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# THE DETERMINANTS OF SUBSTANCE ABUSE AMONG UNDERGRADUATE YOUTHS: ANALYSIS OF TERTIARY INSTITUTIONS IN EKITI STATE, NIGERIA 

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#### Abstract

Background: Substance abuse is a complex and multi-faceted problem that adversely affects nations. Nigeria is concerned about the factors that promote substance abuse menace and how it can be curbed among youth especially, the undergraduate university students. It is against this background that this study examined the factors that influence substance abuse among undergraduate students in tertiary institutions in Ado-Ekiti, Nigeria. Methods: Probit model was used to assess the factors responsible for substance abuse in private and public tertiary institutions in Nigeria. Cross-sectional data were obtained through the administration of questionnaire to one hundred and sixty students from private and public universities. Results: The results of the study show the determinants of substance abuse among private university students are age of the students, poor academic performance and sociocultural factors such as parental/guardian lifestyle, peer pressure. However, for public university students, the major determinants of


substance include; the amount of school expenses, source of school sponsorship and the cost of substance. Conclusion: To reduce the occurrence of substance abuse, proper monitoring of the newly admitted students in private university by both parent and school management should be embraced, while in a public university, substance abusers should be identified through random and periodic drug test and be referred to counseling unit for rehabilitation.

Keywords: Cannabis; Youths; Private and Public Universities; Probit model; Nigeria; Drug; Alcohol.

## 1. Introduction

The abuse of substance involves intake of substance beyond the acceptable standard in the society. It undesirably affects the users' health and their relationship with other economic functioning. In Nigeria, drug abuse is a problem that is causing serious concern to both individuals and government. The problem is predominant among youths who in most cases are ill-informed about the dangers of substance abuse. Many of them engaged in substance abuse out of frustration, poverty, lack of parental supervision, peer influence and pleasure (Oluremi, 2012). The substances in Nigeria that are commonly abused are cannabis sativa, cocaine and heroin. However, the prevalence of the abuse of cannabis sativa is more than cocaine and heroin. The problem is found across among male and female, different age and socioeconomic groups. Most patients on admission for drug related problems in the treatment centers across the country were mostly cannabis sativa abusers, predominantly males, and between the ages of 11-35 years National Drug Law Enforcement Agency (NDLEA, 2008). A 2012 report by the International Narcotic Control Board (INCB) noted that Nigeria tops the list with the highest trafficking and drugs use in West Africa and that close to 50 per cent of Africa’s drug couriers arrested in Europe in 2011 were citizens of Nigeria. The report also shows that Nigeria features prominently among West African countries that produce and export cannabis to countries in Europe. Nigeria was rated highest in cannabis seizure in Africa and remains the country with the largest seizures of cannabis in the region followed by Egypt (NDCMP, 2015).

The rise of drug related issues has been traced to the early 1980s, when cocaine use, in particular, was an emerging drug problem all over the world. As at them, neither cocaine nor heroin was produced in the country, but due to trafficking linkages, these substances entered the country and many Nigerian youth in urban areas embraced the idea. Although, many Nigerian youth have been involved in drug trafficking as early as the 1970s, but the early records on drug related crimes
dated early1980s. The data published by NDLEA between 1990 and 2003 show that over 4,000 people have been arrested for drug offenses, while about $60 \%$ of these arresters were convicted (NDLEA, 2008).

Fig. 1. Proportion of Convicted from the Number of Arrestees for Drug Offenses in Nigeria


Source: Compiled from NDLEA, (2008)
In Nigeria, between 1990 and 2003, many people were arrested and convicted for drug offenses, the statistics from figure 1 shows the proportion of the convicted out of the total number of people that were arrested during these periods. In 1990, few of the total number of the arrestees were convicted, and since then, the percentage has grown up. Between year 2000 and 2007, the highest proportions of the convicted were recorded. This increasing proportion of the convicted has been achieved by the successive government, who put in place various legislations against the abuse and trafficking in narcotic and psychotropic substances. Nigeria has been a cosigner to numerous bilateral and multilateral treaties on Narcotic substance. In line with this and the public vociferation about the harmful effects of substance abuse and prohibited drug trafficking, the Federal Government of Nigeria established the NDLEA via Decree 48 of 1989 (Now CAP N30 LFN 2004).

