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# Unrealistic Optimism and Psychoactive Substance Use among Students at Félix Houphouët-Boigny University in Abidjan, Côte d'Ivoire

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**Abstract**
This study aims to examine the effect of unrealistic feelings of optimism on substance use among students. The quantitative approach adopted made it possible to interview a sample of sixty (60) students selected via the accidental sampling technique by questionnaire. The collected data were analysed descriptively and then using the Chi-square test. The results obtained show that students who overestimate the probability that only positive events will happen to them, rather than adverse events, use psychoactive substances more than their peers who consider both possibilities. Such a result makes it possible to highlight, in part, the reasons why some adolescents continue to adopt behaviours that represent a risk to their health. It is therefore crucial to consider the effect of socio-cognitive biases in the development of policies to address substance use among young people.

**Key words**: Psychoactive substance, sociocognitive, student, unrealistic optimism.

## INTRODUCTION

The use of psychoactive substances is a subject that affects almost all social strata. All over the world, it is a real problem of public health and juvenile delinquency. This study plans to examine the effect of unrealistic optimism on substance use among youth.

In 2020, two hundred and eighty-four (284) million people aged 15 to 64 were recorded as having used a psychoactive substance in the last twelve (12) months of this year, and nearly 14 per cent of them had a disorder of substance use (United Nations Office on Drugs and Crime [UNODC], 2022). These figures represent a 26 per cent increase compared to 2010 (UNODC, 2022). In another report prepared in 2023, UNODC estimates that 296 million people aged 15 to 64 have used psychoactive substances in the last twelve (12) months of their lives in 2021. These figures also show an increase compared to 2020. The use of psychoactive substances is a common phenomenon in Africa. UNODC (2023) estimates that 57 tons of cocaine were seized in West and Central Africa between 2019 and 2022.

Côte d'Ivoire, a developing country, does not remain on the sidelines of this scourge. Indeed, in recent years, the country has been facing an increased consumption of psychoactive substances such as the drug Gaddafi. The use of this substance and many others is a real public health and delinquency problem that affects both the functioning of society and that of schools, which are closely associated with the social violence caused by the use of psychoactive substances among young people. In a survey of three thousand (3000) students, the results show that five hundred and eight (508) had already used drugs at least once in their lives (Dano et al., 2013).

To prevent the spread of this issue, the Ivorian government has implemented several measures, including ratifying international conventions and enacting laws that are suitable for the diverse regional contexts and national programs. Among these strategies, one concrete action was the creation of a regional training centre for combating drugs. Another initiative, at the preventive level, was to raise awareness among young people, as few of them truly understand the consequences of these products. Despite all these actions, the use of psychoactive substances continues with new forms of substance (the Gaddafi drug). In addition, UNODC forecasts indicate a 40 per cent increase in the number of drug users in Africa by 2030 (UNODC, 2023). Faced with these forecasts and especially the social consequences of the scourge on societies in general and the school environment in particular, this study seeks to determine the elements that can account for social deviance.

## LITERATURE REVIEW

### Synthesis of previous research

Hawkins et al. (1992) published a significant literature review on risk factors for substance use among adolescents and young adults. The explanatory factors identified can be summarised into two main groups: on the one hand, individual factors and, on the other hand, contextual factors.

At the level of individual factors, the family unit is at the forefront. In this regard, Cservenka (2016) notes that vulnerability related to substance use is higher in subjects who have a family history of substance use disorders. Michel et al. (2006) add that illicit substance use by mothers increases the likelihood of substance use by their children. In a similar perspective, Leung et al. (2014) showed that parental alcoholism represents a risk factor for the child. The family would thus be considered as a place where behaviours and attitudes towards the use of different drugs are constructed. For this reason, a lack of parental support can lead to substance use problems as well as delinquent behaviour in adolescents (El Khoury, 2016; Nash et al., 2005). Indeed, having at least one parent who smokes and being exposed to smoking at home are elements that influence children's behaviour (Ball et al., 2018; Lochbuchler et al., 2016). In addition, when a parent exhibits delinquent behaviour, it also represents a risk factor for drug use among young people (El Khoury, 2016; Leung et al., 2014).

