National College *of* Ireland

Loneliness and Depressive Symptoms Among International Students in Third-Level

Education in Ireland

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Abstract

Aims: This study aims to provide an understanding of loneliness and depressive symptoms among international students attending third-level education in Ireland. This study assessed the difference in loneliness levels between international students and host-national students and the difference in loneliness between male and female international students. This study also examined whether loneliness, student demographic, and gender were predictors of depressive symptoms. **Method:** Access to the study questionnaire link was distributed to participants ($N = 133$) using various social media platforms and through the placement of posters around the National College of Ireland campus. The questionnaire link included the UCLA Loneliness Scale and the Quick Inventory Depressive Symptomology Self-Report Scale. **Results:** Results showed no significant difference in levels of loneliness between international students and host-national students. Male international students had a higher level of loneliness than female international students. Both gender and loneliness were found to be predictors of depressive symptoms in third-level students. Whilst student demographic was not a significant predictor. **Conclusion:** The findings provide a greater understanding of loneliness and depressive symptoms among international students in Ireland. Implications are discussed also.

Keywords: Loneliness, Depression, International Student, Third-level Education, Host-National Student.

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Introduction

The student population are an essential asset for the future of their chosen field of study. Therefore, it is vital for students to maintain their physical and mental wellbeing throughout the academic year. Loneliness and depressive symptoms are common issues many students face in university (Ceyhan & Ceyhan, 2011). International students are at a high risk of experiencing loneliness and depressive symptoms during the first few weeks of university whilst studying abroad (Levitz & Noel, 1989). Some risk factors that international students may face include the transition to third-level education, the acculturation period, lack of social support, discrimination and, more recently, remote learning.

Loneliness

Loneliness refers to a subjective loss or lack of social relationships where there is a discrepancy of quality and quantity in the existing or desired relationships (Perlman & Peplau, 1981). It has been found that loneliness may be a risk factor for adverse psychological and physical effects such as depressive symptoms (Cacioppo et al., 2006; Wei et al., 2005), increased cognitive decline (Lara et al., 2019), poor sleep quality (Cacioppo et al., 2002) and increased negativity or rumination (Cacioppo & Hawkley, 2009; Zawadzki et al., 2013). Therefore, the adverse effects of loneliness on students in university have an overall negative impact on their university experience.

While studying abroad, international students tend to experience higher levels of loneliness than when they are in their native country (Tsai et al., 2017). The literature has found that over half of the international students in each study had experienced loneliness at least once whilst studying abroad (Rajapaksa & Dundes, 2003). There have been many reasons identifying why an international student may experience loneliness during the academic period. Some factors include the transition into third-level education (Thomas et

al., 2020), the acculturation period (Berry, 2012), language barriers (Mori, 2000), prejudice, discrimination, or ostracism (Cacioppo et al., 2006) and lack of social support.

Although the topic of loneliness is often taken negatively, it would be beneficial to note that there are approaches available that can be used to combat loneliness and any effects that may arise from loneliness. For example, Griffin (2010) believes that the use of various facilities such as group therapies, counselling services and befriending groups can help students with their loneliness by combatting the negative thoughts about themselves. This would help improve their self-esteem and assertiveness and improve their academic performance. In addition, universities can facilitate these approaches by providing services such as international societies, international student talks, and informing international students of all the support services available, such as counselling, maths support, or financial support.

The association between loneliness and depressive symptoms seems to be common throughout the literature (Cacioppo et al., 2006). In a recent study by Cacioppo and colleagues (2010), assessing loneliness and depressive symptoms over the course of five consecutive annual assessments, it was found that loneliness is a predictor of increased depressive symptoms. However, depressive symptoms are not a predictor of increased loneliness.

Depression

As mentioned, studies have found that loneliness can increase the risk of developing psychological issues such as depression (Girmay & Singh, 2019). Depression is one of the most common mental health issues found among university students (Lyubomirsky, 2003). Many negative consequences are associated with depression among college students, including suicidal tendencies (Jeon, 2011), poor academic achievements (Hysenbegasi et al., 2005), and decreased desire for social interaction. Depression may stem from various factors

mentioned relating to loneliness, including financial issues (Dahlin et al., 2011), poor social interactions or supports (Hops et al., 1990) and health risk behaviours such as binge drinking (Adewuya et al., 2006).

Binge drinking is a widespread occurrence in the student nightlife in Ireland and within the general population of Ireland. According to a report by the Health Research Board (2021), Ireland is 8th in the world concerning binge drinking, which refers to the consumption of six or more standard drinks in one sitting. Whilst studying in Ireland, international students may be at risk of partaking in health risk behaviours such as binge drinking due to the drinking culture in Ireland. Binge drinking has been found to be associated with depressive symptoms among college students (Said et al., 2013). It also has other risks associated with such as the increased risk of mortality, driving under the influence (Wechsler et al., 2000), engagement in unsafe sex (Henry Wechsler et al., 2002), poor academic performance, and a reduction in memory performance (H. Wechsler et al., 1994).

Discrimination

Discrimination is an essential factor to consider whilst examining international students' loneliness and depression levels. In a report by Irish Council for International Students (2021), it was noted that 40% of the respondents had experienced or witnessed racial discrimination whilst studying abroad. The effects that arise from discrimination are typically negative. It has been found to increase depressive symptoms (Phinney et al., 1998), lowers self-esteem levels and increases levels of stress (Pak et al., 1991). Ostracism is a form of discrimination by excluding an individual from a society or group (Suen, 1983). It has been shown to increase the dropout rates of students also.

