

# Substance Abuse during Adulthood Subsequent to the Experience of Physical Abuse and Psychological Distress during Childhood

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## ABSTRACT

**Objective:** This study investigated if there was a significant relationship between physical abuse during childhood and experiencing psychological distress and substance abuse among university students.

**Methods:** This cross-sectional study utilized a questionnaire to collect retrospective data from 382 university students (103 males and 279 females) about their substance use patterns, level of psychological distress and their exposure to physical abuse. The data were then analysed using bivariate statistics.

**Results:** Most (61.8%) participants met the criteria for being physically abused, however, only 27.2% recognized the experience as abuse. Another 38.9% of the students reported moderate to severe psychological distress. There was a significant relationship between being physically abused and experiencing higher levels of psychological distress ( $p < 0.001$ ). Cannabis was the most frequently utilized illicit drug (10.3%) while alcohol was the most frequently utilized licit drug (37.4%). Drug abuse was found to be significantly associated with being physically abused during childhood ( $p < 0.05$ ).

**Conclusion:** Even though the results obtained are not generalizable, this study has provided important preliminary information, that experiencing physical abuse increases the likelihood of having higher levels of psychological distress and becoming a substance abuser during adulthood; thereby identifying an overlooked area to target anti-drug use interventions.

**Keywords:** Maltreatment, psychological distress, physical abuse, substance abuse

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## INTRODUCTION

'Substance abuse', according to the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV TR), is the repeated use of a substance, over a year, with there being adverse legal, interpersonal, occupational and/or health related outcomes (1). Substance abuse is a significant concern in Jamaica as confirmed by the 2001 national survey that found 11.9% of respondents to have substance-related problems (2). Many demand and supply reduction strategies have been implemented in Jamaica to reduce substance abuse. These strategies have included educational campaigns in primary, secondary and tertiary institutions as well as communities and workplaces (3). There has also been the enactment and the enforcement of anti-drug laws to prevent drug production and drug trafficking. Despite these strategies, drug abuse is thought to be on the rise among adolescents and young adults (4). The risk factors for substance abuse are known to be biological (5), environmental (6) and psychosocial (7) in nature. Biological factors may

provide a genetic susceptibility to substance abuse, while environmental factors influence the availability of psychoactive substances. However, whether an individual uses or abuses a substance is believed to be highly psychosocial in nature (7), but many psychosocial risk factors are often overlooked. Experiencing physical abuse is an overlooked psychosocial risk factor that has been implicated in substance abuse (8).

The physical disciplining of children is entrenched within the Jamaican culture and is widely endorsed as an effective parenting strategy. Parents typically employ an authoritarian parenting style, with even the simplest disobedience resulting in the spanking of the child (9). This disciplining technique sometimes results in severe abuse (10). Consequently, the 2004 Jamaican Child Care and Protection Act stipulated that persons less than eighteen years old should be protected from abuse, harm or even the threat of harm. However, 6276 cases of physical abuse were reported to the Office of Children's Registry between the years 2007 and 2011 (11). This large number of cases is alarming as research within North America suggests that experiencing physical abuse is associated with adverse developmental outcomes, including an increased likelihood of becoming a substance abuser (12).

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Physical abuse may lead to substance abuse, as increased levels of psychological distress may arise after exposure to physical abuse (8), making self-medicating with a substance more likely. Yet, on the other hand, some researchers suggest that the impact of being physically abused is culturally dependent and therefore, in a culture where corporal punishment is acceptable, the adverse effects would be minimal (13). In light of these contradictory perspectives, this research investigated whether being exposed to physical abuse is associated with higher levels of psychological distress and also an increased likelihood of being a substance abuser, within a cultural context where physical disciplining is considered acceptable.

## SUBJECTS AND METHODS

This study was a part of a larger research that investigated childhood maltreatment and substance use within Latin American and Caribbean countries (14, 15). This present segment utilized systematic sampling techniques to collect retrospective data from 382 (103 males and 279 females) Jamaican undergraduate university students. Students were required to be 18 years and older in order to participate and power analysis identified the minimum sample size to be 311.

### Informed consent

Ethical approval was obtained from the University Hospital of the West Indies/University of the West Indies/Faculty of Medical Sciences Ethics Committee. Each participating student also provided informed consent, prior to completing the questionnaire, by signing a consent form that declared the risks and benefits of the study.

### Instruments

This research utilized a questionnaire consisting of the physical abuse scale from the Adverse Childhood Experiences questionnaire [ACE] (16), the Kessler Psychological Distress Scale [K10] (17) and selected questions from the Inter-American Drug Abuse Control Commission/Organization of American States (CICAD/OAS) drug use questionnaire.

*Adverse Childhood Experiences Questionnaire:* The ACE is a retrospective questionnaire that seeks to provide a measure of childhood maltreatment, namely neglect, sexual, emotional and physical abuse. This questionnaire has been used by many researchers in a variety of cultural settings and has demonstrated adequate reliability and validity (16). Only the physical abuse scale of this instrument, which consists of four items requiring either 'yes' or 'no' responses, was utilized for this study.

*Kessler Psychological Distress Scale:* The K10 (17) is a benchmark measure of psychological distress. The K10 is a self-report questionnaire that is used worldwide to screen for anxiety and depressive symptoms, which may indicate the presence of a psychological disorder. This measure consists of 10 items, with five possible Likert response choices. High

scores on this measure suggest an increased likelihood of being diagnosed with a psychological disorder (18, 19).