Along with the family unit, the peer group is also involved. According to Leung et al. (2014), peer influence involves adolescents adjusting their beliefs, attitudes, and behaviours while conforming to those of their peers. DuBois and Silverthorn (2004) found that deviant peer groups expose their classmates to more deviant behaviours and thus encourage the acquisition of new attitudes and behaviours (Mbaihoyal, 2022).

In addition to family factors, contextual elements are also highlighted. Meier et al. (2008) indicate that youth are more sensitive to changes in beverage prices. Indeed, higher beer prices lead to a decrease in the number of young consumers. In contrast, a meta-analysis of the

associations between the socioeconomic status of youth aged 10 to 15 and alcohol and cannabis use found that the prevalence of substance use is 22 per cent higher among youth of low socioeconomic status than among youth of higher status (Lemstra et al., 2008).

In light of the studies reviewed, we note that several individual, family and contextual factors are highlighted to explain the use of psychoactive substances among young people. However, few studies take into account sociocognitive biases such as the feeling of comparative optimism. However, several studies (Kouabenan, 1999; Kouabenan et al., 2006; Slovic et al., 1981) have shown that taking into account the socio-cognitive functioning of individuals is an essential element in increasing their involvement in safety actions and changing their attitude and behaviour in the face of risks. However, the studies explored take minimal account of this factor, hence the interest in examining it in this study. Does the feeling of unrealistic optimism influence substance use among young people in general and students in particular? This is the central question that this research intends to answer.

Unrealistic optimism is defined as a person's tendency to believe that they are more likely to experience happy situations and less likely than their peers to experience adverse events (Weinstein, 1980). According to Spitzenstetter (2003), this variable contributes to the fact that the individual does not correctly perceive the risk and does not feel directly concerned by the prevention messages (Zineb, 2024). Under the influence of this cognitive bias, people tend to believe that only positive events will happen to them and that adverse events will occur more frequently to others than to them (Milhabet et al., 2002). This cognitive bias also refers to the tendency to overestimate our own abilities relative to those of others (Alicke et al., 1995). Based on these definitions, we can conclude that substance use is positively associated with a high sense of unrealistic optimism among young people. In other words, youth who overestimate the likelihood of positive events happening to them compared to negative ones (high sense of unrealistic optimism) use more substances than their peers who believe that positive and negative events could happen to them (low sense of unrealistic optimism). This is therefore the hypothesis we wish to verify.

**Theoretical Framework**

The theory of health beliefs (Rosenstock, 1974) serves as the theoretical foundation for this research. According to the proponents of this theory, a person will seek to adopt a behaviour aimed at protecting their health if they are aware of health information and value this knowledge. The likelihood that a person will engage in a health behaviour is therefore determined by two factors: their perception of a threat and their belief in the effectiveness of the behaviour.

Threat perception refers to the perceived severity and vulnerability of the subject to a disease or situation. Belief in the effectiveness of a behaviour involves assessing the costs and benefits related to adopting or not adopting that behaviour. At this stage, a person will feel more willing to engage in a health behaviour only if they feel able to perform the behaviour and believe that, in return, they will receive benefits from adopting it.

In addition to the literature review, this theoretical analysis framework will also make it possible to account for the link between the feeling of unrealistic optimism and the use of psychoactive substances among young people. To achieve the objective of this research, it will be structured around the following elements: methodology, results, discussion, and conclusion.

**METHODOLOGY**

The feeling of unrealistic optimism and the use of psychoactive substances are the related variables in this research :

A sense of unrealistic optimism refers to the tendency to overestimate the chances of positive events occurring in our lives, compared to negative ones. People mistakenly believe that they are just programmed to succeed in everything and that the worst can only happen to others. Qualitative in nature, this variable is divided into two modalities: low unrealistic optimism and high unrealistic optimism.

