



# "ASSESSMENT OF THE LEVEL OF KNOWLEDGE REGARDING SUBSTANCE ABUSE AND ITS CONSEQUENCES

By

**Ms. Alka Rose Mathew, Ms. Amrutha S  
Ms. Anakha Shah, Ms. Janet Abraham, Ms. Jisha Prasad  
Ms. Meeghal Susan Abraham, Ms. Najarath N  
Ms. Sreedevi K J**

**MGM MUTHOOT COLLEGE OF NURSING  
KOZHENCHERRY**

Under the guidance of

**PROF.DR. KIRUBA J C, PRINCIPAL  
Mrs. SIBI P VARGHESE, PROFESSOR  
Mrs. MANGALYA A R, LECTURER**

## ABSTRACT

Substance abuse refers to the harmful or hazardous use of psychoactive substance, including alcohol and illicit drugs. Psychoactive substance use lead to dependence syndrome. A cluster of behavioral, cognitive and physiological phenomena that develop after repeated substance use and that typically include a consequence, a higher priority given to drug use than to other activities and obliqueness increased tolerance, sometimes a physical withdrawal state. Substance abuse is more common in adolescent age group. This may have profound effects on physical and mental health. So the researchers felt need to conduct a study to assess the level of knowledge regarding substance abuse among college students. The aim of the study was to assess the level of knowledge regarding substance abuse among college students. Research methodology used in study was a descriptive research design and sampling technique used was convenient sampling. The sample size was 135 students. The data was analyzed using descriptive and inferential statistics. Major findings of the study among demographic variables were, 77.04% had average knowledge regarding substance abuse and 21.48% had poor knowledge while 1.48% had good knowledge. At the end of the inferential analysis, the study identified that there was a significant association between the

knowledge regarding substance abuse and few variables like gender, education, relationship with mother and habits whereas rest of the other variables had no significance in relation to the knowledge regarding substance abuse.

**Keywords:** Knowledge; Substance abuse; College students

# INTRODUCTION

## CHAPTER –1

### INTRODUCTION

Substance abuse is a common phenomenon in the world and has invaded the human society as the most important social damage. Substance abuse is a non-adaptive model of drug use, which results in adverse problems and consequences, and includes a set of cognitive behavioral and psychological symptoms<sup>1</sup>.

It becomes a large phenomenon in India in the past two decades affecting all segments of society. The abuse of psychoactive drugs among youth is an issue of national importance. Substance abuse is increasing at an alarming rate, causing serious threats to every nation, by deteriorating health, increase in crimes, hampering productivity, and destroying relationship, eroding social and moral values and impeding the overall process of society.<sup>1</sup>

Drug abuse is a form of substance related disorder. In some cases, criminal or antisocial behavior occurs when the person is under the influence of a drug and long term personality changes in individuals may also occur. Drugs most often associated with this term includes; alcohol, amphetamines, barbiturates, benzodiazepines, cannabis, cocaine, hallucinogens and opioids.<sup>2</sup>

Abuse of substances creates a great threat to the health, social and economic condition of individual, family, community and to the nation. Substance abuse is a social evil. It destroys not only vitals of the society, but also adversely affects the economic growth of the country. It

spreads all over a country, from nation to nation; to the entire globe, infecting every civilized society irrespective of caste, creed, culture and the geographical location. Globally, substance abuse is a serious public health and social issue.<sup>2</sup>

### **Background of the problem**

College Students make up one of the largest population of drug abusers and are at a heightened risk of addiction. The rate of substance abuse among college students has risen steadily in recent years. The National Library of Medicine National Institute of Health reports 37% of college students have used illicit drugs (Opioids, Stimulants, Benzodiazepines, Cannabinoids and Barbiturates) abused alcohol on a regular basis. The exposure to a variety of people in college, stressors of adjusting to new environments, participating in fraternity sororities, and many other aspects of student life increases the risk of college drug use disorders. While consuming drugs, students have reported committing risky actions like driving while under the influence of an illicit substance or getting involved in criminal activity.<sup>3</sup>

In 2018, 78% of teens aged 18 years had at least one friend who used an illicit drug. On the other hand the number increased to 86% of young adults besides in 2018 between 14% and 27% of college students said most or all of their friends used one or more illicit drugs. In addition, 76% of 19-22 years old said they have direct exposure to people using an illicit drug. 69% of college students who claimed life time use of an illicit drug reported at least one negative consequence in the course of their lifetime.<sup>3</sup>

On average 20% of college students meet the criteria for alcohol use disorders, Approximately 110000 college students are arrested every year for alcohol related violence such as drunk driving and public drunkenness. Approximately 1825 college students die each year because of accidental, alcohol related injuries. Substance abuse has brought problems such as increase in violence and crying, increasing HIV/AIDS disease and collapse in social status and structure. Substance abuse leads to health problem, social problem and physical dependence and psychological addiction.<sup>2</sup>

Although substance abuse has maintained a steady presence on college campus, the type

and frequency of abuse of other substances has varied throughout the years. Excessive drinking and drug use among College students are associated with adverse academic and health outcomes, and risk to personal safety. In contrast to the amount of attention that has focused on patterns of excessive drinking during college, fewer studies have examined the course of illicit drug use behaviour during college.<sup>2</sup>

A total of 33% age engaged in binge drinking in the past month (that is, 5 or more drinks for males and four or more drinks for females on an occasion).Data from the NIAAA states that estimated 1519 college students aged 18 to 23 die due to unintentional alcohol related injuries, which include car accidents. The same data explains that estimated 97,000 students' ages 18 to 23 are victims of alcohol related sexual assault or date rape. One in four college student's experiences academic problem due to drinking.<sup>3</sup>

Approximately 9% of full time college students meet the criteria for an alcohol use disorder (AUD) which is the clinical term for alcohol addiction. MDMA use among College students more than doubled from 2004\_ 2016. Around 43% of college students used marijuana in 2018 which represents a 7% increases over the previous 5 year. Substance abuse can lead to lower GPA, less time spent studying missing class getting behind on assignments dropped out or being expelled.<sup>3</sup>

### **Need and significance of the study**

In 2013, college students who reported substance use averaged 4.94 days of use. In 2018 the annual prevalence of drug abuse was highest among college students (45%) followed by 12<sup>th</sup> grades 39 % and 10<sup>th</sup> grade as 30% have used an illicit drug other than marijuana in the past month. In 2018 the annual prevalence of drug abuse among full time college students was 44.9%. The annualprevalence of drug abuse by female college students was higher (45%) than that of male students (44.8%).

Besides the annual prevalence of use of the various drugs among full time male college students is as follows: alcohol 73.3%, marijuana 42.5%, MDMA 7.2%, cocaine 7%, LSD 6.8% and tranquilizers 3.8%. On the other hand, the annual prevalence of use ofvaried drugs among



full time female college students is as follows: alcohol (75.11%),

marijuana (42.2%), cocaine (4.3%), tranquilizers (3.3%), LSD (2.6%).<sup>4</sup>

The 20.2 million adults aged 18 or older with a past year Substance abuse represent about 8.4 percent of the total population of adults. The percentage of adults with a past year SUD in 2014 was similar to the percentages in 2010 to 2013 but was lower than the percentages in 2002 to 2009. This same pattern was seen in trends of adults with both an alcohol use disorder and an illicit drug use disorder. The percentage of adults with an alcohol use disorder remained steady between 2011 and 2014; however, the percentage in 2014 (6.8 percent) was lower than the percentages in 2002 to 2010. The percentage of adults with an illicit drug use disorder in 2014 was similar to previous<sup>5</sup> years, with the exception of 2011.

In India, the overall life-time prevalence of for substance abuse among college students was found to be 31.3%. Male students had significantly higher prevalence of substance abuse as compared to female counterparts (37.5% versus 19.6% respectively). The most common substance being abused was Tobacco products (22.5%) followed by solvents (10.0%), alcohol (6.2%), sedatives (5.9%), cannabis (4.4%), amphetamine products (2.1%), hallucinogens (0.5%) and cocaine (0.3%). Age, gender and family type were found to be strongly associated with substance abuse ( $p < 0.001$ ). The prevalence of substance abuse among college students is high and causes significant problems in this population; therefore there is necessity of targeted interventions to reduce this huge burden.<sup>6</sup>

The prevalence of Alcoholism in Kerala is 20-38%. The state is ranked at the top in alcohol use in the country. The consumption pattern has steadily increased from 1980 to 2010. The age of first drinking has also decreased steadily from 19 years (1986) to 13 years (2001) Variety of factors affects the magnitude and patterns of consumption. Tobacco use is a major preventable cause of premature death and disease worldwide. Nearly one million people die in India every

year due to tobacco use." Tobacco use in various forms including smoking and chewing has been an integral part of the community life in Kerala for centuries. In Kerala, smoking and use of snuff is predominantly a male habit while chewing is more or less similar among men and women. As Kerala is showing increased trend in the consumption of alcohol, this study was done with the objective of assessing the proportion of substance abuse among youth and to find out the factors associated with it. As per the UN, for statistical consistency across regions,

defines "youth, as those persons between the ages of 15 and 24 years."<sup>7</sup>

College students are the most vulnerable group and are at higher risk of drug abuse related problems compared to other population. The prevalence rate of drug abuse is highest among young adolescents and young adults, a large majority of whom are students, substance abuse by students in secondary schools and college is a serious problem. As it is gaining popularity among college students it would be vital to examine their knowledge towards substance abuse.<sup>8</sup>

Early initiation of substance abuse is usually associated with a poor prognosis and life-long patterns of irresponsible behaviour. The hope that simple information given through educational programs will be sufficient to prevent drug dependence is frequently expressed however, knowledge with regard to consequences of substance use among adolescents enough to prevent them from initiating and continuing its use.<sup>8</sup>

Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems. These problems include: Teenage, pregnancy, Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), other sexually transmitted diseases (STDs), Domestic violence, Child

abuse, Motor vehicle crashes, Physical fights, crime, homicide, suicide<sup>9</sup>

The field has made progress in addressing substance abuse, particularly among youth.

According to data from the National Institute of Drug Abuse (NIDA) Monitoring the Future (MTF) survey, which is an ongoing study of the behaviors and values of America's youth between 2004 and 2009: A drop in past-year use of methamphetamine was reported for all grades, and lifetime use dropped significantly among 8th graders, from 2.3 to 1.6 percent. Among 10th and 12th graders, 5-year declines were reported for past-year use of amphetamines and cocaine; among 12th graders, past-year use of cocaine decreased significantly, from 4.4 to 3.4. More than 7 million people suffer from illicit drug use disorder and one in four deaths can be attributed to alcohol, tobacco, and illicit or prescription drug use.<sup>9</sup>

Decreases were observed in lifetime, past-year, past-month, and binge use of alcohol across the 3 grades surveyed. The statistical study on substance abuse among young adults in India revealed the fact that about 52.87% of people use alcohol, 4.92% use cocaine, 1.22% use tobacco, 1.05% use cannabis, 0.39% use inhalants and 4.51% use other drugs respectively. 74 percentage children in Kerala use tobacco according to a recent

<sup>10</sup> multi-state survey conducted by National drug dependence treatment centre and AIMS

### **Statement of the problem**

A descriptive study to assess the knowledge regarding substance abuse and its consequences among college students of selected colleges at Kozhencherry.

### **Objectives**

1. Assess the knowledge regarding substance abuse and its consequences among college students at a selected college.
2. Find out the association between knowledge and selected socio-demographic variables.

### **Operational definitions**

1. **Assess:** In this study, assess refers to evaluation or estimation of the knowledge level of college students regarding substance abuse and its consequences.
2. **Knowledge:** In this study, knowledge refers to the correct response given by the college students regarding substance abuse and its consequences assessed by structured knowledge

questionnaire.

3. **Substance abuse:** In this study, substance abuse refers to the maladaptive use of some substances like alcohol, smoking, tobacco products that cause harmful effects among the college students.
4. **College students:** In this study, college students refer to both boys and girls who are in the age of 18-23 years studying degree course in a specific institution.

### **Assumptions**

Health is the priority for most of the people.

Increased knowledge regarding substance abuse and its consequences is the best way to prevent the abuse of drugs.

### **Summary**

This chapter deals with the introduction related to the knowledge of substance abuse, drug, tobacco and alcoholism. It help the researcher to get an introduction about the topic , background of the problem, need and significance of the study, statement of the problem, its objective, operational definition & assumption helps to conduct the study in an effective manner.

## **REVIEW OF LITERATURE**

### **CHAPTER -2**

A literature review is defined as a part of the research report where the researcher analyzes and discusses published/scholarly information relating to the subject area under research.

The main purpose of the literature review is to identify what is known and unknown about an area that has not been totally resolved in practice. It provides the background and the context on which the proposed study is conducted.<sup>11</sup>.



The review of literature is arranged in the following headings:

Section 1: Studies related to substance abuse

Section 2: Studies related to knowledge regarding substance abuse

### **Section 1: Studies related to substance abuse**

A cross sectional study was conducted in Khond Paroja (2020) to assess the prevalence of substance use and its determinants among 171 male tribal youths aged 15- 24 years selected by using simple random sampling technique. Data was collected using pre- designed and semi structured proforma. The result revealed that the prevalence of substance use was 64.91%. Minimum age of initiation of substance use was 5 years. The substance commonly used were tobacco (54.96%) and alcohol (20.72%). Some youths were using alcohol and tobacco together (22.52%). The study concluded that the substance use was significantly high among the age group of 20-24 years and there is an association of substance use by parents, unemployment, sibling pressure, peer pressure and lower educational status with substance abuse by tribal youths.<sup>12</sup>

A descriptive study was conducted in Goa (2020) to assess the consumption of alcohol among 981 adolescents over 12-19 years selected by using simple random sampling technique. The result revealed that overall, 9% of adolescents reported that they had been drunk in the 12 months preceding the survey. The study concluded that in general respondents who had experienced an adverse event during childhood were likely to report drunkenness.<sup>13</sup>

A descriptive study was conducted in Kerala (2020) to assess the prevalence and correlate of alcohol use among 5748 college students in Ernakulam who were selected using stratified random sampling by using self administered questionnaire and showed that the prevalence of life time alcohol use was 21.4% with a male predominance, among users, low risk, hazardous and dependent use were 80.2%, 18.3% and 0.9% respectively and initiation was mostly with friend (45.3%).<sup>14</sup>

A study was conducted in Norway (2019) to determine the e drug abuse among 2265 junior high school adolescents who were selected randomly by using personal interviews and results

shows that there was a strong relationship between smoking, alcohol consumption, cannabis use and use of other drugs. The study also showed that pupils who had used cigarettes, alcohol, cannabis, solutions, and tranquilizers had higher frequencies of developing mental symptoms than non users. The study concluded that the connection between smoking and mental symptoms was stronger in the females than males.<sup>15</sup>

A cross-sectional study was conducted in Punjab (2019) to assess the prevalence of substance abuse among 400 adolescents and young adults were selected systematic sampling by using semi-structured questionnaire and the results showed that the prevalence of substance abuse among adolescence and young adults were 65.5% and most common substance abuse was alcohol (41.8%), followed by tobacco (21.3%) and study also found that high prevalence of heroin abuse(20.8%), the prevalence of non alcohol and non tobacco substance abuse was 34.8% and there was a significant association of drug abusers with male gender, illiteracy, and age about 30 years.<sup>16</sup>

A cross sectional study was conducted in Kanpur district (2019) to assess prevalence of the substance abuse among 539 male adolescents were selected randomly by using self-administrated questionnaire and results showed substance abuse was found among 15.02% male adolescents smoking was prevalent among 10.95% alcohol was used by 3.34% and other drug used by 0.75% male adolescents. There was an increase in prevalence of substance abuse with the increase in age.<sup>17</sup>

An explorative study was conducted in Chile (2018) to determine the prevalence of drug consumption among 1577 university students were selected randomly by using structured questionnaire and result showed that 68% of students were of middle socioeconomic class. 71% belonged to some religion and 29% declared themselves as agonistic, 96% drank alcohol at least once in their life and 29% never smoked. The study also revealed that marijuana was consumed 22%, cocaine was used by 5.3%, Hallucinogens were consumed by 2.6%, inhalants were used by 2.3% and about 1.4% used cocaine, 6% consumed stimulants, 13.8% used sedatives. The study concluded that alcohol is the most commonly used drug and it is known to generate more

problems among students.<sup>18</sup>

A cross sectional study was conducted among Kerala (2017) to assess the prevalence of substance abuse among 402 college student where selected randomly by using self-administered pretested semi structured questionnaire and the result showed 31.8% used or abused any one of the substance (alcohol, smoking, pan chewing) irrespective of time and frequency in lifetime and also there is a significant association with substance abuse with age, gender, place of residence, attitude towards ban.<sup>19</sup>

A descriptive survey was conducted in South Africa (2016) to determine the prevalence of substance abuse among rural 338 secondary school students where asked randomly by using self administered questionnaire and results showed that the majority of students (94% male, 98% female) had used substance and started to using substance between the ages 15-20 years. The main study also reveals that the majority (63% male, 50% female) didn't have family members who were substance users and the majority (68%) of the students knew the substance abuse is dangerous to health.<sup>20</sup>

A survey study was conducted in Meerut district (2016) to assess the prevalence and patterns of drug abuse among 110 adolescence were selected purposively from slum area of Meerut by using self administered questionnaire and results showed 46.36% adolescence who were admitted to use of substances like Ghutkha, Tobacco, smoking, alcohol, afeem, ganja, thinner and marijuana, 54.91% admitted one time, 23.53% admitted rarely and 15.68% admitted occasionally. The study also found that the most common substances used were Ghutkha 43.36%, tobacco 40.91%, smoking 37.27% and alcohol 13.63% and also found that 8.18% substance abusers used multiple substances.<sup>21</sup>

An experimental study was conducted in Banaras (2016) on the genotoxic effects of chewing tobacco in young adults among 10 college going students, 5 with tobacco chewing habits and 5 without tobacco chewing habits in the age group of 20-24 years by using control and experimental method. The result revealed that the main values of micronucleus frequency from oral epithelial cells of the students chewing tobacco and not chewing tobacco, was 0.56%

and 0.32% respectively. The study thus concluded that the genotoxic effect of chewing tobacco was more in students who were taking tobacco.<sup>22</sup>

A descriptive study was conducted in Lucknow (2015) on tobacco smoking regarding the prevalence. Quit rates and respiratory morbidity among 7360 adults over 15 years of age selected by using two stages stratified random technique. Data was collected using questionnaire. The result revealed that there were 11496 (15.6%) smokers. In that, 10756 (28.5%) were males and 740 (2.1%) were females. Nearly 14% of ever smokers had some symptoms. There is an association of age, low economic status and rural residence with smoking. The study concluded that a substantial proportion of population had current or past smoking habit with higher prevalence among males than females. The quit rates have been low in spite of the various tobacco measures. There was a significant respiratory morbidity associated with smoking.<sup>23</sup>

An epidemiological study was conducted in Kashmir Valley (2013) on substance abuse among college students was conducted by using multi stage random sampling method over the age group between 18-22 years. The result revealed that the overall lifetime prevalence of substance abuse among college students was 31.3% in male students which had significantly higher prevalence of substance abuse when compared to female counterparts. The study concluded that the most common substance being abused was tobacco products (22.5%) followed by solvents (10.0%), alcohol (6.2%), sedatives (5.9%), cannabis (4.4%), amphetamine products (2.1%), hallucinogens (0.5%) and cocaine (0.3%).<sup>24</sup>