It was found that discrimination had more adverse effects on the depressive symptoms of international students when compared to the levels of depressive symptoms due to the acculturation period (Hysenbegasi et al., 2005). Whilst this may be the case, when comparing

immigrant and sojourner international students, it was found that acculturation had less of an impact on sojourner student's depression levels. The reasoning behind this has been hypothesised to be due to the knowledge that they will be returning to their national country soon; thus, they can cope with the stressors temporarily.

Transition into Third-Level Education

The transition into university can be challenging for many students as they may face various obstacles such as establishing new peer groups, social supports, finding a social identity and overall getting used to the new environment. Studies have found that more than 40% of students leave college early, whilst much of this percentage leave their chosen course within the first year (Hamilton & Hamilton, 2006). Furthermore, the period between weeks 2 and 6 has been found to be the most at-risk period for students to leave their course (Levitz & Noel, 1989). This change into a new and unfamiliar environment may cause a period of disequilibrium among all student transitioning into third-level education (Jackson, 2003).

In Hawkley and Cacioppo's (2010) 'Model of Loneliness', it is hypothesised that feelings of loneliness affect the individual's self-regulation and cognitive processing. As a result, this may affect the individual's academic adjustment in a negative way as these abilities would be required to adjust to their new environment effectively. Self-regulation also allows students to have more autonomy (Jansen, 2019) and reduce their risk of dropping out of their course (Lee & Choi, 2011).

Although the transition into a new academic environment is found to be common among all university students, the international student group would simultaneously have to deal with the transition into a new culture and country. Many international students have to move away from their family, friends and hometowns to attend their college courses (Oswald & Clark, 2003). They would also be leaving any form of social support at home, which may be a challenging factor to deal with. In psychology, the acculturation process is referred to as

the process in which a population group or individual adjusts their cultural beliefs, behaviours, and attitudes to be assimilated with the host-national population of their current location (Birman & Addae, 2021). The adjustments may include changes with language, finding what resources are available, and finding social supports (Smith & Khawaja, 2011).

In a study by Girmay in 2019, it was found that international students within the study have all experienced some level of loneliness at some point during the acculturation process (Girmay & Singh, 2019). Furthermore, in various studies, it was identified that international students found the transition from their native culture to the host national country's culture to be difficult due to multiple reasons such as prejudice and racism from the host-national students (Charles-Toussaint & Crowson, 2010), alienation, lack of social support, adjusting to the new culture and learning a new (Sam, 2001; Trice, 2007; Leigh-Hunt et al., 2017). As a result, these challenges may come as a shock to the international student, which can be very distressing; this is known as cultural shock (Shen & Chen, 2020).

Social Support

It is important for the university faculty to create facilities and services available to international students to internationalise the university to make the acculturation and transition process more manageable. It has been found that international students tend to be reluctant to admit to vulnerability, even when there are support services available to them through their universities (Chew-Graham et al., 2003). This raises the point that it is important for the university faculty to create induction groups for the international population to allow them to see that the support services are there for a reason and that there would be no judgement made if they did intend to use them for any reason. This would also reduce the hardship, loneliness, or possible depressive symptoms by knowing that these support services are there to help rather than judge them.

Social support is one of the most important factors to be noted during the transition into third-level education (Solberg & Viliarreal, 1997). The availability of support would enable students to feel welcome and reduce feelings of aloneness (Lin, 2006). International students may face specific barriers such as lack of knowledge of available support services, fear of being stigmatised (Smith, 2016), or being afraid to reach out for support. This emphasises the point of how important it is during the induction of the academic period. All students must be made aware of all services available to them both within their university and in the local areas. The cultural views of the international student's native country have been found to be an influence on the fear of accessing mental health services (Blignault et al., 2008).

Remote Learning

Unfortunately, since 2019, third-level students in Ireland have witnessed an upsurge in loneliness due to the coronavirus disease-19 (Covid-19) pandemic (Bu et al., 2020). Classes being conducted virtually rather than on campus is a possible reason for this. It was found that students having online classes compared to those attending classes in person experienced higher levels of loneliness (Ali & Smith, 2015; Wallace et al., 2021). A study based on the impact of Covid-19 on students' lives found that 81.3% of students in their study experienced loneliness at least once during the academic period due to remote learning (Birmingham et al., 2021). Attending college lectures online minimises the possibility for international students to fully interact and socialise with other college students (Sarvestani et al., 2019). Although communication can be completed virtually, it is not the same compared to face-to-face interactions and discussions. In a study based in Japan, it was found that students who had begun university during 2020, when the pandemic restrictions were already present, had lower depression levels than students who began college in 2019 (Horita et al., 2021). The reasoning behind this may be due to the fact that students who began college in

2019 may have enjoyed their face-to-face learning, whilst the students who began in 2020 can begin to adapt to online learning from the beginning. Due to the government restrictions, students' social engagement during the academic year is not the same now as previously. Many students' social life is non-existent as their social interactions may have involved meeting their classmates or going out for social events throughout the year. This might have exacerbated the consequences of loneliness, especially during the transition and acculturation period. Feelings of isolation and feeling as though they can not fit into a particular community can cause an individual to feel lonely or cause them to feel depressed as a result.

Remote learning involves students having to look at their computer screens for prolonged periods for both attending classes and completing college work. As a result, this could have an effect on the physical and mental wellbeing of the student (Lamanauskas & Makarskaitė-Petkevičienė, 2021). It is important for faculty members such as lecturers to adapt to the learning environment to keep engagement levels of students up. Without any form of engagement, students' motivation levels, academic performance, and overall mental health have been shown to deteriorate (Chitra & Antoney, 2018). Overall remote learning reduces the ability to socially interact, which would be a vital part of an international student's experience of third-level education. Although facilities such as counselling, maths or academic help would still be available online, it may reduce the motivative factors for these students to reach out for help.

