**Suicidal behaviours and mental health disorders among students commencing college**

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**Abstract**

The increase in psychological disorders and suicidal behaviour in students is a reason for growing concern. Some may start university with pre-existing problems, while others develop problems during this time. It is important to evaluate mental health and wellbeing early, identifying those at risk. The aim of this study was to compare mental health problems and help-seeking behaviour between students in Northern Ireland (NI) and the Republic of Ireland (ROI). Whilst geographically proximate, the institutions span a cross-border region with distinct education and healthcare systems. First-year undergraduate students (n=1828) were recruited in September 2019 as part of the World Mental Health International College Student Initiative. Suicidal behaviour, mental health and substance disorders were investigated using the World Mental Health- Composite International Diagnostic Interview. Prevalence of disorders was high, with more ROI students experiencing problems than NI students. Students were significantly more likely to experience mental health problems if they were female (*p*<0.001), non-heterosexual (*p*<0.0001), and over the age of 21 (*p*<0.0001). These findings show that many students are starting university with high levels of psychopathology and suicidal behaviour, highlighting the importance of early intervention which may need to be tailored to different student populations.

**Key words: student mental health; depression; suicidal behaviour; help-seeking**

**Paper Highlights:**

* University can be a stressful time for students, making them vulnerable to mental health problems.
* Higher prevalence of most disorders found in students in the Republic of Ireland.
* Students in Northern Ireland were more likely to be still receiving treatment for emotional problems.
* Risk factors for emotional problems included sexuality, age and gender.
* High levels of emotional problems found before students started university.

**Introduction**

Global rates of depression, anxiety and stress in students attending third level institutions are rising (Dalky and Gharaibeh, 2019) and many students are commencing college with pre-existing mental health conditions. A recent study found that 83.1% of 12-month mental health disorders commenced before students started college (Auerbach et al., 2016). The transition to university life, and young adulthood, can also be a stressful time for students (Karyotaki et al., 2019). Psychological problems can negatively impact aspects of academic life such as poor class attendance, low grades and social isolation (Breslau et al., 2008) and contribute to higher attrition rates (Auerbach et al., 2016).

The World Mental Health International College Student Initiative (WMH-ICS) reported mental health prevalence data, gathered from 19 colleges, across 8 different countries, from students commencing higher level education. Results from the self-report questionnaires highlighted high rates of mental health issues, with 35% of full-time students screening positively for at least one lifetime anxiety, mood, or substance disorder (Auerbach et al., 2018). The WMH-ICS also reported that lifetime prevalence of suicidal ideation, plans, and attempts were 32.7%, 17.5%, and 4.3%, respectively (Mortier et al., 2018).

 The Ulster University Student Wellbeing study (UUSWS) conducted as part of the WMH-ICS reported elevated levels of psychological problems and suicidal behaviour among first year undergraduate students in Northern Ireland (Ennis et al., 2019; McLafferty et al., 2017; O’Neill et al., 2018). In fact, Northern Ireland had one of the highest percentages of students having any lifetime (39.1%) and 12-month (36.9%) mental health disorder out of the 8 countries included in the WMH-ICS (Auerbach et al., 2018). Risk factors identified in the UUSWS included sexuality, gender and age, with students who identified as non-heterosexual, females, and mature students at a greater risk of both 12 month and lifetime mental disorders. These findings are in accordance with previous research in this area (Eisenberg et al., 2013; Mortier et al., 2017).

A smaller, cross-sectional study which examined depressive symptoms and suicidal ideation, has published findings from undergraduate students in the Republic of Ireland (ROI) (Horgan et al., 2018). Overall, 59% of students experienced depressive symptoms that may require treatment, and 28.5% reported suicidal ideation. A recent report also found that young people in the ROI have lower rates of wellbeing than young people from other countries and by the age of 13; 1 in 3 young people in Ireland will have reported a mental health disorder (NEPS, 2020).These findings demonstrate that the rates of depressive and anxiety disorders in Ireland are extremely high in comparison to other countries, indicating the importance of future research to understand the risk factors and to provide appropriate support to students.

Factors known to contribute to poor mental health in students include academic pressures (Asif et al., 2020), a less structured academic setting (Keeling, 2003) and socio-economic status of the student's home area (Ibrahim et al., 2013). Students are more likely to experience mental health problems if they are from disadvantaged backgrounds or have financial struggles (Bayram and Bilgel, 2008; Eisenberg et al., 2007a; Ibrahim et al., 2013).

