Covid-19, Mental Health and Resilience

Roisin Barrett

16309966

Supervisor: Dr. David Mothersill

B.A (Hons) in Psychology

National College of Ireland

March 2021

Submission of Thesis and Dissertation

National College of Ireland
Research Students Declaration Form
(Thesis/Author Declaration Form)

Name: Roisin Barrett

Student Number: 16309966

Degree for which thesis is submitted: Psychology (BAPSYCH)

Title of Thesis: Covid-19, Mental Health and Resilience

Date: 13/03/2021

Material submitted for award

A. I declare that this work submitted has been composed by myself.

B. I declare that all verbatim extracts contained in the thesis have been distinguished by quotation marks and the sources of information specifically acknowledged.

C. I agree to my thesis being deposited in the NCI Library online open access repository NORMA.

D. ***Either*** *I declare that no material contained in the thesis has been used in any other submission for an academic award.
Or *I declare that the following material contained in the thesis formed part of a submission for the award of

_____
(State the award and the awarding body and list the material below)

Abstract

This study aims to investigate the relationship between the social isolation brought about as a result of the implementation of measures to combat the threat of Covid 19 and its effect on people's mental health. The question as to whether individuals with naturally high levels of resilience will have coped better throughout periods of lockdown will also be examined. A total of 101 participants ranging from 20-69 (M=30.42), who were recruited through social media, completed an online survey consisting of demographic questions, The Depression Anxiety and Stress Scale (DASS-21), The Social Provisions Scale (SPS-24) and The Connor-Davidson Resilience Scale (CD-RISC-25). Results showed that there was a significant relationship between social isolation and mental health. Initially resilience was significantly correlated with mental health, but once other variables were added into the Hierarchical Multiple Regression, its significance was lost. The model as a whole evidenced a 23.3% of variance in mental health. Findings suggest that more research should be done on the effect social isolation is having on mental health and how best to combat this.

TABLE OF CONTENTS

Introduction

The literature review will provide a general overview of the impact of Covid 19 on the world's populations referencing relevant research in the area. Precautionary measures introduced to curb the spread of the virus and their impact will be discussed as will previous and current research, with specific reference to the negative impact of social isolation. The rise in levels of loneliness as a result of social distancing measures will be examined as will the relationship between social isolation, hloneliness and negative mental health. Existing research into resilience will be referenced, as will its role, as a factor in mental health well-being.

Covid 19

Arising as an array of unexplained cases of pneumonia in Wuhan, China, the novel coronavirus, coined Covid-19 by the World Health Organisation, has since spread throughout the globe. The Covid-19 pandemic has had an extensive impact on human activity and interactions worldwide. (Smith, Kozak & Sullivan, 2020) This is due to governments all over the globe issuing "stay at home" orders in the hope of curbing the spread of the virus. Although these measures are implemented to protect the physical health of the people and have shown to be efficient at limiting the spread of this infectious disease, the isolation resulting from their implementation can lead to significant psychological distress (Bai, Lin, Lin, Chen, Chue & Chou, 2004). A study carried out by (Zandifar & Badrfam, 2020) emphasises the mental morbidity and stress individuals in Iran are experiencing due to the seriousness of the disease, the misinformation, uncertainty and unpredictability associated with it, and the social isolation resulting from measures taken to slow its progress down. Further study, conducted in Japan (Shigemura, Ursano, & Morganstein, 2020) highlights

Covid-19's effect on individuals' overall wellbeing, alongside the rising levels of fear and uncertainty due to the economic impact the disease is having worldwide.

Measures to curb the spread of the Virus

Some of the more restrictive measures introduced to curb the progress of the virus are lockdown and quarantining. Rarely, in modern history, apart from wartime, have people had such limits imposed on their movements and personal freedom. Extensive research has been carried out on the impact of quarantine in a variety of situations and could be of relevance in assessing the potential impact on mental health of quarantine in the particular context of Covid 19. Traumatic Stress Disorder, along with fear and depression, are some of the adverse cognitive effects that have been associated with quarantine (Blendon, Benson, DesRoches, Raleigh, & Taylor-Clark, 2004; Liu, Kakade, Fuller, Fan, Fang, Kong, Guan, & Wu, P, 2012; Sprang & Silman, 2013). According to a number of studies, conducted over time, in situations where individuals have had to quarantine for various reasons, negative mental health outcomes have been found to be overwhelming. (Sprang & Silman, 2013) conducted research comparing the difference in post-traumatic stress symptoms in children and parents who had been quarantining versus those who had not, and it was found that of those who had been quarantining, a significant percentage reported the experience as traumatising.

In the present context of Covid 19, constant, overwhelming updates on new cases and fatalities daily, coupled with the isolation people are having to endure and the uncertainty about what lies ahead make it difficult to plan for the future, engendering additional psychological distress. Studies have indicated that psychological distress can weaken an individual's capability to return to pre-pandemic functioning. Heightened psychological distress has shown in the past to negatively affect job performance (de Graaf, Tuithof, Van Dorsselaer & Ten Have, 2012), family functioning (Crowe & Lyness, 2014), and educational

outcomes (Holmes & Silvestri, 2016). Lower levels of satisfaction with life have been associated with a number of measures of psychological distress, including depression (Schimmack, Oishi, Furr, & Funder, 2004), perceived stress, pessimism, and suicidal ideation (Chang & Sanna, 2001).

While limiting physical proximity to those with whom one lives is one of the more restrictive measures implemented to halt the spread of this infectious disease, social distancing has become the norm. Social connections have been sacrificed in an attempt to ensure physical well-being. The normal social supports of friends, extended family and health agencies are more difficult to access during a time of social distancing, thereby increasing the individual's sense of isolation.

The actions of volunteers in local communities throughout the country during lockdown have indicated their understanding of the potential negative effects of quarantining and social distancing on the more vulnerable members of society. While addressing practical issues of ensuring food deliveries etc, they also recognised the importance of maintaining contact with those in isolation and of providing social support. At the heart of their actions was the recognition that the measures taken to combat the spread of Covid 19, while prioritising people's physical welfare, were in danger of threatening their mental wellbeing. Allowing for social bubbles during the present lockdown, indicates an appreciation by policy makers of the importance of social connectivity and the possible long-term repercussions of social isolation. In advocating a cross-sector approach in dealing with the virus and its ramifications, Holt-Lunstad (2020) references "The Double Pandemic of Social Isolation and Covid 19", citing the increase in levels of emotional distress indicated by preliminary surveys carried out within the first month of the imposition of restrictions.

Social Isolation resulting in Increased levels of Loneliness

Enforced social distancing and lockdowns are leading to social disconnection, which in giving rise to loneliness; a phenomenon that has been coined "Lockdown Loneliness" (Sarwar Shah, Nogueras, Van Woerden & Kiparoglou, 2020) In alluding to the rising levels of loneliness indicated among adults in America, (Killgore, Taylor, Cloonan & Dailey, 2020) refer to it as a "critical public health concern". If pre-covid-19, loneliness was a significant area of concern, affecting one-third of people in industrialised countries (Cacioppo & Cacioppo, 2018), then, any increase, brought about by social distancing measures, must surely be alarming.

In a study carried out by the Mental Health Foundation, almost a quarter of adults and 44% of those aged between the ages of 18 and 24 in the UK, have reported experiencing loneliness while living under lockdown. Findings indicate that feelings of loneliness more than doubled over the initial lockdown period. Dr Antonis Kousoulis, Director at the Mental Health Foundation states "Our data reveal that millions of people in the UK are experiencing feelings of loneliness – which is a key risk factor for developing or worsening mental health problems." Widespread emotional distress was reflected also in the findings of an e-survey (Living, working and Covid-19), conducted during lockdown, and carried out throughout Europe. (Ahrendt, Cabrita, Cleric, Hurley & Leoncikas, 2020)

While there is evidence that the social isolation deemed necessary to protect populations against the physical threat associated with Covid 19 has led to an increase in levels of loneliness, it cannot be assumed that a direct correlation exists between social isolation and loneliness. Although lacking a consensual definition, it is agreed amongst most researchers that loneliness is characterised as the difference between a person's current versus coveted social relationships (Perissinotto, Stijacic Cenzer & Covinsky, 2012). There is a distinction between loneliness and social isolation. Loneliness is a subjective feeling, whereas social isolation is an objective measure of social connectedness. For instance, the possibility

exists that those who are more objectively isolated may not feel lonely while those who are less so do. This loneliness can be described as perceived social isolation (Perissinotto et al., 2012). Loneliness is an intricate compound which incorporates a number of factors such as an absence of social support resources, alongside social vulnerability (Yanguas, Pinazo-Henandis & Tarazona-Santabalbina, 2018).

