



Exploring Self-Esteem, Well-Being, Cannabis and Cocaine Involvement Among Adults in

Ireland

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Abstract

Aims: This study aims to explore the interplay between self-esteem (SE), well-being (WB), cannabis and cocaine involvement amongst adults in Ireland in the context of the normalisation of drug use, self-medication and the theory of planned behaviour (TPB).

Method: A survey was administered to participants ($n=185$) through Microsoft Forms assessing psychological factors (SE and WB), cannabis and cocaine use patterns. Variables were assessed using the cross-sectional survey of 185 participants using standardised measures (Rosenberg Self-Esteem Scale, WHO-5 Well-Being Index, and WHO Alcohol, Smoking and Substance Involvement Screening Test). **Results:** Age was positively correlated with both cannabis and cocaine involvement. No significant relationships were found between substance use (SU) and socioeconomic factors (education, occupation). Gender differences were found in males having higher cannabis use than females, where cocaine involvement had not significant differences. SE showed a negative correlation with cannabis and cocaine use; notably once age was controlled, neither SE nor WB predicted SU.

Conclusion: These finding fits with the normalisation thesis that suggests shifts in cultural acceptance regarding what is referred to as softer, less dangerous substances, such as cannabis. In contrast to traditional stereotypes, gender differences only exist for cannabis involvement in this group. The finding supports the SE and WB enhancement over abstinence-based policies in the context of a youth-oriented intervention. This study encourages more holistic strategies to tackle SU in Ireland's changing cultural milieu, by taking on board psychological vulnerabilities and the way society operates.

Key words: Normalisation thesis, self-medication, self-esteem, well-being, cannabis use, cocaine use, Ireland

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Literature review

This study examines the relationship between cocaine involvement, cannabis involvement, self-esteem (SE) and well-being (WB) in a group of 185 adults over 18 years of age in Ireland, a climate characterised by significant rises in substance use (SU). In Ireland, prevalence has increased with individuals 15-64 years old reporting any illicit SU rose from 19% in 2002/2003 to nearly 31% in 2014/1015 (Millar, 2017). Furthermore, an increase in individuals seeking treatment with a 252.6% increase in people seeking treatment for cocaine as the main problem drug in 2024 compared to 2017 (Lynch et al., 2025; Mongan et al., 2021).

Self-Esteem and Well-Being as Predictors

SE and WB are recognised as key psychological concepts in humans which impact and influence actions and behaviours daily, but specifically health risk behaviours (HRBs) such as SU. There is no universally accepted definition for SE; however, it is often described as an idea or concept based on individuals' self-worth rooted in their self-evaluation. It is considered be stable across a person's life, increasing from adolescence, then peaking at 50 to 60 years of age and declining after that, though daily fluctuations do happen (Orth & Robins, 2014). Notably, a person's life choices, emotions, and overall WB are all influenced by their SE; as SE is self-determined, in no way does it relate to an individual's actual talents and abilities or how they are perceived by others. WB is a person's cognitive and subjective assessment of their life, reflecting on their overall quality of life, ability to manage everyday problems, and ability to appreciate life (Hascher, 2008; Ntshuntshe et al., 2020; Tian et al., 2018). WB involves balancing positive and negative emotions, with more positive emotions indicating higher WB (Downs et al., 2017). `When referring to SU this paper refers to the

consumption of alcohol, tobacco, legal or illegal drugs such as cannabis, cocaine, prescription medications for recreational purposes, numbing pain and other non-medical uses; however, this study focuses more on cannabis and cocaine (WHO ASSIST Working Group, 2002). SU has significant effects on cognitive functioning and emotional WB through different mechanisms including attention, memory consolidation and decision making. Different substances affect different psychological mechanisms, as well as usage patterns and individual factors (Humeniuk & World Health Organization, 2010). Long term SU can have detrimental effects and according to neuropsychology studies. Findings indicate neural pathways changes in cognitive processing and emotional control including impaired judgement and mood fluctuations leading to more serious long-term changes in emotional resilience and cognitive flexibility (Inzlicht et al., 2024; WHO ASSIST Working Group, 2002).

Frameworks and Theories

Various frameworks and theories aid researchers in understanding HRBs and why people engage in SU. The self-medication theory proposes that individuals use substances to manage and alleviate psychological distress such as stress, anxiety and low SE in the absence of healthier coping mechanisms. Self-medication is emphasised as an unconscious response to the psychological distress (Hall & Queener, 2007; Smith et al., 2017). The self-medication theory addresses the need for differentiating between drug use and misuse, emphasising the need to understand addiction's roots to create interventions that focus on the development of healthy coping strategies. This theory also posits that traumatic experiences, particularly adverse childhood experiences (ACEs) such as childhood neglect, familial dysfunction, and community violence may drive individuals to self-medication (Arsandaux et al., 2020; Bajaj

et al., 2016; Boden & Day, 2023; Greenwood et al., 2023; Hall & Queener, 2007; Shin et al., 2018). In contrast, not all studies found a negative relationship between SE and SU as high SE has been linked to higher risk taking in certain social settings, such as experimenting with substances, particularly amongst peers, further highlighting the bidirectionality of these relationships (Fuentes et al., 2020; Yan et al., 2020). These studies demonstrate SU may manifest differently depending on circumstances, individual differences and different psychological mechanisms such as self-enhancement, social facilitation and self-medication (Fuentes et al., 2020).

The Theory of Planned Behaviour (TPB) further expands on the previous insights. Bashirian et al. (2012) apply the TPB to examine SU in adolescents in Iran. Participants who experienced positive social reinforcement or felt they had control over using substances are more likely to engage in it. The study shows the impact of social influence as a predictor of SU. The study also suggests that individuals with low SE lack the confidence to resist social influence. Arsandaux et al. (2020) further supports this view by concluding that boosting SE can help prevent HRBs globally.

The normalisation thesis highlights the increased prevalence and availability of drugs as more people experiment. The media influences the normalisation thesis as SU can be portrayed in a neutral or positive way in today's media such as films and social media, resulting in SU being perceived as a normal part of life (Pennay & Measham, 2016).