A descriptive study was conducted in Ahmadabad (2013) to assess the prevalence and patterns of psychoactive substance or drug consumption among 700 undergraduate students of a public sector medical college were selected randomly by using self administered questionnaire and results showed that one hundred and fifty (21.49%) admitted to the use of a psychoactive substance in past or at present, majority users (71.33%) were males and substance abuse was more prevalent among senior students where 30.06% and 24.24% in 4th year and

final year MBBS respectively. The study also found that majority of consumers (62%) were falling in an age group between 15 - 20 years and reasons behind substance abuse were psychological stress (49.33%) and pleasure seeking (42.67%).<sup>25</sup>

A descriptive study was conducted in Pondicherry (2013) on patterns of amphetamine use among 5,500 people over 15-45 years selected by using computer assisted telephone interview (CATI). The result revealed that 5% of sample (4.3-5.7) had used stimulants in the last years, 81% of these users used stimulants once a month or less frequently and 22% used half a gram of stimulant or more on a typical occasion. The study concluded that about one in five amphetamine users used quantities of amphetamine in a single session that have been identified in previous research as being hazardous levels.<sup>26</sup>

A cross sectional quantitative study was conducted in Ethiopia (2012) to assess the prevalence and predictors of substances among 695 Debra Behan University students were selected stratified two stage sampling by using World Health Organization Model Students' Substance Use Core Questionnaire and showed that the lifetime utilization of alcohol, khat and cigarette was 36.3%, 10.9% and 7.4 % respectively, the lifetime utilization of shish and cannabis was 4.2% and 4.5% respectively and 17%, 5.7%, and 3.1% of students were currently using alcohol, Khat and Cigarette respectively. The study also revealed that there was a significant association with student's substance use behavior and using multivariate binary logistic regression, being male.<sup>27</sup>

A cross-sectional study was conducted in Hungary (2012) on social influence of risky drinking and its consequences among males from surveyed communities in 2004, 2006, and 2007 from a total samples size of 5,017 current drinkers (2, 619 male) ages 14-20 years from 68 communities surveyed in 2004, 2006, and 2007 by random method. Result shows that, clustering of getting drunk, heavy episodic drinking, and nonviolent consequences was no longer statistically significant after adjustment for drinking with friends and drinking with parents. Parents providing alcohol explained the clustering of heavy episodic drinking and nonviolent consequence. Drinking with friends or other underage drinkers and friends providing



alcohol increased the risk of these behaviors“, whereas drinking with parents and parents providing alcohol were protective. Perceptions regarding peer drinking, community norms, consequences for drinking, and drinking at a party did not influence clustering. The study suggests that interventions to reduce underage risky drinking in communities should focus on the differential effects of the social context in which drinking occurs.<sup>28</sup>

A cross sectional study was conducted in Brazil (2010) the prevalence of alcohol and drug consumption among 60,973 were selected randomly by using structured questionnaire and results showed that also the incidence of problem with alcohol use was 9.0%, and the prevalence of worried family when student get home drunk was 93.8% and 8.7% students consumed other drugs and study also concluded that there is increased prevalence of alcohol and drug abuse problems among Brazilian adolescents because of easy access of students to alcoholic beverages.<sup>29</sup>

A descriptive study was conducted in Tripura (2010) on the effect of acute smoked marijuana on complex cognitive performance among 18 healthy volunteers over 21-35 years using double-blind design. Out of these participants 8 were females and 10 were males. The result revealed that almost daily marijuana use (mean-6.1 days/week (+ 1.3)), averaging for cigarettes per day and on average, participants reported smoking marijuana in this pattern for 4 years (+2.8). The study concluded that acute marijuana smoking produced minimal effects on complex cognitive task performance in experienced marijuana users.<sup>30</sup>

A descriptive study was conducted in Madras (2009) on cigarette smoking patterns among 15371 over 18-24 years selected by using current population survey. The result revealed that 26% of young adults were current smokers, 20% were daily smokers and 8% were former smokers and the current smoking rates were higher among American Indians/Alaska natives (33%) and Whites (31%) than among other racial /ethnic group. The study concluded that there is an association of socio demographic variables with current, daily, heavy and light smoking among young adults.<sup>31</sup>

A descriptive study was conducted in Arunachal Pradesh (2001) on understanding the

reasons for drug use amongst 364 young poly-drug users over 16-22 years selected by using snow-ball sampling method. The result revealed that the most popular functions for use of drugs were for relaxing (96.7%), to become intoxicated (96.4%), to keep awake at night while socializing (95.9%), enhance an activity (88.5 %) and alleviate depressed mood (86.8%). The study concluded that targeting substances that are perceived to fulfill similar functions and addressing issues concerning the substitution of one substance for another may also strengthen education and prevention efforts.<sup>32</sup>

A descriptive study was conducted in Bombay (1989) on socio-demographic feature of Cannabis and heroin abuse among 680 people over 20- 24 years of age selected by using interview method. The result revealed that 72% addicts belong to age group of 20-24 years, 27% were Christian and 29% Muslims. The reason for the abuse were curiosity (19.85%), pleasure seeking (12%) and mental tension (5%). The study concluded that religion and age plays an important role in developing the substance abuse habits.<sup>33</sup>

## **Section II: Studies related to knowledge regarding substance abuse**

A cross sectional study was conducted in West Bengal, India (2018) to assess the knowledge regarding the consequences of substance use among high school students of among 416 students, in classes VIII, IX, X. Chi-square test were used for statistical analysis. The result of the study reveals that out of 416 students, 52(12.5%) used or abused any one of the substances irrespective of time and frequency in lifetime; (15.1%) were among the urban students and 26 (10.7%) were among their rural counterparts. More than two-thirds (73.07%) of the respondents expressed a desire to quit substance use and 57.69% had tried to stop. Level of knowledge on harmfulness of substance use among students was very high (urban - 84.6% and rural -61.5%) and they stated media as the most frequent source of information. Users were successful in influencing their peers into taking up this habit (urban-15.4% and rural- 26.9%).<sup>34</sup>

A co-relational study was conducted in Jorhat (2018) to assess the knowledge and attitude of adolescent on alcoholism among 99 samples over 14-24 years. By using non

probability convenient sampling technique and the tool used was a structured self administered questionnaire. The result revealed that majority, 74 (78.7%) adolescents had moderately adequate knowledge and least 6(6.4%) had inadequate knowledge on alcoholism. The result concluded that majority of adolescent children 81(86.2%) had moderately favorable attitude and least 13(13.8 %) of them had favorable attitude towards alcoholism.<sup>35</sup>

A descriptive study was conducted in Desh Bhagat University Mandi, Govindgarh (2016) to assess the knowledge related to substance abuse among adolescents. The study sampling technique was stratified Random sampling technique.100 subjects were participated in the study in which 50 are boys and 50 are girls. The study revealed that the overall mean knowledge score in areas of substance abuse was 40.32%.The findings revealed majority of the students (98.33%) had inadequate knowledge the findings of the present study has revealed the mean knowledge score of boys are 41.28, while girls had a mean knowledge score of 39.46.<sup>36</sup>

A descriptive study was conducted in Vadodara (2016) to assess the knowledge, attitude and behavior on drug abuse among 1079 junior middle school students were selected stratified cluster sampling by using self- reported questionnaire and the result showed that 80% of students had good graded, 34.24% were having poor grades regarding harm of drug on the brain and body 30% of the students misunderstood the behavior related to drugs and another 3.20% of them were curious about drugs and study also revealed that 1.58% of the boys and 1.22% of girls never used drugs 25.30% of students ever advised their friends to keep away from drugs and 44.05% - 61.29%students refused the advice from their friends and persuading them to free from drugs.<sup>37</sup>

A cross-sectional study was conducted in Chandigarh (2013) on knowledge and attitude about substance use among school and college students of class 8, 9 and 10 recruited by using total enumeration method. A self-reporting questionnaire was used to collect data from a total sample of 192 students. The results shows that, out of these 92 high school students were enrolled from class 8, 9 and 10 and 100 were college students pursuing graduation. Most of the students appeared to have adequate knowledge about addictive substances and their harmful

effects but only a minority had knowledge about the available treatment. Again only a minority had negative attitude towards substance abusers and agreed for substance use by themselves or their friends or family. The conclusion shows that, Majority of students had adequate knowledge about harmful effects of addictive substances but had limited information regarding treatment options. This highlight the need for spreading more awareness for prevention as well as treatment of substance related problems.<sup>38</sup>

A descriptive study was conducted in Kolkata (2011) to determine the relationship of knowledge regarding drug abuse and selected variables in 100 first year pre degree students were selected stratified random sampling by using structured questionnaire and results showed that college students had inadequate knowledge regarding drug abuse and students had maximum knowledge regarding prevention and minimum knowledge regarding the effect of drug abuse and the study concluded that there was no significant relationship between knowledge on drug abuse and sex, mass media exposure and there was significant relationship found between knowledge and parent education.<sup>39</sup>

A descriptive study was conducted in Tamil Nadu (2009) to assess knowledge regarding substance abuse among 50 adolescent boys selected by using convenient sampling technique in the selected schools. The tool used is structured questionnaire. The result revealed that a vast majority of about 68% adolescent boys had only an average knowledge about substance abuse. The study concluded that among these, 30-32% students used alcohol and 11.3% used marijuana.<sup>40</sup>

A non experimental study was conducted in Belgaum city (2001) to assess the knowledge regarding substance abuse among 50 adolescents were selected snowballsampling by using self-reporting knowledge questionnaire and results showed thatmajority (50%) of adolescents had moderate level of knowledge on substance abuse and30% have inadequate level of knowledge and 30% had adequate level of knowledge onsubstance abuse and mean score was 11.48 and study also found that there wassignificant association between level of knowledge gender (sex) on substance.<sup>41</sup> **Summary**

This chapter deals with the review of literature related to the knowledge of substance abuse, drugs, tobacco and alcoholism. It helped the researchers to gain knowledge on the significance of the problem and threw light on discussion aspect of the study.

# METHODOLOGY

## CHAPTER 3

### METHODOLOGY

Methodology of research includes the general pattern for organizing the procedure for gathering valid and reliable data for the problem under study. They are conducted to develop validate test and evaluate the research instruments and methods “research methodology includes the general pattern for organizing the procedure for gathering validreliable data for the problem under study”.

#### **Research Approach**

It involves the description of the plan to investigate the phenomenon under study in a structured (quantitative), unstructured (qualitative) or a combination of two methods.

Quantitative research approach is used to conduct the study.

#### **Research Design**

The research design to the master plan is specifying the methods andprocedures for collecting and analyzing the needed information in a research study.



The research design for the study was descriptive design.

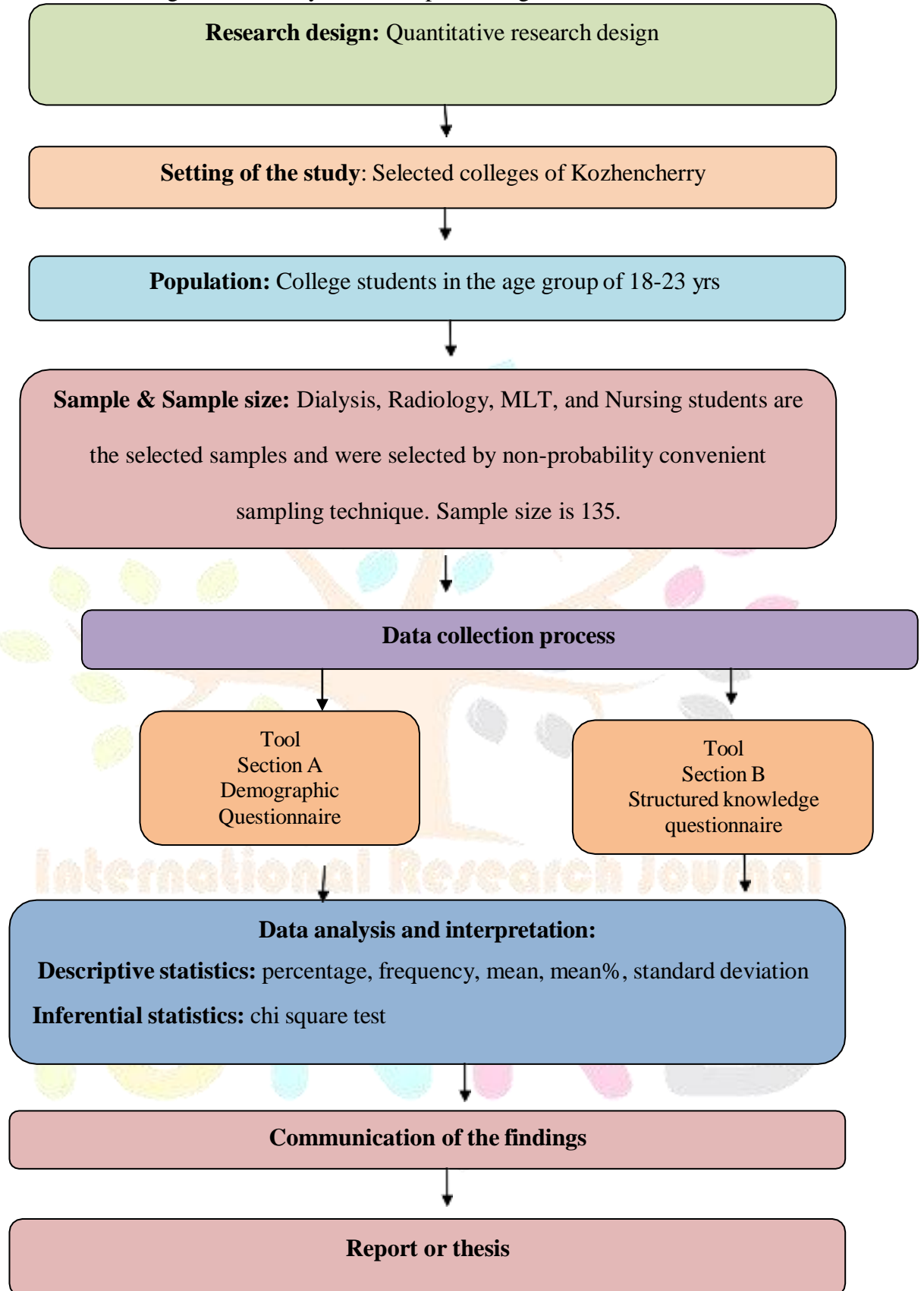


Fig1: Schematic representation of the research study

### **Setting of the study**

The study setting is the location in which the research is conducted- it could be natural, partially controlled, or highly controlled.

The study was conducted at Muthoot College of Allied Health Science & Muthoot College of Nursing, Kozhencherry, Pathanamthitta, Kerala which are the private institutions where boys and girls are studying the courses offered like BSc.MLT, Diploma in Dialysis Technology, Anesthesia& Critical care Technology and Radiology& Imaging Technology and Nursing respectively and the institution is affiliated by Kerala University of Health Science and directorate of medical education Trivandrum.

### **Population**

The entire set of individuals or objects having some common characteristics selected for a research study sometimes refers to as universe of the research study.

The Population includes adolescents in the age group of 18-23 years.

### **Sample and sampling technique**

The sample size for the study uses 135 students from 1st year and 2nd year Dialysis, Radiology and MLT courses & Nursing.

The sampling technique adopted for this present study was non probability convenient sampling technique.

### **Inclusion criteria**

Students of age between 18 - 23 years Students

available at time of data collection

Students who are willing to participate in the study

### **Exclusion criteria**

Students from non professional course of age group between 18- 23 years.

## **Tool/Instruments**

### **Development of the tool**

The tool is developed for the purpose of obtaining data for the study by reviewing the literature and communication with the nursing and medical experts in the field of psychiatry. The following steps were adopted for the development of the tool.

#### Review of literature

- a) Books, journals and articles published and unpublished research studies were reviewed and this provided adequate content for tool presentation.
- b) Internet search
- c) Discussions with nursing experts, psychiatrists and social workers.
- d) Personal experience and discussions with friends and colleagues
- e) Development of blue print.

### **Description of the tool**

The tool consists of two sections:

#### Section A: Demographic variables

The first part of the tool consists of twelve items which are necessary to collect the data's regarding the demographic variables of the students. It consists of items about the student's age in years, gender, education, area of residence, type of family, number of siblings, relationship with peers, relationship with father, relationship with mother, education status of the father, educational status of the mother and their habits.

#### Section B: Structured knowledge questionnaire on substance abuse

The structured knowledge questionnaire is developed by review of research and non research literature about the substance abuse. Expert opinions were taken for assisting the clarity and appropriateness of the item.

The content which was included for the preparation of questionnaire were the concepts of substance abuse, pre- disposing factors effect and withdrawal symptoms of substance abuse and prevention and its treatment. There were 30 multiple choice questions.

Each correct answer was given a score of „1“. The total score was 30.

**Table 1: Interpretation of level of knowledge score**

Sl. No.	Score	Level of knowledge
1.	0-10	Poor
2.	11-20	Average
3.	21-30	Good

### **Pilot study**

A pilot study is a small scale version or trial run of the original study conducted in order to check the feasibility or to improve the design of the research.

After obtaining permission from the principal of Muthoot college of nursing, Kozhencherry, a pilot study was conducted on 02-12-2021 in the Muthoot college of nursing, Kozhencherry on a sample of 10. The result of the pilot study were analyzed and discussed with experts. After the pilot study, no modifications were specified in the structured knowledge questionnaire.

### **Data collection process**

The study is conducted at the Muthoot College of Allied Health Science & Muthoot College of Nursing in Kozhencherry and the result is collected as planned.

The administrative permission is obtained from the Principal of Allied Health Science. Self introduction and establishment of rapport is developed by the investigators. The student is given the explanation about the importance of the study and written consent is obtained from them for willingness to participate in the study. The demographic variables perform and structured questionnaires were given to the study subjects with detailed explanation regarding how to fill it. They are asked to fill in the questionnaire in Section A and B. Privacy given by arranging their seating and confidentiality is assured and maintained. It looks about 40 minutes to complete the questionnaire and anonymity is maintained.

**Plan for data analysis**

Data obtained from the subjects were in groups and organized with appropriate descriptive statistics such as graphs and inferential statistics like Chi square test to prove the association between demographic variables and level of knowledge. Computed statistic information is presented in the following chapters.

# ANALYSIS AND INTERPRETATION

## CHAPTER -4

### ANALYSIS AND INTERPRETATION

Analysis refers to a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing the data in such a manner that they answer the research questions.

This chapter deals with the analysis and interpretation of data obtained from the study to assess the knowledge regarding substance abuse and its consequences among 135 samples residing at selected colleges at Kozhencherry. The data was processed and analyzed on the basis of objectives for the presented study using descriptive and inferential statistics and are described with the help of tables and graphs.

**Objectives**

Assess the knowledge regarding substance abuse and its consequences among college students at a selected college.

Find out the association between knowledge and selected demographic variables.