Social Isolation, Loneliness and Mental Health

Unfavourable mental health outcomes are associated with higher levels of loneliness and a lack of social connectedness (DiTommaso, Brannen, & Best, 2004; Taylor & Stanton, 2007). Loneliness poses significant health risks in terms of reduced mental health (Beutel, Klein & Brähler, 2017). Feelings of loneliness and lack of social support among older people are associated with negative mental health outcomes. However, loneliness is not only experienced by the elderly but is reported among both young and old individuals (Victor & Yang, 2012). Negative mental and physical health is associated with loneliness (Wang, Mann, Lloyd-Evans & Johnson, 2018). Loneliness is also associated with poor cognition (Ayalon, Shiovitz & Roznier, 2016), sleep (Smith et al.,2012) and cardiovascular health (Holt-Lunstad, Smith, Baker, Harris & Stephenson, 2015). (Rico-Uribe, Caballero, Martin-Maria, Cabello, Ayuso-Mateos & Miret, 2018; Holt-Lunstad et al., 2015) conducted meta-analysis in which they reported that higher levels of mortality and morbidity are exhibited in lonely individuals.

Based on (Park, Kwon, Choi, Kang, Choe, Kim, Yun, Lee, Seong, Kim, Seo, & Oh, 2020) review, individuals who experience the highest levels of loneliness were more often than not, the ones experiencing significant stress which correlates with (Sangster & Ellison, 1978; Wells & Kelly, 2008; Su et al., 2018) findings. Although negative mental health outcomes due to covid-19 can affect anyone (Shigemura et al., 2020), certain groups are more

susceptible to developing mental health problems. Those diagnosed with coronavirus and their families, as well as those already suffering from physical or psychiatric conditions are at a higher risk of doing so.

Individuals vary extensively in how they react to difficulties and challenges. Having the capacity to endure setbacks, adapt well to change and bounce back is described as resilience (Luther & Chicchetti, 2001). Some individuals are naturally more resilient than others. Evidence indicates that willpower, personal strengths and resilience are essential to combat adversity (Salik, Masroor, & Khan, 2020). They state that highly resilient individuals have the capabilities to alter their life's courses, emotionally heal and continue excelling towards their goals.

Resilience as a construct in overcoming adversity

Over the last decade an increased emphasis has been placed on resilience as a key construct in mental health well-being. Studies and research by (Seligman, 2002) assert the efficacy of a positive outlook as a resilient factor or 'signature strength'.

During the current pandemic, people's resilience is being tested to an unprecedented extent. (Galatzer-Levy, Huang & Bonanna, 2018) assert that about two-thirds of people cope quite well when exposed to adverse events, even when these occur over a prolonged period of time. They argue that it is within the ability of most 'to endure'. They emphasise the need to define resilience, cautioning against a loose generic definition of it as being a 'strength' or a 'health'. A 'continued near-normal functioning' is, they purpose, a more concise definition and a better guide to the understanding of human reaction in stressful scenarios. People may struggle, they argue, but the dominant reaction is a stable trajectory towards both mental and physical health. They contest that resilience is transferable to differing stressful situations and that it is sustainable over a duration of long-term stressful situations.

(Hone, 2017) asserts that people should reflect not only on the challenges of coping with stressful situations but should honour their success in managing to progress through such stressful or even traumatic scenarios. She emphasises 'self-efficacy' as a critical component of resilience; that most people have an inbuilt or inherent capability to deal with stressful scenarios. She stresses that resilience is not in any way 'magical thinking'; asserting that resilience requires a person to be realistic and not overly critical of the 'self'.

Galatzer-Levy et al., (2018) support the contentions set out by Hone (2017) in arguing that flexibility and adaptability are key in our reaction to stress and trauma. They argue that we have internal traits or strategies that we employ to cope in difficult situations. If one is flexible, they argue, they can best adapt these internal strategies or resources to meet the demands of stressful scenarios. The use and application of these strategies is an unconscious action and when these actions and reactions are fruitful, they are defined as resilience. Studies and research by (Seligman, 2002) echo the findings and assertions of both Hone (2017) and (Galatzer-Levy et al., 2018) as he argues that people should develop and practise their 'signature strengths'. During times of stress, people should focus on their inherent strengths and not dwell on their shortcomings. Signature or key strengths should be exploited as they afford control to the person. One can control and employ our strengths, whereas focus on shortcomings is counterproductive. Seligman's argument dovetails with (Galatzer-Levy et al., 2018) as they advocate for 'flexibility' in drawing on one's internal resources.

Conclusion

While extensive research has been carried out on the relationship between loneliness and negative mental health, the present pandemic provides a specific context in which further

research is merited. In this context, a state of being, social isolation, that would otherwise be deemed undesirable, is instituted, and by its very nature, could be assumed to result in higher levels of loneliness among people, negatively affecting their mental health and impacting on those who may not, in other circumstances, be affected. Therefore, the relationship between social isolation and mental health is one that needs to be investigated as is the role resilience has to play in withstanding the negative impact of isolation on mental health.

While extremely restrictive isolations have been studied in detail (Robertson, Hershenfield, Grace, & Stewart, 2004; Taylor, Agho, Stevens, & Raphael, 2008; Wang, Xu, Zhao, Cao, He & Fu, 2011) very little is known about less restrictive measures (Brookes, Webster, Smith, Woodland, Wessely, Greenberg & Rubin, 2020). The extent to which these "lesser" restrictions, such as separation from family and loved ones, travel restrictions and lack of social gatherings are contributing to psychological distress is a question that merits further exploration. Exploring this question, within the context of the Irish experience, is warranted, as such research, would help to better understand the nature of that experience. As we move away from restricted living, an analysis of available evidence could be of assistance in assessing what policy decisions should be taken, to counteract the negative impact of our experiences during the last year.

Methodology

Participants

The sample for this study consisted of 101 (females: n= 76; males: n= 25) individuals aged from 18-69 (M = 30.42, SD = 13.68). The minimum number of participants necessary for the purpose of this study was n=66, this figure was calculated using the Tabachink & Fidell (2013) formula for calculating sample size when using multiple regression analysis. (N > 50 + 8m) with n being the number of participants, and m being the number of PV's. The vast majority (95%) of the participants in this study were residing in various counties in Ireland at the time of the completion of the study, (18.7%) Dublin, (1%) Galway, (1%) Roscommon, (1%) Waterford, with a minority being based in Australia (5%). Since the beginning of the pandemic, 14.9% (15) of the participants in this study had become unemployed, 25.7% (26) participants had begun working from home and 15.8% (16) had been working more than usual while 38.6% (39) were still working as normal or were still unemployed 5% (5). The study implemented a non-probability convenience sampling approach to recruit participants; recruiting online through a variety of social media platforms (Facebook; Instagram; Twitter).

Measures

Participants were asked demographic questions such as their age, gender and the location in which they reside. Three scales were used to gather information:

Depression, Anxiety and Stress Scale (DASS-21). Developed by Lovibond & Lovibond (1995), the DASS is a 42-item scale which uses a 4-point Likert scale, assessing the participants' levels of depression, anxiety and stress. For the purpose of this study, the shortened 21-item scale was used. The DASS-21, is a self-report questionnaire consisting of **21** items; 7 items within the questionnaire relating to each of the traits of depression,

anxiety and stress. Participants are asked to score each item on a scale from 0, (did not apply to me at all), through 1 (applied to me to some degree or some of the time), 2 (applied to me a considerable degree or good part of the time) to 3 (applied to me very much or most of the time). Statements such as "I felt I wasn't worth much as a person" and "I was unable to become excited about anything" were presented to the participants and they were to select an option from the Likert scale which they felt was most appropriate to them.

