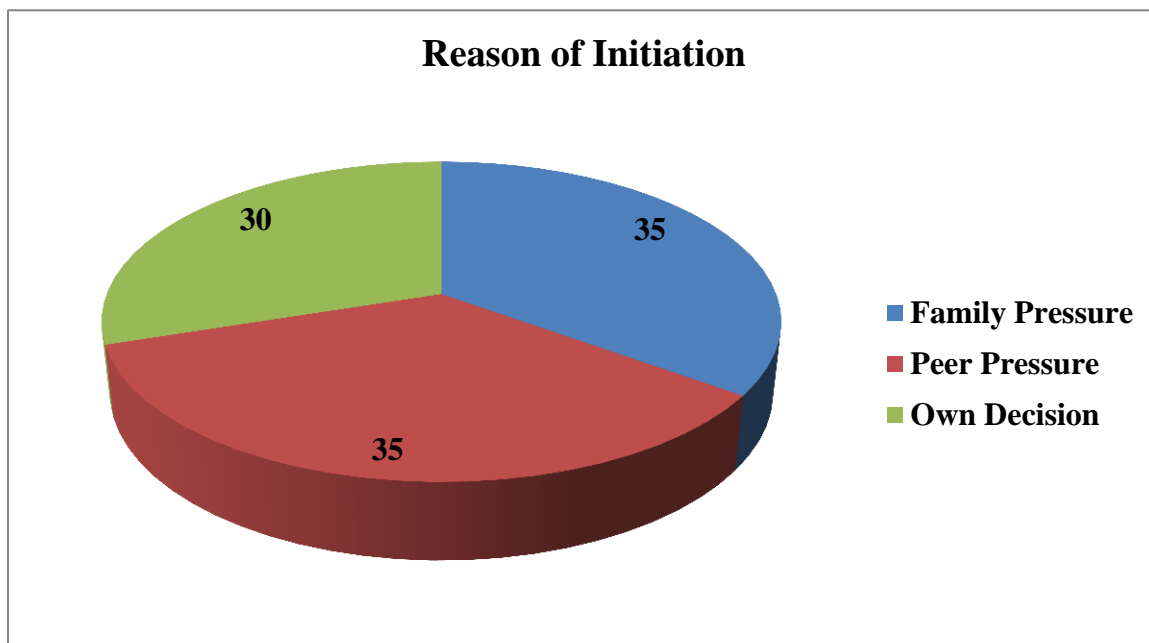
<i>Reason of Initiation</i>	<i>Number of Respondent</i>	<i>Percent</i>
Family Pressure	7	35%
Peer pressure	7	35%
Curiosity	6	30%
Total	20	100%
Note: Authors Estimation.		
Source: Primary Survey.		

From Table 4.13, it was observed that 35% of the children were influenced by their siblings and family members for initiation of inhalant intake and 35% of children were into dendrite abuse due to peer pressure, from friends and other elder children in the area who are under the influence of various substance abuses.

The experimental intake of the inhalants with friends who are already abusing slowly becomes habitual for the children (Verma et al., 2011), peer influence (especially inhalant use by peers and peer encouragement) additionally plays a crucial role in initiating and maintaining inhalant use (Oetting et al., 1988). The abuse of dendrite becomes habitual after a repeated exposure with a peer who inhales it (Kumar et al., 2008).

Figure 4.13

**Pie-Chart Showing Percentage Distribution of Reason for Initiation of Inhalants
(N=20)**



When these children were asked initially about the reasons for starting inhalants (based on checklist), they did not know the exact response as they were initially confused. Most of them don't want to stop as the craving for the inhalant persists and cannot stop the urge to use when peers are using it in front of them. Some of them even added that they don't feel good when they try to stop taking it for more than 6 hours in a day.

4.3 Section III: Case Vignette (Railway Police Personnel)

Mr. Dharmesh, Railway Police Force, New Jalpaiguri, West Bengal was interviewed for the study based on the questionnaire designed especially for the research purpose after getting his consent. He had a good experience of 21 years working in the Railway Police Force, West Bengal and has seen many children coming and going from the railway station. He reported that NGO is working for these inhalant children. The purpose and the importance of the study were explained to him and with the assurance that his response will be used only for study purpose were confided to him.

The following are the responses by him based on the questionnaire:

“Other children have a proper guardian; they have a social image which is not present in case of the street children who are in to inhalants. No one is there to look after them; they generally come from out of the town by train from different parts of state and country. Since they don’t have a guardian to guide them they have the tendency to fall for the company of people who are already into bad habits and easily get influenced by them. They start taking the substances like dendrite out of hunger which is generally informed by the elders of the platform who are into it. Here elders don’t mean by age but by the duration of how long they had been staying in the station. They mostly survive by doing small/petty jobs like sweeping in the train/platform and the small amount of money they get from this works which are mostly used up by them wrongly in buying dendrite. I always suggest the street/platform children not to take the dendrite as it is bad for health by explaining about its dangers and sometimes they get scolded. Sometimes few children listen to them and stop taking it at an early stage. They refer all the children to the NGO whoever is found new in the station and also those who are seen using the dendrite. Many NGO setup is there in almost all the stations of West Bengal. RPF has helped them a lot in bringing it up for intervention. The organization has a social worker and others who teach these children some art, how to read, write and give some morals and values in the form of the story. There are the kids who sniff dendrite and steal money belongings from passengers. Other than that, these children are not involved in any big crime. Many children work in the early morning when the trains reach; they sweep the bogies and platform. Most of them go to Muktangan and stay there till 3:00 pm.”