The record of substance abuse in Nigeria shows that the Northwest has a statistic of $37.47 \%$ of the drug victims, while the Southwest rated second with $17.32 \%$, the Southeast with $13.5 \%$ was ranked
third, North-central has 11.71 percent, and the Northeast zone has the least number of victims with 8.54\% (Akannam, 2008). The chief of these drugs that has been related to abuse in Nigeria is cannabis. Cannabis remains the most used of the illicit drugs, while the use of cocaine and heroin is relatively rare, except among young people in some large urban areas. Some of the earliest studies of substance use in Nigeria focused on cannabis use among young people. Some of the earliest studies of substance use in Nigeria focused on cannabis use among young people. In Nigeria, the estimated lifetime consumption of cannabis among the population is 10.8 percent. Obot, (1990) explains that the clinical findings have shown that cannabis abusers are youths without parental guidance.

The psychotropic substances like benzodiazepines and amphetamine-type stimulants have 10.6 percent consumption in Nigeria, while heroin 1.6 percent, and cocaine have1.4 percent, in both urban and rural areas (Mamman et al 2014). Substance abusers are larger among males than females. The use of volatile organic solvents is 0.53 percent, and widely spread among the street youths. Several substance use happens nationwide with 7.88 percent to varying degrees as reported by the United Nations on Drugs and Crime 2007 data (Moses, 2016). In both urban and rural areas, use of these drugs in combination with alcohol is also a common practice, (Obot, 1990).

The reasons for the increased availability of drugs like cannabis, and cocaine in the Nigerian urban setting have already been identified. Poverty among young people in urban areas has contributed to this malaise. Many of those recruited by international syndicates to transport drugs to North America and Western Europe are poor and unemployed youth with dreams of instant wealth and financial security. Local production of cannabis has also increased in recent years as shown by records of arrests and crop destruction by the NDLEA. Many Nigerian youth are unemployed and large scale migration of young people to the cities in search of employment has increased the number of youth participation in drug trafficking related activities.

Many of the students in tertiary institution engaged in drug abuse out of peer influence and pleasure (Oluremi, 2012). Pleasure is another contributing factor to the youth engagement in substance practice. This is usually the case in most tertiary institutions in Nigeria, where many of the Nigerian students are adolescents and some of them for pleasure engage in various dangerous behaviors like overdose of alcohol and cigarette, reckless driving, premarital and haphazard sexual activities (Onongha, 2012). The users of substances often take them to induce an excitement on ecstasy and
a multiplicity of other agreeable sensations such as arousing of sexual feelings, sensations on the skin, distortions of time and space perception that are not pleasant and a boost of appetite. Students in a tertiary institution have friends who take substances and subsequent abuse in order to fit in with their colleagues. Evidence from Kandel, (1985) shows that the most significant variable in predicting the likelihood of substance user is the degree of adolescent involvement in peer activities, the number of friends using substances and friends' attitude towards substance use. The exert of influence on an individual to participate in substance use and abuse is a very serious issue in Nigerian tertiary institutions as this has served as a form of foundation for high rate of abusers and has immensely contributed to problems like truancy and boycotting of classes by students, departure from normalcy and drop in academic performance due to hangover

Furthermore, social pressure from the media and friends is a universal risk factor for substance use and abuse among adolescents across the globe (Adelekan and Ndom, 1996). One of the features of urbanization is increased exposure to advertising on radio, television and billboards. Young people in urban areas are more exposed to images and messages promoting tobacco and alcohol than their counterparts in rural areas. Substances' advertising has led to an increase in the consumption of substances (especially alcohol and Tobacco). Adolescents are easily influenced by what they see on media platforms. Social media has become a wide platform for the advertisement of drugs and recreational substances. Also on promotional items like shirts, hats, matches, etc., advertisement of drugs has become very common. A valid example is shirts with alcohol badges on them. The youths are easily persuaded by this to indulge in the consumption and ultimately the abuse of substances. The initiation rates and the prevalence of substance use are higher among the urban youth than rural youth due to the effectiveness of marketing and promotional activities of substances (Obot, 2005).