However, the normalisation thesis has its limitations and mostly applies to drugs that are seen as soft or low risk such as cannabis. Harder drugs such as heroin and cocaine are still largely stigmatised (Shiner & Newburn, 2013; Williams, 2016). The normalisation thesis addresses

the need to drug related laws to change along with drug culture and develop better interventions rather than abstinence focused laws and interventions.

The International Context

When comparing SU across global populations, a study in Spain, Fuentes et al., (2020) identified that, lower SE predicted higher SU in adolescents, even when controlling demographic variables. Furthermore, this pattern was found in multiple studies and participants in a systematic review that consisted of over 74,000 participants across all studies from diverse places such as United States, Canada, Europe (Netherlands, Finland, Italy, Norway, Spain, Croatia, and Slovakia), Australia, New Zealand, Asia (Turkey, Iran, and Palestine), and South Africa. This extensive review found that most studies linked lower SE with higher SU and HRBs (Arsandaux et al., 2020). While the systematic review included 19 longitudinal studies, it was mainly focused on 96 cross-sectional studies which limits causal inferences about the relationship between SE and SU. Additionally, these studies heavily relied on self-reported measures, potentially contributing to social desirability bias where participants underreport SU and overestimate SE levels (Arsandaux et al., 2020; Fuentes et al., 2020). Interestingly longitudinal studies offer further insights, Lee et al. (2017) followed 6,504 adolescents in the U.S. from 15 year old to young adulthood, SE was found to be a predictor for binge drinking, cannabis and cocaine involvement. By age 21, SE was no longer a predictor of binge drinking or cannabis involvement but remained a protective factor for cocaine involvement. According to studies, this may be targeted by introducing early interventions in early adolescence before SU patterns develop (Kuntsche & Kuntsche, 2016; Orth, 2018).

Europe's Prevention and Intervention

In Spain SE interventions such as SE workshops are effectively used to increase SE in participants with drug abuse disorders as a preventative measure for relapse for SU as discussed by Fernández-Alarcón et al. (2024). This demonstrates effectiveness in different populations. One British national survey focused on college students found that 56% of participants reported SU (Dillon, 2017). Interventions in Britain integrate positive psychology to promote healthy behaviour using targeted campaigns, especially for higher education students (Boden & Day, 2023). In Ireland, the Target Response with Youth (TRY) project focusses on at-risk youth SE by using youth workers to build trust and provide support to youth at-risk of antisocial behaviour. The key elements of this program are building SE through the promotion of social integration by broadening the participants network outside of those associated with SU and antisocial behaviour (Mongan et al., 2021).

Recent studies in Ireland and Britain, have found an increase in SU in both adolescents and adults. This increase is linked to more tolerant views on recreational drug use which is highlighted by Mongan et al. (2021) and Murphy et al. (2013). The normalisation of SU is accompanied by a rise in alcohol, cannabis, and ecstasy use, with adults today viewing cannabis as less dangerous than previous generations. This shift includes an increased accessibility to substances in today's society (Murphy et al., 2013; Pennay & Measham, 2016; Williams, 2016). Several studies have found that adults are increasingly finding substance use more socially acceptable (Greenwood et al., 2023; Williams, 2016). This is referred to as the normalisation thesis. It refers to recreational drug use becoming more accepted and a part of youth culture making it more socially acceptable (Parker et al., 2013). Recent Irish data supports this notion underscoring the shift in SU as national surveys showed

a rise in adults reporting lifetime SU going from 18.5% in 2002/2003 to 30.7% in 2014/2015, with cannabis as the most used substance with a prevalence of 5.9% (Mongan et al., 2021). Furthermore, individuals seeking treatment where cocaine was the main problem drug increased by 252.6% from 1,500 in 2017 to 5,289 cases in 2024. The number of females seeking treatment also increased by 426.1% between 2017 and 2024 (Lynch et al., 2025).

Positive Psychology and Building Resilience

These psychological mechanisms are consistently found to influence SU and HBRs, as it has been highlighted that higher levels of SE are associated with healthier behaviours (Arsandaux et al., 2020; Fuentes et al., 2020). Overall, SE and WB are interconnected psychological mechanisms that highlight a multidimensional risk factor for SU. Therefore, Arsandaux et al. (2020) highlighted the need for prevention and intervention programs that target more than just SU, expanding to psychological WB and SE and its underlying areas such as risk and resilience. For effective prevention and intervention programs use multidimensional approaches to include universal psychological principles (Hall & Queener, 2007; Smith et al., 2017). The programs must hold cross-cultural relevance as intervention tools must be adaptable to a multitude of settings, cultures and languages (WHO ASSIST Working Group, 2002). Prevention programs for youth aid individuals that target the development of SE, self-regulation, problem solving skills, and emotional regulation have shown better effectiveness, particularly when skills are tailored and targeted to a specific group such as activities woven in culturally relevant activities (Arsandaux et al., 2020; Fernández-Alarcón et al., 2024; Fuentes et al., 2020; Griffin et al., 2001).

These studies collectively indicate that SU in Ireland is influenced by changes in social norms and substance acceptance, especially in settings such and colleges where

normalisation is more common. This indicates SU is also influenced by individual, social, and cultural factors. These findings highlight the need for better, modern interventions that address factors contributing to SU, targeting SE, WB and social skills in adolescents and young adults. The following research questions (RQs) have been formulated to investigate the relationships between SE, WB, cannabis and cocaine use while accounting for potential demographic influences:

RQ1: What are the demographic characteristics of adults in Ireland who engage in cannabis and cocaine use? Does factors such as years spent in education or occupation matter?

RQ2: Does cocaine and cannabis involvement predict levels of self-esteem and well-being? `

RQ3: Does gender influence cannabis and cocaine involvement?

Specifically, the Apropos of previous research it is hypothesised that:

Hypotheses 1 (H1) – Cocaine and cannabis users have lower education and employment levels than non-substance users.

Hypotheses 2 (H2) – Younger substance users use more illicit substances (cannabis and cocaine) than older participants due to normalisation of illicit substances.