“The child doesn’t have much opportunity to watch TV or to be shown by any of the media personality, they are taken by the people of the organization to cinema hall sometimes or whenever they go nearby the television shops they take time to loiter around just to watch. But children were never influenced by the negative role/character depicted in the cinemas. There are many shops who sell dendrites starting from stationary shops to betel-nut shops and they are aware that children abuse these dendrites. Most of the children go to the betel nut shop to buy a dendrite rather than to

stationary shop as they don't sell it to them and they know the reason behind it. The paan shopkeepers sell them easily as it is a source of extra income to them. The children go to buy dendrite as far as the 2 to 3 stations away if they don't get it in the main station or get it from the elder child who mostly supplies other substances too. But there is seen the difference in what substance a younger child takes from the elder ones. 50% of the children are without guardian. Some children are those who come from nearby slum areas having either the parents or single parent. Some of the children don't have both the parents and elders of the family have dumped them or the parents got separated and remarried someone else without looking back towards their children. The parents are poor, jobless and survive by doing petty jobs like daily wager, labour, dishwasher or small roadside eating stalls. No one is there to look after the child or to be taken care of. Their family members have also a history of substance abuse like alcohol, tobacco, dendrite and other drugs. It will be unwise and wrong to say that the habit of substance abuse is continuing from many generations. Their parents bad habit always somewhat influence them adding up to the circumstances, conditions and situations they have to survive the harsh reality of their life. There is one child whose family is into drugs and alcohol but he was never seen taking any substance. The children were living in the station platform since long they keep roaming from one station to another for a short period of time, they have made friends among themselves and so they always come and stay back. Their habit is unchanged, with a slight difference of being aware of consequences of the substance abuse in the long run. Twenty to twenty five children are visible regularly who have not changed their area since long and they are addicted to dendrite. The children have categorized themselves the ones who are a little bit older of age, that is, around 13-15 year. Drinking of alcohol is considered by the younger ones as bad habit. The younger children are the ones who inhale dendrite. They don't mingle with each other much. One tube dendrite costs around Rs 50 and the children mostly buy one tube per day and sometimes two tubes in a day. The children who sniff dendrite are not into drinking alcohol. The children who are in early 16 years, or have crossed 18 years and more are hard to control as they have stopped coming to the NGO and they create a lot of problems such as quarrelling with friends or others, stealing things and

they sometimes ask other younger child also to accompany him. If these children are sent to any institution always try to run away as it is very difficult to maintain them. Many children have stopped going to the nearby organizations also as they have stopped serving them lunch in the daytime and stopped giving them night shelter some reason.”

From the case vignette of the police personnel, it can be observed that the pre-adolescents are highly influenced by the elders of the family and friends who are already into the habit of inhalant abuse which is similar to the earlier research findings by Verma et al. (2011), Oetting et al. (1988) and Kumar et al. (2008). The slow encouragement for the inhalant use by peers raises the curiosity level of the younger child after trying it for once or twice and gradually become habitual. The minimal price range and easy availability of the product is one of the other main reasons for initiation of inhalant abuse which was observed by Lacy and Ditzler (2007). Disturbances at home, lack of proper support of survival, poverty and hunger are some of the main reasons which compel the pre-adolescent to follow the footsteps of other inhalant users without thinking twice. It is believed by many users that it makes everybody forget hunger and pain as observed and similarly found out in other related studies by Baydala (2010), Sakai et al. (2004) and Medina-Mora (2008). A high prevalence of the history of substance abuse in the family was reported with the violence at home. Some of the grown up children especially 16-18 years of age and above who are still abusing inhalants are difficult to control as they usually do not follow the rules and always have the habit of causing troubles all the time. Other studies (Howard et al., 2010; Sakai et al., 2004; Sakai et al., 2006) found out a similar anti-social behaviour and other behaviour disorders among prolonged inhalant users.

4.4 Section IV: Content Analysis of Responses from the in-depth interview with Pre-adolescent children, NGO Counsellors and Social Workers

The in-depth interview was carried out with 20 male pre-adolescent children who meet the criteria of DSM-5 and ICD-10 of inhalant abuse and the NGO Counsellor and Social Worker were personally interviewed, the focus was mainly to understand what they have observed in the inhalant abuser, behaviour and probable circumstances which led to the

initiation of abuse and physical and psychological consequences related to it. The approaching measures were taken by the Counsellors and Social Workers to stop the initiation of inhalant use in other children and those who are already in it, the procedures followed if they are going through the physical and psychological problems. The in-depth interview was conducted with the two Counsellors having academic background of Master in Psychology; and two Social Workers with academic background of Masters in Social work. They look into many different aspects of a problem of people of the community, from the individual to the societal and from the psychological aspects to the politics of these two areas i.e. Guwahati, Assam and Jalpaiguri, West Bengal. These psychologists and social workers have the experience of handling the children who are into anti-social activities as well as substance abuse. They were working in the N.G.O. sectors for over 2-3 years with experience in handling children who have been neglected by the parents and society. They have knowledge of what situations compel these children to fall into bad habits like substance abuse, anti-social and criminal behaviours which give rise to various physical and psychological problems.

Primary and Sub-themes of the Pre-adolestants' Responses (Causes and Consequences of Inhalation)

A. Causes of Inhalant Abuse by Pre-adolestants:

Table: 4.14

Causes of Pre-adolescent Inhalant Abuse (N=20)

<i>Sl. No.</i>	<i>Primary Theme</i>	<i>Sub-themes</i>	<i>Interpretation of the Sub-themes</i>
1.	Psychological Causes	Identity Crisis	Insecure feeling and lack of confidence, failure to find himself and resolve issues of what he wants and who he is. The desire to be known by everyone to prove to the world. They try to portray

			other person and wish to become one whom they idolize such as the character of Hindi movies.
		Stress and anxiety	Anxiety is the outcome of different unresolved stresses of life. Anxious is being afraid of danger, misfortunes and excessively nervous and presence of extreme uneasiness of mind. Children are afraid of their future and do not come out of the situation. The children are stressed out about their living style and poverty, the constant fear of having to sleep without a meal is what they despise. The stress leads to the state of anxious and they are unable to take decision or work.
		Depressed feeling	The disappointment and feeling of helplessness after a bad experience. The children feel sad due to poverty they are facing and are afraid they will never be able to come out of this poor economic condition. These thoughts increase their negative feelings towards life.
		Feeling of loneliness	Loneliness can clog a mind but loneliness need not be necessarily