To calculate a participant's total score for each of the subscales of depression, anxiety and stress, their scores on each question in the relevant subscale are added together. Before the scores can be interpreted, the totalled numbers in each sub-scale have to be multiplied by 2, to mimic DASS-42's categorisation as the DASS 21 is a short form of that scale. Final scores are categorised (normal, mind, moderate, severe and very severe) and indicate an individual's levels of depression, anxiety and stress. The following are the criteria used to assess an individual's levels for each category: Normal: D: 0-9, A: 0-7, S: 0-14, Mild: D: 10-13, A: 8-9, S: 15-18, Moderate: D: 14-20, A: 10-14, S: 19-25, Severe: D: 21-27, A: 15-19, S: 26-33 & Very severe: D: 28+, A: 20+, S: 34+. Cronbach's alpha internal consistency coefficients determined by Basha & Kaya (2016) for depression, anxiety and stress were .96, .89 & .83. This scale had good reliability in the current study (a= .95).

The Social Provisions Scale (SPS): The Social Provisions Scale is a 24 item questionnaire, established by Cutrona & Russel (1987), and designed to measure individual differences in the perception of the six social provisions proposed by Weis (1974); attachment, reliable alliance, guidance, social integration, reassurance of worth and opportunity for nurturance. These proposed provisions are used as subscales, with each subscale compromising 4 items; 2 of which are positive and 2, negative. Participants were asked to read the 24 questions presented to them and to answer based on their current relationship with friends, family and co-workers. They were required to answer using the

four-point Likert scale with '1' being strongly disagree and '4' being strongly agree. Examples of questions presented to the participants are "There are people I can depend on to help me if I really need it" and "I have close relationships that provide me with a sense of emotional security and well-being". Half of the items (negatively formulated) are reverse scored. Tallying the scores can lead to an overall total varying from 24-96. Higher scores are indicative of greater anticipated social support. Cronbach's alpha for the current study was (a=.93). This scale has also proven highly reliable in other studies (r = .93) (Caron, 2013).

Connor-Davidson Resilience Scale (CD-RISC-25). The CD-RISC-25, developed by Kathryn M. Connor and Jonathan R.T. Davidson (2003), is a 25 item self-report questionnaire. This scale was created to gauge an individual's levels of resilience. Statements are presented to participants, who are asked to read them and choose the answer which is most applicable to them. Each item ranges in score from 0-4; 0 being "not true at all" and 4 being "true nearly all of the time". An example of statements used in this scale are "I am able to adapt when changes occur" and "I work to attain my goals no matter what roadblocks I encounter along the way.". The overall score is obtained by adding up all 25 items, therefore giving a total score which can range from 0-100. Lower scores are indicative of lower levels of resilience, while higher scores indicate greater levels of resilience. Previous research has indicated that this scale has good reliability (a= 0.88) (Guzman et al., 2019). Cronbach's alpha for this scale was .92 in the current study.

Design

This study implemented a cross-sectional research design that adopted a quantitative approach. The Predictor Variables were resilience and social isolation while the Criterion Variable was Mental Health.

Procedure

Participants were recruited through various social media platforms. The questionnaire was posted on Facebook, Instagram and Twitter. After clicking on the link to open the survey, participants were presented with an information sheet, providing them with all the relevant information regarding the study. The time commitment involved was outlined as was their role in the study should they choose to participate. The benefits and risks associated with participation in the study were delineated, as were the participants' rights. Anonymity was assured and the researcher and thesis supervisor's contact details were provided, should the participants have any queries regarding the study. (Appendix B). Once participants clicked 'next' on the information sheet, they were brought to the following page where informed consent was established. They were requested to indicate and confirm by ticking three boxes, that they had read all the information supplied and were in agreement with it. Confirmation and agreement were indicated by responding to the following items: By ticking the box below, you are agreeing that: (1) "You have read and understood the Participant Information Sheet", (2) "Questions about your participation in this study have been answered satisfactorily", (3) "You are taking part in this research study voluntarily (without coercion)". Participants were asked to confirm that they were over 18 and to click the informed consent box in order to begin the questionnaire. There were 5 questionnaire sections. The first was a short demographics section in which age, gender and location were requested. The second section consisted of two questions which related to change of work habits and hours outside the home since covid-19 (appendix). The third section was the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995). The fourth was The Social Provisions Scale (Cutrona & Russel, 1987) and the fifth was the Connor-Davidson Resilience Scale (Connor & Davidson, 2003). On completion of the resilience scale questionnaire, participants were brought to the debriefing form (Appendix D), thanking them for their participation,

reminding them that the information they gave would remain anonymous and providing contact details for relevant helplines should they have been negatively affected in any way by participating in this survey. The researcher and thesis supervisor's contact details were also provided again.

Ethical Considerations

NCI's ethical guidelines were adhered to throughout this study. Ethical approval was granted by The National College of Ireland to carry out this study. The benefits and risks associated with participation in this study were clearly outlined prior to commencement of the survey. There was no incentive to take part, therefore everyone participated of their own free will. All participants provided informed consent and confirmed that they were aged 18 and over. Relevant helplines were provided in the debriefing sheet on completion of the study. (Appendix D)

Results

Descriptive Statistics

The current data is taken from a sample of 101 participants (*n*=101). Participants ages ranged from 20-69 years old. The median age for participants was 30.42. A large proportion 25.7% of the sample simply stated that they were residing in Ireland (n=26). 46.5% (n=47) were from Meath, 17% (n=18) were residing in Dublin, 5% were residing in Australia (n=5) and the remaining 5% were spread across Galway (n=1), Kildare (n=1), Mayo (n=1), Roscommon (n=1) and Waterford (n=1). In relation to employment status; 38.6% (n=39) of participants reported that they were still working as normal. 25.7% (n=26) have been working at home since the pandemic began, 15.8% (n=16) are working more than usual, 14.9% (n=15) have become unemployed and 5% (n=5) are still unemployed. 31.7% (n=32) state they spend between 1-3 hours outside the home a day. 25.7% (n=26) spend less than an hour outside their home, 12.9% (n=13) spend 10+ hours outside a day, 11.9% (n=12) spend 7-9 hours outside their home, 9.9% (n=10) spend 5-7 hours outside their home a day and 7.9% (n=8) spend 3-5 hours outside per day. Descriptive statistics for continuous variables are displayed in table 1.

Table 1

Descriptive Statistics for all Continuous Variables

Variable	*Mean*	*Median*	*SD*	*Skewness*	*Kurtosis*	*Minimum*	*Maximum*
Age	30.42	24	13.68	1.64	1.21	20	69
Hours Outside	2.89	2	1.76	.596	-1.079	1	6
Resilience	63.38	63	12.68	.146	-1.108	40	89

Social Isolation	78.47	80	10.27	-.783	.669	45	96
Overall Mental Health	42.68	40	13.59	.917	.339	21	81

Note:

Inferential Statistics

A Pearson's correlation coefficient, *r*, was computed to assess the relationship between Overall Mental Health and Social Isolation. Preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a significant, moderate, negative correlation between Overall Mental Health and Social Isolation ($r = -.48$, $n = 120$, $p < .01$). This indicated that the two variables share approximately 23% variance. Results indicate that higher levels of Social Isolation are associated with significantly lower levels of Overall Mental Health. (See Table 2).

A Pearson's correlation coefficient was conducted to assess the relationship between Resilience and Overall Mental Health. Preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. There was a significant, moderate, negative correlation between social media Resilience of ability and Overall Mental Health ($r = -.38$, $n = 120$, $p < .01$). This indicates that the two variables share approximately 14% of variance in common. Results indicate that higher levels of Resilience are associated with lower Overall Mental Health (see Table 2).

A Pearson's correlation coefficient was conducted to assess the relationship between Hours Spent Outside the Home and Overall Mental Health. Preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity and

homoscedasticity. There was a non-significant, negative correlation between downward Hours Spent Outside the Home and Overall Mental Health (r = -.03, n = 120, p = .76). Results indicate that Hours Spent Outside the Home is not associated with Overall Mental Health (See Table 2).