Gender Differences

The findings have been mixed in relation to gender differences and the association between loneliness and depressive symptoms. Some studies have found that there are no gender differences with the association between loneliness and depression (Cacioppo et al., 2010), whilst others have found that males have a stronger association than females (Cacioppo et al., 2006). Several studies have been undertaken on the impact of loneliness on

international students alone. However, minimal research has been conducted on gender differences related to loneliness and depressive symptoms among international students. Some of the existing literature has found that females students tend to experience higher levels of loneliness than their male peers (Al Khatib, 2012; Sawir et al., 2008). It is hypothesised that women are more vulnerable to the effects that loneliness has on one's mental health (Liu et al., 2020). The possible reasoning for this vulnerability is that females tend to prefer interpersonal relationships, engage in more social events and have larger social groups generally in comparison to males (Cross & Madson, 1997; Hong et al., 2009). The negative effects that would result from loneliness and lack of social networks may affect females more than males due to their need to have stronger interpersonal connections.

In a study based on gender differences and loneliness between students, it was found that the results were determined based on whether the participants were tested using the UCLA Loneliness Scale or a self-labelling measure of loneliness (Borys & Perlman, 1985). It was found that in general, if the study was examined using the UCLA Loneliness Scale and it was a non-significant result, there were no gender differences (Jones et al., 1985). However, if the results were significant, males showed to have higher levels of loneliness. When examined using a self-labelling measure, females had a higher frequency of admitting to experiencing loneliness. Males are more reluctant to admit that they feel lonely due to the fear of possible repercussions. As mentioned previously, different cultures have different views on males obtaining support or admitting to having issues such as loneliness. This might have affected the previous results, which stated that females experience higher levels of loneliness than males if the males were not willing to admit to their feelings of loneliness.

In a study by Piccinelli & Wilkinson (2000), it was found that females are twice as likely to experience depressive symptoms than males. Various reasons and explanations behind the result have been found, one of which is that males are more inclined to deny

support available to them (Ibrahim et al., 2013). This would include but are not limited to social supports such as befriending schemes, counselling services, financial support, or academic support.

A study based on medical students in Sweden found that the students had a 12.9% higher prevalence of depressive symptoms than the general population (Dahlin et al., 2005). From their sample, the female population had a higher amount of depressive symptoms also. Wallin & Runeson (2003) state that females tend to ask for psychological help more often than males. This may be due to women being more open or in tune with their emotions and mental health in comparison to males.

It is hypothesised that males have an affinity for aloneness (Cramer & Neyedley, 1998). They tend to avoid admitting to being lonely as it creates a negative self-evaluation, and they believe admitting to loneliness is a sign of personal failure. Socially, it is more acceptable for women to admit to loneliness in comparison to men, which as a result, has created the stigma that men must not ask for support as it will make them feel inferior or incompetent (Nadler, 1991). When males have a positive attitude for aloneness and the affinity for aloneness, it has shown to buffer out the risk factor of depression, thus having less of a negative effect on them.

It is also suggested that different interventions would be needed for male and female college students due to the difference in the experience of loneliness and depressive symptoms with both genders (Liu et al., 2020). To reduce feelings of loneliness and the risk of depressive symptoms, it is suggested that males improve their efforts to interact socially and create a social group. As mentioned previously, males are less socially active and would be more avoidant of befriending groups or social interactions in comparison to female students. Females on the other hand, are recommended to further improve their social

connections whilst simultaneously making efforts to reduce their loneliness levels as it was found that females suffer from more adverse risk factors than males.

The Current Study

Due to the contradicting nature of the literature available, this study aims to investigate the data within Ireland. There is a lack of studies based on loneliness and depressive symptoms with international students within Ireland, thus exploring the gap in the literature surrounding international students in Ireland. Many of the studies available are based on international students on students in certain countries such as Australia (Sawir et al., 2008), or America (Rajapaksa & Dundes, 2002; Charles-Toussaint & Crowson, 2010; Girmay & Singh, 2019), but others focus on specific nationalities such as Chinese international students (Tsai et al., 2017; Blignault et al., 2008; Shen & Chen, 2020). The reasoning behind students having to be over the age of 18 is due to the use of the Quick Inventory of Depressive Symptomology Self-Report Scale (Rush et al., 2003). The previous research regarding the gender differences with loneliness and depressive symptoms was not consistent across the literature, thus giving reason to explore this area.

Research Aims and Hypothesis

This current study aims to assess the impact of loneliness and depressive symptoms on international students whilst attending third-level education in Ireland. The research will focus on the differences in levels of loneliness between international and host-national students. It will also focus on the gender differences in levels of loneliness of international students. Finally, it will investigate whether levels of loneliness, student demographic and gender are predictors of depressive symptoms. These aims produce the following research questions and hypotheses:

Research Question 1: Do international students and host-national students differ in levels of loneliness?. *Hypothesis 1:* There will be a significant difference in levels of loneliness between international students and host-national students.

Research Question 2: Do male and female international students differ in levels of loneliness?. Hypothesis 2: There will be a difference in levels of loneliness between male and female international students.

Research Question 3: To what extent does loneliness, student demographic and gender predict levels of depressive symptoms?. Hypothesis 3: Loneliness, student status and gender will significantly predict levels of depressive symptoms.