Furthermore, adjusting to a new educational experience can cause stress, anxiety, and estrangement, which has been shown to correlate with mood disorders (Steger and Kashdan, 2009).

Many students experiencing stress believe that the symptoms are part of a typical college experience and therefore do not seek help (Eisenberg et al., 2007; Lattie et al., 2019). Indeed, a study of 19 colleges participating in the WMH-ICS found that only 25.3% to 36.3% of students received treatment for a mental health disorder and only 29.5% to 36.1% received treatment for suicidal behaviour (Bruffaerts et al., 2019). The UUSWS found that only 10% of students received treatment for mental health problems in the previous year, despite many screening positively for a range of disorders. Furthermore, 22.3% of students with psychological problems reported that they would not seek help (Ennis et al., 2019; McLafferty et al., 2017). Research is therefore warranted in order to identify problems early and encourage help-seeking behaviour.

The current study investigates psychopathology among students attending Ulster University (UU) in NI and Letterkenny Institute of Technology (LYIT) in the ROI respectively. Whilst geographically proximate, these two institutions span a cross-border region and are located in jurisdictions with distinct education and healthcare systems. The aim of this current piece of research was to investigate any differences in occurrence of mental health problems, suicidal behaviour, and help seeking behaviour between students at a university in NI and students from a college in the ROI. The study also investigates risk factors for psychological disorders.

**Methods**

**2.1 Design**

The Student Psychological Interventional Trial (SPIT) is a two-phase CHITIN funded project. Phase one commenced in September 2019 with the recruitment of students from across the four campuses of Ulster University (UU) in Northern Ireland (Derry/Londonderry, Coleraine, Jordanstown and Belfast) and Letterkenny Institute of Technology (LYIT), County Donegal, Republic of Ireland (ROI). The study was conducted as part of the World Mental Health International College Student Initiative (WMH-ICS) and was the first time that the WMH-ICS was administered in the ROI. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. All procedures involving human subjects/patients were approved by Ulster University Research Ethics Committee (REC 19/0072).

**2.2 Sample**

In September 2019, 6,679 first year undergraduate students registered in NI (5820) and the ROI (859). All students were invited to participate in the study through an email circulated one week before they were due to register with each institution. A detailed participant information sheet was included outlining the study aims and methodology. Following registration, students were recruited at each campus by trained volunteers (staff and students). A total of 1,947 students across NI and ROI provided a saliva sample and written informed consent was obtained from all subjects. Of these, 1,828 students fully completed the online mental health survey (1,468 in NI and 360 in the ROI). Saliva samples were collected using the Oragene-500 saliva kit (DNA Genotek, Canada) for genetic and epigenetic analysis. The mental health survey was administered online using Qualtrics software. Each student was provided with a link to the survey and a participant code which was unique to each student. Only students who were over the age of 18 and residents of the United Kingdom or Republic of Ireland were eligible to take part. International students, postgraduate students, students under 18 or those repeating first year were excluded in line with the WMH-ICS protocol. Partially completed survey responses were excluded from the current analysis. The completed response rate for UU was substantial at 25.22% of the total intake (1468 out of 5820) and 41.9% for LYIT (360 out of 859). This is higher than the response rate for the original UUSWS survey (16.95%). All students who fully completed the survey received a branded university/college sweatshirt for participating.

**2.3 Survey**

This validated survey has been adapted from the WMH-Composite International Diagnostic Interview (WMH-CIDI) (Kessler et al., 2009) and developed by the WMH-ICS. The survey was used to identify students who met the criteria for mental health disorders in accordance with DSM-V criteria. Alcohol and drug dependence were screened using the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1993)and The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) (Ali et al., 2013) respectively. Suicidality was screened using the Self-Injurious Thoughts and Behaviour Interview (SITBI) (Nock et al., 2007). Alerts were included in the survey to monitor student responses to certain questions, such as an attempted or planned suicide. Students who were deemed to be at risk were then contacted by the institutions counselling service to establish if they required help or support.