Hypotheses 3 (H3) – Adults with lower self-esteem and well-being have higher levels of cocaine and cannabis use.

Hypothesis 4 (H4) – Gender affects cannabis and cocaine involvement.

Methods

Participants

Three different G*Power analyses were run for keys statistical tests needed in this study to determine the appropriate sample size for adequate statistical power. Using an alpha level of 0.05, a power of 0.80, and a medium effect size for all. For independent samples t-tests (Cohen's $d = 0.50$), a total sample of 128 participants is required. For bivariate correlations ($r = 0.30$), the minimum sample is 84. For multiple regression including two predictors ($f^2 = 0.15$), the sample size required is 68. This ensures appropriate power in all analyses (Cohen, 1988).

A total of 185 adults over 18 years of age participated in this study. Participants were recruited by convenience and snowball sampling through social media posters (see Appendix VII) including Facebook groups, Instagram and Reddit where the participants were invited to participate in an anonymous online survey. Survey was hosted via Microsoft Forms. Inclusion criteria included those over 18 years of age and currently living in Ireland. Exclusion criteria included those under 18 years of age and who did not provide informed consent. Data collection was completely anonymous with no identifying information collected. Participants were asked demographic information including age (Mean = 27.03, SD = 7.467), gender (Man, Woman or Prefer to Self-Describe), years in formal education (Junior Certificate = approximately 11 years, Leaving Certificate = approximately 14 years, Undergraduate = approximately 18 years, Masters = approximately 20 years, Ph.D. = approximately 24 years) and occupation (full-time employment, part-time employment, full-time education or training, looking after the home, retired, other). Participants were not compensated for their participation.

Measures

Data collection was done through a survey that was made available online. The survey included demographic questions on age, gender, occupation and level of education of each participant. Furthermore, standardised measures to assess SE, WB and SU included:

Self-Esteem

SE was assessed was using the Rosenberg Self Esteem Scale (RSES). This is a 10-item scale that is widely used to measure global SE. Responses are rated in a 4-point Likert scale with 1 = Strongly Agree to 4 = Strongly Disagree. Higher scores indicate greater SE in participants. RSES has shown strong psychometric properties such as high test-retest reliability over a 2 week period ($r = 0.85\text{--}0.88$) (Rosenberg, 2006) in other studies as well as a Cronbach's alpha ranging from 0.75 to 0.92 (Rosenberg, 2006; Fernández-Alarcón et al., 2024; García et al., 2019; Yang et al., 2019). An internal consistency analysis was conducted for RSES in the current study resulting in a Cronbach's alpha of 0.86, demonstrating its excellent internal consistency in the sample. See Appendix I for further detail.

Well-Being

WB was measured using the World Health Organization - 5 Well-being Index (WHO-5), consisting of five questions assessing overall mood, energy levels, and life satisfaction over the past two weeks. The responses for WHO-5 are rated on a 6-point Likert scale (0 = At no time to 5 = All of the time), where higher scores indicate greater WB. The WHO-5 has demonstrated strong psychometric properties such as validity and reliability. This scale has demonstrated strong test-retest reliability ($r = 0.77$) and internal consistency (Cronbach's $\alpha = 0.85\text{--}0.90$) in previous studies (Downs et al., 2017). When calculating internal consistency in

this study including all 5 items results report a similarly high Cronbach's alpha of 0.83 (see Appendix II).

Cannabis and Cocaine Use

Cannabis and cocaine use was measured using the World Health Organization Alcohol, Smoking and Substance Involvement Screening Test (WHO-ASSIST) relevant items. This questionnaire assesses lifetime and past three months of SU, including various substances such as alcohol, cannabis, cocaine, amphetamines, inhalants, sedatives, hallucinogens, opioids, and other drugs. Participants were asked about the frequency of use, urges, consequences, expressed concerns, and failed attempts to control use. WHO-ASSIST is a validated scales with strong psychometric properties as it demonstrates high test-retest reliability for cannabis and cocaine resulting in kappas ranging from 0.61 to 0.76 and 0.78 to 0.9, respectively. Kappa coefficients were particularly used in the context of the WHO-ASSIST scale to determine if participants would respond consistently to the same items when presented in an interview more than once. Furthermore, the scale has excellent internal reliability with previous studies reporting Cronbach's alpha of 0.84 for cannabis involvement and 0.90 for cocaine involvement (WHO ASSIST Working Group, 2002). An internal consistency analysis of six items covering only cannabis items and one covering only cocaine items which included use, urges, consequences, expressed concerns, and failed attempts to control use were included. Both cannabis and cocaine involvement reported Cronbach's alpha of 0.83 indicating strong internal consistency for both substances. See Appendix III for further detail.

Design

This current study employed a quantitative, cross-sectional correlational design, employed to examine the relationship between SE, WB, cannabis and cocaine use. The independent variables (IV) were total involvement scores of cannabis use and cocaine use, which was assessed using WHO-ASSIST scores, including frequency and consequences of SU in participants social, financial life as well as legal consequences. The dependent variables (DVs) were SE, measured by the RSES, and WB, measured by WHO-5. Two types of analyses were run to examine more aspects of the relationship between SE, WB, cannabis and cocaine use. Descriptive statistics were calculated and analysed to summarise and understand overall trends in participants demographics, SE, WB, cannabis and cocaine involvement.

The study included a Pearsons's correlation analysis as the number of participants in the study is greater than 30, normality was assumed. Pearson's correlation analyses were conducted to explore the relationship between SE, WB, cannabis involvement, cocaine involvement, years in education and age. Independent samples t-tests were carried out to further analyse gender differences in cannabis and cocaine scores. Chi-square tests were conducted to explore relationships between occupation categories and categorised risk levels of cocaine and cannabis involvement scores. Lastly, multiple regression analyses were conducted to assess if cannabis and cocaine involvement predicts SE and WB, while controlling age variable when examining cannabis and cocaine involvement scores.