Parental/guidance lifestyle is an important variable factor that promotes substance abuse among youths in Nigeria. These parents belong to different classes, which are linked to different standards of living and different social problem. Some affluent parents engage in alcohol taking due to the ability to buy the bottled beer, wine and spirit. The parents from this social class give a lot of pocket money to their undergraduate's children. This prompts the students to indulge in alcohol consumption. Some parents also consume substances, especially alcohol in the presence of their children and this lifestyle influences their children to take substances. Family is the first stage of
learning and in a family where there is a high consumption of substances, there is every probability that youth from this background will also indulge in substance consumption which could lead to abuse. Thus, the attitude of parents towards alcohol and substance use play a major role in children's behavior as young people learn and imitate from what they see. Some youth have role models and hero of which they admire and associate themselves with and these role models sometimes are parents, guardians, siblings or friends. Other contributing socioeconomic factors include unemployment, anxiety and frustration, peer group pressure, the desire to be accepted among friends and belong to the social circles as well as the desire to achieve success in a competitive world. Moreover, the warped value system in the society and the craves to get rich quick are attributed to substance abuse among adolescents in Nigeria (NDLEA, (2007).

Substance and alcohol all have side effects, especially when they have been abused. There are short and long term effects that are related to health problems. The short term effects include, slurred speech, drowsiness, confusion, poor co-ordination, dizziness, vomiting and blurred vision, while the long term effects include, liver damage, stomach ulcers, irritation of the pancreas, headaches and loss of body heat (NDLEA, 2008). The usage of alcohol has also been associated with several fatal road accidents as drunk driver loses co-ordination and lack control. Injuries obtain through motor accidents, physical disabilities and diseases are the effects of possible overdose of substance abuse. Substance use and abuse leads to addiction, the user cannot be in a position to control the amount to be consumed, which has led wastage of money by the users. Many students have dropped out of school and end up in the streets sue to substance abuse. This scenario has imparted negatively on the society as some of the youth end up in crime and form the largest number of commercial drivers in the transport industry. Substance abuse is also associated with high risk sexual behaviors associated with sexual violence and sexual abuse and it has led many youth to engage in unprotected sex. Also, many rape cases in schools and colleges occur under the influence of alcohol. Many substance abusers have identified to suffer from frustration, hopelessness and depression, impotence, erective disorders and immature ejaculation during sex. In Nigeria, substance abuse has been associated with the growing psychological disorder in large urban areas, especially among out-of-school youth and it has led to the admission of high proportions of young people, into psychiatric hospitals (Obot, 1995).

Many youth involved with substance abuse has faced an increased risk of death from suicide, mishap, and illness. Also, psychological problems such as depression, apathy, withdrawal and other mental dysfunctions are linked to substance abuse among adolescents. Marijuana use, which is prevalent among students in tertiary institutions and youths generally, has been shown to interfere with short term memory, learning, and psychomotor skills. As a result of drug taking in schools and colleges, problems such as students missing classes because of hangover have developed (Opie, 2005). Substance abuse leads to addiction, which affects the student's performance, consequently, most of the youth who engage in habitual consumption of drugs are drop-out school (Karechio, 1994). The abuse of substances has led to boycotts of classes by students, rioting in tertiary institutions, and departure from normalcy, blackouts, loss of property, and drop in academic performances, cultism, and death among others. Despite all these dangers associated with substance use, there is still a very high rate of substance consumption among the youth. It is against this background that this study aim to provide insight into the factors that influence substance abuse in Ado-Ekiti, Nigeria, especially among undergraduate university students.

## 2. Literature Review

In, Nigeria, studies related to substance abuse are few, this is due to the paucity of data, and even the few available data were mostly cross-sectional school-based and hospital-based data. Thus scholarly articles on substance abuse have not received much attention. However, Nyameh et al, (2013), examined the economic effects of substance abuse among youths. The study noted that over the years, various governments and communities have frowned on the new form of menace that has bedeviled the society, and the productive population of the economy. This situation directly affects the youths, it leaves the labor market vacuum of the labor force, because the youth have indulged in diverse kinds of drug abuse that made them insane and unproductive. The author's emphasis's the need for strict measures to be taken to mitigate the menace, and if necessary measures are not taken on time to curb the act, a time will come that the working age group will be scarce in the labor market. Similarly, Oluremi, (2012), examined drug abuse among the Nigerian adolescents and strategy for counseling. According to her, substance abuse is a serious societal problem that needs urgent attention. However, with effective counseling programs and
serious campaign against drug abuse by the government and other relevant authorities, the problems can be abated.