**2.4 Data analysis**

Weights were applied in all analyses used to ensure that the results were representative of the total student population. These were created using the gender and age characteristics of the first-year student population in NI and the ROI. Lifetime and 12-month prevalence rates for a range of mental health disorders, substance disorder and suicidality were investigated. Chi squared tests for independence were used to identify significant differences in prevalence rates. The age of onset, as defined by the first time the student reported experiencing problems for this range of disorders, was examined with independent samples t-tests to determine any differences between institutions. Logistic regression analysis was used to explore associations between lifetime mental health, substance problems, suicidal behaviour and a range of demographic variables. These included gender (male, female), age (under 21, 21 and over), sexuality (heterosexual, non-heterosexual), student status (part-time, full-time) and relationship status (married, not married). The gender question included 5 options: Male, Female, Transgender Male to Female, Transgender Female to Male and Other. The sample size for the transgender and other groups was not sufficient for logistic regression (n=6; 0.03%). Not married students include those who were separated, divorced, widowed or never married. All analysis was carried out using SPSS (version 25). Participants were removed if data was missing on key variables of interest.

**Results**

**3.1 Sample Demographics**

Similar sample demographics were found for students studying in NI and the ROI (Table 1). The majority of students who participated in this study were under 21 (69% NI, 75.6% ROI; *p*=0.015), female (56.1 NI, 60.7% ROI; *p*=0.288), heterosexual (88.8% NI, 86.3 ROI; *p*=0.173), full-time (96.1% NI, 100 ROI*p*=0.001) and not married (95.2% NI, 97.2% ROI; *p*=0.108). However, the mean age of students in NI (M=21.67, range= 18-65, SD=6.608) was slightly higher than those in the ROI (M=20.81, range= 18-53, SD=5.537, *t*=-2.535, *p*= 0.011).

***Table 1: Sample demographics of students studying in NI and ROI.***

|  |  |  |
| --- | --- | --- |
| **Demographic** | **NI (n=1469)** | **ROI (n=360)** |
| **Age** | **n (%)** | **n (%)** |
| Under 21 (1418) | 1121 (69.0) | 297 (75.6) |
| Over 21 (411) | 348 (31.0) | 63 (24.4) |
| **Gender** |  |  |
| Male (507) | 400 (43.9) | 107 (39.3) |
| Female (1299) | 1051 (56.1) | 248 (60.7) |
| **Sexuality** |  |  |
| Heterosexual (1591) | 1284 (88.8) | 307 (86.3) |
| Non-heterosexual (222) | 172 (11.2) | 50 (13.7) |
| **Student status** |  |  |
| Full-time (1760) | 1408 (96.1) | 352 (100) |
| Part-time (41) | 41 (3.9) | 0 (0) |
| **Marital status** |  |  |
| Married (58) | 48 (4.8) | 10 (2.8) |
| Not married (1751) | 1404 (95.2) | 347 (97.2) |

Note: n= raw unweighted values, % weighted values

**3.2 Prevalence of common mental health disorders**

Overall, the highest lifetime prevalence rates in students in NI and ROI were for suicide ideation (28%), major depressive episode (15.7%) and suicide plans (14.3%). In a comparison in prevalence rates between institutions, ROI students had significantly higher rates for major depressive episode (19.3%), suicidal ideation (36.4%), suicide plans (23.3%), suicide attempt (10.7%) and self-harm (20.2%) when compared to students in NI (Table 2).

***Table 2: Lifetime prevalence of mental health disorders, substance disorders and suicidality.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total**  | **NI** |  **ROI**  |  |
|  | **Total** | **(1848)** | **Total** | **(1469)** | **Total** | **(360)** |  |
| **Disorders** | **n** | **%** | **n** | **%** | **n** | **%** | ***χ2*** |
| Mood-MDE | 287 | 15.7 | 222 | 14.8 | 65 | 19.3 | **4.772\*** |
| Panic Disorder | 175 | 8.6 | 142 | 8.7 | 33 | 8.6 | 0.000 |
| Broad Mania | 68 | 3.9 | 52 | 3.7 | 16 | 4.6 | 0.732 |
| Drug abuse/dep | 177 | 11.6 | 132 | 11.2 | 45 | 13.4 | 1.241 |
| Suicidal ideation | 505 | 28.0 | 379 | 26.0 | 126 | 36.4 | **15.673\*\*\*** |
| Suicide plan | 253 | 14.3 | 177 | 12.1 | 76 | 23.3 | **29.639\*\*\*** |
| Suicide attempt | 131 | 7.7 | 97 | 6.9 | 34 | 10.7 | **6.149\*** |
| Self-harm | 259 | 13.4 | 190 | 11.7 | 69 | 20.2 | **18.658\*\*\*** |

Note: n= raw unweighted values, % weighted values, MDE= major depressive disorder.