Unrealistic optimism is considered low when a person believes that both positive and negative events could happen to them. In contrast, the feeling of unrealistic optimism is considered high when the subject mistakenly believes that only positive events will happen to them, assuming that adverse events only happen to others.

A psychoactive substance is a substance that, when absorbed, modifies the cognitive functions or affects of the individual (World Health Organisation [WHO], 2004). From this definition, we retain that the use of psychoactive substances refers to the absorption of substances that act on the individual's central nervous system, thus modifying their consciousness, mood and thought mechanisms (WHO, 2004).

Qualitative in nature, this variable admits two modalities: presence and absence of consumption. Substance use occurs when an individual answers "yes" to two or more items on a scale designed to assess the frequency of use. In contrast, the absence of substance use is indicated when the subject answers "no" to all items on the scale.

The University Félix Houphouët Boigny (UFHB) in Abidjan is the study site. It is situated in the heart of the Cocody commune in Abidjan. The students of this institution represent our study population. The University Félix Houphouët-Boigny does not have a directory of students who use psychoactive substances. As a result, the ability to obtain a complete and up-to-date list of enrolled students in order to draw a random sample is almost nonexistent. Added to this is the sensitivity of the subject. In light of these factors, the method of accidental sampling was employed. The study took place between November 2024 and February 2025 at the University Félix Houphouët-Boigny, and sixty (60) students were contacted to constitute the sample, whose characteristics are presented in the graph below:

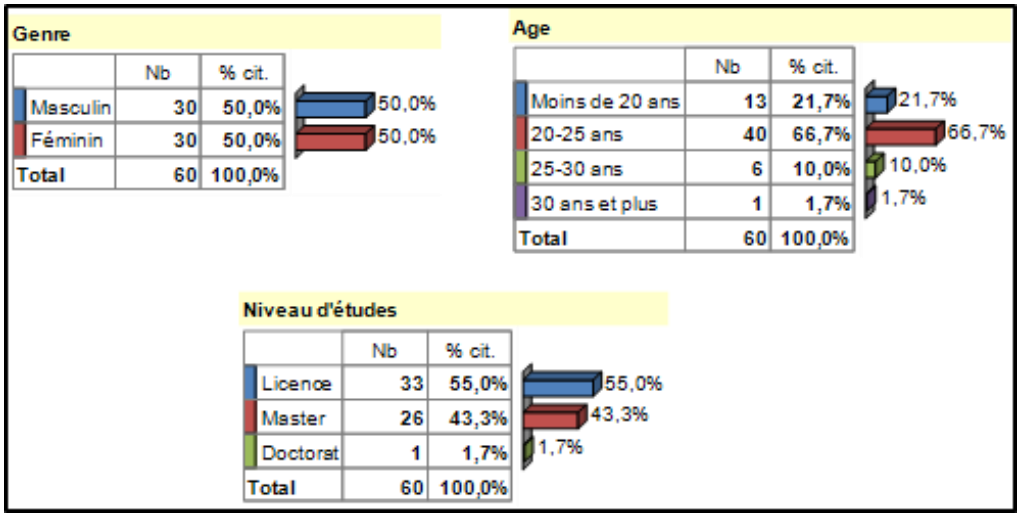


**Figure 1: Sample characteristics (**Source: survey data**)**

The three charts in Figure 1 indicate that the survey sample comprises an equal number of male students (30) and female students (30), with an age range spanning from under 20 years to over 30 years. All three university cycles are represented, with a strong presence of first-cycle students (55%). The questionnaire is the data collection tool used for the survey. It is composed of two scales. On the one hand, the scale used to assess the feeling of unrealistic optimism, and on the other hand, the scale intended to assess the use of psychoactive substances among students. The scale for assessing unrealistic feelings of optimism is a nominal scale with two possible responses: "agree" and "disagree".