Table 2

Correlation between all continuous variables

Variable	1.	2.	3.	4.
1. Overall Mental Health	1			
2. Social Isolation	-.482**	1		
3. Resilience	-.378**	.588**	1	
4. Hours Outside the Home	-.031	-.099	-.194	1

Note: Statistical significance: *p < .05; **p < .01; ***p < .001

Hierarchical Multiple Regression Analysis was conducted to determine how well Social Isolation, Resilience, and Hours Spent Outside the Home predict Overall Mental. There were no violations of assumptions of normality, linearity and homoscedasticity found during preliminary analyses. The results from table 3 show that the model explained 23.3% of variance in overall mental health (F (3, 97) = 11.13, p < .001). Out of the predictor variables, social isolation had the strongest association with overall mental health and this was statistically significant (β = -.40, p < .001). Resilience had a weaker and non-significant association (β = -.17, p <.134), and Hours Outside had the weakest association which was also non-significant (β = -0.1, p <.256) (see table 3 below for full details).

The negative regression coefficients indicate that all three variables are negatively associated with overall mental health, consistent with the correlation analysis above.

Although the Pearson correlation between resilience and mental health was significant, this significance was lost when social isolation and hours outside were included in the multiple regression analysis. The significant association between social isolation in the multiple regression analysis suggests that this is the main predictor for overall mental health.

The variance inflation factor (VIF) corresponding to resilience, social isolation, and hours outside are 1.573, 1.529, and 1.039 respectively. Since none of these values are greater than 5, multicollinearity is not deemed to be a problem in the regression model. (See Table 3).

Table 3

Hierarchical multiple regression table predicting overall mental health

Variable	R^2	R^2 *Change*	*B*	*SE*	*β*	*t*	*P*
Model	.256	.233					
Resilience			-.178	.118	-.166	-.1.51	.134
Social Isolation			-.522	.143	-.395	-3.64	.000
Hours Outside			-.787	.689	-.102	-1.14	.256

Note: R^2 = R-squared; β = standardized beta value; B = unstandardized beta value; SE = Standard errors of B; N = 101.

Discussion

This section details a discussion on the main findings of the study, possible explanations for the findings and how they relate to contemporaneous research. Limitations in research approaches and the relative strengths of the study, with implications for policy theory and areas that merit further research are detailed.

Main Findings

The current study aims to investigate the relationship between isolation, as a result of lockdown due to the covid-19 pandemic, and negative mental health. It also aims to investigate the impact resilience could have on this relationship. The first hypothesis was that Social Isolation will have had a negative effect on mental health. The second hypothesis was that those with higher levels of resilience, will have coped better with lockdown than those with lower levels of resilience.

Results from the Pearson's correlation which was carried out, shows that the first hypothesis was supported, as there was a significant, moderate negative correlation between social isolation and overall mental health, indicating that those who scored higher on social isolation scale (meaning less socially isolated) have lower negative mental health outcomes. Although higher levels of resilience were significantly correlated with overall mental health, the significance was lost, once social isolation and hours outside the home were included in the hierarchical multiple regression analysis; therefore, the second hypothesis is not supported. It is clear from the analyses conducted that social isolation is the strongest predictor of overall mental health.

Findings are consistent with studies carried out investigating psychological well-being during the Covid-19 lockdown which found that perceived family and social support from friends helped in coping throughout isolation (Kilgore et al., 2020). Familial and community

support were also found to play a vital role in protecting mental health in various, previous studies. (Chan, Lowe, Weber, & Rhodes, 2015; Hansel, Osofsky, Osofsky, & Friedrich, 2013; Weems, Watts, Marsee, Taylor, Costa, Cannon & Pina, 2007). Manifestations of mental illness such as depression are prevalent subsequent to disasters such as pandemics (Lau, Yang, Pang, Tsui, Wong & Wing, 2005; Mak, Chu, Pan, Yiu, & Chan, 2009) and are aggravated by lack of social support and isolation (Wang, Mann, Lloyd-Evans, Ma, & Johnson, 2018).

Research study findings correlate also, with the results of recently published research by (Zandifar & Badrfam 2020), as they highlight the feeling of isolation as a key indicator of mental morbidity and stress. They are also supported by Ahrendt et al. (2020)'s study, which found that isolation and feelings of loneliness are significant factors in deteriorating mental health. The lack of social connectedness as posited by Perissinotto (2012), supported the findings of isolation as an indicative factor for poor mental health. Also aligning with the findings of the study, were those of Mangaug (2018), who found that the absence of social support is a key factor in determining mental health.

Although the second hypothesis was unsupported, there was initially, a significant relationship between resilience and mental health, prior to social isolation and hours spent outside the home being added into the hierarchical multiple regression. A study carried out by Killgore et al., (2020), found that there are things that can be done to heighten resilience. Individuals who nurtured their relationships and spent time outdoors exposing themselves to sunlight, were seen to have higher levels of resilience, a factor which helped individuals in dealing with lockdown.

Up to date research on the implications and effects of living with restrictions during the current pandemic 'lockdown' is limited, but recently published research (Galatzer-Levy et al.,

2018) and (Hone, 2017) posit that adaptability and flexibility are determining factors in a person's reaction to stressful scenarios. (Munk, Schmidt, Alexander, Henkel & Hennig, 2020) study indicates that higher levels of resilience correlated significantly with lower prevalence of mental health risks. The present study did not support these findings. While initially, a correlation between resilience and mental health was indicated, once the factor of isolation was included, the correlation diminished in significance.

Policy Formulation

The current pandemic crisis poses huge challenges for society as a whole, both on a macro and a micro level. Decisions taken at a governmental level determine the measures implemented to control the spread of the virus. The impact of these measures is altering people's lives. Current literature, research findings and anecdotal evidence all suggest that what started out as a medical crisis will have a high human cost; threatening the way we live our lives and the quality of those lives. Nowhere is this threat more evident than in the area of mental health. Dong & Bouey (2020) suggests that vast psychosocial crisis interventions are needed and emphasises the necessity for the implementation of mental health care in disaster management plans in the future.

The findings of this study provide an indicative position for policy formulation as they provide evidence of how former policy decisions have impacted on the public. Strategies employed by government to curb the spread of the virus have been extremely restrictive and while they may have been relatively successful in terms of protecting the physical health of the majority of the population, it is clear that they have certainly impacted negatively on the mental health of a significant number of people.

It is critical that the correlation between the increase in a person's feeling of isolation and the decrease in their mental wellbeing is acknowledged and taken into account when

formulating policy. In terms of policy formulation, a more nuanced approach is merited. The impact of restrictions imposed, and the resultant feelings of social isolation must be taken into consideration. Further research might guide a more tailored approach, leading to the inclusion of more social bubbles and the promotion of social and virtual connections that may help to minimise feelings of isolation. Ensuring access to technology for elderly individuals, thereby enabling them to stay connected to their family members, when it is not safe to do so in person, could help to minimise the effects of social isolation (Noone, McSharry, Smalle, Burns, Dwan, Devane & Morrissey, 2020).

Even during "normal" times, mental health is an under resourced area of the healthcare system globally, but it is a vital one; millions of people globally suffer with mental health issues and with worldwide catastrophes such as Covid-19, it becomes abundantly clear that more of an effort needs to be made to protect individuals' mental health (Patel et al., 2018). The findings of this study illustrate the need for government to allocate significant, additional funding to mental health services, to ensure that if a situation like this is ever to occur again, the correct supports have been put in place for those who need them and that emergency mental health strategies are developed in preparation for the issues that will arise, in the event of any future pandemic. More research should be carried out to investigate what steps should be taken and policy decisions made, in order to alleviate the negative effects isolation has had, and is having, on mental health.

Strengths and Limitations

This study presented a number of limitations. The widely accepted Social Provisions Scale (Cutrona & Russel, 1987), used in this study to gauge participants' levels of isolation, was not fit for purpose. The SPS is used to measure individual differences in the perception of the six social provisions proposed by Weis (1974). This scale was not entirely appropriate for the current study as it places an emphasis on participants' social supports and doesn't

gauge levels of isolation. While a person may have social supports, they may also feel isolated due to being unable to see family and friends. If this study were to be replicated, I would recommend acquiring or creating a scale, in which the emphasis was on gauging levels of isolation rather than assessing social supports.

While the demographic type questions, asked at the beginning of the survey, were helpful in providing a context for the participant's responses, more insight should have been gained as to how the participants' lives had changed since the pandemic began. Questions requiring them to report on the nature of their interactions with other people, changes to their overall views on life, and whether or not they feel lonely, may have provided information that would have been more pertinent to the study.