**Organization of findings**

The data collected were organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics and is presented under the following sections: **Section**

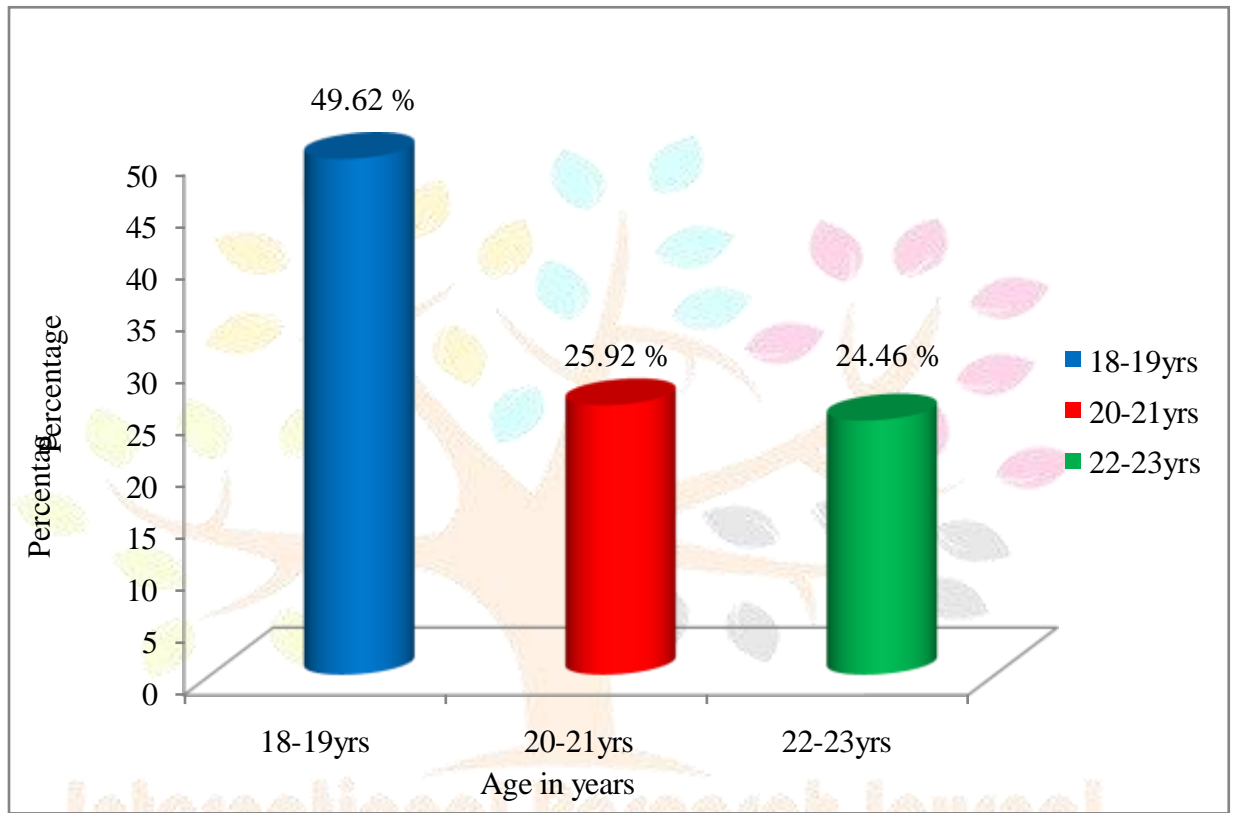
**I:** Description of demographic variables of college students.



**Section II:** Description of level of knowledge of college students regarding substance abuse and its consequences.

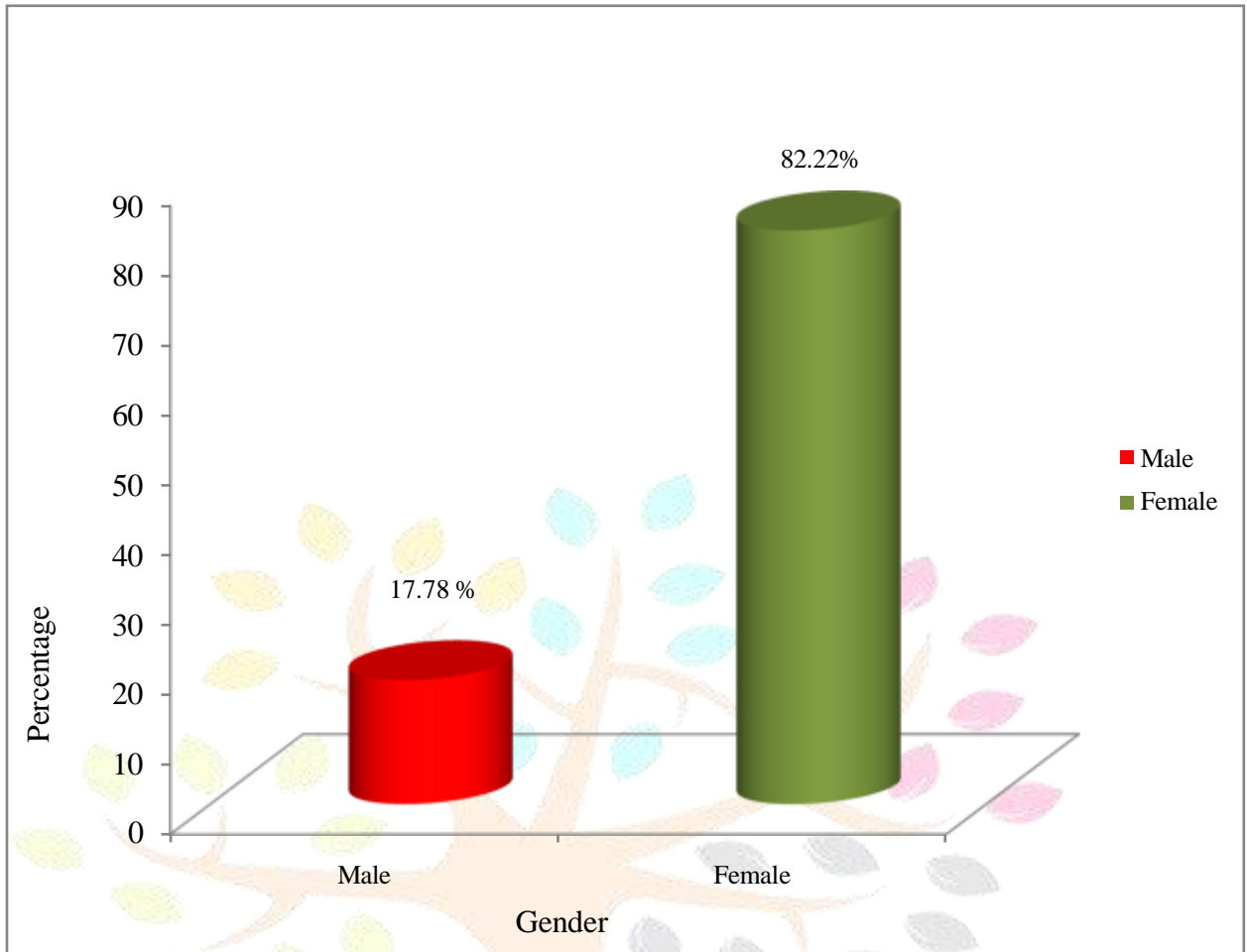
**Section III:** Association between level of knowledge regarding substance abuse and its consequences and demographic variables of college students.

**Section I: Description of demographic variables of college students**



**Fig-1 Distribution of samples according to age**

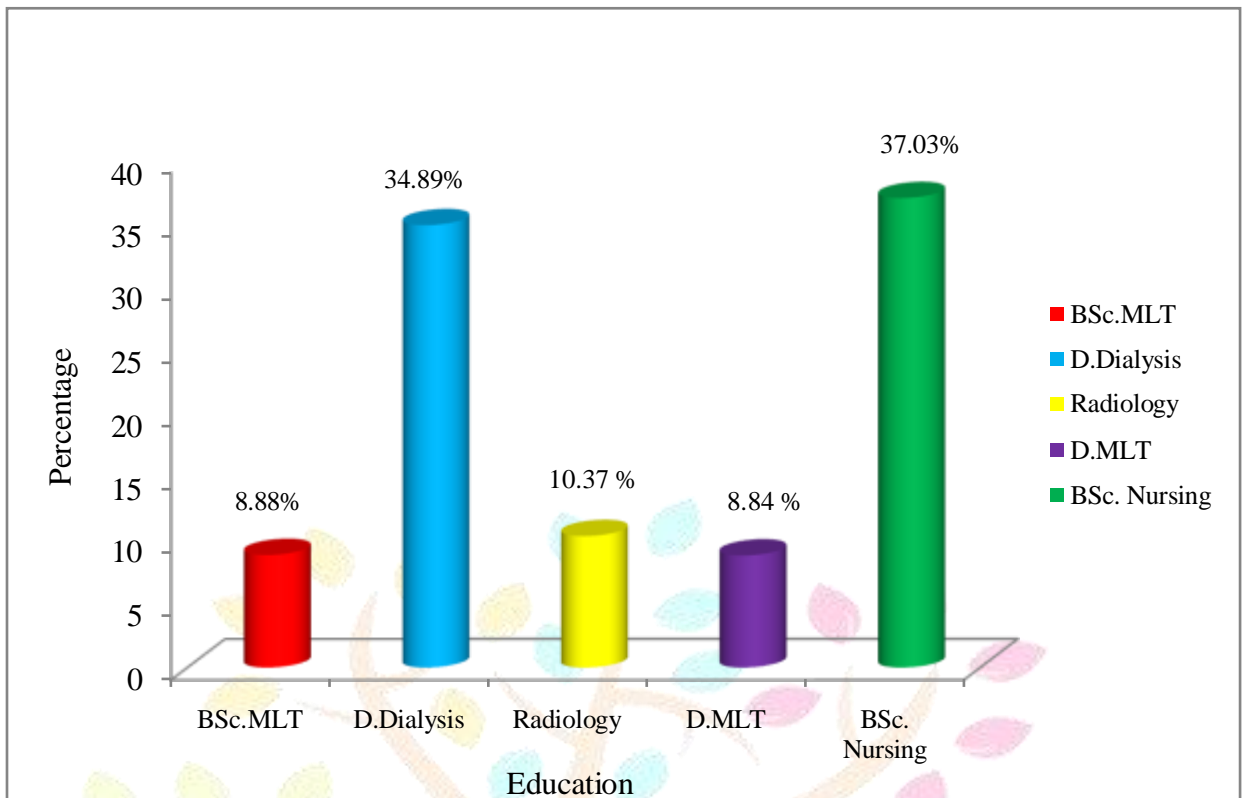
Figure shows 49.62% of the students were belongs to age group of 18-19 years, 25.92% students belongs to 20-21years & 24.46% were belongs to 22-23 years.



**Fig -2 Distribution of samples according to gender**

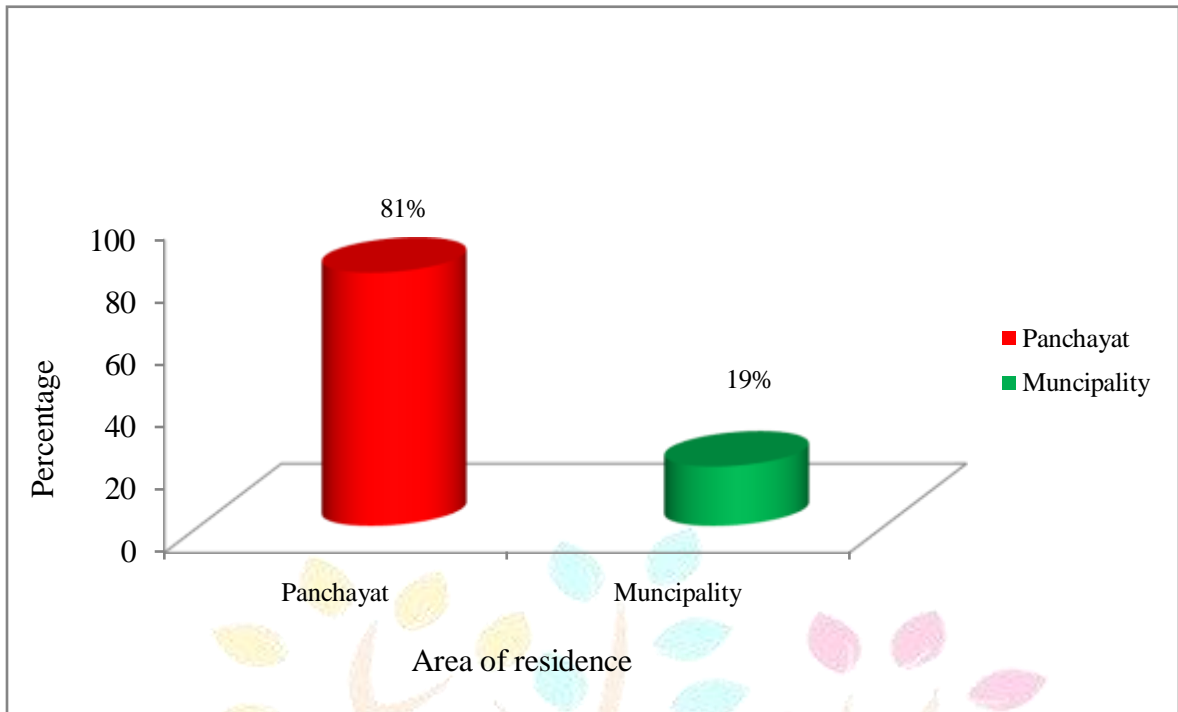
Figure shows that 82.22% subjects were females and 17.78% subjects were males.





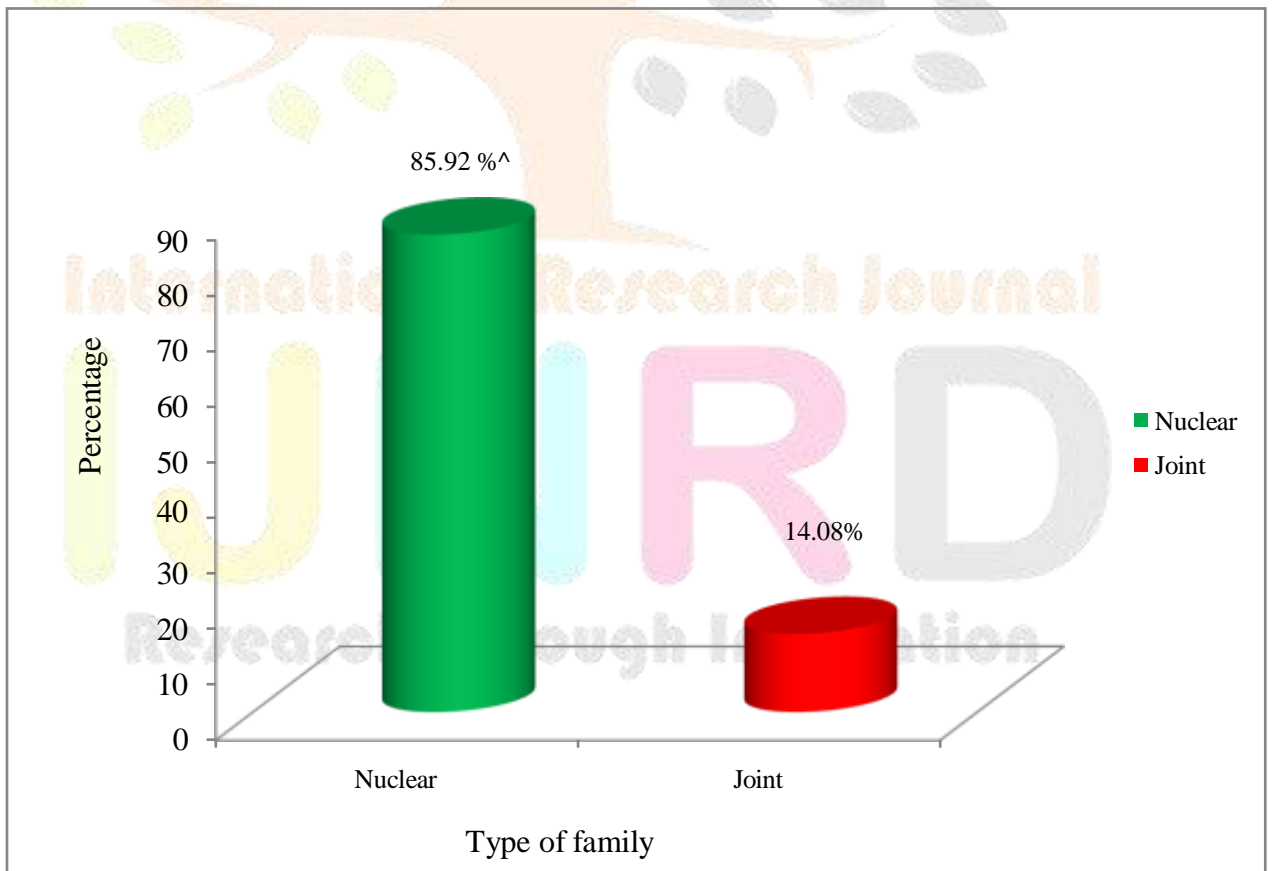
**Fig:3 Distribution of samples according to education**

The figure shows that 37.03% students are from BSc.Nursing, 34.89% is from Dialysis (Diploma), 10.37% from Radiology, 8.88% from BSc.MLT and 8.84% were from D.MLT.



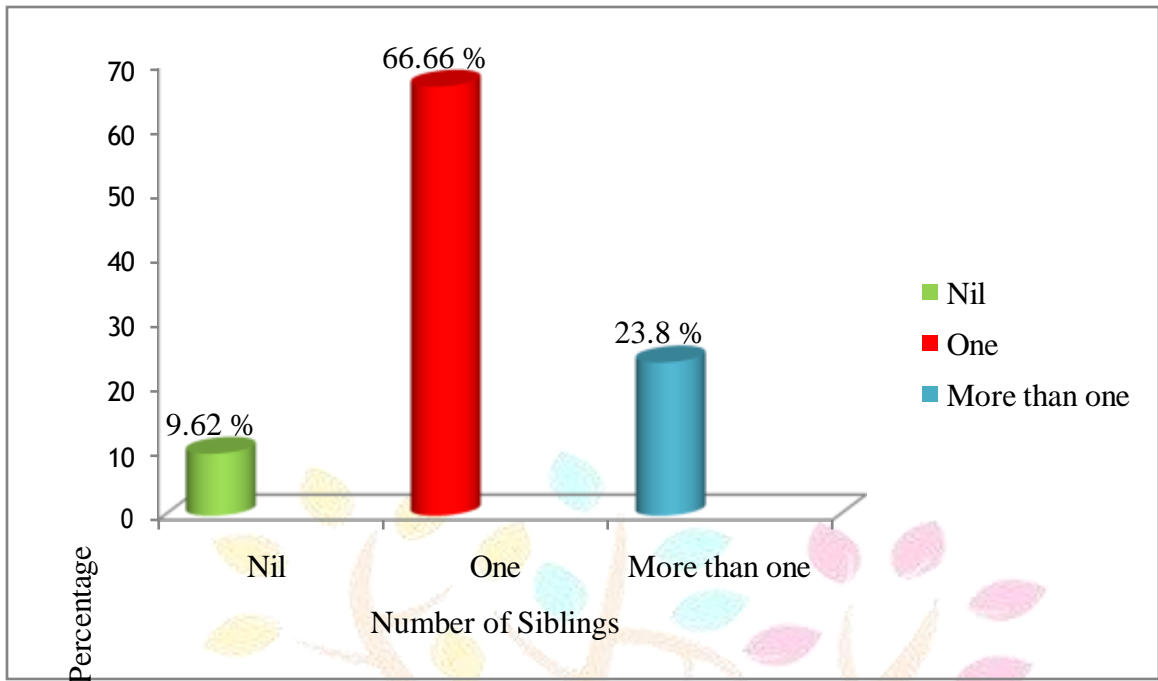
**Fig-4 Distribution of samples according to area of residence**

Figure shows that 81% students are from Panchayat and 19% from municipality.