			being alone. Neglected by the family members, children born unwanted are left behind by the parents for remarriage to another person. They used to be brought up by other people of slum area. These children feel alone and helpless compelling them to take another route of inhalant use for joy and happiness.
		Hopelessness	The state of mind where all the hopes are lost. The child feels that the future is dark for them as they are not accepted by the society and also they cannot live life like kids of rich people. This thought generates a feeling of hopelessness.
		Pleasure	The worthy feeling of happiness with satisfaction. Many children inhale to get pleasure feeling since they were told by their elderly friends.
		Curiosity/experimenting	The thought to explore, investigate and learn more about anything. The child gets curious about inhalants after observing other inhalant friends. Then they have a constant urge to try to inhale. The

			experimentation with the inhalant for once or twice increases his craving for another trial which gradually becomes a habit.
		Boredom	An emotional state of mind when a person has nothing to do. Dissatisfaction with life, being restless all the time, etc. makes the child to use inhalant. Since they do not go to school and don't have any work to do most of the time, they inhale. At home also, they don't have access to any source of entertainment like television where they could watch a movie to spend their time.
2.	Socio- cultural Causes	Faulty family environment	A dysfunctional family with conflicts, misconducts and child abuse. Regular rage by parents towards children for no reason. The verbal abuse as well as physical abuse leaves behind a scar which compels the children to fall for a bad company to take a path in the wrong direction.
		Lack of parental guidance	On the absence of parental guidance, many children tend to act according to their wish which may lead to severe problems.

			<p>Parents are least bothered about children's need and minimal wants of life. The children have to start working from the young age. Negligence creates a sense of guilt, insecurity in the children's mind. The children have to follow the trend of the family, parental desires and wishes which force them to run away from home and take a wrong step in life.</p>
		Easy availability of inhalants	<p>No restrictions in the selling of inhalants (dendrite, eraz-ex, etc.). The inhalants are sold to the children without any restrictions by the govt. In most of the small paan shops and stationary shops, it is available nearby the railway station, where these pre-adolescent children reside.</p>
		Easy to carry and use the inhalant	<p>The inhalants are easy to be carried anywhere and by any means. The main way of carrying it is on a piece of cloth or handkerchief, the other being the small polythene.</p>

		Easy Accessibility	In most of the small <i>paan</i> shops and stationary shops, it is available where these pre-adolescent children reside. They can easily access inhalant even in odd hours of night as these shops near railway station are opened all the time.
		Social acceptance	Inhalant abuse is increasing among this group of children because there is no social taboo attached to it and people in the society as well as parents have accepted that it is not a bad habit. Therefore, these children openly sniff dendrites without any fear.
		Bullied by elderly addict	Superiority feeling is an exaggeration of being better than others. The friend of older age trying to control the lives of children by manipulating the reality and facts creating confusion making them lose tracks. The siblings discourage the children and asked them to follow their path. If they refuse they are meted with violence. The elder children always try to show off that what they are doing is correct

			and the juniors should follow them.
		Alcoholic parents	Addiction in family influences the children. It impacts the stability of the strength of the family. Parents addicted to alcohol or other substance abuse, some are addicted to both, stay under the influence of it most of the time. Children also follow the path of their parents.
		Inhaling culture	In the community, there is repeated exposure to children abusing inhalants. These children did not know initially that it is a bad habit.
		Self-medicating	Advised by elder siblings. They inhale it to induce sleep whenever they feel they have difficulty in sleeping.
		Legality	The inhalant is legal in markets and sold openly by the shopkeepers. Children do not have any fear of legal punishment. Even police personnel cannot take any action on these shopkeepers as selling of dendrites is legal.
		Modeling siblings	They want to follow the footsteps

		behaviour	of their elder siblings as they show off to them.
		To suppress hunger	Misinformation by elders about the effects of the inhalants that it suppresses hunger.
		To overcome physical pain	These children used to be engaged in some of the risky job for earning and in that process, their immature muscle pains. To overcome the pain, they start taking inhalants on other's advice.
3.	Economic Causes	Cheap price	The prices of the inhalants are cheaper (Rs.30- Rs.50 per bottle) in comparison to the other substance. It becomes an attraction for the pre-adolescent children as they can easily afford to purchase it.
		Earning source of children	Since earning of these children about Rs.150-Rs.200 per day, they do not face any financial problem for procuring of inhalants from the shop.

From the Table 4.14, it was observed that after the content analysis, three types of primary themes were identified (psychological, socio-cultural and economic) along with subthemes which influence them to use inhalant as per the response of the 20 pre-adolescent children.

The main identified causes of the inhalant abuse among the pre-adolescents are psychological causes, socio-cultural causes and economic causes. The children face a severe identity crisis in the society; they are stressed and afraid for their future making them sad. The children are curious about the outcome of the inhalant use how would be the feeling. The abuses of the inhalant begin on the experimental basis. They procure the inhalant easily as it is legal and inhale it without being afraid of parents and other people. Mainly because they are neglected and dumped by parents or least bothered about their child. The children are affected both mentally and physically by the poor condition of the house which harms them to develop proportionately. There is a feeling of insecurity among the siblings which is prominent in the habit of bullying the younger child of the family. The bullying of other children outside of the family was observed especially when a respective territory of work is disturbed by another child. The children reported of being misinformed about the consequences of inhalant abuse that it stops “hunger”, “it will give a state of numbness where hunger and pain are forgotten” and “everybody inhales it”. Pre-adolescents gave a strong response to parents being alcoholic or other substance abuse and exposure to both verbal and physical abuse when they are drunk or high on drugs. From the interview of these children, it was clear that there is lack of awareness about various rights of children.

These children are affected by domestic violence, negligence by parents, the remarriage of parents after dumping them alone to survive alone, and so on. The prevalence of substance abuse in the family and among friends affects them to fall in the trap of the inhalant abuse. They are always misunderstood by the common men as they are misguided by the elder children to commit some antisocial behaviour. The main motivators of the children for inhalant use are the family member and peer groups.