Procedure

Participants assessed the online survey through Microsoft Forms. The study was posted on social media platforms (namely Facebook, Instagram and Reddit) where

participants could follow a direct link to the survey. Participants were firstly presented with a consent form (see Appendix IV), where participants learned about the study's purpose, voluntary nature of participation, confidentiality of responses, National College of Ireland data retention policies, and the right to withdraw before submission. The participants were also required to confirm that they are 18 years of age or older and they live in Ireland. Once the participants provided informed consent, the survey consisted of demographic questions (see Appendix V), followed by RSES, then WHO-5 and lastly, WHO-ASSIST. After the survey, participants were presented with a debriefing form (see Appendix VI), thanking participants for taking time to participate in the study. The form reinforced the confidentiality and study objectives and informed participants that the data collected would be analysed to better understand the relationship between SE, WB, and SU. Participants were once again reminded that their responses would remain anonymous and would contribute to academic research publications or presentations. Additionally, the form provided contact details for mental health support services, including the HSE Drugs and Alcohol Helpline, Samaritans, and Aware, for those who may have felt discomfort discussing topics related to substance use and mental health. If participants had any further questions or wished to learn more about the study's results, they were encouraged to contact the researcher via email.

Ethical Considerations

Ethical approval for the study was obtained from the National College of Ireland Ethics Committee. All participants provided informed consent before participating in the study, also they were assured that they could withdraw from the study at any point before submission. Though no risks were associated with participation, a list of helplines contact

details (including HSE Drugs and Alcohol Helpline, Samaritans, and Aware) was provided for individuals who may have experienced distress as a result of the survey.

Results

This section of the research presents the statistical tests that were performed to test for the hypotheses and investigate the relationship between demographic variables, cocaine use, cannabis use, SE and WB. Analyses included descriptive analysis, as well as inferential statistics to understand relationship between variables and determine predictive relationships. The data reported, includes means (M), standard deviations (SD), and significance values where relevant and applicable. All analysis were performed using IBM SPSS 29, and all assumptions were tested prior to performing inferential analyses. A Shapiro-Wilk test on SE, WB, cannabis and cocaine scores suggested SE and WB are normally distributed, with $p = .13$ and $p = .058$. However, cannabis substance involvement scores and cocaine substance involvement scores according to the WHO-ASSIST manual (WHO ASSIST Working Group, 2002), were non-normally distributed as $p < .001$, however due to the sample size exceeding 30 participants, Pearson's correlation and parametric tests were used, assuming approximate normality of sampling distributions per the central limit theorem.

Descriptive Statistics

Firstly, descriptive analysis was conducted to answer RQ1 and to partly explore H1 and H2, to better analyse the demographic characteristics of those who partake in cannabis and cocaine use and those who do not. Differences in age and gender were also analysed. This study consisted of 185 participants, however 179 were included in the final analysis due to outliers. These were identified by creating a statistical filter to remove results that were more than three standard deviations from the mean. All participants were 18 years or older with a mean age of 27.03 (SD = 7.47) and ranging from 18 to 56 years. The sample consisted of 52 males, 126 females, and one participant who self-described as non-binary (total $N = 179$)

after filtering). Education levels were also measured in years ($M=16.26$, $SD=2.82$) ranging from 10 to 22 years in education. Occupation of participants was also recorded with 121 participants in full-time employment, 29 in part-time employment, 13 in full-time education, 8 participants were looking after the home and 8 participants in other while no participants were retired. Furthermore, TSI for cannabis use had a mean of 4.35 ($SD = 6.21$) while TSI for cocaine use had a mean of 2.44 ($SD = 3.81$). Continuous variables are presented in Table 1.

Table 1

Descriptive statistics for age, cannabis total substance involvement, cocaine total substance involvement, education years, self-esteem and well-being

Variable	M [95% CI]	SD	Range
Age	27.03 [25.94, 28.12]	7.47	18-56
Cannabis TSI	4.35 [3.44, 5.26]	6.21	0-24
Cocaine TSI	2.44 [1.88, 3.00]	3.81	0-15
Education Years	16.26 [15.85, 16.67]	2.82	10-22
Self-Esteem (RSE)	22.13 [21.43, 22.83]	4.77	10-35
Well-Being (WHO-5)	46.75 [44.14, 49.36]	17.79	4-88

Note: M = mean, SD = Standard deviation; TSI = Total Substance Involvement; RSE = Rosenberg Self-Esteem Scale; WHO-5 = World Health Organization Well-Being Index

Inferential Statistics

To better examine and answer research questions, hypotheses, and better understand the relationship between the variables inferential analyses were conducted. As H1 and H2 hypothesised that the lower the age the higher cannabis and cocaine involvement scores would be, and lower education and occupation levels are correlated with higher cannabis and cocaine involvement scores. A Pearsons correlation analysis was conducted (See Table 2) for variables including age, years in education, cannabis involvement, cocaine involvement, SE and WB. The analysis found age to be negatively correlated with both cannabis involvement ($r = -.22, p = .003$), cocaine involvement ($r = -.19, p = .011$) and SE ($r = -.19, p = .011$). Cannabis and cocaine involvement showed moderate positive correlation ($r = 0.27, p < .001$). Lastly SE and WB showed a strong positive correlation ($r = 0.65, p < .001$). No other significant correlations were found between education years and other variables, SU variables and psychological measures also did not reach statistical significance.

Table 2

Pearson's Correlation Between Age, Years in Education (Education Years), Cannabis Involvement, Cocaine Involvement, SE (RSE) and WB (WHO-5)

Variable	1	2	3	4	5	6
1.Age	1	-.047	-.22**	-.19*	-.19*	-.14
2.Education Years	-.05	1	.01	-.15	.00	.11
3.Cannabis TSI	-.22**	.01	1	.27**	.09	.08
4.Cocaine TSI	-.19*	-.15	.27**	1	.08	.07

5.RSE	-.19*	.00	.09	.08	1	.65**
6.WHO-5	-.14	.11	.08	.07	.65**	1

*Note: ** $p < .01$, * $p < .05$.*

To examine categorical variable a chi-square tests of independence was conducted but found no significant relationship between occupation and cannabis TSI, $\chi^2 (80, N = 179) = 50.44, p = .996$. Likewise, cocaine TSI was not significantly associated with occupation, $\chi^2 (56, N = 179) = 44.78, p = .859$.