**Fig-5 Distribution of samples according to type of family**

Figure shows that 85.92% students are from nuclear family and 14.08% students from joint family.

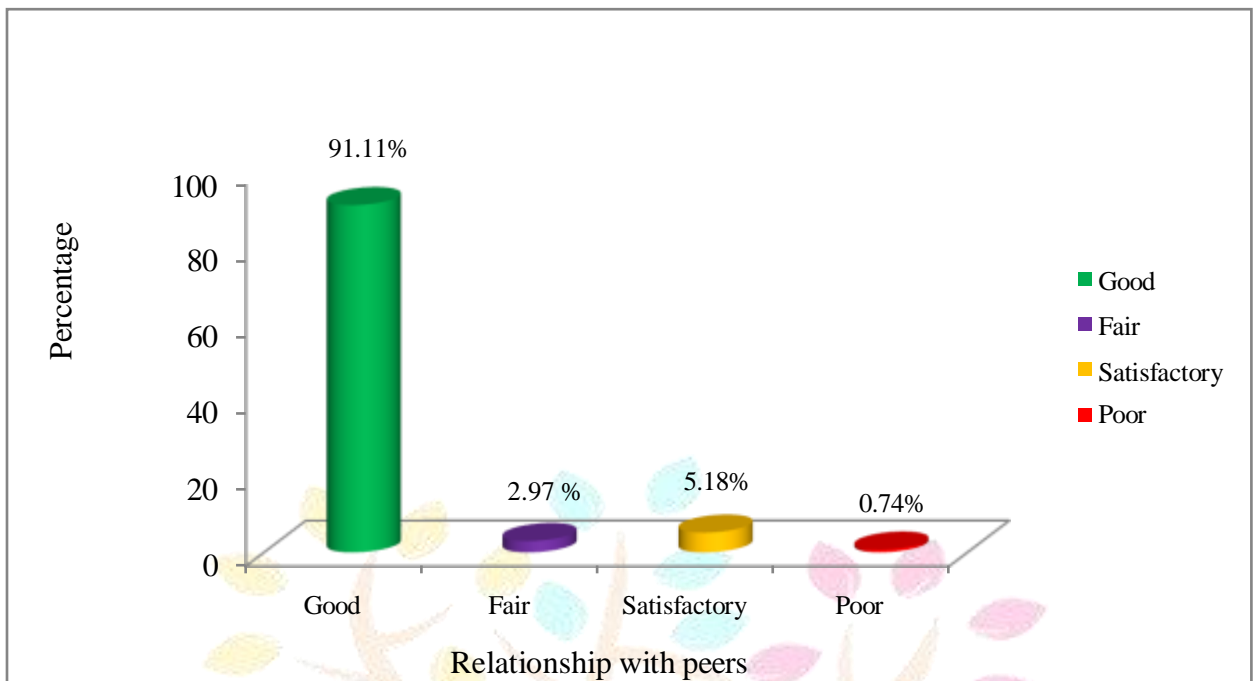


**Fig-6 Distribution of samples according to number of siblings**

Figure shows that 9.62% of samples do not have any siblings, 66.66% of samples have one sibling and 23.85% of samples were having more than one sibling.

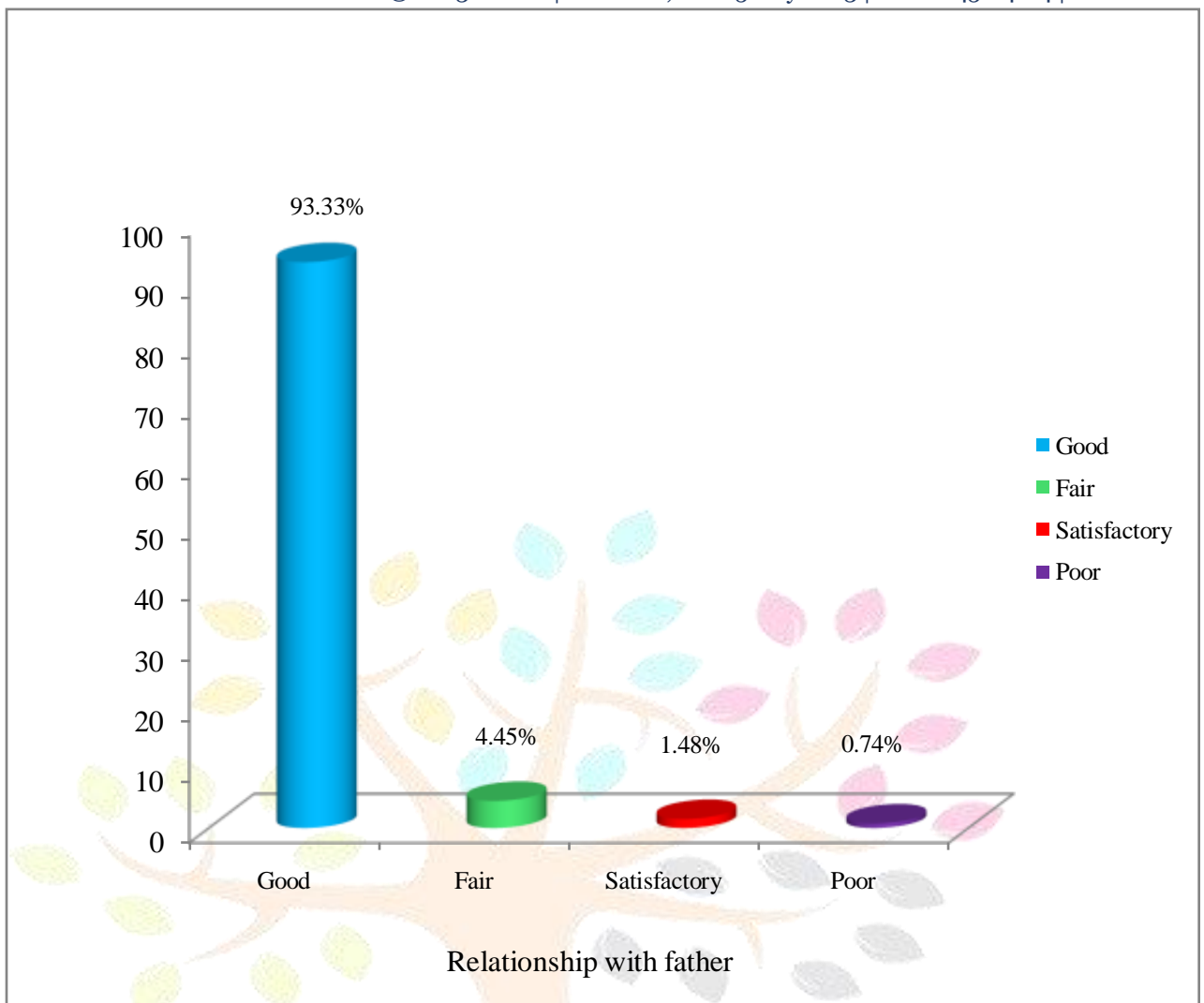






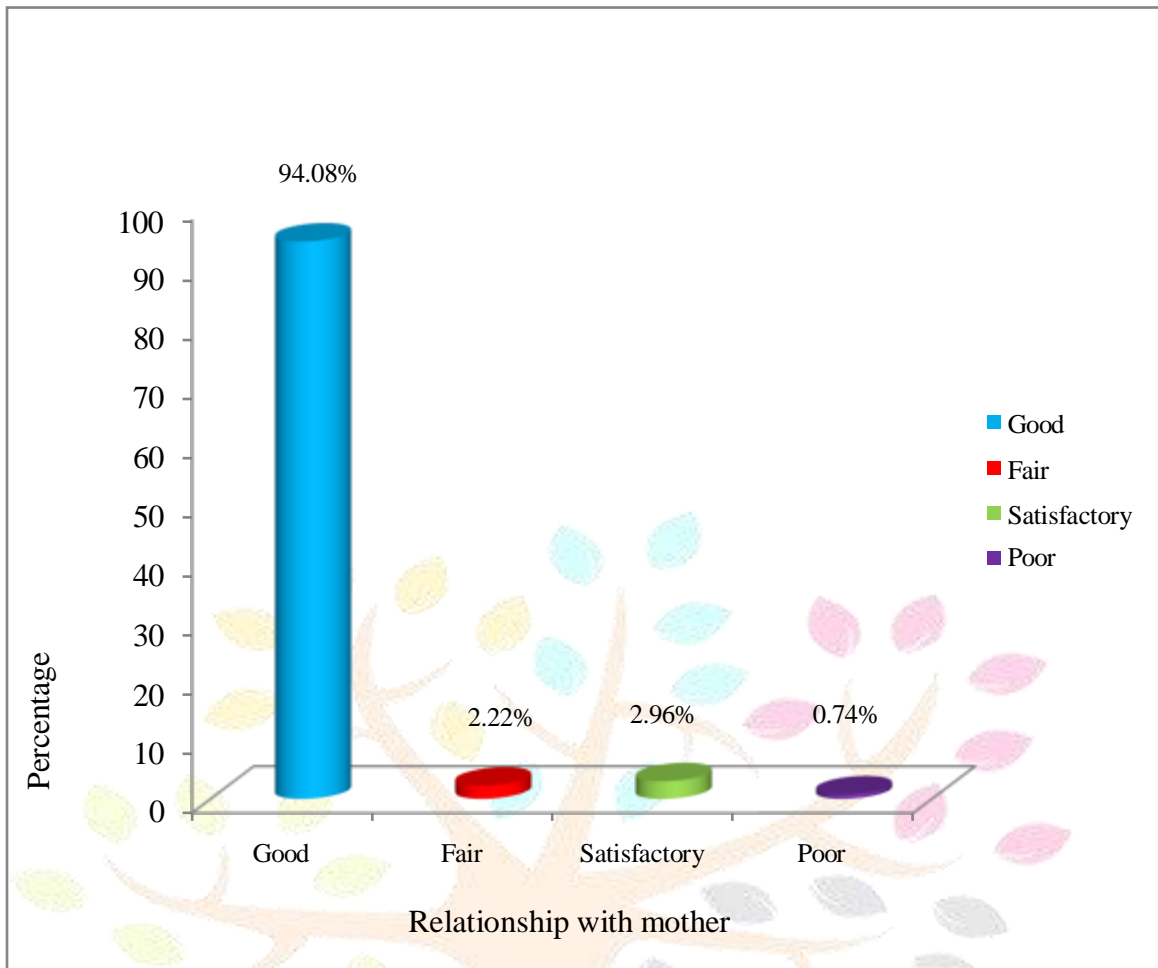
**Fig-7 Distribution of samples according to relationship with peers**

Figure show that 91.11% of students have good relationship with peers, 2.97% of students have fair relationship, 5.18% students have satisfactory relationship and 0.74% of students have poor relationship with peers.



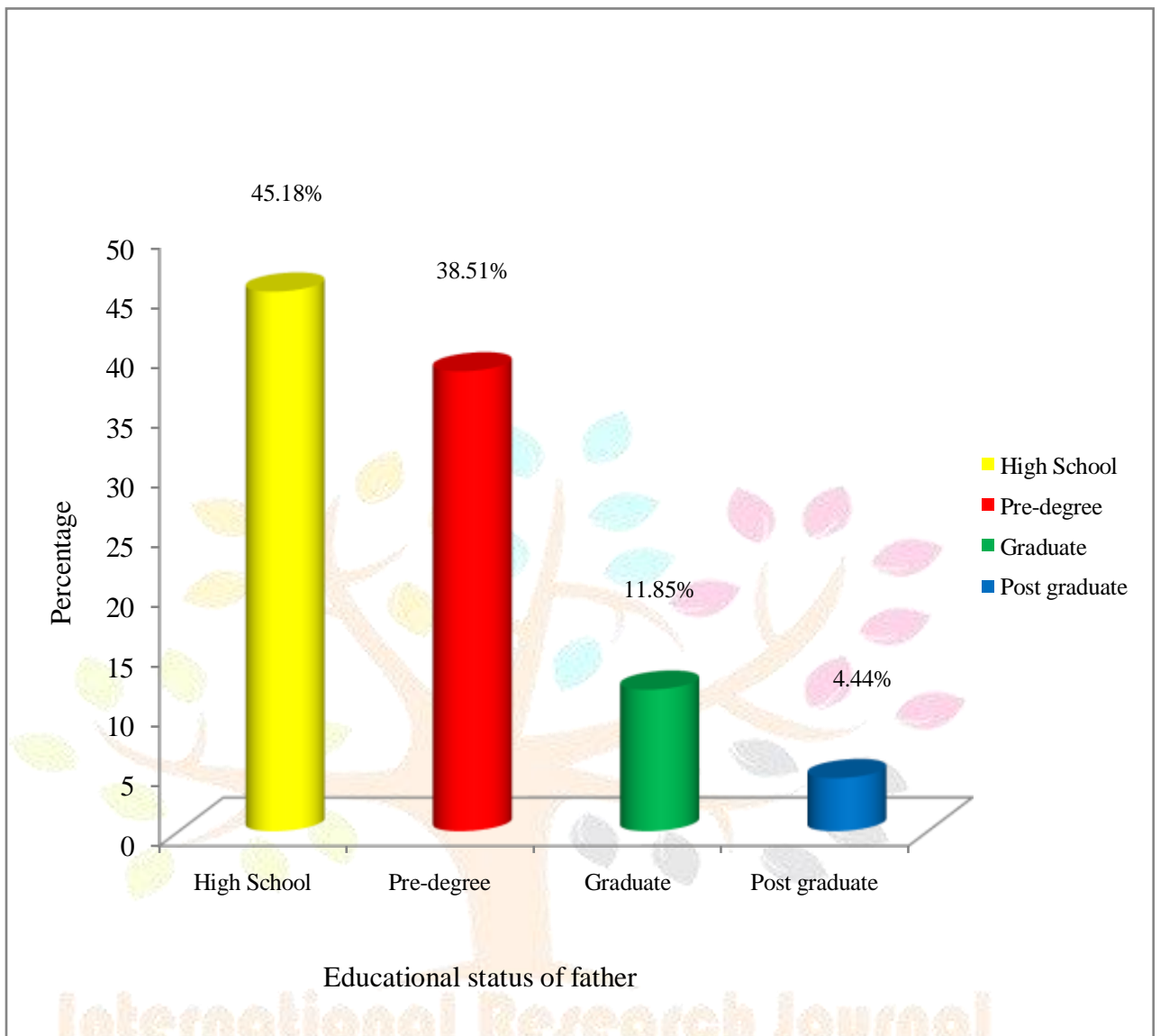
**Fig-8 Distribution of samples according to relationship with father**

Figure shows that 93.33% of students have good relationship with father, 4.45% of students have fair relationship, 1.48% of students have satisfactory relationship and 0.74% of students have poor relationship with father.



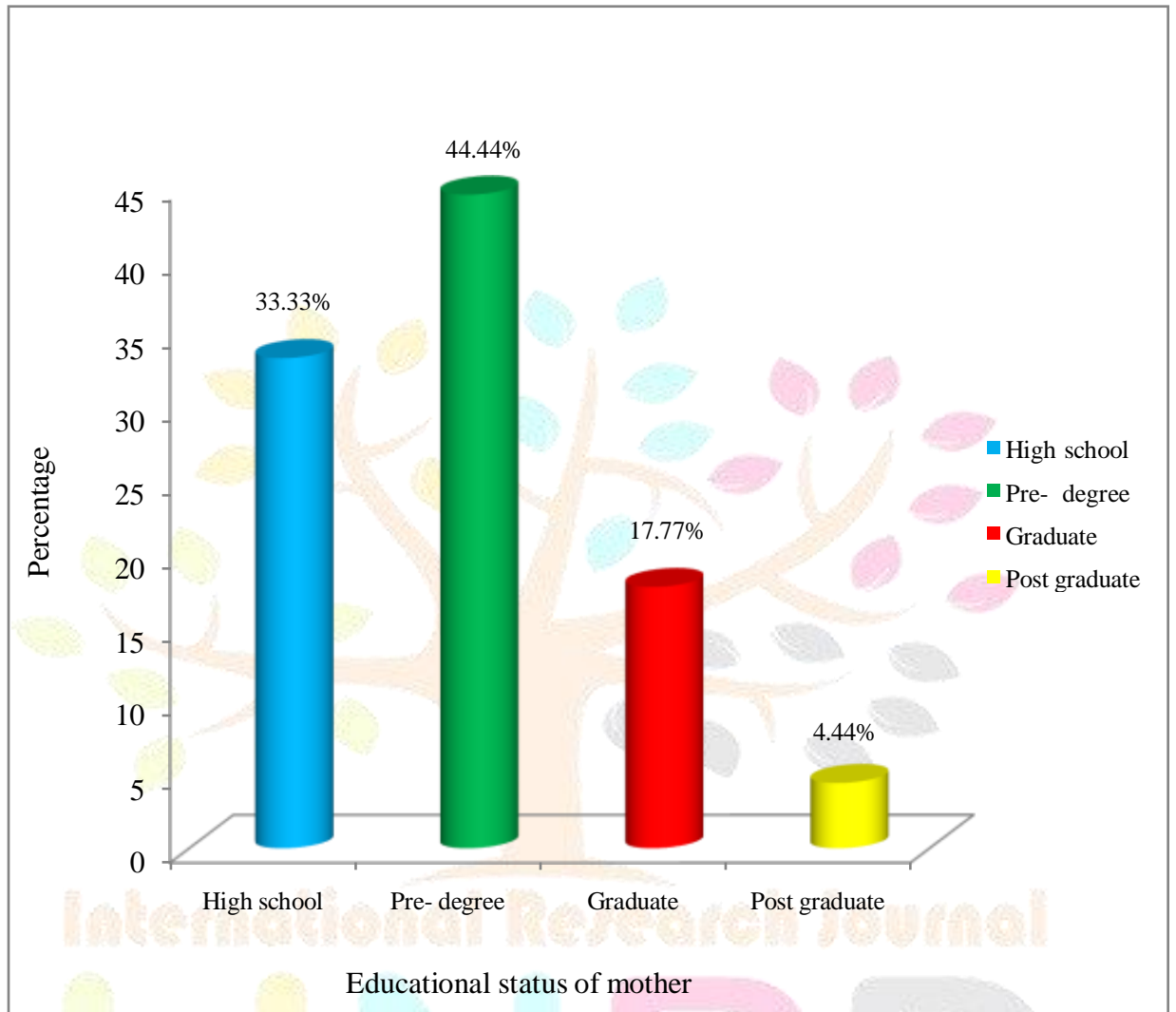
**Fig-9 Distribution of samples according to the relationship with mother**

Figure shows that 94.08% students have good relationship with mother, 2.22% students have fair relationship, 2.96% students have satisfactory relationship and 0.74% students have poor relationship with mother.