In the related study by Medina-Mora et al. (2008) it was found out that the poverty, domestic violence at home and children who had lost their parents at a young age affects the children, boosting the inhalants use among them. In another study, Lacy and Ditzler (2007) observed that the low price of the product of inhalant and the availability makes it popular for abuse. Anderson (2003) in a study brought to light the lack of awareness

about the consequences of the inhalant abuse in parents and the wrong interpretation to their children. The main reason for early initiation of inhalant abuse is a social acceptability and easy availability of them was observed by Bardhan et al. (2015).

The high rise of inhalant abuse among the children of younger ages from poor family was observed in the studies by Benegal et al. (1998) and Seth et al. (2005). Reddy et al. (2014) and Gupta et al. (2014) in their studies found out that the common reasons of the inhalant abuse are peer pressure, history of substance abuse in the family and curiosity due to repeated exposure to it. In another study by Kumar et al. (2008) the children who are inhaling had a family member who had a habit of substance abuse and they cannot keep a relationship on good terms.

B. Consequences of Inhalant Abuse by Pre-adolescents:

Table 4.15

Consequences of Inhalant Abuse (N=20)

<i>Sl. No.</i>	<i>Primary Theme</i>	<i>Subthemes</i>	<i>Interpretation of the Subthemes</i>
1.	Psychological consequences	Cognitive impairment	The lack the thinking and judgmental power, problem in remembering things and unable to take appropriate decisions of life.
		Irritable	They get easily annoyed over petty issues, due to inability to think properly and judge about the course of action.
		Aggressive	Aggression is the outward action due to the frustration inside mind with the intention to

			harm other; it may be either in reaction or in absence of stimulation. The child tends to become aggressive after repeated exposure to the violence at home or by other people in the society as well as continuous use of inhalants.
		Pessimistic and negative thoughts about self and others.	People should be careful not to cause any trouble which may be a responsible for reason of the other person physical and mental disturbance. A common person does not accept them as a normal child and does not come up for help if they are in trouble but instead blame them for their situation. They are referred as dirty, thief, gang member, and full of negativity.
		Depressive tendencies	The child complaints of unwillingness to eat, work or to play or talk with friends. The daily routine changes and he keeps missing the jobs which he is supposed to do as he completely loses interest in everything because of continuous use of inhalants.

		Suicidal ideation	Suicidal ideation is the preoccupied feeling of death or desire to kill oneself. The child sometimes has a suicidal ideation but he does not know why he has developed this feeling.
2.	Physical consequences	Dizziness	Dizziness is the spinning sensation of the surrounding area. The problem of dizziness is the inhalant abuse and weakness due to lack of proper meal.
		Burning sensation in oropharynx part of throat	The sensation of burning occurs due to the mild chemical reaction in the throat in case of the inhalant abuser.
		Chest-pain	The chemicals in the inhalant induce irregular and rapid heart rhythm; the inhalant abuser refers it to be experiencing a chest pain.
		Lack of appetite	The inhalant abuser experiences the suppression of hunger which is the secondary effects of the chemicals present in the inhalant which alters the normal functioning of the brain.

		Fatigue	Fatigue is the indistinct tiredness experienced by the inhalant abuser. They mainly suffer from mental fatigue.
		Gnawing Headache	The children experience a headache and drowsy after they go through the phase of excitement.
		Vomiting	When the children take overdose inhalant, they vomit as the body could not take too much of chemical and they start blabbering to themselves.
		Watery red eyes	The eyes of the inhalant abuser are always red and watery due to strong chemicals, present in the inhalant which causes irritation and burning sensation.
		Lack of sexual desire	Because of long use of inhalants, children reported that they do not have any sexual desire.
3.	Socio-cultural consequences	Risk-taking behaviour	The inhalant user love to take a risk and show off by hurriedly jumping from a moving train or crossing railway tracks to go to another platform. They also do jobs which has a great risk to

			life. When then used to be engaged in rag picking work after using inhalant, sometimes hospital use needles prick their hand.
		Isolation from family	The inhalant abuser is isolated from the family as they cannot take care of them. It is difficult for the family also to feed their grownup child.
		Risk of Physical abuse	There is a high risk that the inhalant user will get abused verbally and physically abused by the people in the society for his inappropriate behaviour. They yell, insult, using of filthy language, beat them up, and isolate them.
4.	Economic consequences	Inability to earn	The repeated exposure to inhalants makes them weak physically as a result of which they skip doing any job quite often. They also lack concentration and there is also forgetfulness caused by regular intake of inhalant.
5	Legal consequences	Anti-social behaviour	The children consciously or unconsciously do some of the

			unacceptable behaviours in the society. They exhibit this behaviour to buy food and inhalants. They are least bothered about other people of society and consequence of their behaviour.
		Fear of being caught by police	The children have great a fear of being caught by the police personnel while inhaling. They are afraid to be caught and sent to the correction homes from the railway station.

From Table 4.15, it was observed that after the content analysis, 5 types of primary themes were identified along with subthemes which are the consequences of inhalant abuse as per the response of the 20 pre-adolescent children, NGO Counsellors and Social workers.

These five types of consequences are psychological consequences, physical consequences, socio-cultural consequences, economic consequences and legal consequences. The child has poor memory power, inability to think fairly and lacks judgmental power. Many incidences of being aggressive, quarrelling and fighting with another child for a share of the meagre quantity of inhalant were shared by the pre-adolescents. The pre-adolescents were unable to concentrate in works as they constantly duel over inhalant intake and how to buy it next. Feeling of anxiousness and suicidal ideation was also informed by them. Many children were exposed to the anti-social unknowingly by the elders due to lack of proper knowledge and guidance about many norms of the society.

The child using inhalants experience feeling of dizziness, burning sensation of oropharynx part of the throat, many children reported of teary eyes caused by burning sensation, they complained of experiencing chest pain, fatigue with gnawing headache because of which sometimes they vomit also. They expressed that they don't feel hungry after inhaling but feel drowsy and sleepy.