Methods

Participants

The research sample of the current study consisted of 133 (Male: $n = 36$; Female: $n = 97$) third-level students in Ireland over the age of 18. Within the sample, 38.3% of participants were international students ($n = 51$) and 61.6% were host-national students ($n = 82$). Convenience sampling was used to recruit the participants. The study was primarily promoted through the researcher's social media but also promoted using posters placed on the notice boards around the National College of Ireland's campus.

Measures

Before completing the questionnaires, participants were required to state their gender (male, female, other) and select which age range they fit into (18-24, 25-40, 41-64, 65+). Participants were also required to state which student demographic they fall under (international student in Ireland, host-national student in Ireland).

Loneliness

The first scale used in the research study was the revised UCLA Loneliness Scale (Russell et al., 1980) (See Appendix D). It is a twenty-item scale used to measure an individual's feelings of loneliness. It uses a four-point scale to determine the levels of loneliness associated with each question. Sample items include: "I feel left out" and "My social relationships are superficial". Participants were asked to answer based on the four-point scale ranging from 1 "never" to 4 "often". Items 1, 5, 6, 9, 10, 15, 16, 19, 20 on the scale are reverse scored as they are positively worded statements. Sample items of the positive items include "I am an outgoing person" and "I feel part of a group of friends". A study to determine the reliability and validity of the UCLA Loneliness Scale was conducted and found it provides a reliable and valid assessment for various populations and data

collection methods (Cronbach's alpha ranging from .89 to .94) (Russell, 1996). In addition, this scale had very good reliability in the current study ($\alpha = .92$).

Depressive Symptoms

The second scale that was used is the Quick Inventory Depressive Symptomology – Self Report (QIDS-SR) Scale (Rush et al., 2003) (See Appendix E). It is a sixteen-item self-report scale that determines the depressive symptom severity of adult participants. It uses a four-point Likert scale which allows participants to reflect on their mood and behaviours over the past week and choose their answers based on both factors. This scale is divided into different subcategories: questions 1-4 (sleep), question 5 (sadness), questions 6-9 (weight and appetite), question 10 (concentration), question 11 (self-image), question 12 (death or suicide), question 13 (interest), question 14 (energy levels), questions 15 and 16 (psychomotor items). The questions of the scale are scored from 0 (symptom not present) to 3 (severe risk of symptom). The scale's score is calculated by adding the highest scores from each subcategory. The highest score that can be gained from this scale is 27. Scores of 0-5 suggest no depression, 6-10 suggest mild depression, 11-15 suggest moderate depression, 16-20 suggest severe depression, and 20-27 suggest very severe depression. One-time use of this scale does not give a diagnosis but rather indicates the depressive symptom severity of the participant. It has been shown to have good reliability and construct validity (Cronbach's alpha = .87) (Brown et al., 2008; Cameron et al., 2013). This scale had an acceptable level of reliability in the current study ($\alpha = .69$). Although these scales have not been used with this specific topic previously, it is essential to use them to understand the potential issues international students might face whilst studying abroad.

Design

The research design of the current study was a cross-sectional design with a quantitative approach. The design was also correlational due to the aim to assess the statistical relationship between various variables without the influence of external variables.

Independent samples t-tests were conducted to test the first and second hypotheses of the study. This examined the associations between 1) student demographic and loneliness levels and 2) gender of international students and loneliness levels. Finally, a multiple regression analysis was conducted to assess the third hypothesis of the study. This contained three predictor variables (PV): loneliness, student demographic and gender. The criterion variable (CV) of the regression was depressive symptoms.

Procedure

The majority of participants were recruited using the researcher's social media platforms, including Facebook, Instagram, Twitter, and Reddit. In addition, some participants were recruited using the QR code on posters placed within the National College of Ireland's campus (See Appendix F). Each social media post and poster included the description of the study, requirements to take part, the aim of the current study and a link and QR code to access the online Google Forms link. Once participants used the direct link or QR code, they were brought to the questionnaire page on Google Forms. They were shown an information sheet detailing the purpose of the study whilst also briefly explaining what they should expect if they decide to proceed with the study (See Appendix A). It also mentioned that the study would take approximately 10-15 minutes to complete. After reading the information sheet, the participant will select "next" to proceed with the consent form. This is where participants will consent to the understanding that they meet the study requirements, and it is understood that they may withdraw at any time without penalty (See Appendix B). If participants agreed to the study terms, they were asked to provide consent by clicking "I consent" at the bottom

of the page. This then brought participants to the first questionnaire, the UCLA Loneliness Scale. Participants were required to answer all the UCLA Loneliness scale questions followed by the QIDS-SR scale. Once both questionnaires were complete, participants were brought to a debrief sheet which included contact details of the researcher and supervisor of the study (See Appendix C). In the case that the topics involved in the study caused participants distress, contact details to various helplines were placed at the bottom of the debrief sheet.

This research study has been viewed and approved by the Ethics Committee of the National College of Ireland and follows the ethical guidelines of The Psychological Society of Ireland's Code of Professional Ethics (Psychological Society of Ireland, 2010) and the National College of Ireland's Ethical Guidelines and Procedures for Research involving Human Participants (National College of Ireland, 2018).

Results

Descriptive Statistics

Descriptive statistics were collected from 133 participants who took part in the study. All participants had an age range of 18-64. Frequencies for gender, student category and age range are presented in Table 1.