Gender differences for H4 were analysed using independent t-tests which reported that men ($M = 6.67, SD = 7.23$) have greater cannabis involvement than women ($M = 3.32, SD = 5.44$), $t(176) = -3.39, p < .001, d = -0.56$ while no significant difference in cocaine involvement and gender ($t(176) = -1.22, p = .223, d = -0.20$) was found in this sample.

To examine RQ2, test for H3, and analyse significant difference in SE and WB among individuals who have cannabis and cocaine involvement. A hierarchical regression analysis was conducted to examine whether SE predicts cannabis and cocaine TSI. The overall model controlled for age in block 1 as age is correlated with TSI scores. Younger age predicted higher cannabis involvement ($\beta = -.21, p = .006$) as well as cocaine involvement ($\beta = -.18, p = .018$) (See Table 3). Neither self-esteem ($\beta = .05, p = .692$) nor well-being ($\beta = .01, p = .808$) were significant predictors of cannabis TSI and explained about 5.2% of the variance (adjusted $R^2 = .036$) in the final model. Furthermore, SE ($\beta = .02, p = .828$) and WB ($\beta = .03, p = .760$) were not significant predictors of cocaine TSI when included with age in the model. This model explained about 3.8% of the variance (adjusted $R^2 = .021$). Due to the data not meeting normality assumptions the residual errors were checked, and both models showed no

severe violations of linearity, homoscedasticity, or normality. No multicollinearity as all VIFs were less than 1.1.

Table 3

Hierarchical Multiple Regression Analyses Predicting Cannabis and Cocaine Involvement (N = 179)

Variable	R^2	R^2	B	SE	β	t	p
<i>Change</i>							
Cannabis Step 1	.05	-					
(Age)			-0.18	0.06	-.22	-3.01	.003
Cannabis Step 2	.05	.00					
(Age)			-0.18	0.06	-.21	-2.80	.006
(RSE)			0.05	0.13	.05	0.40	.692
(WHO-5)			0.01	0.03	.01	0.24	.808
Cocaine Step 1	.04	-					
(Age)			-0.10	0.04	-.19	-2.56	.011
Cocaine Step 2	.04	.00					
(Age)			-0.09	0.04	-.18	-2.39	.018
(RSE)			0.02	0.08	.02	0.22	.828
(WHO-5)			0.01	0.03	.03	0.31	.760

Note: R^2 = R-squared; R^2 Change = Delta R-squared; β = standardized beta value; B = unstandardized beta value; SE = Standard errors of B ; t = t-value; N = 179; Statistical significance: * p < .05; ** p < .01; *** p < .001

Discussion

The purpose of this present study was to explore the relationship between cannabis involvement, cocaine involvement, SE, WB among adults in Ireland, in the context of self-medication, TPB and normalisation thesis in cannabis and cocaine involvement.

The second hypothesis (H2) was partially supported as findings present that younger adults reported higher engagement in cannabis and cocaine use, establishing age as a stable predictor of both substances. This is consistent with previous studies and supports the normalisation thesis which posits that SU has become normalised with youth culture (Parker et al., 2013; Pennay & Measham, 2016; Williams, 2016). One longitudinal study found that while SE acted as a protective factor from alcohol and cannabis use at age 15, by the time participants reached age 21, SE was no longer a predictor, which may be related to normalisation of these substances (Lee et al., 2017).

The first hypothesis (H1) was not supported as findings in contrast to previous studies that found relationships between socioeconomic disadvantage and SU (Lynch et al., 2025; Yang et al., 2019), education and occupation did not show a significant relationship with cannabis and cocaine involvement in this group. This is consistent with the data obtained by Parker et al. (2013), who reported that SU and socioeconomic status were not significant within the context of normalisation. This limitation may be due to relatively high education levels in this group.

The fourth hypothesis (H4) was partially supported as results showed that men have considerably greater cannabis involvement than women, but no significant gender difference was found for cocaine involvement. These mixed results imply that while gender pattern for

cannabis persist (Mongan et al., 2021), cocaine involvement may indicate a broader normalisation, consistent with Boden and Day (2023) results. Furthermore, Irish data (Lynch et al., 2025) has revealed a considerable increase in females seeking treatment for cocaine involvement with an increase of 426.1% from 268 cases in 2017 to 1,494 cases in 2024, illustrating a shift in female cocaine use which may minimise gender gaps in this group.

The third hypothesis (H3) was not supported as neither SE nor WB significantly predicted cannabis and cocaine involvement when accounting for age. While there was a relationship between low SE and higher SU, the relationship declined after age was taken into account. This contrasts previous research that found a consistent relationship between SE and SU across multiple studies, despite significant variation in measurements and the variables in the sample (Arsandaux et al., 2020). However, when comparing to longitudinal studies, results also show that SU such a cocaine use becomes normalised with age (Lee et al., 2017). These findings indicate that where SU is becoming more common in Ireland, there are larger developmental and cultural factors, such as age and peer norms, which may have greater influence on usage than individual psychological qualities (Parker et al., 2013; Williams, 2016). Age is more than a demographic factor as it also serves as an indicator for exposure to modern youth culture, peer groups and social norms (Mongan et al., 2021; Tian et al., 2018).

Theoretical Implications

The lack of predictive power of SE and WB is consistent with the self-medication theory which claims that individuals may partake in SU to cope due to psychological distress (Chebli et al., 2023; Hall & Queener, 2007; Smith et al., 2017). Similarly, the TBP illustrates that social norms and perceived behaviour control are key factors in influencing SU. The high level of social reinforcement in younger adults may minimise the impact of individual

attitudes or psychological predispositions on SU, which is consistent with the study results with age being a key factor (Bashirian et al., 2012).

The strong relationship between SE and WB demonstrates their close psychological connection (Bajaj et al., 2016), further supporting recommendations for approaches focusing on WB when addressing SU. Healthy levels of SE are associated with high WB outcomes which may act as a buffer against HRBs. Notably, this study reveals that these protective mechanisms are reduced when SU is normalised.