The children have a risk of being isolated by the family for inhaling, they love taking a risk like jumping from a moving train as usually they sweep in train and have a high tendency of getting abused by the public for showing unacceptable behaviour. They were unable to earn as they became very weak both cognitively and physically after the chronic use of inhalants. They have a constant fear of being caught by the police personnel and sent to the correction home for inhaling and anti-social behaviour.

According to the "Signs of Inhalant Use" (1997), the physical signs of inhalant abuse are red eyes, runny nose or eyes, stains in the cloth or body, breath smell of chemical odour, abnormal spots and sores around the mouth, they complain of the low level of appetite and feel nauseated. Psychological signs are they get excited easily, become anxious and irritable and look drunk. In other studies, the presence of severe social and emotional deprivation with a high chance of being depressed was found by Zur and Yule (1990).

In the related studies by Mizuhara et al. (2010) and Dinwiddie (1994) a serious threat to health both mentally and physically was found out. In a study by Okudaira et al. (1996), it became clear that the children with early initiation of inhalant cause severe psychological problems. In a similar study by Dhoble et al. (2013), the signs of inhalant use are burning in eyes and oropharynx, lightheadedness, memory loss, drowsiness, slurred speech, irritability, dreamlike state, loss of appetite, giddiness, nausea, unconsciousness and delirium. It was accompanied by psychological craving, irritability, restlessness, insomnia, anhedonia, attention and concentration problem, psychomotor retardation, the heaviness of head, tingling sensation, tremors and body pain.

The NGO Counsellors and Social workers additionally pointed out some of the necessary approaches and preventive measures required to be taken on an urgent basis to help to

change these pre-adolescents and save them from the further harm. If proper treatment is provided after motivating them and if they are accepted by their family members, then they may start a new drug free life. They need to be accepted by the society without any type of negative comments. Proper awareness about the child rights among both the children and the parents is necessary for preventing them from any substance use. Awareness about the bad effect of substance abuse by providing appropriate information regarding the harmful effects of the inhalants to children and family members will certainly change their mind set and will keep them away from various substances. The Children should be educated about the importance of study and how they can be a better citizen of the society.

CHAPTER V

SUMMARY, CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

5.1 BACKGROUND

Substance abuse is the consumption of any illicit substances such as alcohol, tobacco, inhalant and prescription drugs, as well as illicit substances such as heroin, cocaine, etc. in the long run it affects the physical and mental health of the individual. Addiction leads to the adverse effects of health, both mentally and physically. Substance abuse is defined by World Health Organization (WHO) as “persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice” (WHO, 1994). The addiction to substance use is increasing, present in every age but the most critical age for initiation of inhalant abuse is pre-adolescent. The early exposure to the addictive substances has increased the risk of addiction to those substances.

The inhalant is a volatile substance that produces toxic gases that can be inhaled to induce psycho-active or mind-altering effects (DSM-5, 2013), it mixes directly with blood and effects brain and other structures of the central nervous system. Abuse of inhalant amongst the pre-adolescents is famous because it is easily accessible found in household and commercial products (e.g., glues, correction fluid, paint products, petrol, lighter fuels and aerosols), cheap, legal and less doubtful.

The pre-adolescent are motivated to learn because of their natural curiosity and their desire to understand more about themselves, their bodies, their world and the influence that different things in the world have on them. The addiction to substance use is increasing, present in every age but the most critical age for initiation of inhalant abuse is pre-adolescent. Abusing inhalant gives an ecstatic state of mind leading to addiction. A dire consequence comprises of sudden sniffing death syndrome, asphyxia and serious damages like falls, burns, frostbite, etc. Children who have been using inhalant for the

longer period of time can suffer from cardiac damage as well renal, hepatic and neurologic systems.

When the person fully appreciates other people, from positive relationships, realize their full potential, perform work productively, make meaningful contributions to the community, can cope with their communities and our environment he/she is mentally well. Psychosocial refers to psychological functioning, social functioning as well as the support of the surroundings.

Most of the Indian youth inhalant user shows the decline of use as they reach senior year only 4 percent keeps using it seriously. The people with poor economic background are the most prone to the inhalant abuse the inhalant user get involved in the various gangs of the area and exhibits unacceptable behaviour. The male children are the ones who are more vulnerable to inhalant use than girls of the same age. Peer pressure in both sexes was observed in many of the studies.

5.2 SIGNIFICANCE OF THE STUDY

The children sometimes losses track of their life and get influenced by the bad habits like smoking, sniffing inhalants, substance abuse, drugs and drinking alcohol. The impacts of the addiction are chronic health problems, early and unnatural death and involvement in criminal activities like theft. The absence of large-scale study comprising of different areas of India and the comparison to find out the definite reason and concrete findings was lacking behind. In the studies related to the Northeastern states, it was prominent that the entire time one or the other state was left behind as with the passing years a rise in the inhalant use was observed. For future, the proper documentation after a thorough study of the inhalant user both in the medical setup as well as the jurisdiction and record of an aggregate number about how many children are actually abusing inhalants is a must.

In the light of the aspects considered above, it would be a matter of interest and great research relevance to explore the prevalence, causes and consequences of inhalant abuse among children.

5.3 OBJECTIVES

The main objectives of the research were:

1. To explore the Psycho-social and cultural determinants of inhalant abuse among pre-adolescents.
2. To explore the psychological consequences of inhalant abuse among pre-adolescents.

5.4 METHOD

The exploratory research design was adopted because of the character of the study. Exploratory research provides insights into and comprehension of a problem or scenario. In order to recognize the inhalant abuser in an area, at first one or two children were identified who were used as *Gate-keepers* and to identify different cases of inhalant use/abuse among pre-adolescents of the community. They were explained about the purpose of the study and briefed about how to approach the participants for interviewing them. All the participants assured about maintenance of confidentiality and written consent was taken from them for their participation.