Using as it did, a self-report measure, the questionnaire could be said to being prone to self-serving bias. Requiring the participants to think back over a period of time that had passed, the period of the first lockdown, and asking them to access how they remembered feeling throughout that period, may have affected the reliability of the answers they gave. Taking into account that the majority of responses were gathered prior to the lockdown in late November and that respondents were probably already looking forward to Christmas, it could be assumed that they were feeling relatively positive, and this positivity could have been reflected in their responses. Past negative feeling could have been forgotten, and they may have simply reported on their current emotions, disregarding their experiences of previous onths and not indicating, to any truly reliable degree, the overall nature of their feelings. Although it would not have been possible for this particular study, a longitudinal design would have been better able to encapsulate participants' true emotions over the course of the pandemic as they would have had to report on their current emotions at each interval of questioning.

A further limitation of the design of the study, may have been the amount of time it took to complete and its length. Compromising as it did, of three different scales, meant that there were a considerable number of questions to be read and responded to; a factor that may have resulted in potential participants clicking out of the study before completion, due to loss of interest. The length of the questionnaire may also have caused loss of concentration among those who did complete the study, resulting in answering, while not truly engaging with the questions. This, could of course, have impacted on the overall results. One approach to counteract this problem, would be the use of shortened versions of the scales used in this study, such as the CD-RISC-10, rather than the CD-RISC-25, which was used in the current study, or the SPS-10 rather than the SPS-24, or alternatively, finding another suitable, shorter scale which comprises of fewer questions.

A strength of this study is that it attempts to investigate the impact covid-19 is having on mental health, in an innovative way. To this researchers' knowledge, previous studies have not investigated the effect resilience has on combatting the negative mental health effects which derive from social isolation and certainly, this has not been done within the context of the Irish experience.

An advantage of this study, is the large sample size, with its diverse age range. The high completion rate, could be attributed to the anonymous and confidential nature of the questionnaire. A benefit of this study, is that it supports the hypothesis that isolation and the reported feeling of isolation, when living with restrictions during the Covid 19 lockdown, impacts significantly on a person's mental health. In this regard, the study supports other research around the world, but places it in the Irish context.

Implications of Present Study and Possibility for Future Research

As the Covid 19 pandemic continues to be centre stage and a cause for concern throughout the world, further research in the area is merited. A replication of this study, while taking into account its limitations, and aiming for a larger heterogeneous sample, to include questions that focus on contributory factors to the feeling of isolation could be instructive. A sampling of participants' access to digital and social media, networking connections, family age profile, online educational access, and financial supports could be researched as causational factors for isolation. Questions could be focused to provide an insight into key factors that may alleviate the sense of isolation in the context of Covid 19 restrictions. Research findings in this area may provide guidance, on both an individual and societal level, in terms of coping with enforced isolation in restrictive lockdowns.

In conclusion, the first hypothesis for this study, that social isolation will have had a negative impact on mental health was accepted. The study found that there is a significant correlation between social isolation and overall mental health, meaning that those who perceive themselves as socially isolated have worse overall mental health than those who do not. The second hypothesis, which was that those with higher levels of resilience will have coped better throughout 'lockdown' than those with lower levels, was rejected, as although resilience was significantly correlated with mental health, once social isolation and hours outside the home were added into the hierarchical multiple regression, this significance was lost. This study contributes to previous literature regarding the Covid-19 pandemic. It is consistent with other studies which found that social isolation has a negative impact on mental health. The importance of researching the effects these unprecedented times are having on mental health are highlighted through the findings of this study.

References

1. Ahrendts, D., Cabrita, J., Cleric, E., Hurley, J., Leoncikas, T., Mascherini, M., Riso, S., & Sandor, E. (2020). Living, working and COVID-19, *COVID-19 series, Publications Office of the European Union*, Luxembourg.
2. Ayalon, L., Shiovitz, E. S., Roziner, I. (2016). A cross-lagged model of the reciprocal associations of loneliness and memory functioning. *Psychology and Aging,* 31 (2016), pp. 255-261
3. Asmundson G., Taylor, S. (2020). Coronaphobia: fear and the 2019-nCoV outbreak *Anxiety Disord*., 70 (2020), Article 102196
4. Bai, Y., Lin, C.-C., Lin, C.-Y., Chen, J.-Y., Chue, C.-M., & Chou, P. (2004). Survey of stress reactions among health care workers involved with the SARS outbreak. *Psychiatric Services,* 55, 1055 1057.
5. Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L. (2020) 2019-nCoV epidemic: address mental health care to empower society. *Lancet*, 22 (395) (2020), pp. e37-e38
6. Basha, E., & Kaya, M. (2016). Depression, Anxiety and Stress Scale (DASS): The Study of Validity and Reliability. *Universal Journal of Educational Research* 4(12): 2701-2705
7. Best, L. A., Law, M. A., Roach, S., & Wilbiks, J. M. P. (2020). The psychological impact of COVID-19 in Canada: Effects of social isolation during the initial response. *Canadian Psychology/Psychologie Canadienne*. https://doi.org/10.1037/cap0000254

8. Beutel, M.E., Klein, E.M., Brähler, E. (2017). Loneliness in the general population: prevalence, determinants and relations to mental health. *BMC Psychiatry* **17,** 97 https://doi.org/10.1186/s12888-017-1262-x

9. Blendon, R. J., Benson, J. M., DesRoches, C. M., Raleigh, E., & TaylorClark, K. (2004). The public's response to severe acute respiratory syndrome in Toronto and the United States. *Clinical Infectious Diseases*, 38, 925–931.

10. Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *SSRN Electronic Journal,* 395, 912–920.

11. Cacioppo, J. T., Cacioppo, S. (2018) The growing problem of loneliness. *Lancet*, 391, p. 426

12. Caron, J. (2013) Une validation de la forme abrégée de l'Échelle de provisions sociales : l'ÉPS-10 items [A validation of the Social Provisions Scale: the SPS-10 items].

13. Chan, C. S., Lowe, S. R., Weber, E., & Rhodes, J. E. (2015). The contribution of pre- and postdisaster social support to short- and long-term **mental health** after Hurricanes Katrina: A longitudinal study of low-income survivors. *Social Science & Medicine*, *138*, 38–43. 10.1016/j.socscimed.2015.05.037

14. Chang, E. C., & Sanna, L. J. (2001). Optimism, pessimism, and positive and negative affectivity in middle-aged adults: A test of a cognitiveaffective model of psychological adjustment. *Psychology and Aging,* 16, 524 – 531. http://dx.doi.org/10.1037/0882-7974.16.3.524

15. Chang, E. C., Watkins, A. F., & Banks, K. H. (2004). How adaptive and maladaptive perfectionism relate to positive and negative psychological functioning: Testing a stress-mediation model in black and white college students. *Journal of Counseling Psychology*, 51, 93–102. http://dx.doi .org/10.1037/0022-0167.51.1.93

16. Crowe, A., & Lyness, K. P. (2014). Family functioning, coping, and distress in families with serious mental illness. *The Family Journal,* 22, 186 – 197. http://dx.doi.org/10.1177/1066480713513552

17. Cutrona, C. E., & Russell, D. W. (1987). The provisions of social relationships and adaptation to stress. In W. H. Jones, & D. Perlman (Ed.), Advances in personal relationships (Vol. 1, pp. 37-67). Greenwich, CT: JAI Press.

18. de Graaf, R., Tuithof, M., van Dorsselaer, S., & ten Have, M. (2012). Comparing the effects on work performance of mental and physical disorders. *Social Psychiatry and Psychiatric Epidemiology,* 47, 1873– 1883. http://dx.doi.org/10.1007/s00127-012-0496-7

19. DiTommaso, E., Brannen, C., & Best, L. A. (2004). Measurement and validity characteristics of the short version of the social and emotional loneliness scale for adults. *Educational and Psychological Measurement*, 64, 99 – 119. http://dx.doi.org/10.1177/0013164403258450

20. Dong, L., Bouey, J. (2020) Public mental health crisis during COVID-19 pandemic, China *Emerg. Infect. Dis., 23*

21. Farrer, Louise., Gulliver, Amelia., Katruss, Natasha., Bennett, Kylie., Bennett, Anthony., Ali, Kathina., & Griffiths, Kathleen. (2020). Development of the Uni

Virtual Clinic: an online programme for improving the mental health of university students. *British Journal of Guidance & Counselling*. 48. 1-14. 10.1080/03069885.2020.1729341.