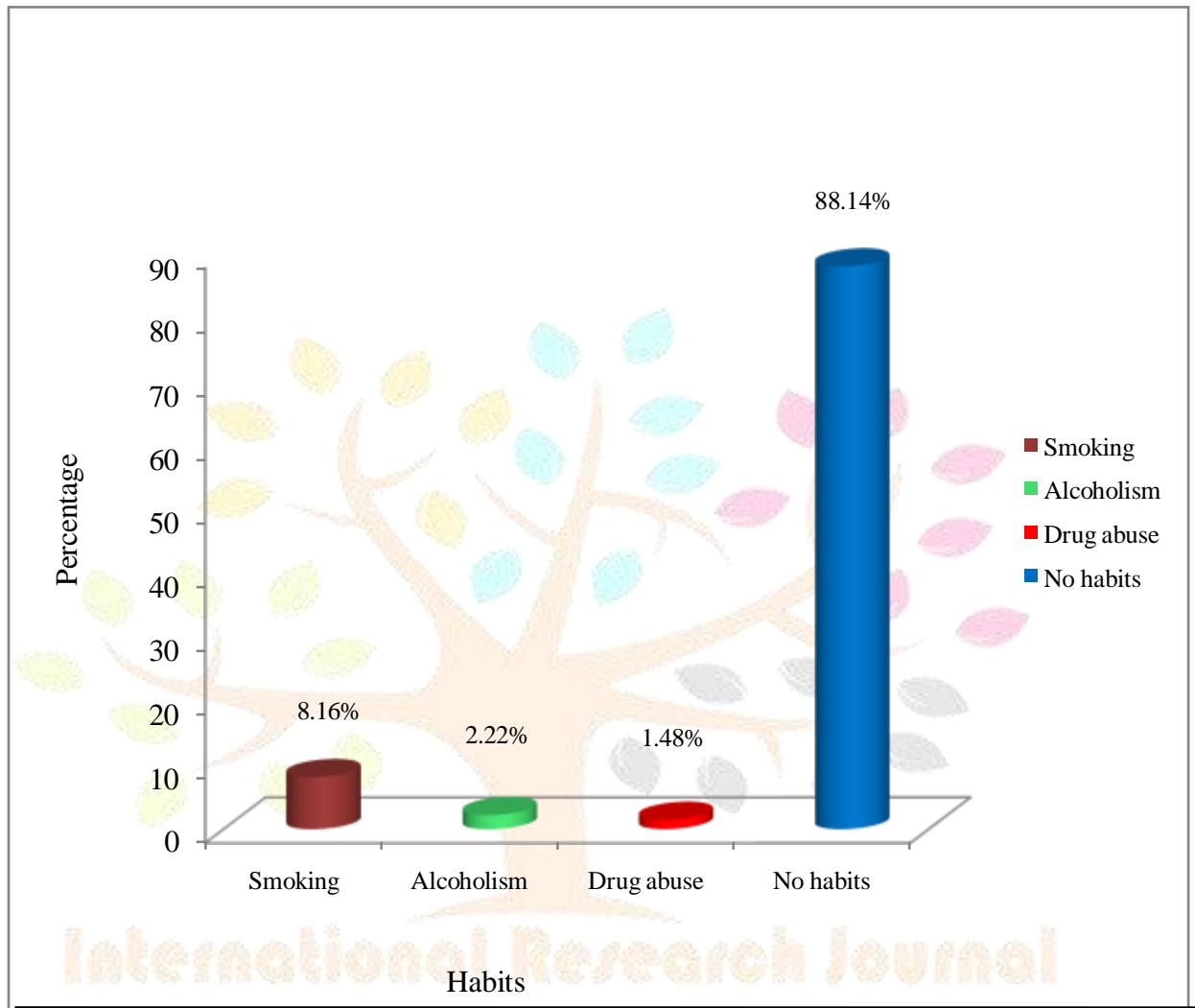
**Fig: 10 Distribution of samples according to educational status of father**

Figure shows that fathers 45.18% students have high school education, fathers of 38.51% are pre-degree, fathers of 11.85% students are graduates and 4.44% students were post graduates.



**Fig- 11 Distribution of samples according to the educational status of mother** Figure shows that mothers of 33.33% students have high school education, mothers of 44.44% are pre-degree, mothers of 17.77% students are graduates and 4.44% students are post graduates.





**Fig- 12 Distribution of samples according to habits**

Figure shows that 88.14% students doesn't have any practice of substance abuse, 8.16% students have practice of smoking, 2.22% students have the practice of alcoholism and 1.48% students have usage of other drugs.

**SECTION II: Description of level of knowledge of college students regarding substance abuse and its consequences.**

**Table 2: Frequency and percentage of level of knowledge regarding substance abuse and its consequences among college students**

**N=135**

Level of knowledge	Frequency (f)	Percentage (%)
Good knowledge	2	1.48
Average knowledge	104	77.04
Poor knowledge	29	21.48

The data presented in the above table depicts that 1.48% have good knowledge, 77.04% have average knowledge and 21.48% have poor knowledge regarding substance abuse and its consequences.

**SECTION III: Association between level of knowledge regarding substance abuse and its consequences and demographic variables of college students.**

**Table 3**

**Association of knowledge regarding substance abuse with the age of the students**

**N=135**

Age	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
18-19 yrs	9	6.66	57	42.22	1	0.74	7.4201
20-21 yrs	9	6.66	26	19.25	0	0	
22-23 yrs	11	8.14	21	15.55	1	0.74	

The above table describes about the association of knowledge regarding substance abuse with the age of students. The computed Chi square value of the students was 7.4201 at  $p < 0.05$  level were less than table value (9.488) which depicted that there is no significant association between the knowledge of the students and the age.

**Table 4****Association of knowledge regarding substance abuse with the gender of the students**

N=135

Gender	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Female	11	8.17	13	9.62	0	0	10.76*
Male	18	13.33	91	67.4	2	1.48	

\*  $p < 0.05$ 

The above table describes about the association of knowledge regarding substance abuse with sex of the students. The computed chi square value of the students was 10.76 at  $p < 0.05$  level were greater than table value (5.991) which depicted that there was a significant association between the knowledge and gender of students.

**Table 5****Association of knowledge regarding substance abuse with education of the sample**

N=135

Education	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Bsc. MLT	2	1.48	10	7.4	0	0	17.92*
D. Dialysis	14	10.39	32	23.7	1	0.74	
Radiology	6	4.44	8	5.93	0	0	

D. MLT	3	2.23	9	6.66	0	0
Bsc. Nursing	4	2.96	45	33.33	1	0.74

\*  $\rho < 0.05$ 

The above table describes about the knowledge regarding substance abuse with the education of the students. The computed chi square value of the students was 17.92 at  $\rho < 0.05$  level were greater than table value ( 15.507) which depicted that there was a significant association between the knowledge and education of the students.

**Table 6****Association of knowledge regarding substance abuse with area of residence**

N=135

Area of residence	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Panchayat	24	17.77	84	62.22	1	0.74	0.65
Municipality	5	3.7	20	14.81	0	0	

The above table describes about the association of knowledge regarding substance abuse with area of residence of the student. The computed chi square value of the student was 0.65 at  $\rho < 0.05$  level were less than table value(5.991) which depicted that there was no significant association between knowledge and area of residence of students.

**Table 7****Association of knowledge regarding substance abuse with type of family****N=135**

Type of family	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Nuclear	25	18.51	90	66.66	1	0.74	2.486
Joint	4	2.96	14	10.37	1	0.74	

The above table describes about the association of knowledge regarding substance abuse with type of family of the students. The computed chi square value of the student was 2.486 at  $p < 0.05$  level were less than table value ( 5.991) which depicted that there was no significant association with knowledge and type of family of students.

**Table 8****Association of knowledge regarding substance abuse with number of siblings****N=135**

Number of siblings	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Nil	5	3.7	8	5.92	0	0	4.21
One	19	14.07	69	51.11	2	1.48	
More than one	5	3.7	27	20	0	0	

The above table describes about the association of knowledge regarding substance abuse with number of siblings. The computed chi square value is 4.21 at  $p < 0.05$  level were less than table value ( 9.488) which depicted that there was no significant association between knowledge of students and number of siblings.



**Table 9****Association of knowledge regarding substance abuse with relationship with peers****N=135**

Relationship with peers	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Good	28	20.74	94	69.62	1	0.74	4.864
Fair	1	0.74	2	1.48	1	0.74	
Satisfactory	0	0	7	5.18	0	0	
Poor	0	0	1	0.74	0	0	

The above table describe about the association of knowledge regarding substance abuse with relationship with peers. The computed chi- square value of the student was 4.864 at  $p < 0.05$  level were less than the table value ( 12.592) which depicted that there was no significant association between the knowledge and relationship with peers.

**Table 10****Association of knowledge regarding substance abuse with relationship with father****N=135**

Relationship with father	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Good	27	20	98	72.6	1	0.74	5.09
Fair	1	0.74	4	2.96	1	0.74	
Satisfactory	0	0	2	1.48	0	0	
Poor	1	0.74	0	0	0	0	

The above table describe about the association of knowledge regarding substance abuse with relationship with father. The computed chi- square value of the students was 5.09 at  $\rho < 0.05$  level were less than table value (12.592) which depicted that there was no significant association between the knowledge of the students and relationship with father.

**Table 11**

**Association of knowledge regarding substance abuse with relationship with mother**

**N=135**

Relationship with mother	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Good	27	20	99	73.34	1	0.74	22.1*
Fair	2	1.48	1	0.74	0	0	
Satisfactory	0	0	3	2.22	1	0.74	
Poor	0	0	1	0.74	0	0	

\*  $\rho < 0.05$

The above table describe about the association of knowledge regarding substance abuse with relationship with mother. The computed chi- square value of the students was 22.1 at  $\rho < 0.05$  level were greater than table value ( 12.592) which depicted that there was significant association between the knowledge of the students and relationship with mother.

**Table 12****Association of knowledge regarding substance abuse with educational status of father****N=135**

Educational status of father	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
High school	17	12.6	43	31.85	1	0.74	7.3
Pre-degree	8	5.94	44	32.59	0	0	
Graduate	2	1.48	13	9.62	1	0.74	
Post graduate	2	1.48	4	2.96	0	0	

The above table describe about the association of knowledge regarding substance abuse with educational status of father. The computed chi- square value of the students was 7.3 at  $p < 0.05$  level were less than table value ( 12.592) which depicted that there was no significant association between the knowledge of the students and educational status of father.

**Table 13****Association of knowledge regarding substance abuse with educational status of mother****N=135**

Educational status of mother	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
High school	13	9.62	31	22.98	1	0.74	5.76
Pre-degree	11	8.14	49	36.3	0	0	

Graduate	3	2.23	20	14.81	1	0.74
Post graduate	2	1.48	4	2.96	0	0

The above table describe about the association of knowledge regarding substance abuse with educational status of mother. The computed chi- square value of the students was 5.76 at  $p < 0.05$  level were less than table value ( 12.592) which depicted that there was no significant association between the knowledge of the students and educational status of mother.

**Table 14**  
**Association of knowledge regarding substance abuse with habits**

Habits	Level of knowledge						$\chi^2$
	Poor		Average		Good		
	f	%	f	%	f	%	
Smoking	10	7.4	1	0.74	0	0	40.695*
Alcoholism	2	1.48	1	0.74	0	0	
Drug abuse	1	0.74	1	0.74	0	0	
No habits	16	11.86	101	74.82	2	1.48	

\*  $p < 0.05$

The above table describes about the association of knowledge regarding substance abuse with habits. The computed chi- square value of the students was 40.695 at  $p < 0.05$  level were greater than table value (12.592) which depicted that there was significant association between knowledge and habits of students.

# RESULTS

## CHAPTER 5 RESULTS

The description of result enables the researcher to reduce, summarize, organize, evaluate, interpret and communicate numerical information. This chapter presents the major results on data collected based on the knowledge regarding substance abuse and its consequences among college students. In order to interpret a meaningful answer to the research problem under study, the data were processed and analyzed in a systematic manner, so that patterns and relationships that exist between the data groups can be discerned.

This chapter is organized mainly under 3 headings – objectives, assumptions and major results of the study.

### Objectives

1. Assess the knowledge regarding substance abuse and its consequences among college students at selected colleges.
2. Find out the association between level of knowledge and selected demographic variables.

### Results

In the present study the distribution of samples according to age, among 135 samples (49.62%) was in the age group of 18-19 years, (25.92%) were in the age group of 20-21 years and (24.46%) were in the age group of 22-23.

Distribution of samples according to gender, out of 135 samples 17.78% were males and 82.22% were females.

Distribution of samples according to educational status, among 135 samples, 8.88% were studying in BSc MLT, 34.89% in Diploma in dialysis, 10.37% in radiology, 8.84% in Diploma in MLT and 37.03% in BSc Nursing.

Distribution of samples according to the area of residence, among 135 samples, 81% was having their residence in Panchayat and 19% in Municipality.



Distribution of samples according to their types of family, out of 135 samples, 85.92% were from nuclear family and 14.08% from joint family.

Distribution of samples according to their number of siblings, out of 135 samples, 9.62% had no siblings, 66.58% had one sibling and 23.8% had more than one sibling.

Distribution of samples according to their relationship with peers, out of 135 samples, 91.11% had a good, 2.97% had fair, 5.18% had satisfactory and 0.74% had poor relationship with peers.

Distribution of samples according to their relationship with father, out of 135 samples, 93.33% had good, 4.45% had fair, 1.48% had satisfactory and 0.74% had poor relationship with father.

Distribution of samples according to their relationship with mother, out of 135 samples, 94.08% had good, 2.22% had fair, 2.96% had satisfactory and 0.74% had poor relationship with mother.

Distribution of samples according to their educational status of their father, out of 135 samples, 45.18% had obtained education up to high school, 38.53% had obtained education up to pre-degree, 11.85% were graduates and 4.44% were post graduates.

Distribution of samples according to the educational status of their mother, out of 135 samples, 33.33% had obtained education up to high school, 44.49% had obtained education up to pre-degree, 17.74% were graduates and 4.44% were post graduates.

Distribution of samples according to their habits, out of 135 samples, 8.16% were used to smoke, 2.22% used to drink alcohol, 1.48% were used to abuse drugs and 88.14% had no habits.

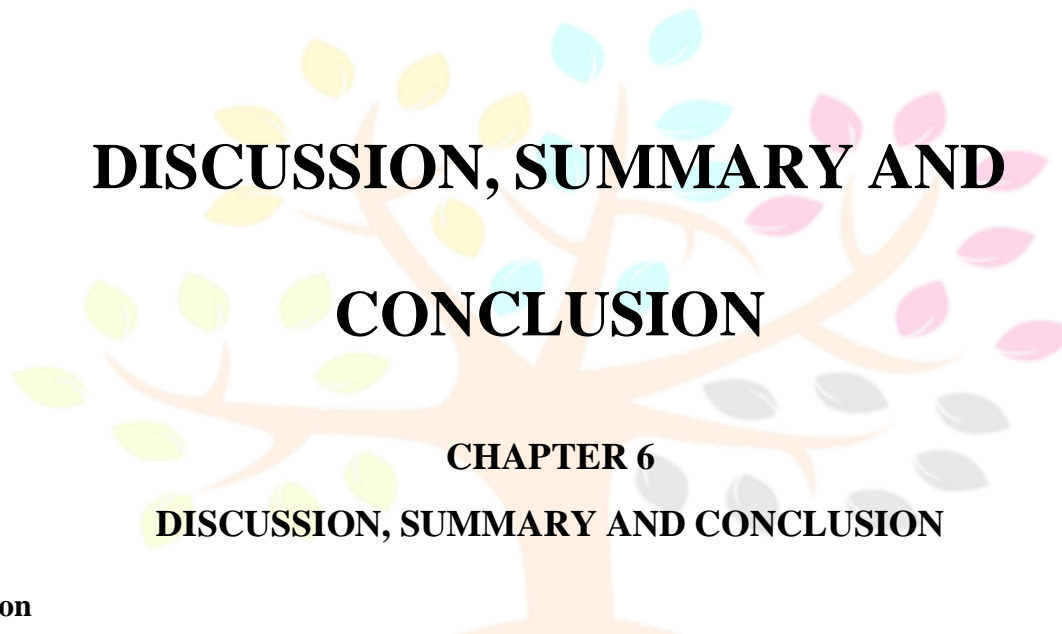
**To assess the knowledge regarding substance abuse and its consequences among college students at selected colleges.**

Description of structured knowledge questionnaire to assess the knowledge regarding substance abuse and its consequences, among 135 samples 1.48% had good knowledge, 77.04% had average knowledge and 21.48% had poor knowledge.

**To find out the association of knowledge score of college students at selected colleges with demographic variables**

The chi-square value (  $\chi^2 = 10.76$ ,  $\chi^2 = 17.92$ ,  $\chi^2 = 22.1$ ,  $\chi^2 = 40.695$ ,  $p < 0.05$  )

showed that there was a significant association between the knowledge score of samples at selected colleges with demographic variable. This showed there is a significant association between knowledge score of samples and gender, education, relationship with mother and their habits. But no association was found between the age of students, area of residence, type of family, number of siblings, relationship with peers, relationship with father, educational status of father and educational status of mother.



# **DISCUSSION, SUMMARY AND CONCLUSION**

## **CHAPTER 6**

### **DISCUSSION, SUMMARY AND CONCLUSION**

#### **Discussion**

A Report of finding is never sufficient to convey their significance. The meaning that researchers give to the result plays a rightful and important role in the report.

The present study was conducted to describe the assessment of knowledge regarding substance abuse and its consequence at selected colleges at Kozhencherry, Pathanamthitta. In order to achieve the objectives of the study, quantitative approach with descriptive design was adopted. Non probability convenient sampling technique was used to select the samples. The data was collected from MGM Muthoot College of Allied health science and MGM Muthoot College of nursing Kozhencherry. The data were collected by structured questionnaire and was interpreted using chi square technique.

The findings of the study have been discussed with reference to objectives, assumptions and findings of other related studies under the following headings: SECTION I: Discussion of the demographic characteristics of the students.

SECTION II: Discussion of assessment of knowledge regarding substance abuse and its consequences among college students.

SECTION III: Discussion of association between the knowledge score of college students at selected colleges with demographic variable.

### **Section I: Discussion of demographic characteristics of the students.**

Among 135 samples 67 (49.62%), were in the age group of 18-19 years and 111 (82.2%) were females. Majority of college students 50 (37.03%) were BSc Nursing students and 110(81%) had their residence in Panchayat. Out of 135 samples, 116 (85.92%) were from nuclear family and 90 (66.58%) had one sibling. Among the sample 123 (91.11%) had a good relationship with peers, 126(93.33%) had a good relationship with father and 127 (94.08%) had a good relationship with mother. Out of 135 samples 61 (45.18%) of the samples fathers were having an educational status of high school level and 60 (44.49%) of their mothers had obtained education up to pre degree. Majority of college students 119 (88.14%) had no habits.

### **Section II: Discussion of assessment of knowledge regarding substance and its consequences among college students.**

The result of the present study revealed that among 135 students, only two students (1.48%) had good knowledge, 104 (77.04%) had average knowledge and 29 (21.48%) had poor knowledge.

The study showed that about 77.04% students had average knowledge regarding substance abuse. The findings of the present study was similar with another concordant study conducted among 50 adolescent boys selected by using convenient sampling technique in selected school, Tamilnadu. The tool used is structured questionnaire. The result too revealed that a vast majority of about 68% of adolescent boys had only an average knowledge about substance abuse.