To assess the use of psychoactive substances, the CRAFFT-ADOSPA test, developed by Karila et al. (2007), is used and adapted to the study's context. This test includes six (6) questions to identify whether or not substances are harmful to the user. The statistical processing of the data follows the following steps:

**Measurement Scale 1: Unrealistic sense of optimism**

The response modalities are coded as follows:

Code 1, for the agreement modality

Code 2, for the dissenting modality

For each subject interviewed, we define the overall frequency of the codes assigned to the items according to the response methods. On this basis, the modal frequency, i.e. the code that repeats the most, is considered to be more characteristic of the type of feeling of unrealistic optimism. Thus, a higher frequency of code (1) compared to code (2) refers to a high sense of

unrealistic optimism. Conversely, a higher frequency of code (2) compared to code (1) corresponds to a low feeling of unrealistic optimism.

**Measurement Scale 2: Drug use**

The CRAFFT-ADOSPA scale highlights three types of risk of substance use: low (0-1 points), moderate (2 points) or high (>3). When the respondent answers "yes" to two items on the questionnaire, this refers to harmful use of psychoactive substances.

For the research, the questionnaires were accompanied by a consent form designed to obtain the free and informed consent of the students. To ensure the confidentiality of the respondents, all questionnaires were anonymised. The data collected was entered into an Excel database designed for this purpose, and access to which was conditional on a password. The data entered was then rigorously processed and analysed via the SPSS software.

SPSS is therefore the software used for data processing. Two statistical hypotheses ($H_0$ and $H_1$) were formulated: $H_0$ (null hypothesis) expresses the absence of a relationship between the variables considered, and $H_1$ (alternative hypothesis) reflects a link of dependency between the variables.

Since the analysis is based on frequencies, the chi-square (X2) statistical test is used. For decision-making, the probability threshold α (0.05, 0.01, 0.001) is considered. So, if the p-value is less than α (0.05; 0.01; 0.001), we reject H0 and retain H1. Under these conditions, a dependency relationship exists between the variables. On the other hand, if the p-value is greater than the value of α (0.05, 0.01, 0.001), H1 is rejected and H0 is accepted; Therefore, there is no significant relationship between the variables. Subsequently, the Phi coefficient is used to assess the strength of the relationship between the variables. The research results are presented below.

## RESULTS AND DISCUSSION

**Descriptive analysis of comparative optimism among surveyed students**.

**Table 1: Analysis of the feeling of optimism**

| **Comparative optimism** | | | | | | |
|---|---|---|---|---|---|---|
| | **Agree** | | **Disagree** | | **Total** | |
| | N | % cit. | N | % cit. | N | % cit. |
| I do not think I will be dependent on alcohol | 54 | 90% | 6 | 10% | 60 | 100% |
| I believe I will never be dependent on alcohol or any other toxic substance. | 48 | 80% | 12 | 20% | 60 | 100% |
| I do not think I will ever be addicted to alcohol, but some of my friends will be. | 35 | 58,3% | 25 | 41,7% | 60 | 100% |
| I do not think I will ever be dependent on alcohol, and it is the same for others as it is for me. | 28 | 46,7% | 32 | 53,3% | 60 | 100% |
| **Total** | 165 | 68,8% | 75 | 31,3% | 240 | |

Source: survey data

Analysis of the data in Table 1 shows that 90 per cent of students surveyed believe they will not be addicted to alcohol, and 80 per cent believe they will never be addicted to alcohol or any other toxic substance. Similarly, 35 respondents (58.3%) believe they will never be addicted to alcohol, but some of their peers will one day. Finally, 32 subjects (53.3%) believe that what happens to them will not happen to others. The majority of respondents feel less exposed to risk.

**Unrealistic optimism and substance use**

To account for the relationship between the variables, statistical assumptions were made as follows:

$H_0$: Substance use is the same among students, regardless of the high or low nature of their unrealistic sense of optimism.

$H_1$: Substance use is higher among students with high unrealistic optimism than among their peers with low unrealistic optimism.