Revisiting the Normalisation Thesis

The study's results are in line with the normalisation thesis in Ireland, highlighting how SU influences young individuals across age, socioeconomic status and gender. Boden and Day's (2023) identify rising SU and attitudes seeing SU as normative increasingly popular in students in UK and Ireland, mirroring the pattern in this study. Additionally McCarthy (2017) also supports this notion of normalisation among youth and college students in Ireland. While Murphy et al. (2013) found a sampling bias in SU studies underrepresenting early school leavers and focusing mostly on students.

The study demonstrates how the normalisation thesis is reinforced by the cultural acceptance of what were 'softer' drugs like cannabis due to their normalisation and reshaping SU patterns in Ireland (Parker et al., 2013; Pennay & Measham, 2016). Further legitimising recreational use, media influence and legislative change (e.g. decriminalisation debates in youth enclaves). Yet, the thesis has limitations; tendencies persist to stigmatise harder drugs, which indicates the need for various public health approaches. For normalised substances, policies that focus on abstinence can be less likely to be effective than harm reduction strategies like drug checking the services at festivals and peer education in universities

(Boden & Day, 2023). On the other hand, drug abuse of harder drugs requires specific interventions aimed at reducing stigma and structurally inequitable environments. This may explain the complex position of cocaine involvement in this study as it remains stigmatised by some (Shiner & Newburn, 2013; Williams, 2016). However, the rise in females involved in cocaine and the lack of gender difference may point to a shift towards normalisation in younger generations.

Practical and Policy Implications

The unique role and predictive power of SE and WB implies holistic programs that integrate mental health support, social skills training (Greenwood et al., 2023) and a community building program. Initiatives that take place in school and in the workplace aimed at promoting SE and WB (such as mindfulness workshops or peer support networks) may preclude the onset of SU by facilitating healthier coping. Interventions for younger adults would have to take up the socio cultural contexts where normalisation occurs (Boden & Day, 2023). Influencer partnerships and running social media campaigns to change how SU narratives present themselves and accessible support could be offered. Fernández-Alarcón et al. (2024) found SE workshops successful in certain therapeutic setting, promoting comprehensive psychological support within recovery frameworks, even if SE is less predictive of beginning SU.

Furthermore, when TPB focused interventions that may focus on social networks, individual social norms and perceived behaviour control such as peer led classes and education and youth SE and WB initiatives. However, more complex approaches for multidimensional prevention of SU through the inclusion of psychological, social, and cultural components as highlighted by Greenwood et al. (2023).

Study Strengths and Limitations

The study's strengths include the use of reliable measurement tools which are validated scales. A sufficiently powered sample size, allowing for robust statistical analysis. Notably, the study used convenience and snowball sampling which may limit generalisability, among underrepresented groups such as less educated communities and socioeconomic diverse groups. This study also did not have any retirees which further limits generalisability. Furthermore, self-report measures, though standardised they can be vulnerable to social desirability bias. The cross-sectional design limits causal inference and the removal of polysubstance patterns and other substances reduces ecological validity.

Future research should include longitudinal qualitative design to better capture participants' patterns of development for deeper understanding of these multifaceted psychological and social factors leading to SU. The use of more detailed multifaceted measurements of different types of SE and resilience factors could improve the understanding of the mechanisms (Fuentes et al., 2020; Yang et al., 2019).

Conclusion

On a global stage, Ireland's association with substance use, like in much of the globe, is one of normative drug use that weaves its way into the fabric of youth culture. The cultural shift towards normalisation of substances such as cannabis, ecstasy and cocaine in college campuses and media demonstrates a broader acceptance, substances are no longer vices, but connections, escape and even expression (Boden & Day, 2023; Pennay & Measham, 2016). Nevertheless, this normalisation is not standardised. While cannabis becomes more acceptable, harder drugs are cloaked with stigma (Shiner and Newburn 2013), suggesting a paradoxical society. In the process of becoming an adult, young adults walk a line between a

world where “soft” drug use is almost expected and judgment remains for those whose behaviour carries more social judgement and risk.

This study implies normalisation regardless of socioeconomic status which does not align with previous studies (Corrigan, 1986; Ramo et al., 2011), this may be due to high education level in this study. To properly examine this, a broader range of socioeconomic backgrounds must be included as it is the only way to fully grasp the normalisation thesis boundaries.

Additionally, the study found that a significant predictor of cannabis and cocaine involvement was age, with young adults showing higher levels of SU. This is an early adulthood period of identity exploration, peer influence and experimentation (Parker et al., 2013; Williams, 2016; Greenwood et al., 2023; Mongan et al., 2021), a period of time where social normalisation of substances compete with natural humanness and the desire to be a part of things. SU becomes a social lubricant in easing anxieties (Boden & Day, 2023). However, for some, experimenting leads to habitual use, most frequently when accompanied by low SE or insufficient address of mental health needs (Greenwood et al., 2023; Griffin et al., 2001).

The typical male dominated nature of SU patterns is acted upon by the lack of significant gender differences in SU patterns. This study shows that this has become a culture where cocaine use is almost gender neutral, and women take part in SU at rates similar to men, especially among younger adults (Boden & Day, 2023; Mongan et al., 2021). This trend of the normalisation of SU forces deeper considerations: what unmet needs do substances relate to in people’s lives? This is not all the answers but holds up a way forward where each step contributes to a journey towards WB.

If a young adult who has low SE is provided with caring relationships, active involvement in activities, and in the case of emotional bankruptcy, with the capacity to develop emotional resilience; They may learn healthier ways of coping with things, leaving substances behind. This agrees with García et al.'s (2019) statement that well-being functions as a 'psychological immune system' that can help absorb life's stresses. This suggests that the lifelines for those teetering on the edge of substance dependency toward WB, could be implemented through intervention, including community programs focused on developing mindfulness, creative expression or peer support.