Table 1

Frequencies for categorical variables (N=133)

Variable	Frequency	Valid %
Gender		
Male	36	27.1
Female	97	72.9
Other	0	0
Student Demographic		
International Student	51	38.3
Host-National Student	82	61.7
Age Range		
18-24	96	72.2
25-40	35	26.3
41-64	2	1.5
65+	0	0

The mean (M), standard error mean, median, standard deviation (SD) and range for continuous variables are presented in Table 2. The mean levels of depression were 11, which indicates a moderate level of depressive symptoms being present in the study.

Table 2

Descriptive statistics for all continuous variables (N = 133)

Variable	M [95% CI]	Std. Error Mean	Median	SD	Range
Loneliness	*46.73* [44.69-48.78]	1.04	46	11.94	22-70
Depressive Symptoms	*11.5* [10.46-12.53]	.52	11	6.01	1-24

Inferential Statistics

To test the first hypothesis an independent-samples t-test was conducted to compare loneliness scores of international students and host-national students. There was no significant difference in scores for international students (M = 48.35, SD = 13.11) and host-national students (M = 45.73, SD = 11.11), t (131) = 1.23, p = .084, two-tailed.

An additional independent-samples t-test was conducted to test the second hypothesis to compare loneliness scores of male and female international students. The results revealed that there was a significant difference in scores with male international students (M = 55.29, SD = 9.59) scoring higher than female international students (M = 43.5, SD = 13.18), t (48.9) = 3.7, p = .001, two-tailed. The magnitude of the differences in the means (mean difference = 11.79, 95% Cl: 5.38 to 18.19) was large (Cohen's d = 1.02)

The third hypothesis was tested by conducting a standard multiple regression to investigate the impact of loneliness, student demographic, and gender on levels of depressive symptoms. Preliminary analyses were conducted to ensure no violation of assumptions of normality, linearity, multicollinearity, and homoscedasticity. The model explained 36.6% of the variation in depressive symptoms, F (3, 129) = 24.855, p = <.001. As can be seen from Table 3, both loneliness and gender were statistically significant, with loneliness recording a higher beta value (beta = .584, p<.001), followed by gender (beta = .207, p = .005).

Table 3

Standard multiple regression output for loneliness, student demographic and gender

Variable	R^2	B	SE	β	*t*	*p*
(Constant)	.37***					
Loneliness		.294	.036	.584	8.263	<.001
Student Demographic		-1.1	.9	-.09	-1.22	.223
Gender		2.8	.98	.21	2.86	.005

Note. *p < .05; **p < .01; ***p < .001

In summary, there was no significant difference in levels of loneliness between international students and host-national students. However, a significant difference in levels of loneliness was found between male and female international students. Male international students were found to have higher levels of loneliness in comparison to female international students in this instance. It was found that the student demographic does not predict depressive symptoms to a significant level. However, loneliness and gender were found to significantly predict depressive symptoms.

Discussion

In the current study, loneliness and depressive symptoms among international students were examined within third-level education in Ireland. First, the study aimed to investigate the difference in levels of loneliness between international students and host-national students within third-level education in Ireland. The study also aimed to examine the difference in levels of loneliness between male and female international students within third-level education in Ireland. Finally, it was also aimed to assess whether loneliness, student demographic and gender are predictors of depressive symptoms. From these aims, it was hypothesised that there would be a significant difference in levels of loneliness between international students and host-national students, a significant difference in levels of loneliness between male and female international students and that loneliness, student demographic and gender are significant predictors of depressive symptoms.

In relation to the first hypothesis, it was found that there was no significant difference in levels of loneliness between international students and host-national students. One possible explanation for the non-significant findings is that the study was conducted during the Covid-19 pandemic. Around the time of data collection, new restrictions were being mandated within Ireland, leading to a possible explanation of similar levels of loneliness across both international and host-national students. This would align with the literature around Covid-19 in terms of the vast majority of third-level students in general experiencing some form of loneliness throughout the academic period during the pandemic (Birmingham et al., 2021). The transition into third-level education is already challenging in itself for all students (Thomas et al., 2020). The academic pressure that would be added alongside the pressure placed on students attending university online may have been a plausible reason for the results above.

Another important factor that should be considered whilst analysing the findings of this research question is that participants may have taken part in the study during the Christmas period. Some students may not have been able to travel home due to isolation restrictions being in place. The use of qualitative measures would be beneficial in the investigation process as participants would have the ability to explain their loneliness levels.

Future research could be conducted using a longitudinal study comparing the loneliness levels of international students and host-national students in Ireland before and after the pandemic. This would allow for a greater understanding of the levels of loneliness between both student demographics. In addition, it would assess whether the results shown above were merely due to the pandemic or environmental factors or whether the difference in levels of loneliness between international and host-national students is truly non-significant on a general basis.

In favour of the second hypothesis, it was identified that there was a significant difference in levels of loneliness between male and female international students. Although some literature states that females had a higher frequency of admitting to feelings of loneliness (Nicolaisen & Thorsen, 2014), in line with the study by Jones and colleagues (1985), males were found to have a higher score of loneliness when examined using the UCLA Loneliness Scale in the current study. The hypothesised reasoning behind this was that females tend to be more open when admitting to feelings of loneliness. However, since the UCLA Loneliness scale is based on positive and negative items, that would not involve directly admitting to feelings of loneliness but rather an overall score of levels of loneliness.

Other studies have found that the mean scores of loneliness were higher in male students in comparison to females (Tümkaya et al., 2008). Therefore, it is hypothesised that female students obtain and maintain close relationships with others more frequently than males due to their better attachment skills (Deniz et al., 2005).