22. Galatzer-Levy, I.R., Huang, S.H., & Bonanna, G.A. (2018) Trajectories of resilience and Dysfunction following personal trauma: A review and statistical evaluation. *Clinical Psychology Review*., 63,41-55

23. Hansel, T. C., Osofsky, J. D., Osofsky, H. J., & Friedrich, P. (2013). The effect of long-term relocation on child and adolescent survivors of Hurricane Katrina. *Journal of Traumatic Stress*, *26*, 613–620. 10.1002/jts.21837

24. Holmes, A., & Silvestri, R. (2016). Rates of mental illness and associated academic impacts in Ontario's college students. *Canadian Journal of School Psychology*, 31, 27– 46. http://dx.doi.org/10.1177/ 0829573515601396

25. Holt-Lunstad, J. 2020. The Double Pandemic Of Social Isolation and Covid-19: Cross-Sector Policy Must Address Both. *Health Affairs Blog,* 10.

26. Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., Stephenson, D.,(2015). Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspect Psychol Sci*, 10 (2015), pp. 227-237

27. Hone, L. (2017) Resilient Grieving: Finding strength and embracing life after a loss that changes everything.

28. Killgore, D. S. William., Taylor, C. Emily., Cloonan, A. Sara., Dailey, S. Natalie. (2020). Psychological resilience during the COVID-19 lockdown. *Psychiatry Research*, 291.

29. Lau, J. T., Yang, X., Pang, E., Tsui, H. Y., Wong, E., & Wing, Y. K. (2005). SARS-related perceptions in Hong Kong. *Emerging Infectious Diseases*, *11*, 417–424.

30. Liu, X., Kakade, M., Fuller, C. J., Fan, B., Fang, Y., Kong, J., Guan, Z., Wu, P. (2012). Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. *Compr Psychiatry.*

31. Lovibond, S. H., & Lovibond, P. F. (1995b). Manual for the Depression Anxiety Stress Scale. Sydney: The Psychological Foundation of Australia, Inc.

32. Luthar, S.S., Chicchetti, D., 2001. The construct of resilience: implications for interventions and social policies. *Dev. Psychopathology*. 12 (4), 857-885.

33. Mak, I. W. C., Chu, C. M., Pan, P. C., Yiu, M. G. C., & Chan, V. L. (2009). Long-term psychiatric morbidities among SARS survivors. *General Hospital Psychiatry*, *31*, 318–326. 10.1016/j.genhosppsych.2009.03.001

34. Munk, A. J. L., Schmidt, N. M., Alexander, N., Henkel, K., & Hennig, J. (2020). Covid-19—Beyond virology: Potentials for maintaining mental health during lockdown. *PLoS ONE*, *15*(8), 1–13. https://doi.org/10.1371/journal.pone.0236688

35. Noone, C., McSharry, J., Smalle, M., Burns, A., Dwan, K., Devane, D., & Morrissey, E. C. (2020) Video calls for reducing social isolation and loneliness in older people: a rapid review. Cochrane Database Syst Rev.;5(5).

36. Park, W. B., Kwon, N. J., Choi, S. J., Kang, C. K., Choe, P. G., Kim, J. Y., Yun, J, Lee, G. W., Seong, M. W., Kim, N. J., Seo, J. S., Oh, M. D. (2020). Virus Isolation from the First Patient with SARS-CoV-2 in Korea. *J Korean Med Sci*.

24;35(7):e84. doi: 10.3346/jkms.2020.35.e84. PMID: 32080990; PMCID: PMC7036342.

37. Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P. (2018). *The Lancet Commission on global mental health and sustainable development.* Lancet. ;392(10157):1553–98

38. Perera, H. N (2015). Construct validity of the social provisions scale: A bifactor exploratory structural equation modeling approach. Assessment (online first). doi: 10.1177/1073191115589344

39. Perissinotto, C. M., Stijacic Cenzer, I., Covinsky, K. E., (2012). Loneliness in older persons: a predictor of functional decline and death. *Arch Intern Med*, 172pp. 1078-1083

40. Rico-Uribe, L. A., Caballero, F. F., Martín-María, T., Cabello, M., Ayuso-Mateos, J. L., Miret, M.(2018). Association of loneliness with all-cause mortality: A meta-analysis. *PLoS One,* 13 (2018), Article e0190033

41. Robertson, E., Hershenfield, K., Grace, S. L., & Stewart, D. E. (2004). The psychosocial effects of being quarantined following exposure to SARS: A qualitative study of Toronto health care workers. *The Canadian Journal of Psychiatry* / La Revue canadienne de psychiatrie, 49, 403

42. Salik, S., Masroor, U., & Khan, M. J. (2020). Psychological Vulnerability, Resilience and Social Support among Health Care Professionals during Covid 19: A Cross Cultural Study. *Pakistan Armed Forces Medical Journal*, S331–S335.

43. Sarwar Shah, G. S., Nogueras, D., Van Woerden, H. C., Kiparoglou, V. (2020) The COVID-19 Pandemic: A Pandemic of Lockdown Loneliness and the Role of

Digital Technology. *J Med Internet Res.* Nov 5;22(11):e22287. doi: 10.2196/22287. PMID: 33108313; PMCID: PMC7647474.

44. Schimmack, U., Oishi, S., Furr, R. M., & Funder, D. C. (2004). Personality and life satisfaction: A facet-level analysis. *Personality and Social Psychology Bulletin*, 30, 1062–1075. http://dx.doi.org/10.1177/ 0146167204264292

45. Seligman, M. (2002) Authentic Happiness. *New York: The Free Press*. Chapters 8 and 9

46. Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., Benedek, D. M. (2020) Public responses to the novel 2019 coronavirus (2019 – nCoV): mental health consequences and target populations. *Psychiatry Clinical Neuroscience.* (February) (2020)

47. Smith, S., Kozak, N., Sullivan., K. A., (2012). An investigation of the relationship between subjective sleep quality, loneliness and mood in an Australian sample: can daily routine explain the links? *Int J Soc Psychiatry*, 58, pp. 166-171

48. Smith, B. M., Twohy, A. J., & Smith, G. S. (2020). Psychological inflexibility and intolerance of uncertainty moderate the relationship between social isolation and mental health outcomes during COVID-19. *Journal of Contextual Behavioral Science*, *18*, 162–174. https://doi.org/10.1016/j.jcbs.2020.09.005

49. Sprang, G., & Silman, M. (2013). Posttraumatic stress disorder in parents and youth after health-related disasters. *Disaster Medicine and Public Health Preparedness*, 7, 105–110. http://dx.doi.org/10.1017/dmp .2013.22

50. Taylor, M. R., Agho, K. E., Stevens, G. J., & Raphael, B. (2008). Factors influencing psychological distress during a disease epidemic: Data from

Australia's first outbreak of equine influenza. *BMC Public Health,* 8, 347. http://dx.doi.org/10.1186/1471-2458-8-347

51. Taylor, S. E., & Stanton, A. L. (2007). Coping resources, coping processes, and mental health. *Annual Review of Clinical Psychology*, 3, 377–401. http://dx.doi.org/10.1146/annurev.clinpsy.3.022806.091520

52. Victor, C. R., Yang, K. (2012). The Prevalence of Loneliness Among Adults: A Case Study of the United Kingdom. *The Journal of Psychology*, 146 (2012), pp. 85-104

53. Wang, Y., Xu, B., Zhao, G., Cao, R., He, X., & Fu, S. (2011). Is quarantine related to immediate negative psychological consequences during the 2009 H1N1 epidemic? *General Hospital Psychiatry*, 33, 75–77. http:// dx.doi.org/10.1016/j.genhosppsych.2010.11.001

54. Wang, J., Mann, F., Lloyd, E., Ma, B. R., Johnson, S. (2018). Associations between loneliness and perceived social support and outcomes of mental health problems: a systematic review. *BMC Psychiatry,* 18 (2018), p. 156

55. Weems, C. F., Watts, S. E., Marsee, M. A., Taylor, L. K., Costa, N. M., Cannon, M. F., Pina, A. A. (2007). The psychosocial impact of Hurricane Katrina: Contextual differences in psychological symptoms, social support, and discrimination. *Behaviour Research and Therapy*, *45*, 2295–2306

56. Weiss, R. (1974). The provisions of social relationships. . In Z. Rubin (Ed.), Doing unto others (pp. 17–26). Englewood Cliffs, NJ: Prentice Hall.