Moreover, Onongha, (2012), examined the influence of some factors on alcohol use and abuse among education students of Osun state university and the result indicated that $34.8 \%$ of the alcohol abuse among students is explained by parental lifestyle and peer influence. It was also revealed that parental affection and commitment to conventional activities influence the abuse of alcohol. The study also revealed that parents and peer have enormous influence on students' alcohol use. This is because parents and peer are seen as role models. Students without strong commitments to conventional activities such as reading books and religious activities are easily swayed by their peers who engage in substance abuse. Equally, Atilola et al., (2013), evaluated the incidence, pattern and socio-demographic determinants of adolescent alcohol and substance use among a cohort of students surveyed in Nigeria. The results showed that about $21 \%$ of the students use alcohol or any other substance in the preceding 12-months before the survey. NDLEA (1999) conducted a rapid situation assessment of drug abuse in Nigeria and the study covered 22 states out of 36 states in Nigeria. The results show that cannabis was the most widely abused and trafficked drug in the country.

Furthermore, Omonon and Freddy (2015), investigated the influence of health education on prevention of drug abuse among adolescents from secondary school and university, and found that there was no significant variation in the trend of drug abuse among adolescents with drug education and those without drug education. The study also shows no significant difference in the pattern of drug abuse among male and female adolescents, between the pattern of drug abuse of adolescents from upper and lower socioeconomic background and in the pattern of drug abuse of early and late adolescents.

## 3. Methodology

This research work was carried out between Januarys to December 2018 in Ado-Ekiti is the capital of Ekiti state, two leading tertiary institutions in Ado-Ekiti were purposefully selected, a private university and a public university. A simple random sampling technique was employed to select the target population as precisely as needed out of the total population. To determine the sample size for each university, the sample size calculator developed by creative research systems was
employed. A Sample of 68 was obtained from private and public universities with confidence interval of 11.83 and 11.87 respectively, but 80 students from each university were eventually included in the study to make up for attrition. Written and oral informed consent was taken from the respondents before filling the questionnaire into the study, while respondents were given assurance of the confidentiality of the information supplied. The research instrument employed was the modified WHO Students' drug use questionnaire that include details of general health and academic performance as well as the cost of substance in Nigeria. For the validity of the research instrument in the study area, about $2 \%$ of the questionnaire was distributed through pilot survey in order to clear out possible errors before the final survey was conducted. Cronbach's Alpha coefficient was used to test the interest consistency of the items in the questionnaire. Students across all disciplines were selected from each school. Thus a total of 160 students of tertiary institutions in Ado-Ekiti, Nigeria were selected. To examine the determinants of substance abuse, the functional relationship was derived from probit model expressed as follows;

Let $y^{*}$ be a continuous variable that is unobservable, i.e. a latent variable and assume that $y^{*}$ is determined by the model;
$y^{*}=\beta_{1}+\beta_{2} x_{i}+\ldots . \ldots . .+\beta_{k} x_{k} \varepsilon_{i}$
$y^{*}=x_{i} \beta_{i}+\varepsilon$

Where
$\varepsilon=$ residual (error term) which is assumed uncorrelated with $X$
$X_{i}=$ vector of explanatory variables which are demand shifters such as age, income, parent marital
status etc. $\beta_{i}=$ parameters of $X_{i}$ While we do not observe, we do observe the discrete individual substance abuse status, whether it is yes or no, according to the following rule:

$$
y_{i}=\left\{\begin{array}{l}
1-\text { if }-y^{*}>0 \\
0-\text { if }-y^{*} \leq 0
\end{array}\right.
$$

The probability that individual student abuses substance is 1 and 0,1 is yes, while 0 if otherwise. To model the probability that a student abuses substance. Assuming that $\varepsilon$ follows a standard normal distribution yield;
$p_{i}=p\left(y_{i}=1 / x_{i}\right)=p\left(y_{i}>0 / x_{i}\right)$
$p\left(y_{i}=1 / x_{i}\right)=\phi(x \beta)$
The above equation implies a binary response model for the probit model and the symmetry gives $\partial=1$ implies the standard normal distribution. Thus, the probit equation to capture the association between substance abuse and dependent factors is estimated by maximum likelihood.