***2 shows significant institutional differences in prevalence rates***

*\*p <0.05, \*\*p <0.01, \*\*\*p <0.001*

The highest 12-month prevalence rates were found for suicidal ideation (17.2%), major depressive disorder (14.5%) and alcohol dependency (11.3%). Similar to the lifetime disorders, ROI students had a higher prevalence of all 12-month disorders except panic disorder. Significantly higher rates were observed in major depressive episode, suicidal ideation and suicide plans in ROI compared to NI. In contrast to lifetime disorders, no significant difference was found in 12-month suicide attempts and self-harm between the institutions.

***Table 3: 12-month prevalence of mental health disorders, substance disorders and suicidality.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Total** | **NI** | **ROI** |  |
|  | **Total** | **(1829)** | **Total** | **(1469)** | **Total** | **(360)** |  |
| **Disorders** | **n** | **%** | **n** | **%** | **n** | **%** | ***χ2*** |
| Mood-MDE | 268 | 14.5 | 204 | 13.5 | 64 | 18.5 | **5.967\*** |
| Panic Disorder | 145 | 7.0 | 119 | 7.1 | 26 | 6.6 | 0.076 |
| Broad Mania | 50 | 2.9 | 40 | 2.8 | 10 | 3 | 0.073 |
| Alcohol dep | 201 | 11.3 | 154 | 10.8 | 47 | 13.2 | 1.814 |
| Drug abuse/dep | 98 | 6.0 | 70 | 5.5 | 28 | 7.9 | 3.514 |
| Suicidal ideation | 320 | 17.2 | 242 | 15.8 | 78 | 22.9 | **10.697\*\*** |
| Suicide plan | 133 | 7.4 | 92 | 6.3 | 41 | 12.1 | **13.654\*\*\*** |
| Suicide attempt | 38 | 1.9 | 30 | 1.9 | 8 | 2.1 | 0.150 |
| Self-harm | 97 | 4.9 | 71 | 4.4 | 26 | 7.1 | **4.183\*** |

Note: n= raw unweighted values, % weighted values, MDE= major depressive disorder.

***2 test shows significant institutional differences in prevalence rates***

*\*p <0.05, \*\*p <0.01, \*\*\*p <0.001*

**3.3 Age of onset of common mental health disorders**

The average age of onset for most mental health disorders was between the ages of 15 and 16. In general, ROI students reported earlier onset of most disorders than NI students. Significantly earlier average age of onset was reported in the ROI for major depressive episode (ROI (M=14.08, SD= 4.326; *t* =-2.409, *p*= 0.0.17) compared to NI (M=15.91, SD= 5.878) LYIT) and drug abuse (ROI (M=15.76, SD=4.108); NI (M=17.92, SD=5.465; *t*=-2.472, *p*= 0.014)).

***Table 4:******Age of onset of mental health disorders, substance disorders and suicidality.***

|  |  |  |
| --- | --- | --- |
|  | **NI** | **ROI** |
|  | **Total** | **(1469)** | **Total** | **(360)** |
| **Disorders** | **Mean** | **SD** | **Mean** | **SD** |
| Mood-MDE | 15.91 | 5.878 | 14.08 | **4.326\*** |
| Panic Disorder | 15.92 | 5.027 | 14.80 | 3.969 |
| Broad Mania | 15.90 | 3.970 | 13.98 | 3.017 |
| Alcohol dep | 16.56 | 4.322 | 17.08 | 3.798 |
| Drug abuse/dep | 17.92 | 5.465 | 15.76 | **4.108\*** |
| Suicidal ideation | 16.07 | 5.501 | 15.23 | 4.639 |
| Suicide plan | 16.08 | 5.127 | 15.97 | 4.984 |
| Suicide attempt | 17.11 | 5.489 | 15.87 | 2.156 |
| Self-harm | 15.33 | 3.724 | 14.64 | 3.223 |