A community-based survey with face to face in-depth-interviews was carried out among ten pre-adolescent children of New Jalpaiguri (West Bengal) and ten pre-adolescent children of Guwahati (Assam). In-depth interview was also carried out with social workers and counsellors of NGO who are working in these areas for the welfare of these children and police personnel of the area police station of Guwahati and New Jalpaiguri.

The exploratory research study was carried out among the 20 children who fulfil the criteria of Diagnostic and Statistical Manual of Mental Disorders-5 (2013) of inhalant abuse and also among 2 NGO counsellors, NGO Social worker and Police personnel of the respective areas.

The first phase of data collection was done at Guwahati, Assam at Athgaon and Fatasil Harijan Colony. The second phase of data collection was done at New Jalpaiguri, West Bengal at Siliguri Junction Area and Sraban Nagar Slum area. Order and nature of

questions varied according to the respondents and their life experiences. Each participant was interviewed for more than 30 minutes, depending on the flow.

5.5 PILOT STUDY

A pilot study was done on few children initially in both the areas Guwahati, Assam and New Jalpaiguri, West Bengal in order to understand the prevalence of inhalant use in the community and what inhalant is commonly used in the area. Except this, the other purpose was to finalize the developed questionnaires for the interview and to plan for the process of data collection.

A pilot study was carried out in the month of January 2017 in Guwahati (Assam) and New Jalpaiguri (West Bengal). During the pilot study one NGO, each situated at Guwahati and New Jalpaiguri were approached and they guided to the respective areas. During the pilot study, one 9 years old male child who fulfils the criteria of the inhalant dependence of DSM-5 and ICD-10 each from Guwahati, Assam and Jalpaiguri, West Bengal was selected to be a Gatekeeper for the study.

The prevalence of inhalant intake mainly among pre-adolescents was observed along with the causative factors and consequences of inhalant use among these children. After dendrite intake, the respondent feels lack of appetite, aggressive, dizziness, dryness of mouth, experience the burning sensation for some time inside the oropharynx and whole body cramps still the respondent enjoys it.

5.6 SAMPLE

1. 20 Pre-adolescent children abusing Inhalants participated in the study, 2 NGO Counsellors, 2 NGO Social Workers and 2 Police Personnel.

Sample Inclusion Criteria:

1. Pre-adolescent male of age group between 8-13 years of age
2. Pre-adolescents who are willing to participate

3. Pre-adolescents who fulfil the ICD 10 criteria of inhalant dependence
4. Pre-adolescents who are school dropouts
5. Pre-adolescents who are only inhaling substance (not any other substance)

Sample Exclusion Criteria:

1. Girls
2. School Going Children
3. Other age groups
4. Pre-adolescents having any major physical/mental disorder/s

Ethical consideration:

1. Informed consent of the interviewee.
2. Voluntary participation and withdrawal from the study.
3. Ensuring anonymity and confidentiality of personal information.
4. No risk/ harm to the participants.

5.7 TOOLS USED

1. *Socio-Demographic Data-sheet:* It is semi-structured performa (*See Appendix I*). It contains information about socio-demographic variables like age, sex, education, religion, occupation, etc. and clinical details like type, duration, methods of intake, diagnosis (according to ICD 10 criteria), etc.

2. *An Inhalant Risk Factor Checklist* was prepared to understand the characteristics and attitudes toward the inhalant use.

3. *The questions asked during In-depth Interview:* The main focus of the questionnaire (*See Appendix III*) was to know the prevalence of the inhalant abuse among the pre-

adolescent children, the psycho-social causes behind the use of the inhalants, the cultural causes and the psychological problems being faced by the children after the prolonged use of the inhalant. Two sets of the questionnaire were used one for the pre-adolescent children and second for the Non-Government Organization (counsellors and social workers) and the police personnel having experience of dealing with the children who are into inhalant abuse.

5.8 DATA ANALYSIS

Qualitative data were analyzed by using content analysis and case vignette. The information gathered were analyzed into two broad phases-first descriptive and second interpretative.

5.9 MAJOR FINDINGS

The Pre-adolescents, NGO Counsellor and Social worker and Police Personnel were interviewed to find out the prevalence of the inhalant abuse, the accompanying causes leading the inhalant abuse and the consequences related to the long-term use of inhalant in both the area Guwahati, Assam and Jalpaiguri, West Bengal. The comparisons of the information gathered were not possible due to the unavailability of the secondary data. The main findings of the study after interviewing the Pre-adolescents, NGO Counsellor and Social worker and Police Personnel are as follows:

A. Prevalence of Inhalant Abuse

The rate of prevalence as per reported by the Pre-adolescents, NGO Counsellor and Social worker and Police Personnel are as follows:

- The pre-adolescents, NGO Counsellors and Social workers and Police Personnel reported that the prevalence is high among the street children who roam around the streets, poor, and homeless are a most vulnerable group in the society to an inhalant.
- The huge popularity of the inhalant was informed by pre-adolescents, NGO Counsellor and Social worker and Police personnel especially among pre-adolescent

children of ages 10 years (25%), 12 years (25%) and 13 years (25%) followed by 11 years (15%), 8 years (5%) and 9 years (5%).

- They informed that most of the inhalant users were school dropouts.
- The pre-adolescents, NGO Counsellor and Social worker and Police Personnel reported that the pre-adolescents belonging to the nuclear family are more vulnerable to inhalant use than others.
- In comparison to other religion, the presence of the inhalant use among the Hindu religion has been observed more.
- The high prevalence the inhalant abuse was reported in the pre-adolescents who work as a beggar, ragpicker and oil collector is more into due to repeated exposure.
- Additionally, the children with parents working as beggar, ragpicker and oil collector are reported to have been using inhalants.
- The history of family substance abuse in pre-adolescent abusing inhalant was reported by the pre-adolescents, NGO Counsellors and Social workers and Police Personnel.
- Information of the pre-adolescents using inhalants earn about Rs. 6000 per month and mostly use their money on buying inhalants was given by the pre-adolescents, NGO Counsellors and Social workers and Police Personnel.
- The majority of the pre-adolescents denied of being active in any of the misconduct or anti-social behaviour, however when the police personnel were interviewed they informed the presence of this behaviour.