**Table 2 : $\chi^2$ test**

| | Value | Ddl | P |
|---|---|---|---|
| **$X^2$** | 11.0 | 1 | < .001 |
| **N** | 60 | | |

Source: survey data

**Table 3 : Effect size of the link**

| Table 3 : Effect size of the link | |
|---|---|
| | **Value** |
| **Coefficient Phi** | 0.428 |
| **V de Cramer** | 0.428 |

Source: survey data

At one DDL, the p-value < 0.001, a significant relationship was found between feelings of unrealistic optimism and the frequency of substance use among students, $X^2$ (1, N = 60) = 11; p < 0.001 (see Table 2). The value of the Phi coefficient, 0.428, indicates that the relationship between these two variables is moderate (see Table 3).

**Discussion**

This research aimed to analyse the effect of the feeling of unrealistic optimism on the use of psychoactive substances among students at the University Félix Houphouët-Boigny. The results indicate that students' unrealistic sense of optimism significantly influences their substance use. The more invulnerable they feel to the dangers associated with substance use, the more they use. Their unreal perception of the world leads them to minimise the dangers associated with substance use. They mistakenly believe that the negative consequences of these substances will affect their peers and not them.

A parallel could be drawn between these results and the work of Weinstein (1980). In his study, this author shows that individuals tend to underestimate their own vulnerability to adverse events. In a similar perspective, Skidmore et al. (2016) also showed that this form of unrealistic optimism is associated with a minimisation of the dangers associated with substance use, thus promoting their use. The feeling of unrealistic optimism thus acts as a self-justification mechanism, allowing one to maintain a positive self-image while continuing to engage in risky behaviours (Aspinwall & Taylor, 1992).

The explanatory framework proposed by the Health Belief Model, developed by Rosenstock (1974) and enriched by Becker et al. (1984), also helps to explain the results of this study. This is because, according to this model, a person's health behaviour depends on how they perceive their personal vulnerability to a health problem, the perceived severity of that problem, the perceived benefits of preventive behaviour, and the perceived barriers to engaging in that behaviour. Among these elements, the perception of susceptibility, i.e. perceived vulnerability, has an impact on the decision-making process. This conclusion is also mentioned by Weinstein (1989), who emphasises that the perceived feeling of vulnerability is a determining factor in the regulation of risk behaviour. Similarly, Kouabenan (1999) states that many risky behaviours can be explained by an invulnerability bias that leads individuals to think that accidents or the adverse effects of one behaviour can only happen to others. More recently, Arria et al. (2017) have shown that students who perceive a low personal threat related to drug or alcohol use are the most likely to develop regular use. This shows that the subjective perception of risk really influences behaviour.

Brewer et al. (2007) indicate that perceived vulnerability is a key predictor of preventive behaviour; the more a person feels exposed to danger, the less risky behaviour they adopt. Conversely, when it is low, especially when combined with an overestimation of their ability to resist risk (high unrealistic optimism), the probability of engaging in risky behaviours increases. Weinstein and Klein (1996) also emphasised this aspect by demonstrating that young people who exhibit both characteristics tend to underestimate the consequences of their actions, believing themselves immune to the adverse effects of consumption. In the university environment, this mechanism acts as a source of psychological motivation that pushes students to practice such activities as alcohol consumption or drug experimentation.

## CONCLUSION AND RECOMMENDATIONS

**Conclusion:** The findings of this research reveal a significant relationship between the interacting variables. Students with a strong sense of unrealistic optimism are more likely to use psychoactive substances than their peers. Theoretically, this study supports the health belief model by demonstrating that perceived vulnerability plays a crucial role in decision-making related to risky behaviours. It also mobilises the contributions of social cognitive psychology based on the concept of unrealistic optimism presented by Weinstein (1980), to understand the mechanisms that can inhibit risk awareness in young people.

**Recommendations:** The results obtained at the end of the investigations underline the importance of socio-cognitive factors in understanding substance use behaviours among young people. To combat it more effectively, awareness-raising policies must include activities in their programmes that aim to strengthen young people's realistic perception of risk in the face of danger.

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