Note: SD= standard deviation, MDE = major depressive episode. *\*p < 0.05*

**3.4 Socio-demographic correlates of mental health disorders**

Logistic regression analysis examined associations between lifetime mental health, drug problems and suicidal behaviour and a range of demographic variables (Table 5). Females were more likely to develop mental health problems such as major depressive episode (*OR*=1.570, *p* < 0.01) and self-harm (*OR*=1.341, *p*< 0.05). However, females were much less likely to have drug dependency problems than males (*OR*=0.409, *p* <0.001). Students aged 21 or over were more than twice as likely to have most disorders including major depressive episode (*OR*=2.714, *p* <0.001) and suicide attempts (*OR*= 2.614, *p* < 0.001). Non-heterosexual students were at least twice as likely to have any of the lifetime disorders investigated. Compared to heterosexual students, non-heterosexual students were three times more likely to suffer from a major depressive episode (*OR*=3.085, *p* <0.001) and suicide plans (*OR*= 3.089, *p* <0.001). Students who studied part time were less likely to develop most of the emotional problems investigated and significantly less likely to have suicide plans (*OR*= 0.201, *p* <0.05). When looking at marriage status, non-married students were twice as likely to have suicide plans (*OR*=2.607, *p* <0.05) and four times more likely to have drug dependency (*OR*=4.769, *P* < 0.05) and self-harm (*OR*= 4.477, *p* < 0.05)

***Table 5: Logistic regression analyses of demographic correlates of lifetime disorders.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Demographic** | **MDE** | **Drug dep** | **Suicide attempt** | **Suicide plan** | **Self-harm** |
| **N=1757** | **OR****(95% CI)** | **P -value** | **OR****(95% CI)** | **P -value** | **OR****(95% CI)** | **P -value** | **OR****(95% CI)** | **P -value** | **OR****(95% CI)** | **P -value** |
| **Gender** |  |  |  |  |  |  |  |  |  |  |
| Female (1268) | **1.570\*\*****(1.182-2.086)** | **0.002** | **0.409\*\*\*****(0.301-0.555)** | **0.000** | 1.047(0.724-1.513) | 0.808 | 0.886(0.672-1.169) | 0.393 | **1.341\*****(1.003-1.794)** | **0.048** |
| Male (489) | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  |
| **Age** |  |  |  |  |  |  |  |  |  |  |
| 21 and over (387) | **2.714\*\*\*****(1.629-2.900)** | **0.000** | **2.605\*\*\*****(1.912-3.547)** | **0.000** | **2.614\*\*\*****(1.804-3.788)** | **0.000** | **2.229\*\*\*****(1.670-2.976)** | **0.000** | 1.242(0.907-1.701) | 0.177 |
| under 21 (1370) | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  |
| **Sexuality** |  |  |  |  |  |  |  |  |  |  |
| Non-heterosexual (212) | **3.085\*\*\*****(2.187-4.351)** | **0.000** | **2.037\*\*\*****(1.365-3.039)** | **0.000** | **2.282\*\*\*****(1.447-3.600)** | **0.000** | **3.089\*\*\*****(2.192-4.355)** | **0.000** | **2.619\*\*\*****(1.842-3.722)** | **0.000** |
| Heterosexual (1545) | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  |
| **Student status** |  |  |  |  |  |  |  |  |  |  |
| Part-time (41) | 1.549(0.792-3.030) | 0.201 | 0.646(0.266-1.570) | 0.335 | 0.679(0.216-2.132) | 0.507 | **0.201\*****(0.490-0.819)** | **0.025** | 0.101(0.009-1.105) | 0.060 |
| Full-time (1716) | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  |
| **Marital status** |  |  |  |  |  |  |  |  |  |  |
| Not married (1706) | 1.086(0.574-2.056) | 0.800 | **4.769\*****(1.210-18.800)** | **0.026** | 2.720(0.819-9.035) | 0.102 | **2.607\*****(0.999-6.801)** | **0.050** | **4.477\*****(1.124-17.835)** | **0.034** |
| Married (51) | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  | 1.0 |  |

Note: MDE = major depressive disorder, OR = adjusted odds ratio, CI = confidence intervals

*\*p <0.05, \*\*p <0.01, \*\*\*p <0.001.*

**3.5 Help seeking for emotional problems**

Participants were asked whether they have ever received treatment, either with medication or psychological counselling and if they are still receiving treatment. A significantly higher proportion of students in the ROI (17.4%) than NI (12.1%) had taken medication for an emotional problem (Table 6). Students in the ROI were also significantly more likely to receive psychological counselling (29.3%) than students in NI (21.6%). However, higher prevalence of students from NI (22.5%) were still receiving treatment when compared to the prevalence of students in the ROI (18.1%). In NI, the percentage of students taking medication or receiving counselling for emotional problems was higher in females than males. However, in the ROI, the percentage of males who received help was greater than the percentage of females.