The inconsistent literature based on gender differences in loneliness may be due to cultural differences. In a study by Barreto and colleagues (2021), it was found that levels of loneliness were highest amongst young men in individualistic cultures. Individualistic cultures involve individuals who are independent and focused on their own goals and privacy (Rhee et al., 1995). Ireland is a country that would be considered to have an individualistic culture, thus giving a possible explanation to the results found in the study. Due to the stigma that males must stay quiet about their mental health issues in certain cultures, the results based on gender differences in relation to loneliness would differ depending on the country and culture the study is based around.

The third hypothesis found that gender and loneliness were predictors of depressive symptoms among third-level students, but student demographic was not a predictor. It was hypothesised that all three factors would be a predictor of depressive symptoms. However, after analysing the results, this outcome is coherent with the results found from the first hypothesis as there were no significant differences in levels of loneliness between international and host-national students. The research has consistently stated that there is an association between loneliness and depressive symptoms among students.

The interaction between loneliness and depressive symptoms places students at a high risk of suicidal ideation (Liu et al., 2015). Furthermore, certain ethnic groups such as Latino students are deemed at a higher risk when compared to white adults (Baca-Garcia et al., 2011). The hypothesised reasoning behind this would be due to the Latino group having a collectivist culture (Chesin & Jeglic, 2012). Collectivist culture is the opposite culture to the individualistic culture mentioned previously when referring to the culture type within Ireland. Collectivist cultures place heavy emphasis on relations with their family and others. In comparison, the individualistic culture within Ireland emphasises uniqueness and independence.

Implications

Given that the adverse risk factors to one's health that can be associated with loneliness and the high prevalence of loneliness within the current study sample, it would be important to try and prevent any effects of the issue early on (Richardson et al., 2017). It is vital that universities have the facilities available for students at any given time to provide support for knowledge to know how to deal with issues relating to student mental health. Access to websites such as Silvercloud allows for students to have open access to personalised mental health supports at any hour of the day.

The information gathered from the current study may lead to a practical implication being implemented into all universities in the case of a crisis such as the COVID-19 pandemic. For example, this could be used to create manuals that would guide university faculty to follow the right steps based on interventions that work for students in times of need. Examples of this would be if a pandemic were to happen again, interventions would be available that suit the needs of the student population group.

Given that this study found that males had a higher level of loneliness, promotional events to spread awareness of men's mental health would be an important practical implication that universities could also facilitate. It not only would be an attempt to break the stigma surrounding men's mental health, but it would also allow men coming from various cultures that may have a stigma surrounding mental health to realise that it is okay to ask for help. Promotional events may include talks, community cafes and other social events like walks, bingo, seasonal events that would benefit students through social interaction, thus minimising the risk of loneliness.

Strengths and Limitations

The use of reliable and valid measures was a strength in the research. The reliability of the scales shows that the results are generally consistent over the past research. The

validity allows the participants to have a valid representation of their feelings of loneliness and depressive symptoms using the self-report scales. The UCLA Loneliness Scale is commonly used among previous research and has a high-reliability score in the current study ($\alpha = .92$).

Another strength that should be noted is the total amount of participants within the study. G* Power software estimated that a reliable number of participants for the study would be 128. The total number of participants within the study came to 133. This allowed for a higher reliability and validity score.

As mentioned previously, there is a gap in the literature regarding loneliness and depressive symptoms among international students in third-level education in Ireland. This study aims to produce a form of clarity to how loneliness levels of international students compare to host-national students in Ireland.

Due to the limited outcomes from the two scales used, the results can only be generalised and may not entirely interpret the results accurately. The use of additional demographic questions may have benefited the interpretation of the results. For example, questions regarding participants' nationality or specific age rather than the age range would have given a more in-depth analysis. The use of the participant's nationality may have been beneficial in finding whether there is a correlation between specific nationalities and levels of loneliness or depressive symptoms.

The use of quantitative measures alone provides a limited overview of results. The use of quantitative and optional qualitative questions within the study would have been beneficial in understanding results as some results may have been affected due to environmental factors that are not recorded in the response. In addition, it would allow for participants to explain certain aspects, such as whether they think social support is important or whether males should be as open with their mental wellbeing just as much as women.

The study uses self-report measures to examine levels of loneliness and depressive symptoms among students. Although these self-report measures have been shown to be valid and reliable, since the study was conducted online through Google Forms, the results may have been manipulated to be either exaggerated or undervalued by simply choosing the highest or lowest value of each question.

One major limitation that should be noted is that the study was conducted whilst Covid-19 restrictions were still in place within Ireland. This may have affected the difference in levels of loneliness between international students and host-national students. As a result, it may have heightened the levels of both loneliness and depressive symptoms among both demographics. Another issue with this would be that the replication of this study may result in different outcomes in future research when the pandemic ends and restrictions are entirely lifted within every country.

Conclusion

In summary, the findings support the idea that international students are at a high risk of loneliness and depressive symptoms. Although there was no difference in levels of loneliness between international students and host-national students, it was still evident that international students had experienced some form of both loneliness and depressive symptoms. The current study provides guidance for future research to explore this area in a more qualitative approach to explore the explanations behind the findings.

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Appendices

Appendix A - Information Sheet

You are invited to participate in a research study based on loneliness and depressive symptoms among third-level students. My name is Lauren McGuinness. I am a final-year undergraduate student at the National College of Ireland studying psychology. Please read the following information thoroughly before agreeing to take part in the study.

What is the purpose of this study?
The purpose of this study is to investigate experiences of loneliness and depressive symptoms among third-level students. The study aims to further our understanding of relationships between loneliness and depressive symptoms, and to investigate whether these relationships are different for international and host-national students. The study will also examine the differences in loneliness severity between male and female international students.