57. Yang, Y., Zhang, W. L., Zhang, L., Cheung, T., Xiang, Y. T. (2020) Mental health services for older adults in China during the COVID-19 outbreak *Lancet Psychiatry*, 7 (4) (2020), p. e19

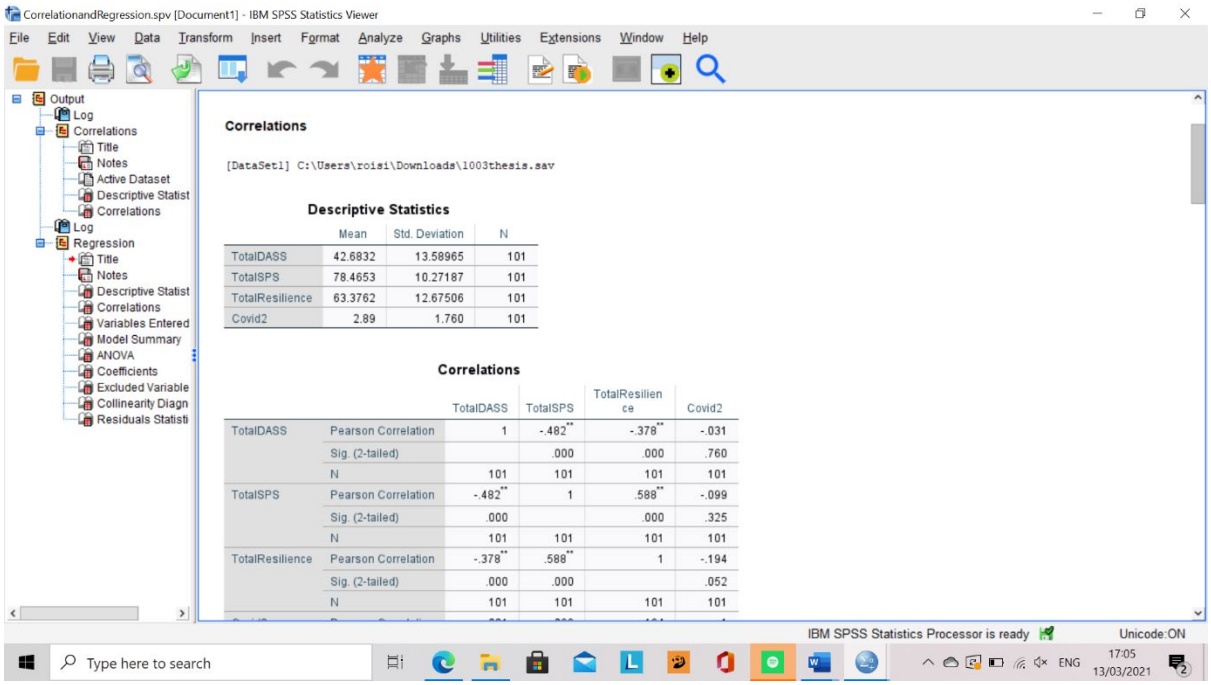
58. Yanguas, J., Pinazo-Henandis, S., Tarazona-Santabalbina, The complexity of loneliness. *Acta Biomed*, 89 (2018), pp. 302-314

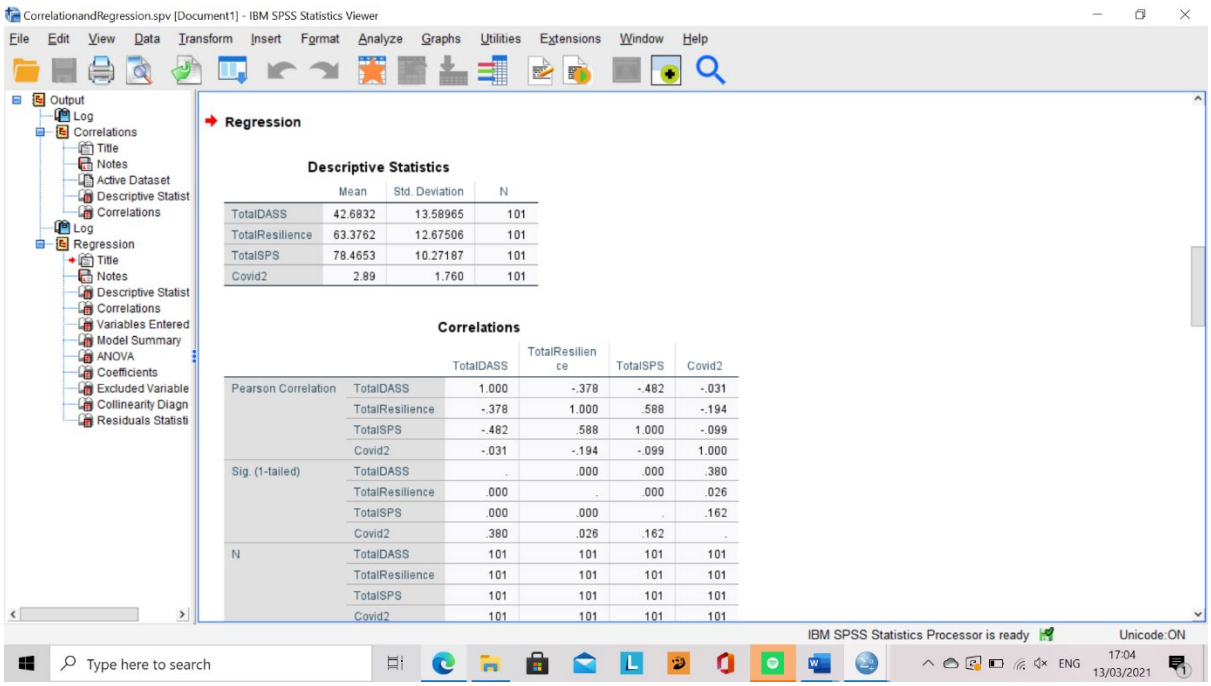
59. Zandifar, A., & Badrfam, R. (2020). Iranian Mental Health during the COVID-19 Epidemic. *Asian Journal of Psychiatry*, 51, Article ID 101990.

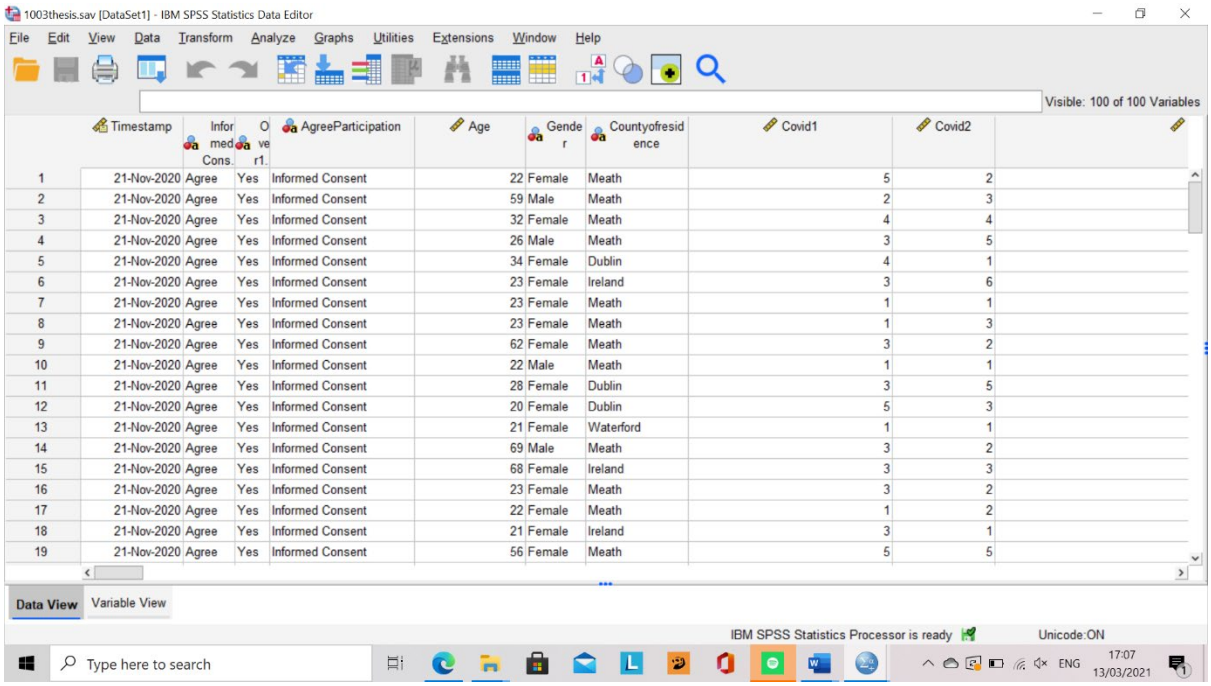
Appendices

Appendix A

Evidence of SPSS output and data set







Appendix B

Information Sheet

INVITATION

You are being asked to take part in a research study on the effects of social isolation due to covid-19 lockdown, and whether resilience can help mitigate the negative effects this may have on mental health.