### **Section III: Discussion of association between the knowledge score of college students at selected colleges with demographic variable**

The findings of the present study revealed that there was an association between the knowledge score of college students at selected colleges with demographic variable. This showed there is a significant association between the knowledge score of samples and gender, education, relationship

with mother and habits. But there is no association was found between the age of student, area of residence, type of family, number of siblings, relationship with peers and father, educational status of father and mother. The result discussed above were similar with previous study which showed that there is a significant association with substance abuse with age, gender, place of residence and attitude towards ban.

## Summary

The study was conducted with primary objective of assessment of the knowledge regarding substance abuse and its consequences among college students at a selected colleges.

Assessment may generate curiosity to gain knowledge regarding substance abuse. The literature review covers the study under following sections.

Section 1: studies related to substance abuse.

Section 2: studies related to knowledge regarding substance abuse.

The research approach adopted for the study was quantitative with descriptive research design. The study was conducted at Muthoot College of Allied Health Science and Muthoot College of Nursing Kozhencherry, Pathanamthitta District.

The samples for the present study were selected by non probability convenient sampling technique. The sample comprised of 135 college students who fulfilled the inclusion criteria. The participants were asked to fill the demographic variables. Performa and structured questionnaire and anonymity was maintained. Ethical clearance was obtained from Ethical Review Board of Parent Institution. A pilot study was conducted at Muthoot College of Nursing on 29 Nov 2021. The study was found feasible and practicable. The main study was conducted 2 Dec 2021 to 7 Dec 2021. The researchers applied Chi square test to analyze the collected data.

The study results revealed that among 135 samples 104 (77.04%) college students had average knowledge, 29 (21.48%) had poor knowledge and 2 (1.48%) of them had good knowledge.

## Conclusion

The study aimed at assessing the knowledge regarding substance abuse and its consequences among college students and find out the association between level of knowledge and selected demographic

variables. The following conclusions were drawn on the basis of the findings of the study.

1. Among 135 samples, 67 (49.62%) were in the age group of 18-19 years.
2. Majority of the participants, i.e., 111 were female (82.2%).
3. Majority of college students 50 (37.03%) were BSc Nursing students, 12 (8.8%) were studying in BSc MLT, 47 (34.89%) in Diploma in Dialysis and 12(8.84%) Diploma in MLT and 14(10.37%) were studying in Diploma in Radiation Technology.
4. Majority of college students, 81% had their residence in Panchayat and 19% municipality.
5. Out of 135 samples 85.92% were from nuclear family and 14.08% from joint family.
6. Majority of college students, 66.58% had one sibling, 23.8% had more than one sibling and 9.62% had no sibling.
7. Out of 135 samples majority of students, (91.11%) had good, 5.18% had satisfactory, 2.97% had fair and 0.74% had poor relationship with peers.
8. Majority of college students (93.33%) had good, (4.45%) had fair, (1.48%) had satisfactory and (0.74%) had poor relationship with father.
9. Majority of college students, (94.08%) had good, (2.22%) had fair, (2.96%) had satisfactory and (0.74%) had poor relationship with mother.
10. Most of the samples father's had (45.18%) obtained education up to high school, (38.53%) had obtained up to pre degree, (11.85%) graduates and (4.44%) were post graduates.
11. Majority of samples mother's education (44.49%) up to high school, (33.33%) up to high school, (17.74%) were graduates and (4.44%) were graduates.
12. Majority of samples (88.14%) had no habits, 8.16% were used to smoke, 2.22% used to drink alcohol, 1.48% were used to abuse drugs.
13. The result of the study also revealed that (77.04%) had average knowledge,(21.48%) had poor knowledge and (1.48%) good knowledge.
14. The result also showed that there was a significant association between knowledge score of college students with baseline Performa. This showed there is a significant association between knowledge score of college students and gender, education, relationship with mother and habits.



### **Nursing implications**

1. The findings of the study have certain important indications for the nursing profession in the field of nursing practice, nursing education, nursing administration and nursing research.

### **Nursing practice**

1. Nurses can use pamphlets and teaching modules to provide further information on the knowledge of substance abuse, its causes, and risk factors among adolescents, early adults, and youth and to their parents.
2. Nurses can provide counseling to the students and their family members.
3. Nurses can identify and recognize the people who are at risk of developing dependency on substance abuse.
4. Nurses can conduct awareness programmes regarding the risk factors and its consequences of substance abuse among youths.
5. Nurses can give health education which can be organized and conducted at colleges to prevent substance abuse among the early adults and youth.

### **Nursing education**

1. The study helps to provide knowledge regarding the substance abuse and its products.
2. Nurse educators can encourage the students to gain knowledge regarding substance abuse.
3. Nurse educators can encourage the students to create awareness to other students and peer groups regarding the risk factors and ill effects on health regarding substance abuse.

### **Nurse administration**

1. Nurse administrator can plan or organize in service education for nursing personnel regarding knowledge of substance abuse.
2. Nurse administrator can encourage the nursing personnel to conduct studies related to substance abuse.
3. Nurse administrator can organize along with the government, voluntary health agencies and hospitals to promote the awareness on knowledge of substance abuse.

### **Nursing research**

1. Nurses must develop newer instructional technology towards nursing education and practice on creating awareness to the society regarding substance abuse.
2. Nurses can conduct studies associated with substance abuse in colleges from time to time.
3. Nurses can do more research in this aspect to find out the predisposing factors of substance abuse.

### **Limitations**

1. Generalization of the study was limited due to convenience sampling technique.
2. Study was limited to two selected colleges in a district.

### **Recommendation**

1. A similar study can be conducted with large sample.
2. A comparative study can be conducted to assess the knowledge regarding substance abuse and adult attitude towards substance abuse.

## **REFERENCE**

### **REFERENCE**

1. Nahvizadeh M M, Akhavan S, A review study of substance abuse status in high school students, Isfahan, Iran. International journal of preventive medicine. 2014; Volume 7 (Issue 2): page no:77-81.
2. Sahu K K, Sahu Soma. Substance abuse cause and consequences. Research gate. [cited 2012 Dec 2014]. Available from <https://www.researchgate.net/publication/>
3. Bayba M College drug used statistics. Addiction Group. [cited 2021 Nov 2018]. Available from <https://www.addictiongroup.org/addiction/college.drug-abuse-statistics>
4. Bouchrika I. College drug abuse statistics: 2020/2021 data, facts and predictions. Research.com. [cited 2020 Sep 30]. Available from <https://research.com/education/college-drug-abuse-statistics>

5. Lipari N R. Trends in substance use disorder among adults aged 18 or older. pubmed.com. [cited 2017 June 29]. Available from <https://www.drugabuse.gov/drug-topics/statistics>
6. A Ambedkar, A Agarwal, R Raw. Magnitude of substance used in India 2019. Ministry of social justice and empowerment, Govt. of India. 2019, - and determinants of substance abuse among youth in central Kerala, India. Researchgate. Available from <https://www.ijcmph.com>.
7. Raphael L, Raveendran R , V M Sajna. Prevalence and determinants of substance abuse among youth in central Kerala India. Research gate.[cited 2017 Jan 20]. Available from <https://www.researchgate.net/publication/>
8. Sreevani R. a guide to Mental Health and Psychiatric Nursing. 3<sup>rd</sup> edition. New Delhi: Jaypee brothers medical publishers pvt. Limited; 2010. Page no: 191-198
9. Townsend Mc. Textbook of psychiatric & mental health nursing. 8<sup>th</sup> edition. Philadelphia: F A Davis Company; 2007. Pg no: 229-265
10. Jasdeep K, Kiranjith k. A descriptive study to assess the knowledge regarding substance abuse among adolescent students. Asian journal of nursing education and research. 2015; volume 5 (issue 4): page no: 463-466
11. Sharma K S, Textbook of Nursing Research and Statistics, 3<sup>rd</sup> edition, New Delhi: Reed Elsevier India pvt limited; 2014. page no: 43
12. Koushal D. A descriptive study to assess the knowledge towards substance abuse among adolescent school children. Research gate. [Cited 2020 February]. Available from <https://www.researchgate.net>
13. Mary J C, Vijayakumari S, Riaz K M. A study to assess the prevalence and correlation of alcohol use in Kerala. Research gate. [Cited 2020 Jan 26]. Available from <https://www.researchgate.net>.
14. Sanjeev M, Sahil S, Tejbir S. A cross sectional study on prevalence of substance abuse and its determinants among the male youth aged 15-24 yrs of slums of city Amritsar. pesquiser.[cited 2019 April]. Available from <https://pesquisa.bvsalud.org>.
15. N J Lavik. Drug abuse among junior high school students in Norway. Pubmed. [Cited 2019 Oct

20]. Available from <https://pubmed.ncbi.nlm.nih.gov>.

16. Rabic et.al. A cross sectional study to assess the prevalence of substance abuse among male adolescents in Kanpur. Research gate. [cited 2019 June]. Available from <https://www.researchgate.net>

17. Octanio Campollo, Fernando A. An explorative study to determine the prevalence of drug consumption among 1577 university students. Pubmed. [Cited 2018 Jan 19]. Available from <https://pubmed.ncbi.nlm.nih.gov>

18. Gebermariam B T, Mruts B K, Neway K T. substance use and associated factors among Debu buhan university students central Ethiopia. Biomed; [cited 2018 April 3]. Available from [www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)

19. Sajna M V. Prevalence and determinants of substance abuse among youth in central Kerala. International journal of community medicine and public health.2017; volume 4(issue 3): page no: 747-751.

20. Nawas H, Ayub J. Uses psychoactive drugs among medical undergraduate in Ahamedabad.pubmd.[cited 2017 Dec 29]. Available from [www.pubmed.ncbi.nlm.nih.gov](http://www.pubmed.ncbi.nlm.nih.gov).

21. Tosin H Oni, Tshitangano G T. Substance use among secondary school students in rural setting in South Africa: Prevalence and possible contributing factors. AOSIS. [Cited 2016 April8]. Available from <https://www.phcfm.org>.

22. Heart C L, Gorp V, Haney M.Division on substance abuse. Pubmed. [Cited 2016].Available from <https://pubmed.ncbi.nlm.nih.gov>

23. Dr Sharma M, Chaudary M. a study of drugs and substance abuse among adolescents of slum, dwellers. The international journal of Indian psychology.2016; Volume 3(issue 4):pageno: 20-25.

24. Moron E M, Blocker J D. Substance use in primary care, journal of family medicine and community health.2015;volume 2(issue 7):page no :558-562.

25. H Sahadat, H Shakhaoat, R Abdur. Prevalence of Tobacco smoking and factors associated with initiation of smoking among university students in Dhaka. Pubmed. [Cited 2015 sep 10]. Available from <https://pubmed.ncbi.nlm.nih.gov>.

26. Tufel B, Abdul G, Syed Q. An epidemiological study of substance abuse among college students

of North India, Kashmir valley. Research gate. [Cited 2013 January]. Available from <https://www.researchgate.net>.

27. Chris W, James R, Emily R. A descriptive study on patterns of Amphetamine use among adolescents. Research gate. [Cited 2013 Nov 10 ]. Available from <https://www.researchgate.net>.

28. Raboussin B A, Song E Y, Wolfson M. social influences on the clustering of underage risky drinking and its consequences. J Stud Alcohol Drugs. 2012; Volume 10 (Issue 6): page no 117-128.

29. Tais G F. Medication use in adults living in Brazilia, Brazil: A cross sectional population-based study. Pubmed. [Cited 2010 July 21]. Available from <https://www.researchgate.net>.

30. Kingsuk S, Suman R K. A descriptive study on effect of acute smoked marijuana on complex cognitive performance among healthy volunteers. Research gate. [cited 2010 June]. Available from <https://www.researchgate.net>.

31. O L Theresa, K Ichiro, G A Dolores. Patterns of smoking different for different racial or ethnic group. Pubmed.[cited 2006 September]. Available from <https://pubmed.ncbi.nlm.nih.gov>.

32. Annabell B, John M, John S. Understanding reasons for drug use among young people a functional perspective. Health education research. 2001; Volume 16 (Issue 4): page no. 457-469

33. Shastri S S. sociodemographic factors of Cannabis and Heroin abuse in Bombay. Pubmed. [1989 October ] . Available from <https://pubmed.ncbi.nlm.nih.gov>.

34. Bhawariya R. A descriptive study to assess the knowledge related to substance abuse among adolescents in Desh Bhagat University Mandi Punjab, International journal of research. 2021; Volume 10 (issue 6): page no: 1178-1187.

35. B Ahmed, N R Ntompizodwa. A correlational study to assess the knowledge and attitude of adolescent on alcoholism. South African Dental journal. 2018; volume 7: page no: 27-30

36. V Shenbagaprabha, Lamin T, Shainas A. A study to assess the level of knowledge on substance abuse among the adolescents boys. Indian journal of research. 2016; Volume 5 (issue 8): page no: 361-365.

37. B Anilkumar, Ogoncho O P. Knowledge on substance abuse among adolescents.

International journal of nursing education and research. 2016; Volume 4 (issue 3): page no: 371-375.



38. Nebhinani N, Hamatha N. Substance related knowledge and attitude in school and college students. German journal of psychiatry. Research gate; [cited2013july5] Available from <https://www.researchgate.net>
39. Faldu H G, Yuvrajsinh V.A descriptive study to determine knowledge regarding substance abuse in Kolkata. Research gate.[cited2011Dec3]Available from<https://www.researchgate.net>
40. Tsering D, Pal R, Dasguptha A. Substance use among adolescent high school students in India .A survey of knowledge, attitude and opion. Journal of pharmacy and bio allied science. 2010; Volume 2 (issue 2): page no: 137-140.
41. H Qian, G Rui. Study on knowledge, attitude and behavior regarding drug abuse amongjunior MiddleschoolstudentsPubmed; [cited2008may2]. Available from <https://pubmed.ncbi.nlm.nih.gov>.



# APPENDICES

## APPENDIX- A

**MGM MUTHOOT COLLEGE OF NURSING**  
(An ISO 9001 : 2008 Certified Nursing College)  
College Road, Kozhencherry - 689 641

(Approved by Indian Nursing Council & Kerala Nurses & Midwives Council) | (From 2003 to 2009 - Affiliated to Mahatma Gandhi University, Kottayam)  
(From 2010 - Affiliated to Kerala University of Health Sciences, Thrissur)

Ref.: CON/MMC/1904 /12/21 10/12/2021

To  
The III B.Sc. Nursing Students (Group II)  
MGM Muthoot College of Nursing  
Kozhencherry


**Sub.: Permission to Conduct Research Study - reg.:-**


As per the request letter from III year B.Sc. Nursing students (Group II), I granted the permission to conduct research study among the First year B.Sc. Nursing students of this college on the following topic:-

**"Assess the knowledge regarding Substance abuse and its consequences among college students at a selected college".**


The student researchers will not cause any inconvenience.

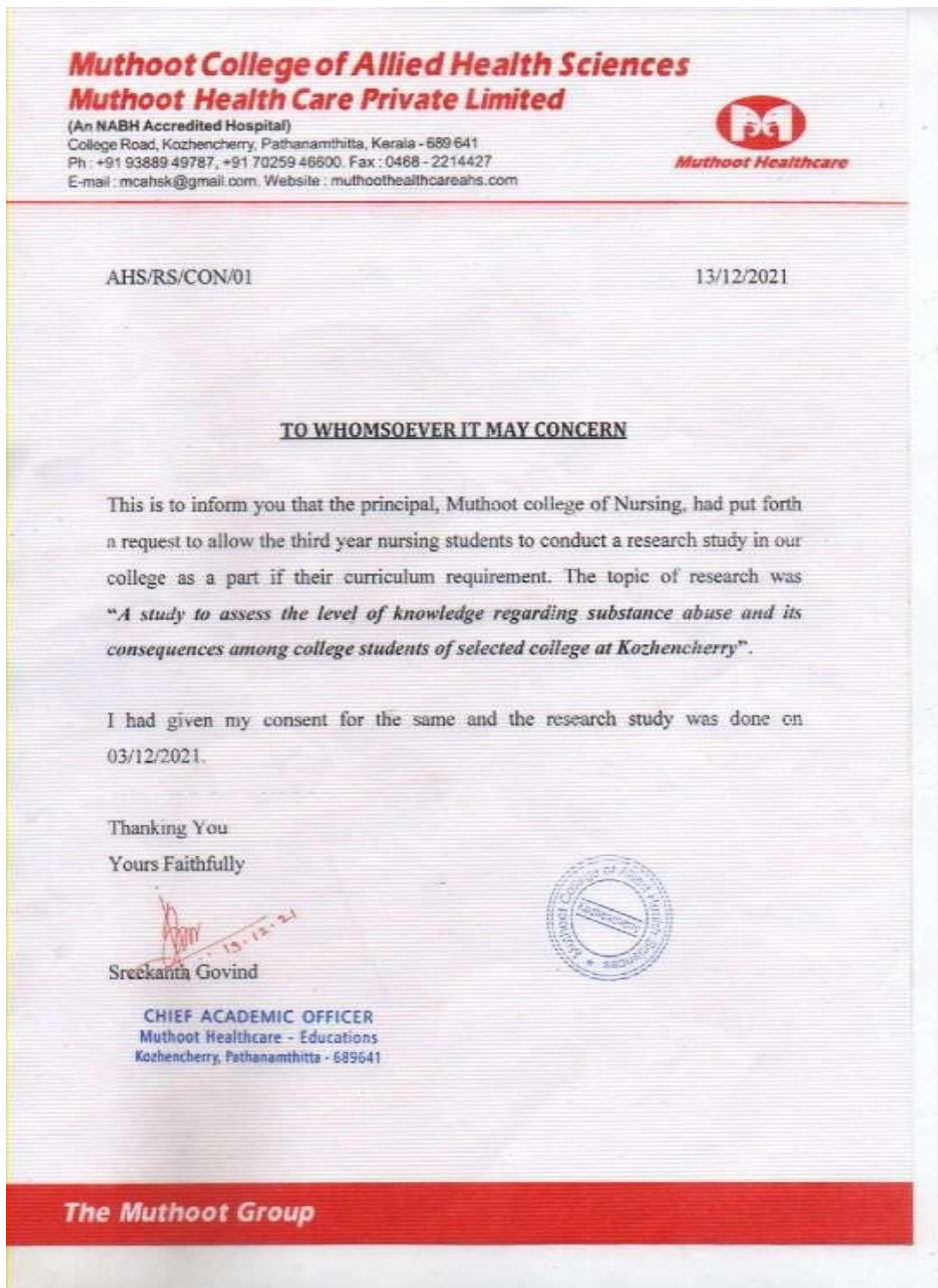
Thanking you,  
Yours Sincerely,

  
**PROF. DR. KIRUBA J. C.**  
Dr. Kiruba J. C. SPAL  
M.G. MUTHOOT COLLEGE OF NURSING  
KOZHENCHERRY



Parent Hospital : Muthoot Health Care Private Limited ; An NABH Accredited, NABH Safe / Certified and ISO 9001:2008 Certified Hospital  
College Road, Kozhencherry, Pathanamthitta (Dist) 689641 - Kerala India.  
Phone : 0488-2278158, Fax : 0488-2279906 Email : mmc\_mccc@yahoo.com, Web : www.muthootnursingkzy.com





## Research Through Innovation

### APPENDIX--B

#### LIST OF EXPERTS FOR CONTENT VALIDATION OF RESEARCH TOOLS

1. Mrs. SINDHU ABRAHAM  
PROFESSOR,  
HOD MEDICAL SURGICAL NURSING

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

2. Mr. SKARIAH KOSHY

PROFESSOR

HOD MENTAL HEALTH NURSING

MGM MUTHHOT COLLEGE OF NURSING

KOZHENCHERRY

3. Mrs. SIJI T JOSE

ASSOCIATE PROFESSOR,

CHILD HEALTH NURSING DEPARTMENT

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

4. Mrs. NIBY K MATHEW

ASSOCIATE PROFESSOR

MATERNAL HEALTH NURSING DEPARTMENT

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

5. Mrs. TINTU SARA JOY

ASSISTANT PROFESSOR

MEDICAL SURGICAL NURSING DEPARTMENT

MGM MUTHOOT COLLEGE OF NURSING

KOZHENCHERRY

6. Mrs. LEKSHMI BALAJI

LECTURER

COMMUNITY HEALTH NURSING DEPARTMENT

MGM MUTHOOT COOLEGE OF NURSING

KOZHENCHERRY

## APPENIX-C

### LETTER SEEKING FOR EXPERT OPINION AND SUGGESTIONS FOR THE CONTENT VALIDITY OF THE TOOL

From,

3<sup>rd</sup> year Bsc. Nursing

Kozhencherry

Pathanamthitta

To,

Subject: Request for expert opinion and suggestions to establish content validity of research tool.