SUBA $=f($ PMSTATUS, AGE, GENDER, INCOME,SCHEXP, CGPA, SCFI,SCHLSPON, CS, SKSE,$\mu)$
$\operatorname{SUB}=\lambda_{0}+\beta_{\kappa} X_{\kappa}+\mu$

Where
SUBS $=$ Probability of substance abuse by the respondents (a dummy variable)
AGE= age of the students in continuous form
INCOME = parent income measured in continuous form
SCHEXP = amount of school expenses
CGPA = Cumulative Grade Point Average of the respondents
SCFI= sociocultural factor index. ${ }^{1}$
CS $=$ cost of substance (Cannabis)
$\mu=$ error terms
$X_{\kappa}=$ indexes factors that influence substance abuse
$\beta_{\kappa}=$ indexes coefficients of factors that influence health status

## 4. Results and Discussion of Results

## Table 1. Descriptive Statistics

| Private University |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Variable | Obs | Mean | Std.Dev | Min | Max |  |

[^0]| Age | 68 | 16.6324 | 1.17059 | 15 | 20 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Parent's Income | 68 | 45441.2 | 11287.8 | 30000 | 70000 |
| CGPA | 68 | 3.08574 | 0.9059 | 0.98 | 4.59 |
| Average cost of substance (Cannabis) | 68 | 12647.1 | 9842.06 | 1500 | 50000 |
| Average amount of school expenses | 68 | 1172265 | 249490 | 295000 | 1865000 |
| Index of Social economic factors | 68 | 17.9706 | 2.86497 | 6 | 24 |
| Public University |  |  |  |  |  |
| Variable | Obs | Mean | Std.Dev | Min | Max |
| Age | 68 | 21.5882 | 2.13175 | 16 | 25 |
| Parent's Income | 68 | 17279.4 | 10153.8 | 10000 | 50000 |
| CGPA | 68 | 2.95691 | 0.84225 | 0.32 | 4.5 |
| Average cost of substance (Cannabis) | $68$ | 6144.12 | 7116.52 | $200$ | 30000 |
| Average amount of school expenses | 68 | 140721 | $19118.3$ | $80300$ | 205000 |
| Index of Social economic factors | 68 | 17.8235 | 3.71339 | 6 | 24 |

## Source: Computed by STATA, 12 (2019)

Table 1, present the descriptive statistics of the variable of interest, the minimum age in private is 15 years while the maximum age is 20 years with an average age of 17 years. The age in public is 21 years while the minimum and maximum age is 16 and 25 respectively. This implies that the minimum age in private university is lower than in a public university. Moreover, the average income of the parent of the students in private and public universities is \#45,441.2 and \#17,279.4 respectively. The results also show that the average CGPA in private university is higher than public university. Interestingly, the average cost of cannabis in the private university is \#12,647, while in public school is $\# 6,144$. Also, the total school expenses of a respondent in private school are more than the average school expenses of a respondent in public school. The socioeconomic factor index in private university is slightly higher than that of public university.

Table 2. Marginal Effect of Probit Results

| Substance Abuse | Private University | Public University |
| :--- | :--- | :--- |
| Log of Age | $2.716(1.75)^{* *}$ | $-2.259(-3.2)^{* * *}$ |
| Female | $0.0705(0.46)$ | $-0.198(-0.96)$ |
| Parent Marital Status_ Monogamous | $0.0203(0.12)$ | $0.0704275(0.5)$ |
| Log of Social factors index | $0.633(1.79)^{* *}$ | $1.155(4.1)^{* * *}$ |
| log of income | $-0.050(-0.18)$ | $-0.264(-1.33)$ |
| log of average amount of school expenses | $0.474(1.49)$ | $1.265(2.91)^{* * *}$ |
| Parent as source of school sponsorship |  | $0.559(2.04)^{* * *}$ |
| Cumulative Grade PA | $-0.352(-1.88)^{* *}$ | $-0.407(-2.49)^{* * *}$ |
| Average cost of substance(Cannabis ) | $-0.008(-0.12)$ | $0.116(2.64)^{* * *}$ |
| Log of index of students' knowledge of <br> substance abuse effect | $0.118(0.32)$ | $-0.145(-0.6)$ |
| Number of Observations | 63 | 63 |
| LR chi2(10) | $14.72(0.0647)$ | $27.98(0.0018)$ |
| Pseudo R2 | 0.2235 | 0.3558 |