The end goal, though, is not to wipe out SU as much as it is to make a world in which it is not required as a balm to soothe psychological suffering, insecurity or despair. Despite the fact that Ireland's journey resembles that of many nations, Ireland's journey is not yet complete. By curtailing complexity and placing humanity at its centre, we can move toward a future where SU is neither pathways to habitual lewdness or professional spammer status, and neither a blameful view nor a shameful shame. This study sheds light on the intersection of normalisation of use, vulnerability and demographic shifts important to current use in Ireland. Its relationship to broader societal changes in the great global wake means that the solution can no longer be punitive reaction, but rather empathetic evidence-based effort. With increasing normalisation thesis, ongoing research should be adjusted to new dynamics so that public health response remains equally fluid and nuanced while addressing the behaviours that are to be addressed. In a time of life when SU is a part of life that is becoming part of the social fabric, the study of SU in a self-perception, WB, and cultural context does not have the feel of academic isolation; it is a necessary step towards the embrace of healthier more resilient communities.

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Appendices
Appendix I – RSE

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Rosenberg Self-Esteem Scale (RSE)

Author: Morris Rosenberg

The purpose of the 10 item RSE scale is to measure self-esteem. Originally the measure was designed to measure the self-esteem of high school students. However, since its development, the scale has been used with a variety of groups including adults, with norms available for many of those groups.

Scoring: As the RSE is a Guttman scale, scoring can be a little complicated. Scoring involves a method of combined ratings. Low self-esteem responses are "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. Two or three out of three correct responses to items 3, 7, and 9 are scored as one item. One or two out of two correct responses for items 4 and 5 are considered as a single item; items 1, 8, and 10 are scored as individual items; and combined correct responses (one or two out of two) to items 2 and 6 are considered to be a single item.

The scale can also be scored by totalling the individual 4 point items after reverse-scoring the negatively worded items.

Reliability: The RSE demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

Validity: Demonstrates concurrent, predictive and construct validity using known groups. The RSE correlates significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory. In addition, the RSE correlates in the predicted direction with measures of depression and anxiety.

Reference:
Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

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RSE

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree
2 = Agree
3 = Disagree
4 = Strongly disagree

_____ 1. On the whole, I am satisfied with myself.
_____ 2. At times I think I am no good at all.
_____ 3. I feel that I have a number of good qualities.
_____ 4. I am able to do things as well as most other people.
_____ 5. I feel I do not have much to be proud of.
_____ 6. I certainly feel useless at times.
_____ 7. I feel that I'm a person of worth.
_____ 8. I wish I could have more respect for myself.
_____ 9. All in all, I am inclined to think that I am a failure.
_____ 10. I take a positive attitude toward myself.

Appendix III – WHO-5



WHO-5 Well-being Index

Please respond to each item by marking <u>one box per row</u> , regarding how you felt in the last two weeks.		All of the time	Most of the time	More than half the time	Less than half the time	Some of the time	At no time
WHO 1	I have felt cheerful in good spirits.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
WHO 2	I have felt calm and relaxed.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
WHO 3	I have felt active and vigorous.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
WHO 4	I woke up feeling fresh and rested.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0
WHO 5	My daily life has been filled with things that interest me.	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0

Scoring:

The raw score is calculated by totaling the figures of the five answers. The raw score ranges from 0 to 25, 0 representing worst possible and 25 representing best possible quality of life.

To obtain a percentage score ranging from 0 to 100, the raw score is multiplied by 4. A percentage score of 0 represents worst possible, whereas a score of 100 represents best possible quality of life.

Regional Office for Europe WHO. Use of Well-Being Measures in Primary Health Care - The DepCare Project. Health for All, Target 12, 1998 [<http://www.who.dk/document/e60246.pdf>]

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EXPLORING SELF-ESTEEM, WELL-BEING, COCAINE AND CANNABIS INVOLVEMENT

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Appendix III - WHO-ASSIST

Question 6

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Have you ever used any drug by injection? (NON-MEDICAL USE ONLY)	0	2	1

IMPORTANT NOTE:
Patients who have injected drugs in the last 3 months should be asked about their pattern of injecting during this period, to determine their risk levels and the best course of intervention.

PATTERN OF INJECTING

Once weekly or less
Fewer than 3 days in a row

INTERVENTION GOALS

Brief intervention including "risks associated with injecting" card

More than once per week
3 or more days in a row

Further assessment and more intensive treatment

HOW TO CALCULATE A SPECIFIC SUBSTANCE INVOLVEMENT SCORE

For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q6 in this score. For example, a score for cannabis would be calculated as: $Q2c + Q3c + Q4c + Q5c + Q6c + Q7c$

Note that Q5 for tobacco is not coded, and is calculated as: $Q2a + Q3a + Q4a + Q6a + Q7a$

THE TYPE OF INTERVENTION IS DETERMINED BY THE PATIENT'S SPECIFIC SUBSTANCE INVOLVEMENT SCORE

	Record specific substance score	no intervention	receive brief intervention	more intensive treatment*
a. tobacco		0 - 3	4 - 26	27+
b. alcohol		0 - 10	11 - 26	27+
c. cannabis		0 - 3	4 - 26	27+
d. cocaine		0 - 3	4 - 26	27+
e. amphetamine		0 - 3	4 - 26	27+
f. inhalants		0 - 3	4 - 26	27+
g. sedatives		0 - 3	4 - 26	27+
h. hallucinogens		0 - 3	4 - 26	27+
i. opioids		0 - 3	4 - 26	27+
j. other drugs		0 - 3	4 - 26	27+

NOTE: *FURTHER ASSESSMENT AND MORE INTENSIVE TREATMENT may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

A. WHO - ASSIST V3.0

INTERVIEWER ID		COUNTRY		CLINIC	
PATIENT ID		DATE			

INTRODUCTION (Please read to patient)

Thank you for agreeing to take part in this brief interview about alcohol, tobacco products and other drugs. I am going to ask you some questions about your experience of using these substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

NOTE: BEFORE ASKING QUESTIONS, GIVE ASSIST RESPONSE CARD TO PATIENT

Question 1

(If completing follow-up please cross check the patient's answers with the answers given for Q1 at baseline. Any difference on this question should be queried)

In your life, which of the following substances have you <u>ever</u> used? (NON-MEDICAL USE ONLY)	No	Yes
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3
d. Cocaine (coke, crack, etc.)	0	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3
j. Other - specify	0	3

Probe if all answers are negative:

"Not even when you were in school?"