***Table 6: Prevalence of those who have ever taken medication or received psychological counselling for an emotional problem and who are currently receiving treatment in NI and ROI.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **NI** | **ROI** |  |  |
|  | **Total (n=1444)** | **Male (n=387)** | **Female (n=1039)** | **Other (n=5)** | **Total (n=355)** | **Male (n=106)** | **Female (n=244)** | **Other (n=1)** | ***Institution******2*** | ***Gender******2*** |
| Medication (%) | 165 (12.1) | 30 (8.7) | 131 (14.6) | 3 (49.5) | 55 (17.4) | 19 (19.4) | 36 (16.4) | 0 (0) | **6.905\*\*** | **6.802\*\*** |
| Psychological counselling (%) | 318 (21.6) | 65 (17.7) | 247 (24.4) | 4 (66.0) | 102 (29.3) | 32 (30.1) | 68(28.6) | 1 (100) | **9.558\*\*** | **6.958\*\*** |
| Still in treatment (%) | 83 (22.5) | 10 (14.2) | 71 (26.9) | 2 (50.0) | 20 (18.1) | 7(20.9) | 13 (16.6) | 0 (0) | 1.049 | **4.350\*** |

*Note:* ***2 test shows significant institutional and gender differences in treatment***

*\*p <0.05, \*\*p <0.01, \*\*\*p <0.001.*

**Discussion**

The current study examined mental health problems and suicidal behaviour among students commencing studies in UU and in LYIT as part of the WMH-ICS, with students from the ROI included for the first time in this comprehensive survey. The study demonstrates that overall rates of mental health and substance abuse issues and suicidal behaviour are high among students starting third level education. When comparing prevalence rates, students in the ROI were more likely to experience all of the problems investigated and were significantly more likely to have experienced a major depressive episode and to have engaged in suicidal behaviour, including self-harm, suicide ideation, plans and attempts, than students based in NI.

The 12-month prevalence rates of mental health disorders were lower than lifetime rates as would be expected. Nevertheless, in the 12 months prior to university, almost one fifth of students had engaged in suicidal ideation with higher incidences seen in students in the ROI than students in NI. High rates were also seen in major depressive episode and alcohol dependency. For many of these students, the months leading up to commencing university may have been quite challenging. As the majority of the students were under the age of 21, with many aged 18-19, they may have been completing their A-Levels (UK) or Leaving Certificate (ROI) exams during this period. Prior research reported that the Leaving Certificate can have a very negative impact on student’s mental health (Banks and Smyth, 2015) which may partially account for the difference in prevalence rates found between the cohort based in NI and the ROI.

When considering demographic risk factors in both institutions, those who were part-time, over the age of 21, non-heterosexual and not married or in a permanent relationship were more likely to experience the majority of mental health and substance abuse problems. Females were more likely to have depression or to have engaged in self-harm. Males, however, were significantly more likely to have drug abuse problems. Students who identified as non-heterosexual were between two and three times more likely to experience all problems investigated. Such findings are in keeping with prior research (Eisenberg et al., 2007b; McLafferty et al., 2017). Students who were not married were four times more likely to self-harm or have a drug dependency. This may be related to their age as many who were married were older, but it may also indicate that being in a relationship is protective.

Many students reported that they were very young when they first had mental health issues. This highlights the need for early intervention, as by the time students reach university, they have often been experiencing problems for many years. Students in the ROI had an earlier onset than students in NI. This finding is in accordance with previous research which reported that young people (13-16) in the ROI are less likely to have good mental health when compared with young people from a number of other countries (HEA, 2019)

One factor which may partially account for the differences in prevalence rates found between NI and the ROI could be that the two institutions (University versus Institute of Technology) attract different types of students. For example, the points needed for entry to university are higher. Students with pre-existing psychopathology may be less likely to obtain higher grades if their psychological health impacts on their studies. Another factor could be related to socio-economic status (SES). As prior research has indicated that LYIT has the highest proportion of students from a disadvantaged area, when compared to other institutions of further and higher educations (HEA, 2019), this may partially account for the elevated rates of mental health, substance problems and suicidality found among this cohort.