Respected Sir/Madam,

We, the third year B.sc nursing students of MGM Muthoot College of nursing, Kozhencherry, have selected the following topic for research to be submitted as partial fulfillment of the requirement for B.sc nursing programme **TOPIC: "A study to assess the knowledge regarding substance abuse and its consequences among college students"**.

We request you to go through the items and give your valuable suggestions and opinions to validate the tool. Your suggestions will be extremely helpful for us to refine the research study we have attached the details of our study along with the research tool.

Thanking you

Yours sincerely

3<sup>rd</sup> year Bsc. nursing

Place: Kozhencherry

Date:

Here with we have enclosed:

1. Acceptance form for tool validation.



2. Title of the study, statement of the problem, objective of the study operational definitions and assumptions.
3. Content validity certificate.
4. Criteria for validation of tool.
5. Tool validating certificate.




**APPENDIX-  
D**

**CONTENT VALIDITY CERTIFICATE**

I hereby certify that I have validated tool of second group of third year B.Sc Nursing students of MGM MUTHOOT COLLEGE OF NURSING, KOZHENCHERRY, who had undertaken the study to assess the level of knowledge regarding substance abuse and its consequences along College students of a selected college.

Place: Kozhanchery

  
Sign of expert:


Date: 09.11.2021

Designation: Assistant Professor.

### CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated tool of second group of third year B.Sc Nursing students of MGM MUTHOOT COLLEGE OF NURSING, KOZHENCHERRY, who had undertaken the study to assess the level of knowledge regarding substance abuse and its consequences along College students of a selected college.

Place: KOZHENCHERRY

Sign of expert: 

Date: 17.11.2021

Designation: PROFESSOR

**CONTENT VALIDITY CERTIFICATE**

I hereby certify that I have validated tool of second group of third year B.Sc Nursing students of MGM MUTHOOT COLLEGE OF NURSING, KOZHENCHERRY, who had undertaken the study to assess the level of knowledge regarding substance abuse and its consequences among College students of a selected college.

Place:

Sign of expert:

Date:

Designation:




### CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated tool of second group of third year B.Sc Nursing students of MGM MUTHOOT COLLEGE OF NURSING, KOZHENCHERRY, who had undertaken the study to assess the level of knowledge regarding substance abuse and its consequences along College students of a selected college.

Place: *Kozhencherry*

Date: *02.11.21*

Sign of expert:

  
Associate Professor  
Child health nursing ppt

Designation:



### CONTENT VALIDITY CERTIFICATE

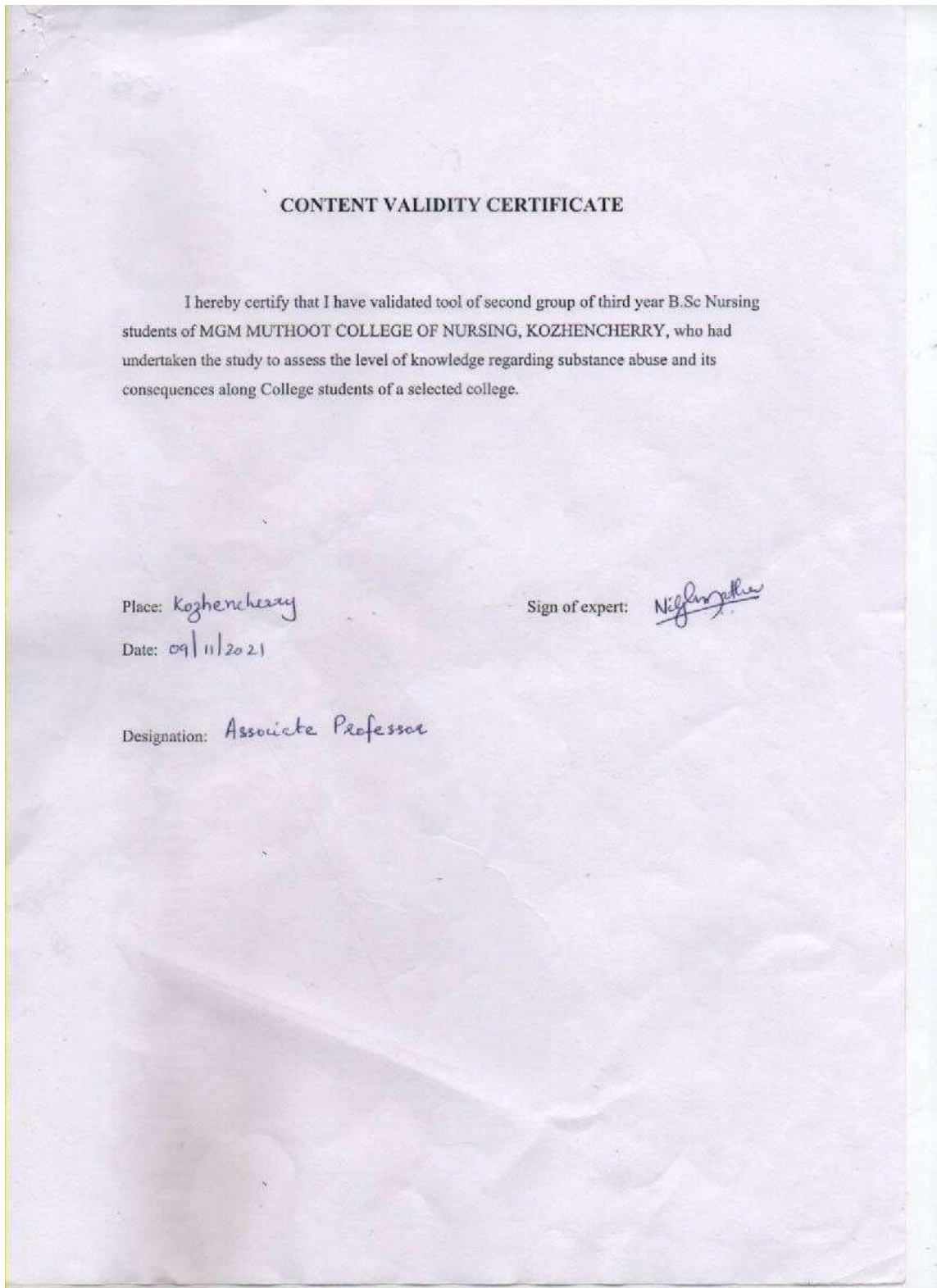
I hereby certify that I have validated tool of second group of third year B.Sc Nursing students of MGM MUTHOOT COLLEGE OF NURSING, KOZHENCHERRY, who had undertaken the study to assess the level of knowledge regarding substance abuse and its consequences along College students of a selected college.

Place: MGM Kozhancherry

Date: 11/11/21

Designation: lecturer

Sign of expert: Lakshmi



#### APPENDIX-E

#### WRITTEN INFORMED CONSENT FORM

I am giving consent to the part of the study by 3rd yr B. Sc Nursing students of M.G.M MCON, Kozhencherry, on the assessment of knowledge regarding substance abuse and its consequences among college students. I hereby declare to abide this rule. I have been

informed that my participation is entirely voluntary and I can refuse to answer to the questions or decide. To terminate the participation at any point even after the study begins, I have been informed that my participation, non participation or my refusal to participate will have no effect on the health services provided to me. I have been told that this will be used only for study purpose and also informed about the confidentiality of my responses.

I.....

.....(Name and Address)

voluntarily agree to join this study.

Full name and signature

Left hand thumb impression of the informant

Full name and signature of Investigator

Place: Kozhencherry

Date:

### APPENDIX- F

#### CERTIFICATE FOR EDITING

This is to certify that the thesis work "A descriptive study to assess the knowledge regarding Substance abuse and its consequences among college students of a selected college at Kozhencherry" done by Ill year B.Sc. Nursing students in MGM Muthoot College Of Nursing has been edited for English language appropriateness.

Signature:

Name:

Place:

Date:

**APPENDIX- G**

**ACCEPTANCE FORM FOR TOOL VALIDATION**

Name.....

Designation.....

Name of the College/ Hospital/ Institution:

.....

Statement of acceptance or non-acceptance

I give my acceptance/ non- acceptance to validate the tool.

Title of the study: "A study to assess the knowledge regarding substance abuse and its consequences among college students"

Place: Kozhencherry

Date:

Signature

**TOOL USED FOR STUDY**

**SECTION- A**

**SOCIO DEMOGRAPHIC DATA**

**General instruction to the sample:**

- Put tick mark (  ) for appropriate response.
- Read all of the questions carefully.
- Answers involving more than one option are not acceptable.
- Respond to all the questions below.
- Your response will be kept confidential and be used only for the research purpose.

1. Age

- a) 18 - 19 yrs.
- b) 20 - 21 yrs.
- c) 22 – 23 yrs.

2. Gender

- a) Male
- b) Female

\_\_\_\_\_

3. Education

- a) B.Sc. MLT \_\_\_\_\_
- b) Diploma in Dialysis \_\_\_\_\_
- c) Radiology \_\_\_\_\_
- d) Diploma in MLT \_\_\_\_\_
- e) B.Sc. Nursing \_\_\_\_\_

4. Area of residence

- a) Panchayat \_\_\_\_\_
- b) Municipality \_\_\_\_\_

5. Types of family

- a) Nuclear family \_\_\_\_\_
- b) Joint family \_\_\_\_\_

6. Number of siblings

- a) NIL \_\_\_\_\_
- b) One \_\_\_\_\_
- c) More than one \_\_\_\_\_

7. Relationship with peers

- a) Good \_\_\_\_\_
- b) Fair \_\_\_\_\_
- c) Satisfactory \_\_\_\_\_
- d) Poor \_\_\_\_\_

8. Relationship with father

- a) Good \_\_\_\_\_
- b) Fair \_\_\_\_\_
- c) Satisfactory \_\_\_\_\_
- d) Poor \_\_\_\_\_

9. Relationship with mother

- a) Good \_\_\_\_\_
- b) Fair \_\_\_\_\_
- c) Satisfactory \_\_\_\_\_
- d) Poor \_\_\_\_\_

10. Education status of father

- a) High School \_\_\_\_\_
- b) Pre-Degree \_\_\_\_\_
- c) Graduate \_\_\_\_\_
- d) Post Graduate \_\_\_\_\_





11. Education status of mother

- a) High School \_\_\_\_\_
- b) Pre-Degree \_\_\_\_\_
- c) Graduate \_\_\_\_\_
- d) Post Graduate \_\_\_\_\_

12. Habits

- a) Smoking \_\_\_\_\_
- b) Alcoholism \_\_\_\_\_
- c) Drug abuse \_\_\_\_\_
- d) No habit \_\_\_\_\_

**SECTION-B**

**STRUCTURED KNOWLEDGE QUESTIONNAIRE**

**General instruction to the sample:**

- ✓
- Put tick mark (  ) for appropriate response.
- Read all of the questions carefully.
- Answers involving more than one option are not acceptable.
- Respond to all the questions below.
- Your response will be kept confidential and be used only for the research purpose.

1. What does self-medication mean?

- a) Prescription of drug by doctors \_\_\_\_\_
- b) Motive for using a substance \_\_\_\_\_
- c) Deciding the drug of choice \_\_\_\_\_
- d) Psychological distress through substance use \_\_\_\_\_

2. What is the meaning of abuse?

- a) To use wrongfully or in harmful way \_\_\_\_\_
- b) To use better way \_\_\_\_\_
- c) To use at once \_\_\_\_\_
- d) To use occasionally \_\_\_\_\_

3. What is substance abuse?

- a) Disorders due to the use of psychoactive substances \_\_\_\_\_
- b) Disorders due to overconsumption of alcohol and smoking \_\_\_\_\_
- c) Disorders due to the use of chemicals \_\_\_\_\_
- d) All the above \_\_\_\_\_

4. Which among the following is a risk factor for substance abuse?

- a) Ineffective parenting \_\_\_\_\_
- b) Academic success \_\_\_\_\_
- c) Strong family bond \_\_\_\_\_
- d) All of the above \_\_\_\_\_

5. What is the cause for the over consumption of substance?  
a) Genetic factor  
b) Psychological factor  
c) Social factor  
d) All the above
6. What are the consequences of the substance abuse?  
a) Physical and psychological dependence  
b) Healthy lifestyle  
c) Good Behavior  
d) None of the above
7. Which among the following is the most common psychological factor for drug abuse?  
a) Self treatment  
b) Curiosity  
c) Peer pressure  
d) Money and availability of drugs
8. Which age group is more drug addicted?  
a) Below 15 yrs  
b) 16 – 30 yrs  
c) 30 – 60 yrs  
d) Above 60 yrs
9. Which is the most abused substance in India?  
a) Opioid  
b) Illicit drugs  
c) Heroin  
d) Alcohol
10. Which day is international anti-drug day?  
a) June 26  
b) August 12  
c) March 8  
d) September 26
11. Which of the following is a commonly used psychoactive substance?  
a) Alcohol  
b) Cocaine  
c) Sedatives  
d) All the above
12. What is the main cause of death among college students due to substance abuse?  
a) Accidents  
b) Violence  
c) Suicide  
d) Assault

13. Which of the following is a sign of drug abuse? \_\_\_\_\_
- a) Depression \_\_\_\_\_
  - b) Diarrhea \_\_\_\_\_
  - c) Dizziness \_\_\_\_\_
  - d) Dumbness \_\_\_\_\_
14. Which of the following is associated with academic problem due to drug abuse? \_\_\_\_\_
- a) Skipping classes \_\_\_\_\_
  - b) Irritability \_\_\_\_\_
  - c) Change in personality \_\_\_\_\_
  - d) Avoiding eye contact \_\_\_\_\_
  - e) \_\_\_\_\_
15. Which drug become addictive by its first use? \_\_\_\_\_
- a) Nicotine \_\_\_\_\_
  - b) Heroin \_\_\_\_\_
  - c) Marijuana \_\_\_\_\_
  - d) Crack cocaine \_\_\_\_\_
16. Which of the following are not psychiatric disorders associated with substance abuse? \_\_\_\_\_
- a) Hallucination \_\_\_\_\_
  - b) Psychosis \_\_\_\_\_
  - c) Alzheimer's disease \_\_\_\_\_
  - d) Schizophrenia \_\_\_\_\_
17. Which substance is strongly linked to aggression? \_\_\_\_\_
- a) Marijuana \_\_\_\_\_
  - b) Alcohol \_\_\_\_\_
  - c) Tobacco \_\_\_\_\_
  - d) Codeine \_\_\_\_\_
18. What is the main complication of alcohol consumption? \_\_\_\_\_
- a) Dyspnea \_\_\_\_\_
  - b) Lung cancer \_\_\_\_\_
  - c) Slurred speech \_\_\_\_\_
  - d) Liver cirrhosis \_\_\_\_\_
19. "Black out "after drinking alcohol means \_\_\_\_\_
- a) Loss of hearing \_\_\_\_\_
  - b) Lapse of memory \_\_\_\_\_
  - c) Slurred speech \_\_\_\_\_
  - d) Loss of vision \_\_\_\_\_
20. Which vitamin deficiency can be seen in alcoholic person? \_\_\_\_\_
- a) Vitamin D \_\_\_\_\_
  - b) Vitamin E \_\_\_\_\_
  - c) Vitamin A \_\_\_\_\_
  - d) Vitamin B \_\_\_\_\_

21. Which of the following is a proper method to stop alcoholism?  
a) Moderate exercise \_\_\_\_\_  
b) De-addiction centre \_\_\_\_\_  
c) Take rest \_\_\_\_\_  
d) Counseling \_\_\_\_\_
22. Which is the most vulnerable age group to start tobacco smoking?  
a) 14-21 yrs \_\_\_\_\_  
b) 22-30 yrs \_\_\_\_\_  
c) 31-40 yrs \_\_\_\_\_  
d) 41-50 yrs \_\_\_\_\_
23. Which is the leading cause of death among smokers?  
a) heart attack \_\_\_\_\_  
b) Leukemia \_\_\_\_\_  
c) Lung cancer \_\_\_\_\_  
d) Liver cirrhosis \_\_\_\_\_
24. Which is the most severe complication occurs due to chewing tobacco?  
a) Mouth cancer \_\_\_\_\_  
b) Gum bleed \_\_\_\_\_  
c) Dental caries \_\_\_\_\_  
d) Oral cancer \_\_\_\_\_
25. Which among the following is a narcotic?  
a) Charas \_\_\_\_\_  
b) Bhangs \_\_\_\_\_  
c) Ganja \_\_\_\_\_  
d) Heroin \_\_\_\_\_
26. Which among the following is a form of heroin?  
a) Tobacco \_\_\_\_\_  
b) Poppy \_\_\_\_\_  
c) Datura \_\_\_\_\_  
d) Cannabis \_\_\_\_\_
27. Which is the disorder that occurs due to the long-term use of cocaine?  
a) Major depression \_\_\_\_\_  
b) Mania \_\_\_\_\_  
c) Schizophrenia \_\_\_\_\_  
d) Autism \_\_\_\_\_
28. Which of the following is not a short-term effect of cocaine use?  
a) Feeling sick to the stomach \_\_\_\_\_  
b) Paranoia (feeling that people are out to get you) \_\_\_\_\_  
c) Hair loss \_\_\_\_\_  
d) High risk for heart attack \_\_\_\_\_

29. Which among the following is the first symptom of withdrawal syndrome? \_\_\_\_\_  
a) Anxiety \_\_\_\_\_  
b) Fear \_\_\_\_\_  
c) Vomiting \_\_\_\_\_  
d) Tremors \_\_\_\_\_
30. Where the treatment of drug addiction should be done? \_\_\_\_\_  
a) Home \_\_\_\_\_  
b) School \_\_\_\_\_  
c) De-addiction centre \_\_\_\_\_  
d) Religious place \_\_\_\_\_

### ANSWER KEY

- 1.) C
- 2.) A
- 3.) D
- 4.) A
- 5.) D
- 6.) A
- 7.) B
- 8.) B
- 9.) D
- 10.) A
- 11.) A
- 12.) A
- 13.) A
- 14.) A
- 15.) B
- 16.) C
- 17.) B
- 18.) D
- 19.) B
- 20.) D
- 21.) B
- 22.) A
- 23.) C
- 24.) A
- 25.) D
- 26.) B
- 27.) A
- 28.) C
- 29.) A
- 30.) C