B. Causes of Inhalant Abuse:

1. Psychological causes of inhalant use:

The chief psychological causes leading to the inhalant use among the pre-adolescents are Identity crisis, stress and anxiety, depressed feeling, feeling of loneliness, hopelessness, pleasure, curiosity/experimenting and boredom.

2. Socio-cultural causes:

The chief socio-cultural factors of inhalant use among the pre-adolescents are the faulty family environment, lack of parental guidance, easy availability, easy to carry and use the inhalant, easy accessibility, social acceptance, bullied by elderly addict, alcoholic parents, inhaling culture, self-medicating, and legality, modeling sibling behaviour, to suppress hunger and to overcome physical pain.

3. Economic causes:

The major economic causes of inhalant use are the cheap price and earning source of children.

C. Consequences of the Inhalant Abuse:

1. Psychological consequences:

The serious psychological consequences related to the inhalant use are cognitive impairment, irritable, aggressive, pessimistic and negative thoughts about self and others, depressive tendencies and suicidal ideation.

2. Physical consequences:

The serious physical consequences related to the inhalant use are dizziness, burning sensation in oropharynx part of the throat, chest pain, and lack of appetite, fatigue, gnawing headache, vomiting, watery red eyes and lack of sexual desire.

3. Socio-cultural consequences:

The major socio-cultural consequences faced by the inhalant user are risk-taking behaviour, isolation from family and risk to physical abuse.

4. Economic consequences:

The major economic consequence the inhalant user has to face is inability to earn.

5. Legal consequences:

The major legal consequences are anti-social behaviour and fear of being caught by police.

5.10 CONCLUSION

An alarming rate of high prevalence of inhalant abuse among street children in both the area Guwahati, Assam and New Jalpaiguri, West Bengal was observed in this study. Prevalence of substance abuse was high among pre-adolescent children of ages 10 years (25%), 12 years (25%) and 13 years (25%) followed by 11 years (15%), 8 years (5%) and 9 years (5%). The children belonging to the nuclear family with the parental history of substance abuse and working as a beggar, ragpicker and oil collector are more into inhalant abuse. The major causes of inhalant abuse are the influence of identity crisis, stress, anxiety, depressed feelings, peer pressure, abusive parents, faulty family environment and lack of proper guidance. Many use inhalants to escape loneliness and boredom. The main attraction to inhalants for the pre-adolescents is easy availability, easy accessibility, easy to carry and use the inhalant and cheap price of the product. The false belief of the inhalants suppressing hunger and pain are the additional cause of the inhalant abuse. The pre-adolescents were annoyed easily become irritable and aggressive. The presence of cognitive impairment, pessimistic and negative thoughts about self and others, the pre-adolescents being sad and unwillingness to work along with suicidal ideations was found out. Accompanying physical problems like dizziness, burning sensation of oropharynx part of the throat, chest pain, lack of appetite, fatigue gnawing headache, vomiting and watery red eyes were also observed. The isolation from the family and the risk-taking behaviour were prominently reported during the study. The pre-adolescents faced the inability to earn, threat to legal consequences for anti-social behaviour with fear of being caught by police.

5.11 APPROACHES AND PREVENTIVE MEASURES

- A strong message should be spread to the pre-adolescents about the bad effect of the inhalant use and its related consequences.

- Awareness among shopkeepers, strong restrictions on the availability of commonly used inhalants could have the impact on inhalant abuse.
- The acceptance from their family members, stern rules against parents on abandoning of the children by the administration.
- The common people of the society should embrace these children without any type of negative comments.
- Proper awareness about the child rights among both the children and the parents is necessary for preventing them from any substance use.
- The affected children should be identified, properly rehabilitated and arrangement for better educational facility should be provided by framing policies for such children by state and central government so that they can be a better citizen of the society.

5.12 LIMITATIONS OF THE STUDY

1. M. Phil is a degree course of short duration which is very less time to carry out an extensive research in a sector of substance abuse where the samples are hard to find and difficult to confront.
2. The sample size was cut short and it is believed that the result of small sample size is not reliable, large sample signifies the validity.
3. The single-gender male was chosen where else the problem of inhalant abuse was observed among the females too.
4. In order to find out the depth of prevalence, the study could have been done on comparison basis between pre-adolescent boys and girls.
5. There was a lack of reliable record/documentation/data in any of the administration sector in both the areas regarding the prevalence of inhalant (dendrite) abuse among pre-adolescent.

5.13 SCOPE FOR FURTHER RESEARCH

1. North-eastern states can be considered as research study areas for the extensive study of the problem in order to understand the prevalence of inhalant abuse, as well as causes and consequences of inhalant abuse among pre-adolescents.
2. School students can be considered as samples as there is increasing use of inhalants among school going children.
3. Secondary data related to inhalant abuse in different states can be collected in order to see the pattern of inhalant abuse among various age groups.
4. Future research can be done by covering various substances including inhalant abuse among children of various age groups.
5. A similar study can also be carried out on boys and girls to see who are more vulnerable and the reason behind it.
6. A longitudinal study can be done on children of various age groups in order to find out the consequences in the long run.

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INFORMED CONSENT FORM

Full Title of Research: Children Abusing Inhalants: Causes and Consequences.

Name and Address of Researcher: Ms. Udangshri Basumatary, M. Phil Research Scholar, Department of Psychology, Sikkim University, Gangtok, Sikkim.

Consent

1. I confirm that I have been informed about the procedures of the above study.
2. I understand that my participation is voluntary and no financial incentives were offered for participation.
3. I am free to withdraw at any time, without giving reason.
4. I was given opportunity to ask questions and she has answered to my satisfaction.
5. The interview is being audio recorded and will be used for research purposes only.
6. I was assured that my information will be kept confidential.
7. My signature/thumb impression below indicates that I agree to take part in the above study.
8. I have received a copy of this signed informed consent form.