*CICAD/OAS drug use questionnaire:* The students' drug use and abuse behaviours were assessed using questions from the CICAD/OAS drug use questionnaire. This questionnaire was previously used within the Caribbean and was found to demonstrate good levels of validity. Questions were selected to measure drug use and also drug abuse according to the DSM-IV definition (1).

### Data collection

The questionnaire was pretested by using think-aloud interviews to ensure that each item was interpreted as intended. A table of random numbers was utilized to identify the participating faculties from the selected university. Every third student within the vicinity of the faculty office was solicited to participate. Upon completing their questionnaire, students were thanked for their participation and given a phone card. The relationship between experiencing physical abuse and psychological distress, as well as experiencing physical abuse and later drug abuse, were investigated using bivariate tests (Chi-square).

## RESULTS

A total of 382 students participated, 27% were males and 73% were females. The mean age was 21.27 years  $\pm$  4.39 years, with most students (88.5%) being between the ages 18 and 24 years. The majority of the students (65.4%) reported a middle-class socio-economic background. Of note, 27.2% of the students believed they were physically abused, however, 61.8% actually met the criteria of being physically abused. Additionally, 30.9% reported that they had witnessed the physical abuse of a loved one.

### Psychological distress

The students' level of psychological distress can be seen in Table 1. Of those students who were physically abused, 38.9% reported moderate to severe psychological distress symptoms, and were therefore more likely to be diagnosed with a psychological disorder. Chi-squared analysis also revealed that experiencing physical abuse was significantly associated with higher levels of psychological distress during adulthood:  $\chi^2$  (3, N = 368) = 19.757,  $p < 0.001$ .

Table 1: Reported levels of psychological distress

| Level of psychological distress | Total<br>(f) | Total<br>(%) |
|---------------------------------|--------------|--------------|
| Minimal                         | 153          | 41.6         |
| Mild                            | 93           | 25.3         |
| Moderate                        | 55           | 14.9         |
| Severe                          | 67           | 18.2         |

### Psychoactive substance abuse

Psychoactive substance use was reported by 38.9% of the students, with cannabis being the most frequently used illicit

substance (10.3%), while alcohol was the most frequently used licit drug [37.4%] (Table 2). A non-significant relationship was identified between experiencing physical abuse and becoming a substance user:  $\chi^2 (1, N = 380) = 0.287, p = 0.592$ .

Table 2: Reported frequency of substance use

| Substances         | Past 12 months' use |        | Past 30 days' use |        |
|--------------------|---------------------|--------|-------------------|--------|
|                    | <i>f</i>            | (%)    | <i>f</i>          | (%)    |
| Cannabis           | 39                  | (10.3) | 18                | (4.7)  |
| Tobacco/cigarettes | 34                  | (8.9)  | 24                | (6.3)  |
| Alcohol            | 142                 | (37.4) | 92                | (24.2) |
| Cocaine            | 3                   | (0.8)  | 3                 | (0.8)  |

The dysfunctional outcomes that occurred as a result of psychoactive substance use were analysed and 33.8% of the substance users (13.6% of the total sample), also met the DSM-IV criteria for substance abuse. Chi-squared analyses identified a significant relationship between experiencing physical abuse and later substance abuse:  $\chi^2 (1, N = 382) = 5.846, p < 0.05$ .

## DISCUSSION

This research found that two in every three students were physically abused, while a third of the substance users were also substance abusers. This study confirmed the thesis that there is an increased likelihood of becoming a substance abuser when an individual has experienced physical abuse during childhood. Furthermore, being physically abused was associated with experiencing psychological distress during adulthood. These results are consistent with research from North America indicating that being from a culture where corporal punishment is deemed acceptable does not act as a buffer against the adverse developmental outcomes associated with being physically abused. Notably, the majority of the students who were physically abused did not recognize the experience as abuse and yet they did experience higher levels of psychological distress and were more likely to become substance abusers.

Experiencing physical abuse was not found to be associated with substance use, but physically abused participants were significantly more likely to abuse a substance. These findings suggest that being physically abused is a risk factor for psychological distress and the abuse of psychoactive substances, but does not influence the use of a substance (12). This is a cause for concern as the majority of the participants were physically abused.

Psychological distress is more likely to occur after experiencing physical abuse, as being physically abused often results in emotion regulation difficulties and the utilization of avoidance coping strategies (8). Avoidance coping is an ineffective coping strategy as it involves denying, delaying, minimizing or suppressing stressful thoughts or emotions, which only amplifies the effect of the stressor.

Using this coping strategy makes one less likely to obtain social support (20) and is also associated with substance abuse.

Psychoactive substance abuse has persisted as a serious concern within Jamaica despite the numerous educational campaigns, rehabilitative treatments and anti-drug demand strategies that have been implemented. This suggests that there are other factors driving drug abuse in Jamaica that are not being targeted. One apparently overlooked area is the harsh physical disciplining that is often used by parents to facilitate obedience. Physical abuse has now been highlighted as being a risk factor for later substance abuse within the Jamaican context; thereby identifying a potential area to focus demand reduction strategies. Interventions aimed at preventing physical abuse and also enhancing cultural awareness of its potential adverse outcomes should be seen as an integral part of any drug demand reduction strategy for Jamaica.

## Limitations

This was a self-report, retrospective study, with the sample being limited to young adult university students. Therefore, the results obtained cannot be generalized to the entire Jamaican population. Additionally, the responses obtained were vulnerable to the effects of memory interference and decay. Participants may have forgotten important information relating to their childhood experiences or may have repressed these memories. It should also be noted that in sensitive matters relating to abuse, there might be a tendency to under-report or over-report child abuse and drug use problems. Furthermore, social desirability may have influenced the responses given by the participants.

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