The term 'host-national students' refer to anyone who has lived in Ireland for over five years or is an Irish citizen.

Has this study been ethically approved?
Yes, the National College of Ireland's Research Ethics Committee has received and reviewed the study. They have given full ethical approval for it to take place.

What are the requirements to take part in this study?
Participants must be over the age of 18 and currently studying in third-level education in Ireland. Participants must also be either an international student or host-national student to take part in the study. If you are a part of any medical or clinical group involving mental health conditions, please do not participate in this study.

What will the study involve?
If you decide to take part, you will be asked to complete this online questionnaire. The questionnaire will ask you to provide some basic demographic information, and to answer a series of questions related to feelings of loneliness and feelings of low mood or depressive symptoms. You will be asked to provide your consent before you proceed to complete the questionnaire. At the end of the questionnaire, contact information of support lines will be provided, which participants can use if they have experienced any distress. Contact email addresses for the researcher and research supervisor will also be provided, which participants can use if they have any queries following the study.

How long will participation in this study take?
Overall, this study will take participant's approximately 10-15 minutes to complete.

Do you have to take part?
No, the study is entirely voluntary and under no obligation are you required to take part. However, it would be appreciated if you would give 10-15 minutes to participate in the study. If you decide to take part in the study, you will be asked to provide consent beforehand. You are free to keep a copy of this information sheet for your own purposes, and if you need a copy provided, please use the contact email addresses provided

Your right to withdraw:

Participants have the right to withdraw from the study at any time. You may do this by exiting out of the Google Forms tab at any time. However, if you complete the survey and submit your responses, you will not be able to withdraw your information as all responses are anonymous; therefore, your answers would not be identifiable to withdraw.

Will all information provided be confidential?
Although all information in this study is anonymous, all data will be kept confidential. No personal information will be taken from the participant during this study. Only the researcher will have access to any data provided.

What will happen to the information you provide?
According to code 11.1.16, Section 11.4 Code of Conduct in the National College of Ireland Quality Assurance Handbook, all information will be kept in a password-protected file using an external hard drive for at least five years. This is to protect the researcher and the College in case of an allegation of falsification of data. Afterwards, all data will be deleted.

What will happen with the results?
The study results will be included and examined in an undergraduate thesis in the National College of Ireland. If you wish to see the results, you may contact the researcher using the email address provided.

Are there any risks of taking part?
There is no intention of causing any harm or discomfort to the participants throughout the study. However, the topics of the study may cause some distress. If you feel uncomfortable or under any form of distress, you may leave the study by exiting out of the tab. Contacts to helplines in the case that the study has caused you any form of discomfort can be seen below.

If the study has caused you any form of distress, please contact your general practitioner or Pieta House. They have a 24/7 freephone 1800 247 247 or text "HELP" to 51444.

Are there any benefits from my participation?
There are no direct benefits provided to the participants for their participation in this study; however, they will be contributing to the research behind loneliness and depressive symptoms among international students. In addition, this will allow researchers to understand the issues international students in Ireland may be facing, leading to a better approach and interventions in the future.

Contact Details
If you have any more queries, you can reach out using the following email addresses:
Name: Lauren McGuinness
Contact Email: x19301956@student.ncirl.ie
Supervisor: Dr Caoimhe Hannigan
Supervisor's Email: Caoimhe.Hannigan@ncirl.ie

Appendix B - Consent Form

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

– This research is being conducted by Lauren McGuinness, an undergraduate student at the National College of Ireland.

– The Departmental Ethics Committee has accepted the method proposal suggested for this research project in principle, which implies that the Committee has no reservations regarding the procedure itself. However, the student mentioned above must follow ethical guidelines in their interactions with participants and data collection and processing.

– I confirm that I have read and understood the Information Sheet for the above research study.

– I understand that I may refuse to participate or withdraw at any stage if I do not feel comfortable proceeding with the study.

– I have been informed about the general purpose of the study and agree voluntarily to participate.

– I can confirm I am over the age of eighteen.

– 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 can contact the researcher to address any concerns or questions about the study once it is complete.

– I may withdraw from this study at any time and but once my answers have been submitted, I will not be able to withdraw any submitted data.

By clicking the "I consent" button below you are confirming that you have read and understand the above information and that you would like to participate. You are also acknowledging that you are 18 years or older.

I consent □

Appendix C - Debriefing Sheet

Thank you for taking part in my research! This study related to loneliness and depressive symptoms among college students in Ireland. The study aims to investigate whether higher levels of loneliness are associated with higher levels of depressive symptoms, and whether there are differences in levels of loneliness or depressive symptoms between international versus host-national, and male versus female students.

How was it tested?
All participants in the study will complete this online questionnaire, and this will provide data to determine levels of loneliness and depressive symptoms among the students surveyed. We will use this data to investigate the research questions described above.

What did this research expect to find?
Based on findings from previous research, we expect that students who have higher levels of loneliness may have higher levels of depressive symptoms. Some previous studies have suggested that female international students experience higher levels of loneliness in comparison to males; and that international students may experience greater levels of loneliness than host-national students. We therefore expect that we may also find differences in loneliness between these groups.

Why is this research important?
Loneliness has been shown to be associated with many physical and mental issues. It has also been found that many students experience loneliness, and that international students may be particularly at risk for experiencing loneliness. It is important to address the issues in attempt to raise awareness and create interventions to benefit both host-national and international students

Confidentiality:
All information provided was anonymous. The data collected in this study will remain confidential whilst the results will be used in my final year thesis in the National College of Ireland.