If "No" to all items, stop interview.

If "Yes" to any of these items, ask Question 2 for each substance ever used.

EXPLORING SELF-ESTEEM, WELL-BEING, COCAINE AND CANNABIS

INVOLVEMENT

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Question 2					
In the past three months, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC)?					
	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	2	3	4	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	2	3	4	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	2	3	4	6
d. Cocaine (coke, crack, etc.)	0	2	3	4	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	2	3	4	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	2	3	4	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	2	3	4	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	2	3	4	6
j. Other - specify:	0	2	3	4	6

If "Never" to all items in Question 2, skip to Question 6.

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.

Question 3					
During the past three months, how often have you had a strong desire or urge to use (FIRST DRUG, SECOND DRUG, ETC)?					
	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3	4	5	6
d. Cocaine (coke, crack, etc.)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
j. Other - specify:	0	3	4	5	6

Question 4					
During the past three months, how often has your use of (FIRST DRUG, SECOND DRUG, ETC) led to health, social, legal or financial problems?					
	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4	5	6	7
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	4	5	6	7
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	4	5	6	7
d. Cocaine (coke, crack, etc.)	0	4	5	6	7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	4	5	6	7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	4	5	6	7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4	5	6	7
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	4	5	6	7
j. Other - specify:	0	4	5	6	7

Question 5					
During the past three months, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG, ETC)?					
	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products	0	5	6	7	8
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	5	6	7	8
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	5	6	7	8
d. Cocaine (coke, crack, etc.)	0	5	6	7	8
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	5	6	7	8
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	5	6	7	8
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	5	6	7	8
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	5	6	7	8
j. Other - specify:	0	5	6	7	8

Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

Question 6		
Has a friend or relative or anyone else ever expressed concern about your use of (FIRST DRUG, SECOND DRUG, ETC)?		
	No, Never	Yes, in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6
d. Cocaine (coke, crack, etc.)	0	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6
j. Other - specify:	0	6

Question 7		
Have you ever tried and failed to control, cut down or stop using (FIRST DRUG, SECOND DRUG, ETC)?		
	No, Never	Yes, in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6
d. Cocaine (coke, crack, etc.)	0	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6
g. Sedatives or Sleeping Pills (Valium, Serenax, Rohypnol, etc.)	0	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6
j. Other - specify:	0	6

Appendix IV – Consent Form

In agreeing to participate in this research I understand the following:

- The method proposed for this research project has been approved in principle by the Departmental Ethics Committee, which means that the Committee does not have concerns about the procedure itself as detailed by the student. It is, however, the above-named student's responsibility to adhere to ethical guidelines in their dealings with participants and the collection and handling of data.
 - If I have any concerns about participation, I understand that I may refuse to participate or withdraw at any stage by exiting my browser.
 - I understand that once my participation has ended, that I cannot withdraw my data as it will be fully anonymised.
 - I have been informed as to the general nature of the study and agree voluntarily to participate.
 - All data from the study will be treated confidentially. The data from all participants will be compiled, analysed, and submitted in a report to the Psychology Department in the School of Business.
 - I understand that my data will be retained and managed in accordance with the NCI data retention policy, and that my anonymised data may be archived on an online data repository and may be used for secondary data analysis. No participants data will be identifiable at any point.
 - At the conclusion of my participation, any questions or concerns I have will be fully addressed.
 - Anonymised data will be stored on NCI servers in line with NCI's data retention policy. It is envisaged that anonymised data will also be uploaded to a secondary data repository to facilitate validation and replication, in line with Open Science best practice and conventions
- ☐ Please tick this box if you have read and agree with all of the above information.
- ☐ Please tick this box to indicate that you are providing informed consent to participate in this study.
-

Appendix V - Demographic questions

1. Age: _____

2. Gender Identity:

- Man
- Woman
- Non-binary
- Prefer to self-describe ____.

3. How many years have you spent in education? e.g. Junior Certificate = approximately 11 years, Leaving Certificate = approximately 14 years, Undergraduate = approximately 18 years, Masters = approximately 20 years, Ph.D. = approximately 24 years.

4. Occupation:

- Full-time employment
- Part-time employment
- Full-time education or training
- Looking after the home
- Retired
- Other

Appendix VI – Debriefing Form

Study Title:

Effects of Substance Use on Well-Being and Self-Esteem

Researcher:

Nathaly Araujo Junqueira, National College of Ireland
Email: X19464116@student.ncirl.ie

Supervisor:

David Mothersill, National College of Ireland

Thank You for Participating!

Thank you for taking part in this research study. Your time and effort are greatly appreciated, and your responses will contribute valuable insights into how casual drug use, specifically the use of substances like cannabis and cocaine, may impact self-esteem and well-being among young adults in Ireland.

Study Purpose:

The purpose of this study is to understand the psychological effects of substance use on self-esteem and well-being. By gathering data from participants like you, this study hopes to improve public health strategies and raise awareness around the mental health consequences of casual drug use.

Confidentiality:

As mentioned in the study, all data collected is anonymous and cannot be linked back to you. No identifying information was collected, and your responses will be kept completely confidential.

What's Next?:

The data from this study will be analysed to better understand the relationship between drug use, self-esteem, and well-being. The findings may be included in an academic thesis, presented at conferences, or published in academic journals. However, no identifiable information will ever be published.

Need Support?:

If you feel distressed or concerned about any of the topics covered in the survey, or if you would like further support, please consider contacting the following services:

- HSE Drugs and Alcohol Helpline
Freephone: 1800 459 459
Website: www.drugs.ie
- Samaritans
Freephone: 116 123
Website: www.samaritans.org
- Aware (Support for Depression)
Freephone: 1800 80 48 48
Website: www.aware.ie

Further Information:

If you have any questions or would like to learn more about the study's results, please feel free to contact me via email at X19464116@student.ncirl.ie. I would be happy to provide further details once the study is complete.

Thank you once again for your participation!

Appendix VII – Social Media Poster