SAMPLE	Age	Gender	Education	Area of residence	Type of family	No. of siblings	Relationship with peers	Relationship with father	Relationship with mother	Educational status of father	Educational status of mother	Habits
1	1.3	2.2	3.1	4.1	5.2	6.3	7.1	8.1	9.1	10.1	11.1	12.4
2	1.1	2.2	3.1	4.1	5.1	6.2	7.3	8.1	9.1	10.2	11.3	12.4
3	1.2	2.2	3.1	4.1	5.1	6.3	7.1	8.1	9.1	10.1	11.2	12.4
4	1.1	2.2	3.1	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
5	1.1	2.2	3.4	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
6	1.1	2.2	3.4	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1	12.4
7	1.1	2.2	3.4	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
8	1.1	2.2	3.4	4.2	5.1	6.1	7.1	8.1	9.1	10.1	11.1	12.4
9	1.1	2.2	3.4	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
10	1.3	2.2	3.1	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.1	12.4
11	1.2	2.2	3.1	4.1	5.1	6.3	7.1	8.1	9.1	10.4	11.3	12.4
12	1.2	2.2	3.1	4.1	5.1	6.2	7.1	8.1	9.4	10.1	11.1	12.4
13	1.1	2.2	3.1	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
14	1.3	2.2	3.4	4.1	5.2	6.2	7.1	8.1	9.1	10.1	11.1	12.4
15	1.2	2.2	3.4	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
16	1.2	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
17	1.2	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
18	1.1	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
19	1.3	2.1	3.3	4.2	5.1	6.2	7.1	8.1	9.1	10.2	11.4	12.4
20	1.1	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
21	1.2	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
22	1.3	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
23	1.1	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4

24	1.2	2.2	3.3	4.1	5.1	6.2	7.2	8.1	9.1	10.3	11.2	12.4
25	1.2	2.2	3.3	4.1	5.1	6.2	7.3	8.1	9.1	10.2	11.2	12.4
26	1.1	2.2	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
27	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
28	1.3	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.2	11.4	12.4
29	1.1	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.1	11.1	12.4
30	1.2	2.2	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
31	1.3	2.2	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.4	12.4
32	1.3	2.1	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
33	1.1	2.1	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
34	1.2	2.2	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.1	11.1	12.4
35	1.2	2.1	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
36	1.2	2.2	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
37	1.2	2.2	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
38	1.2	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
39	1.1	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
40	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
41	1.3	2.1	3.2	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
42	1.2	2.2	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.1	11.1	12.4
43	1.3	2.2	3.2	4.2	5.1	6.2	7.1	8.2	9.2	10.1	11.3	12.4
44	1.2	2.2	3.1	4.1	5.2	6.2	7.1	8.3	9.3	10.1	11.1	12.4
45	1.3	2.2	3.2	4.1	5.2	6.2	7.2	8.1	9.3	10.1	11.1	12.4
46	1.1	2.1	3.1	4.2	5.2	6.3	7.1	8.1	9.1	10.3	11.3	12.4
47	1.1	2.1	3.1	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.2	12.4
48	1.1	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
49	1.1	2.1	3.2	4.2	5.2	6.2	7.1	8.1	9.1	10.1	11.2	12.4
50	1.3	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.1
51	1.2	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.1
52	1.3	2.1	3.2	4.1	5.1	6.1	7.1	8.1	9.1	10.2	11.2	12.1

53	1.3	2.1	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.1	11.1	12.1
54	1.3	2.2	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.1	12.3
55	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.1
56	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
57	1.3	2.2	3.2	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1	12.1
58	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.1
59	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
60	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.1
61	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.2
62	1.3	2.2	3.2	4.1	5.1	6.3	7.3	8.1	9.1	10.1	11.1	12.4
63	1.2	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.3	12.4
64	1.2	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
65	1.3	2.1	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.1	11.1	12.2
66	1.3	2.1	3.2	4.1	5.1	6.3	7.3	8.3	9.1	10.2	11.2	12.4
67	1.2	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.1	11.2	12.4
68	1.3	2.1	3.2	4.1	5.1	6.2	7.3	8.1	9.1	10.2	11.2	12.4
69	1.3	2.1	3.2	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1	12.1
70	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
71	1.3	2.1	3.2	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.2
72	1.1	2.2	3.1	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
73	1.1	2.1	3.1	4.1	5.2	6.3	7.1	8.4	9.1	10.2	11.2	12.4
74	1.1	2.2	3.4	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
75	1.2	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.4	11.4	12.4
76	1.1	2.1	3.2	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1	12.1
77	1.2	2.2	3.2	4.1	5.2	6.3	7.1	8.1	9.1	10.1	11.1	12.3
78	1.2	2.1	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
79	1.2	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.4	11.4	12.4
80	1.3	2.2	3.2	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
81	1.3	2.2	3.2	4.1	5.2	6.2	7.1	8.1	9.1	10.3	11.1	12.4

82	1.2	2.2	3.4	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
83	1.2	2.1	3.4	4.2	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
84	1.1	2.2	3.4	4.1	5.1	6.1	7.1	8.1	9.1	10.2	11.3	12.4
85	1.2	2.2	3.4	4.1	5.1	6.2	7.1	8.2	9.2	10.1	11.1	12.1
86	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
87	1.2	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
88	1.1	2.2	3.5	4.2	5.1	6.2	7.1	8.1	9.1	10.4	11.3	12.4
89	1.1	2.2	3.5	4.1	5.1	6.3	7.4	8.1	9.1	10.2	11.2	12.4
90	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.3	11.3	12.4
91	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.3	12.4
92	1.1	2.2	3.5	4.2	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
93	1.1	2.2	3.5	4.2	5.2	6.1	7.1	8.1	9.1	10.3	11.3	12.4
94	1.1	2.2	3.5	4.2	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
95	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.2	12.4
96	1.2	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.3	11.3	12.4
97	1.1	2.2	3.5	4.1	5.1	6.1	7.1	8.1	9.1	10.2	11.3	12.4
98	1.1	2.2	3.5	4.2	5.1	6.3	7.1	8.1	9.1	10.1	11.2	12.4
99	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.3	12.4
100	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.4	11.4	12.4
101	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
102	1.2	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
103	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.3	12.4
104	1.1	2.2	3.5	4.2	5.2	6.2	7.1	8.1	9.1	10.2	11.2	12.4
105	1.1	2.2	3.5	4.5	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
106	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
107	1.1	2.2	3.3	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
108	1.1	2.2	3.5	4.2	5.1	6.2	7.1	8.1	9.1	10.4	11.3	12.4
109	1.1	2.1	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.3	12.4
110	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.3	11.3	12.4

111	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.3	12.4
112	1.1	2.2	3.5	4.1	5.2	6.2	7.1	8.1	9.1	10.2	11.3	12.4
113	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.2	9.1	10.2	11.2	12.4
114	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4
115	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
116	1.2	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.3	11.3	12.4
117	1.2	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.3	12.4
118	1.1	2.2	3.5	4.1	5.1	6.2	7.3	8.2	9.3	10.3	11.1	12.4
119	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
120	1.1	2.2	3.5	4.1	5.1	6.1	7.3	8.1	9.1	10.2	11.2	12.4
121	1.1	2.2	3.5	4.2	5.1	6.3	7.1	8.2	9.2	10.1	11.3	12.4
122	1.1	2.2	3.5	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.2	12.4
123	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
124	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.3	11.3	12.4
125	1.2	2.2	3.5	4.1	5.1	6.1	7.1	8.1	9.1	10.2	11.2	12.4
126	1.1	2.2	3.5	4.2	5.2	6.1	7.1	8.1	9.1	10.1	11.2	12.4
127	1.1	2.2	3.5	4.2	5.1	6.3	7.1	8.1	9.1	10.2	11.3	12.4
128	1.2	2.2	3.5	4.1	5.1	6.1	7.1	8.1	9.1	10.2	11.2	12.4
129	1.1	2.2	3.5	4.1	5.1	6.1	7.2	8.1	9.1	10.2	11.2	12.4
130	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.2	11.2	12.4
131	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.3	12.4
132	1.1	2.2	3.5	4.1	5.1	6.3	7.2	8.1	9.1	10.2	11.2	12.4
133	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.3	9.3	10.2	11.2	12.4
134	1.1	2.2	3.5	4.1	5.1	6.2	7.1	8.1	9.1	10.1	11.1	12.4
135	1.1	2.2	3.5	4.1	5.1	6.3	7.1	8.1	9.1	10.2	11.2	12.4

Research Through Innovation



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total	
1	0	1	0	0	0	1	1	0	1	0	0	1	0	1	0	0	1	1	0	0	1	0	1	1	0	0	0	0	0	1	12	
2	0	1	1	0	1	1	0	1	1	1	0	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	0	0	1	18	
3	0	0	1	0	1	0	0	1	1	0	1	1	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	1	1	17	
4	0	1	0	1	0	1	0	0	0	1	1	0	1	0	0	0	0	1	0	0	1	1	1	1	1	0	0	0	1	1	14	
5	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	1	0	1	0	1	1	1	0	1	0	0	1	13	
6	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	1	0	1	0	1	1	1	0	1	0	0	1	13	
7	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	1	0	1	0	1	1	1	0	1	0	0	1	13	
8	0	1	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	1	13	
9	0	1	1	0	0	0	0	1	1	0	1	1	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	1	13	
10	0	0	1	0	0	0	0	1	0	1	1	0	1	0	0	0	1	0	0	1	1	1	1	0	1	0	0	0	0	1	12	
11	0	0	1	0	0	0	0	1	1	1	1	0	1	0	0	0	1	0	0	1	1	1	1	0	1	0	0	0	0	0	11	
12	0	1	0	0	0	0	0	1	1	1	1	0	1	0	0	0	1	0	0	1	1	1	1	1	1	0	1	0	0	1	15	
13	0	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	1	0	1	0	1	1	0	1	0	0	1	0	1	0	12	
14	0	1	1	0	0	1	1	1	1	0	0	0	1	0	0	1	1	1	1	0	1	1	1	1	0	0	1	0	1	1	18	
15	0	1	1	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	1	0	1	1	1	1	0	0	1	0	0	0	15	
16	0	1	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	13	
17	0	1	0	0	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	12	
18	0	1	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	10	
19	1	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	10	
20	1	0	1	0	1	1	0	0	0	0	1	1	1	0	0	0	1	1	1	0	1	1	1	0	0	1	1	1	0	1	17	
21	1	1	0	1	0	1	1	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	1	0	1	1	0	0	1	16	
22	0	1	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1	0	0	1	13
23	0	1	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0	1	0	0	1	12	
24	0	1	0	0	0	0	1	1	1	0	1	1	1	0	1	0	0	1	0	0	1	0	0	1	1	0	1	0	0	0	13	
25	0	1	0	0	0	0	1	1	1	0	1	1	1	0	0	0	1	1	0	0	1	0	0	1	1	0	1	0	0	1	14	
26	1	0	0	1	0	0	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	1	1	1	0	0	0	1	0	1	13	
27	1	0	0	1	0	0	0	1	0	0	0	0	1	1	0	1	0	1	0	0	1	1	1	1	0	0	0	0	0	1	12	
28	1	1	1	1	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	18	

29	1	1	1	1	0	0	0	1	1	1	1	0	1	0	0	0	1	1	1	0	1	0	1	1	0	0	1	0	0	1	17	
30	1	1	1	1	0	1	0	1	1	0	0	0	1	0	0	1	0	0	1	0	1	1	1	1	1	0	1	0	0	1	17	
31	0	1	1	0	1	1	0	0	1	1	0	0	0	1	0	1	1	1	1	0	0	1	1	1	0	0	1	0	0	1	16	
32	1	1	1	0	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1	0	1	1	1	1	1	0	0	0	0	0	15	
33	0	1	1	0	0	0	1	1	1	0	0	0	0	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	13
34	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1	1	1	0	1	1	1	1	0	1	0	1	17	
35	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0	0	1	1	16
36	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	1	16
37	1	1	0	1	0	1	1	0	1	0	0	0	1	0	0	1	1	1	0	0	0	1	1	1	0	0	1	1	1	0	16	
38	1	1	0	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	0	0	1	1	1	1	0	0	0	0	1	1	14	
39	1	1	1	1	1	0	1	1	1	0	0	0	1	0	0	1	0	1	0	0	0	1	1	1	0	0	1	0	0	0	15	
40	1	1	0	1	0	1	0	1	1	0	0	1	1	0	0	1	0	1	0	0	1	1	1	0	0	1	1	1	0	1	17	
41	1	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	1	0	0	0	0	1	1	1	0	0	0	0	0	12	
42	1	1	0	0	1	0	0	1	1	0	0	1	1	0	0	1	0	1	1	1	1	1	1	0	1	1	0	0	0	1	17	
43	0	1	1	1	0	0	1	1	1	1	1	0	1	1	0	1	1	1	0	0	0	1	1	0	1	0	1	0	0	1	18	
44	1	1	1	0	1	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	1	1	1	0	0	1	1	1	1	17	
45	1	1	1	1	0	1	0	1	1	0	1	0	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	23	
46	0	0	0	1	1	0	0	0	1	1	0	1	0	1	1	1	0	1	1	0	1	0	0	0	0	0	1	0	0	1	14	
47	0	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	1	1	0	1	1	0	0	1	18	
48	0	1	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	1	0	0	1	0	0	1	0	0	1	1	0	0	11	
49	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	7	
50	0	0	1	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	1	11	
51	0	1	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	1	0	10	
52	0	1	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	7	
53	0	1	0	1	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	9	
54	0	0	0	1	0	1	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	1	0	1	0	12	
55	0	1	0	1	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	11	
56	0	1	0	1	0	1	1	1	0	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	11	
57	0	1	0	1	0	1	1	1	0	0	0	1	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	11	

58	0	1	0	1	0	1	1	1	0	1	0	1	1	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
59	0	1	0	1	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	14
60	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0	11	
61	0	1	0	1	0	1	0	1	0	1	0	1	1	0	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	
62	0	1	0	0	0	1	0	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	14	
63	0	1	0	0	0	1	0	1	1	0	0	1	1	0	0	0	0	1	0	0	1	1	1	1	0	0	1	0	1	0	1	0	1	0	1	1	0	1	1	0	1	1	1	14	
64	0	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	1	1	0	0	1	0	1	1	0	1	1	0	1	1	9
65	0	1	0	0	1	1	1	0	1	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10		
66	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	13		
67	0	1	1	1	0	1	0	0	1	1	1	1	0	0	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15			
68	0	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	1	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17			
69	0	1	0	0	1	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10		
70	1	0	1	0	0	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	20			
71	0	1	1	1	0	1	0	0	0	1	1	0	1	0	0	1	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	15			
72	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7	
73	0	1	1	0	0	1	0	1	1	1	0	1	0	0	0	1	0	1	1	0	1	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16		
74	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
75	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
76	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	7
77	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	7
78	0	1	0	1	0	0	0	1	1	1	1	1	1	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	15	
79	0	1	0	1	1	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	17		
80	0	1	0	0	0	1	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	19	
81	0	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	14	
82	0	1	0	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	16	
83	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
84	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
85	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
86	1	1	0	1	0	1	0	1	1	0	0	0	1	0	0	1	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	

87	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	11	
88	0	1	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	0	1	0	1	1	0	0	1	1	0	0	0	0	13	
89	1	1	1	0	1	0	0	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	1	1	0	1	1	1	0	1	18	
90	1	1	1	1	0	0	0	1	0	1	1	0	1	1	0	0	0	1	0	1	1	1	1	1	0	0	1	0	1	1	18	
91	1	1	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	0	1	1	1	0	0	1	0	1	0	1	14	
92	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	13	
93	0	1	1	0	1	1	1	1	0	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	12	
94	1	1	1	1	1	0	1	1	1	1	0	0	1	0	0	1	1	1	0	1	1	0	1	1	0	1	0	1	0	0	1	20
95	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	1	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	16
96	1	1	1	1	1	0	0	1	1	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	1	0	0	1	0	1	16	
97	0	1	1	0	1	1	1	1	1	0	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	15
98	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	1	16
99	0	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	11
100	1	1	1	1	1	1	0	1	0	0	1	0	1	0	0	0	1	1	0	1	1	0	1	1	1	0	1	0	0	0	1	18
101	1	1	1	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	18	
102	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	1	1	1	0	1	1	1	1	0	0	1	0	0	0	16	
103	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	12
104	0	1	1	1	1	1	0	1	1	0	0	0	1	0	0	1	0	1	0	1	0	1	1	0	1	0	0	0	0	0	0	14
105	1	1	1	1	0	0	0	0	1	0	0	1	1	1	0	1	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	18
106	1	1	1	1	1	1	0	0	0	0	0	0	0	1	0	1	1	1	1	0	0	1	0	1	1	0	0	0	1	0	15	
107	1	1	1	1	1	1	0	1	1	0	0	1	1	1	0	1	0	1	0	0	1	1	1	1	0	0	1	0	0	1	19	
108	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	1	1	1	0	0	1	0	1	1	0	1	0	0	0	0	1	18
109	1	1	1	1	1	1	0	0	1	1	1	0	0	1	0	0	1	1	1	0	0	1	1	1	1	0	1	0	1	0	19	
110	0	1	1	1	1	1	0	1	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	1	13
111	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	0	1	0	0	1	1	1	0	0	0	0	1	0	1	16	
112	1	1	1	1	1	1	0	1	1	1	0	0	1	0	0	0	0	1	0	0	1	1	0	1	0	0	0	1	0	1	16	
113	0	1	1	1	1	0	0	1	0	0	0	1	1	0	1	1	1	1	0	0	1	0	1	0	0	0	0	1	0	1	15	
114	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	18	
115	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	1	17

116	1	1	1	1	1	0	0	1	1	1	0	1	1	1	0	0	0	1	1	0	1	0	1	1	0	1	0	0	0	1	15	
117	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	1	15	
118	1	1	1	1	1	0	0	1	1	0	0	1	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	13	
119	1	1	1	1	0	0	1	1	1	0	1	0	1	0	0	1	0	1	1	1	1	0	1	1	0	0	0	0	1	1	18	
120	1	1	1	1	1	1	0	1	1	0	1	0	1	0	1	1	0	1	1	0	1	1	0	1	0	0	1	1	1	20		
121	1	1	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	0	11	
122	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1	1	1	0	10	
123	1	1	0	0	0	0	0	1	1	0	0	0	1	0	1	1	0	1	0	0	0	1	1	0	1	0	1	1	0	1	14	
124	1	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	21
125	1	1	1	1	0	1	0	1	1	0	0	1	1	0	0	0	1	0	1	1	1	1	1	1	0	1	0	0	1	1	18	
126	1	1	1	1	1	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	12
127	1	1	0	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	1	0	15
128	1	1	0	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1	0	0	1	1	1	0	0	1	0	0	0	0	0	17
129	1	1	1	1	1	1	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	1	1	15	
130	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	1	0	0	1	0	1	1	0	1	0	0	0	0	1	1	17	
131	0	1	1	1	1	0	1	1	1	0	1	1	1	0	0	1	1	1	1	0	0	1	1	1	0	1	0	0	0	0	18	
132	1	1	0	1	1	1	0	1	0	0	0	0	1	0	0	0	0	1	1	0	0	1	1	0	1	1	0	0	1	1	15	
133	1	1	1	0	1	1	1	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	14
134	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	1	0	1	15
135	0	1	0	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1	16