Name of the Participant:

Signature/Thumb Impression:

I have explained the above and answered all questions asked by the participant:

Name of the Researcher: Ms. Udangshri Basumatary **Signature:**

Date:

Thank you,

Ms. Udangshri Basumatary

M. Phil Scholar,

Department of Psychology,

Sikkim University, Gangtok (Sikkim)

APPENDIX-II

SOCIO-DEMOGRAPHIC DATA SHEET

1	Name				
2	Age /DOB				
3	Education	Continuing	Dropout	Nil	
4	Parents/Guardians				
5	Address with contact number				
6	No. of Family members				
	Type of Family	Nuclear	Joint	Extended	Others
7	Religion	Hindu	Muslim	Christian	Any other
8	Occupation				
9	Income (Self), if any	Yes		No	
10	If Yes, Source of Income				
11	Parents' monthly occupation	Father			
		Mother			
12	Family history of any substance use, Give details				
13	Reason for initiation				
14	Type of inhalant				
15	Duration				
16	Quantity/day				

17	Method of Use		
18	Age of Initiation of inhalant		
19	Any other substance/s		
20	Whether family members know about patient's abuse		
21	Inhalant intake	Alone	With friends
22	Source of procuring inhalant		
23	Inhalant related problems	Physical	Mental
24	Criminal behavior, if yes details	Yes	No
25	Anti-social attitude (like quarreling, fighting, theft, etc.)	Yes	No
26	Any physical injury	Yes	No
27	Current psychiatric symptoms, if any co-morbid psychiatric disorder		
28	Any other illness		
29	Suicidal ideation	Yes	No
30	Suicidal attempt	Yes	No

IN-DEPTH INTERVIEW QUESTIONS

(For Pre-Adolescent Children)

A. Psychological causes:

1. What kind of thoughts comes in your mind when you need to speak up for yourself?
2. How do you feel among friends and other family members of your family?
3. How do you feel when you are alone?
4. How do you like to spend most of your times?
5. Why do you think is necessary to be accepted by everyone in the family and society?
6. How do you want to present in front of friends and family members?
7. What kind of situation have you faced where you required proofing yourself to be correct?
8. How does your living condition affect you?

B. Social causes:

1. Do you have any knowledge about media? How are you influenced by the media?
2. How do you feel when you see your siblings and friends prospering more than you?
3. Are you satisfied with your work? What kind of job are you willing to work?
4. How does your parent support you when you are in trouble?
5. What are the most interesting and depressing part in going to school?
6. How do your friends support you when you are in trouble?

C. Cultural causes:

1. What kind of beliefs do you follow when it comes to inhalants?
2. How do you execute your beliefs?
3. How did this belief started in the early days?
4. Why did you follow the trend as the choice was to be made by you?
5. What do you think about your beliefs?
6. How would you explain about the beliefs that you and your family have been following generation wise?
7. What do you think you should do for betterment of the family regarding it?

D. Consequences:

1. Where and since when did you start taking the inhalants? Did you enjoy it at the first intake?
2. Do your parents know about your inhalant intake? What was your parents' reaction when they came to know about your inhalant intake?
3. Have you been in any kind of trouble for inhalant intake?
4. How frequently do you use inhalant? How does it feel after taking?
5. How did you get influenced for inhalant intake?
6. How many of your friends join you to take inhalant? What does your friend say about it?
7. How often do you get frustrated with someone? Do you ever felt like hurting them?
8. Have you ever self-harmed yourself? Why? How?
9. Why do think you feel anxious sometimes without any particular reason?

10. Are you having sleepless nights? How will you describe your sleepless nights? / What do you have to say about your sleepless nights?

11. What will you say about your loss of interest in any of the work?

12. Do you hear things which others don't seem to hear? Why do you hear it?

13. Do you see things which others don't seem to see? Why do you see it?

14. Do you often feel low or lack of energy?

15. Do you have a feeling that someone has come to get you?

16. Do you think that others are stealing your thoughts/can listen/read your mind? How?

17. Do you have a feeling that others are controlling you, your thoughts, feelings, actions, or urges?

IN-DEPTH INTERVIEW QUESTIONS

(For NGO Counsellors, Social Workers & Police Personnel)

A. Psychological causes:

1. How long have you been working in this area?
2. What peculiar characteristics have you observed in the street children?
3. How does the child cope up among his friends?
4. When you approach to correct them, what type of behavior do you get from the child?
- 5 Why do you think the street children are different to the other children?

B. Social causes:

1. What do you think of the street children in general?
2. How do the children depict a media?
3. How influenced are the children by your work?
4. What kind of work do they prefer to work for a petty amount of money?
5. In the locality how a promotion of an inhalant does takes place?
6. In which way the family and locality affects the child leading him to inhalant?
7. In what way school influences the children?

C. Cultural causes:

1. In what way do the practices and beliefs of the parent influences the child?
2. The children get many help from the organization like yours but still take a wrong ways, what influences them?
3. The practices which are followed by children how did it develop, was it followed on generation basis?

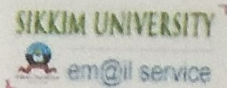
4. What compels them to follow the same path while they have a chance not to?
5. Did your organization ever come across any kind of situation where families and children's idea contradicts with each other?

D. Consequences:

1. What have you observed in the children who are inhalant addicted?
2. What type of characteristics have you come across in the inhalant abusers? How are they different from other substance abusers?
3. What is the present scenario of inhalant abusers?
4. Why do the children keep going to buy the inhalants?
6. How many times a day a single child goes to the shop?
7. In a single day children might come alternately to purchase? How do you differentiate a new child? How will you describe him?
8. What kind of work do they prefer to work for a petty amount of money to buy inhalant other than begging?
9. What difference have you observed in the beginning of inhalant abusers life regarding school and now?

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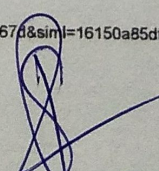
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