There are no equivalent reports, to our knowledge, in relation to socio-economic factors of students in NI, therefore it difficult to make comparisons as SES was not investigated in the current study. Plans are in place however to query social economic status in follow up questionnaires with participants of the SPIT project.

The current study found that while rates of help seeking was low overall, students in NI were less likely to have sought help than students in the ROI. However, despite higher rates of previous help seeking behaviour, students in the ROI were less likely to still be in treatment. This may be related to different treatment options, availability of services and potential costs in the two jurisdictions, with many patients in the ROI paying for treatment while all those in NI can avail of free NHS treatment. Examining a sample of ROI university students, Goodwin et al. (2016) found that only a third of students had sought help from a mental health professional. The UU-SWS found low rates of help-seeking behavior among students commencing university in NI in 2015 (Ennis et al., 2019; McLafferty et al., 2017), with less than twenty per cent of those with a mental health problem having received treatment. The SPIT study found slightly higher rates of help seeking in NI students, with 23.8% of students having received either psychological counselling or medication for an emotional problem. This highlights the importance of enhancing student’s knowledge of mental health issues, and for further development of help-seeking behaviors on the island of Ireland.

Young people (aged 15–25) are already the highest risk age for developing a mental health disorder. Funding of mental health services in the ROI has remained consistently low, ~6% of the overall health budget, compared to 12% in New Zealand and the UK (College of Psychiatrists of Ireland, 2018). Comparatively, funding of mental health services in NI is ~5%, the lowest rate in the UK, despite having the highest prevalence of mental health issues (Parliament, 2016). Mental health services are underfunded across the board; and young people struggle the most to access psychological treatments. The use of existing evidence guided by theoretical frameworks to create a specifically tailored mental health programme, to meet the needs of higher education students has been called for (O’ Brien et al., 2020), especially now due to the long-term mental health effects expected from the Covid-19 pandemic (O’Connor et al., 2020). The need is also apparent for the promotion of mental health awareness for students starting university life (Breslin et al., 2018). It is hoped that the current research will help inform educators, policy makers and practitioners in this regard.

Further research however would be very beneficial. For example, research would suggest that biological factors may affect the risk of developing mental health problems. We recently reported that there were substantial epigenetic changes in genes associated with immune response and inflammation, present in a subset of participant samples from the UUSWS study. These epigenetic changes were linked to the skin condition psoriasis, pointing to further research required into inflammatory genes and other supplementary genes (Lapsley et al., 2020). Moreover, the Challenging Times Two study found that young adults in the ROI had higher rates of mental disorders than those in NI (Cannon et al., 2013). Our findings concur with this, but the question remains why this might be so. It could be linked to deprivation, a lack of opportunity for young people, or a lack of support services in the area for those with mental health problems, but further research is warranted in this area.

While the current research was conducted in a rigorous manner, a number of limitations should be considered when interpreting the results. Only a subset of students studying in the ROI were recruited to the study and the sample may therefore not be representative of the whole student population. However, in NI, all incoming first year students were invited to participate. Conversely, sizeable samples were obtained in both institutions and to ensure that the analysis was representative in relation to age and gender, weights were applied. A further limitation that must be considered is the self- report nature of the questionnaire. Students may not accurately report issues related to their mental health due to stigma and an unwillingness to disclose that they have a mental health or substance abuse problem. Indeed, this may suggest that the prevalence rates might in fact be higher in both institutions.

While the study has a number of limitations, it does however provide valuable insight into the mental health and wellbeing of students starting college in two different jurisdictions, North and South of the border on the island of Ireland. Our findings demonstrate that the prevalence of mental health disorders among students continues to be high, confirming earlier findings (McLafferty et al., 2017). Furthermore, this study included students from the ROI for the first time and identified significant differences between the cohorts in relation to their mental health and wellbeing, with students in the ROI experiencing higher levels of problems than those north of the border. Targeted interventions may therefore be beneficial to address these issues. Moreover, further research to explore differences between the two jurisdictions in relation to the education and health systems would also be warranted.

Our research will follow this cohort of students through their time in higher education, with comprehensive surveys being carried out in year 2 and year 3. In this way we will be able to examine any changes to their mental health and wellbeing over the course of their studies. This is particularly important since this cohort was surveyed prior to the COVID-19 pandemic, and students already had high levels of psychological problems. Findings from follow up timepoints will allow us to investigate the impact of the pandemic on educational experiences, attrition rates and overall student wellbeing.

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