Support Services:
If the study has caused you any distress, please contact your general practitioner or Pieta House. They have a 24/7 freephone 1800 247 247 or text "HELP" to 51444.

You may also want to contact me for any queries or questions about the study:
Name: Lauren McGuinness
Contact Email: x19301956@student.ncirl.ie
Supervisor: Dr Caoimhe Hannigan
Supervisor's Email: Caoimhe.Hannigan@ncirl.ie

Thank you for your participation

Appendix D - Revised UCLA Loneliness Scale

Indicate how often each of the statements below is descriptive of you.

Statement	Never	Rarely	Sometimes	Often
1. I feel in tune with the people around me	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends	1	2	3	4
6. I have a lot in common with the people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those around me	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want it	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

Appendix E - Self-Report Quick Inventory of Depressive Symptomatology (QIDS-SR$_{16}$)

Please select the one response to each item that best describes you for the past seven days

1.   Falling Asleep:

I never take longer than 30 minutes to fall asleep.	0
I take at least 30 minutes to fall asleep, less than half the time (3 days or less out of the last 7 days).	1
I take at least 30 minutes to fall asleep, more than half the time (4 days or more out of the last 7 days).	2
I take more than 60 minutes to fall asleep, more than half the time (4 days or more out of the last 7 days).	3

2.   Sleep During the Night:

I do not wake up at night.	0
I have restless nights, sleeping lightly and wake up for a few brief periods each night.	1
I wake up at least one or more times a night, but I go back to sleep easily.	2
I wake up more than once a night and stay awake for 20 minutes or more, more than half the time (4 days or more out of the last 7 days).	3

3.   Waking Up Too Early:

Most of the time, I wake up no more than 30 minutes before I need to get up.	0
More than half the time, I wake up more than 30 minutes before I need to get up (4 days or more out of the last 7 days).	1
I almost always wake up at least one hour or so before I need to, but I go back to sleep eventually.	2
I wake up at least one hour before I need to, and cannot go back to sleep 4 days or more out of the last 7 days.	3

4.   Sleeping Too Much:

I sleep no longer than 7-8 hours a night, without napping during the day.	0
I sleep no longer than 10 hours in a 24-hour period including naps.	1
I sleep no longer than 12 hours in a 24-hour period including naps.	2
I sleep longer than 12 hours in a 24-hour period including naps.	3

5.   Feeling Sad:

I do not feel sad	0
I feel sad less than half the time (3 days or less out of the last 7 days).	1
I feel sad more than half the time (4 days or more out of the last 7 days).	2
I almost always feel sad.	3

Please complete either 6 or 7 (not both)

6.   Decreased Appetite:

There is no change in my usual appetite.	0
I eat rather less often or lesser amounts of food than usual.	1
I eat much less than usual and only with personal effort.	2
I rarely eat within a 24-hour period, and only with extreme personal effort or when others persuade me to eat.	3

7.   Increased Appetite:

There is no change from my usual appetite.	0
I feel a need to eat more frequently than usual.	1
I regularly eat more often and/or greater amounts of food than usual.	2
I feel driven to overeat both at mealtime and between meals.	3

Please complete either 8 or 9 (not both)

8. Decreased Weight (Within the Last Two Weeks):

I have not had a change in my weight.	0
I feel as if I have had a slight weight loss.	1
I have lost 2 pounds/1 Kg or more.	2
I have lost 5 pounds/2 Kg or more.	3

9. Increased Weight (Within the Last Two Weeks):

I have not had a change in my weight.	0
I feel as if I've had a slight weight gain.	1
I have gained 2 pounds/1 Kg or more.	2
I have gained 5 pounds/2 Kg or more.	3

10. Concentration/Decision Making:

There is no change in my usual capacity to concentrate or make decisions.	0
I occasionally feel indecisive or find that my attention wanders.	1
Most of the time, I struggle to focus my attention or to make decisions.	2
I cannot concentrate well enough to read or cannot make even minor decisions.	3

11. View of Myself:

I see myself as equally worthwhile and deserving as other people.	0
I am more self-blaming than usual.	1
I largely believe that I cause problems for others.	2
I think almost constantly about major and minor defects in myself.	3

12. Thoughts of Death or Suicide:

I do not think of suicide or death.	0
I feel that life is empty or wonder if it is worth living.	1
I have thought of suicide or death several times over the last seven days for several minutes.	2
I think of suicide or death several times a day in some detail, or I have made specific plans for suicide or have actually tried to take my life.	3

13. General Interest:

There is no change from usual in how interested I am in other people or activities.	0
I notice that I am less interested in people or activities.	1
I find I have interest in only one or two of my formerly pursued activities.	2
I have very little interest in formerly pursued activities.	3

14. Energy Level:

There is no change in my usual level of energy.	0
I get tired more easily than usual.	1
I have to make a big effort to start or finish my usual daily activities (for example, shopping, homework, cooking or going to work).	2
I really cannot carry out most of my usual daily activities because I just do not have the energy.	3

15. Feeling slowed down:

I think, speak, and move at my usual rate of speed.	0
I find that my thinking is slower or my voice sounds dull or flat.	1
It takes me several seconds to respond to most questions and I am sure my thinking is slower.	2
I am often unable to respond to questions without extreme effort.	3

16. Feeling restless:

I do not feel restless.	0
I am often fidgety, wringing my hands, or need to shift how I am sitting.	1
I have impulses to move about and am quite restless.	2
At times, I am unable to stay seated and need to pace around.	3

Appendix F - Poster