My name is Roisin Barrett, I am a final year Psychology student in the National College of Ireland. This study is being carried out as part of my final year project. I am investigating the effects social isolation is having on individuals mental health, and whether their levels of resilience can help combat this.

WHAT WILL HAPPEN

In this study, you will be asked to give your name and county of residence once you have agreed to take part in the study. Once informed consent is obtained you will be given 3 questionnaires which will give an insight to your levels of social isolation, overall mental health and your levels of resilience.

TIME COMMITMENT

The study typically takes 10-15 minutes in total to complete

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time during the survey without explanation.. Participation in this study is voluntary and you have the right to omit or refuse to answer or respond to any question that has been asked of you. All data collected is completely anonymous therefore once you have submitted your answers it is not possible to withdraw consent.

You have the right to have your questions about the procedures answered. If you have any questions as a result of reading this information sheet, feel free to contact me using the details which are provided at the end of this information sheet.

BENEFITS AND RISKS

There are no known benefits or risks for you in this study.

COST, REIMBURSEMENT AND COMPENSATION

Your participation in this study is voluntary There will be no payment in return for participating in this study.

CONFIDENTIALITY/ANONYMITY

The data we collect do not contain any personal information about you except your age and general location ie., county of residence. No one will link the data you provided to the identifying information you supplied.

FOR FURTHER INFORMATION

Please feel free to contact:

Roisin Barrett

Researcher: x16309966@student.ncirl.ie

David Mothersill

Supervisor: david.mothersill@ncirl.ie

Appendix C

Informed Consent

In order to take part in this study, it is necessary for you to give informed consent.

By ticking the box below, you are agreeing that:

(1) you have read and understood the Participant Information Sheet

(2) questions about your participation in this study have been answered satisfactorily

(3) you are taking part in this research study voluntarily (without coercion).

I have read and agree with all of the above information.

☐ Agree

I am over 18 years of age

☐ Yes

By clicking this box you are giving your informed consent for participation in this study

☐ Informed Consent

Appendix D

Debriefing Form

Thank you for your time and consideration to take part in this study.

All of the data that has been collected during this study that could make you identifiable will be kept completely anonymous.

As mentioned in the introduction, some participants may find the topic of this study distressing. If you feel you were in any way negatively affected by this please do not hesitate to contact:

Pieta house: Tel: 1800 247 247
www.pieta.ie

Aware: Tel: 1800 80 48 48
Email: supportmail@aware.ie

Niteline: 1800 793 793

Jigsaw: 01 658 3070

If any participant has any question regarding the results of the study or any questions about the questionnaires please do not hesitate to contact:

Myself: x16309966@student.ncirl.ie

or my supervisor: david.mothersill@ncirl.ie

Appendix E

Depression and Anxiety Stress Scale (DASS-21).

1. I found it hard to wind down.

Never (0 points)

2. I was aware of dryness of my mouth.

Never (0 points)

3. I couldn't seem to experience any positive feeling at all.

Never (0 points)

4. I experienced breathing difficulty.

Never (0 points)

5. I found it difficult to work up the initiative to do things.

Never (0 points)

6. I tended to over-react to situations.

Never (0 points)

7. I experienced trembling (eg, in the hands).

Never (0 points)

8. I felt that I was using a lot of nervous energy.

Never (0 points)

9. I was worried about situations in which I might panic and make a fool of myself.

Never (0 points)

10. I felt that I had nothing to look forward to.

Never (0 points)

11. I found myself getting agitated.

Never (0 points)

12. I found it difficult to relax.

Never (0 points)

13. I felt down-hearted and blue.

Never (0 points)

14. I was intolerant of anything that kept me from getting on with what I was doing.

Never (0 points)

15. I felt I was close to panic.

Never (0 points)

16. I was unable to become enthusiastic about anything.

Never (0 points)

17. I felt I wasn't worth much as a person.

Never (0 points)

18. I felt that I was rather touchy.

Never (0 points)

19. I was aware of the action of my heart in the absence of physical exertion.

Never (0 points)

20. I felt scared without any good reason.

Never (0 points)

21. I felt that life was meaningless.

Never (0 points)

Appendix F

Social Provisions Scale (SPS-24).

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

1. There are people I can depend on to help me if I really need it. _____

2. I feel that I do not have close personal relationships with other people. _____

3. There is no one I can turn to for guidance in times of stress. _____ .

4. There are people who depend on me for help. _____

5. There are people who enjoy the same social activities I do. _____

6. Other people do not view me as competent. _____

7. I feel personally responsible for the well-being of another person. _____

8. I feel part of a group of people who share my attitudes and beliefs. _____

9. I do not think other people respect my skills and abilities. _____

10. If something went wrong, no one would come to my assistance. _____

11. I have close relationships that provide me with a sense of emotional security and well-being. _____

12. There is someone I could talk to about important decisions in my life. _____

13. I have relationships where my competence and skills are recognized. _____

14. There is no one who shares my interests and concerns. _____

15. There is no one who really relies on me for their well-being. _____

16. There is a trustworthy person I could turn to for advice if I were having problems. _____

17. I feel a strong emotional bond with at least one other person. _____

18. There is no one I can depend on for aid if I really need it. _____

19. There is no one I feel comfortable talking about problems with. _____

20. There are people who admire my talents and abilities. _____

21. I lack a feeling of intimacy with another person. _____

22. There is no one who likes to do the things I do. _____

23. There are people I can count on in an emergency. _____

24. No one needs me to care for them. ____

Appendix G

Connor-Davidson Resilience Scale (CD-RISC-25).

0 = Not true at all. 1 = Rarely true. 2 = Sometimes true. 3 = Often true. 4 = True nearly all of the time

1. I am able to adapt when changes occur.

2. I have at least one close and secure relationship that helps me when I am stressed.

3. When there are no clear solutions to my problems, sometimes fate or God can help.

4. I can deal with whatever comes my way.

5. Past successes give me confidence in dealing with new challenges and difficulties.

6. I try to see the humorous side of things when I am faced with problems.

7. Having to cope with stress can make me stronger.

8. I tend to bounce back after illness, injury, or other hardships.

9. Good or bad, I believe that most things happen for a reason.

10. I give my best effort no matter what the outcome may be.

11. I believe I can achieve my goals, even if there are obstacles.

12. Even when things look hopeless, I don't give up.

13. During times of stress/crisis, I know where to turn for help.

14. Under pressure, I stay focused and think clearly.

15. I prefer to take the lead in solving problems rather than letting others make all the decisions.

16. I am not easily discouraged by failure.

17. I think of myself as a strong person when dealing with life's challenges and difficulties.

18. I can make unpopular or difficult decisions that affect other people, if it is necessary.

19. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.

20. In dealing with life's problems, sometimes you have to act on a hunch without knowing why.

21. I have a strong sense of purpose in life.

22. I feel in control of my life.

23. I like challenges.

24. I work to attain my goals no matter what roadblocks I encounter along the way.

25. I take pride in my achievements.

Add up your score for each column 0 + ____ + ____ + ____ + ____

Add each of the column totals to obtain CD-RISC score = _____