Notes: Absolute values of z statistics in parentheses, * $p<.10$, ** $p<.05$, *** $p<.01$ represent significant levels. Dependent variable: probability of substance abuse, a binary variable

From table 2, the marginal effects measured in unit of probability for private university, show that a unit increase in age increases the probability of engaging in substance abuse by 2.72. Also, the probability that a respondent will engage in substance abuse as a result of social-economic factors such as parental/guidance lifestyle, role model and hero worship, mass media, craze for easy wealth, peer pressure/Influence is 0.63 . However, the probability that a respondent with higher academic performance will engage in substance abuse is 0.35 less than a respondent with lower academic performance.

The marginal effects measured in unit of probability, for public university, show that a unit increase in age decreases the probability of engaging in substance abuse by 2.26. Also, the probability that a respondent will engage in substance abuse as a result of social-economic factors such as parental/guidance lifestyle, role model and hero worship, mass media, craze for easy wealth, peer pressure/Influence is 1.16 . Similarly, the probability that a unit increase in the amount
of school expenses of a respondent will make the respondent engage in substance abuse is 1.27. Equally, the probability that a respondent that has parent sponsorship will engage in substance abuse is 0.56 more than a respondent with self-sponsorship. In the same vein, the probability that a unit increase in the average cost of substance (Cannabis) will make the respondent engage in substance abuse is 0.12 . However, the probability that a respondent with higher academic performance will engage in substance abuse is 0.41 less than a respondent with lower academic performance. Finally, the reference categories for the categorical variables are variables with highest observation, they are also convenient and sensible to use. The test of significance employed were $z$ statistics and Heteroscedastisity-consistent standard errors. The z-statistics and their probability values show that the independent variables have explanatory and significance power. Also, the pseudo r-squared for the model is fairly high (above 20\%).

## 5. Conclusion and Recommendations

The findings of this study show that the significant determinants of substance abuse among undergraduates from private university include factors such as age, students' Cumulative Grade Point Average (CGPA) and sociocultural factors such as parental/guardian influence and lifestyle, social status of the parent, craze for easy wealth among students, peer pressure/ influence and mass media. However, for the public university, the major factors are age, school expenses, education sponsorship by parent, students’ Cumulative Grade Point Average (CGPA), cost of substance (Cannabis) and sociocultural factors. From this study, it was realized that irrespective of the type of school, whether private or public, poor academic performance is a significant factor that influence undergraduate youth to involve in substance abuse. This is because some students may take solace in drugs to forget their academic problems, most of these students who indulge in substance intake were introduced to the substances by their friends.

Moreover, sociocultural factors are important factors that promote substance abuse among the students. Also, age is a positive factor that influences substance in private school, whereas in public school, the reverse is the case. This situation may be connected to the fact that, most students in private university are younger and naïve than students from public school, thus they are more likely to engage in drug abuse as they grow in age than students from public university, who are mature and well exposed. On this note, this study recommends proper monitoring of the newly admitted students in private university by both parent and school management as these students tend to be
young and immature. Also, drug test should be done for all the newly admitted students and randomly for other students so as to detect those who have been involved in drugs and prevent other students from their influences. Also, parents should do follow up on their children's academic performance and provide them with considerable support rather than threatening them whenever their performances are below expectation. Drug abusers identified should be referred to counseling psychologist through rehabilitation centers and encouraged to join a drug free club that will educate and actively engage them.


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[^0]:    ${ }^{1}$ These indicators are; parental/guardian influence and lifestyle, social status of the parent, craze for easy wealth among students, peer pressure/ influence and mass media. These indicators are converted into an index by the use of linear combination composite measure, which allows equal weight of (1/5) to be assigned to all the indicators. The factors are measured on a scale of 1 to 4 where 4 corresponds to strongly agreed while 1 is strongly disagreed as indicated in the questionnaire. The index for each student's preference is obtained by the summation of weight assigned to each indicator multiplied by the value of each indicator.

