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Examining the relationship between religious involvement and psychological health, loneliness, and well-being during the COVID-19 pandemic among community dwelling older adults living in Ireland

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ABSTRACT

During the COVID-19 pandemic and first lockdown in Ireland, public health restrictions created a barrier to in person religious participation. The aim of this paper is to understand the effect this had on psychological health. Data were from The Irish Longitudinal Study on Ageing (TILDA). The final sample was made up of 3044 adults living in Ireland aged 60 years and older. Relationships between religious participation and psychological health were modelled using longitudinal regression analyses. Loneliness increased between Wave 5 and COVID-19 relative to Prayer [OR = .06, 95% CI = .10, .02, $p < .01$] while Mental Health increased between Wave 5 and COVID-19 relative to Religious Attendance [OR = 1.15, 95% CI = 1.00, 1.32, $p < .05$]. Results show that religious participation had some effect on mental health and loneliness. Future research should focus on measuring the relationship at later stages of the pandemic and the use of alternative forms of religious practice.

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Religion; COVID-19; mental health; psychological health; loneliness; quality of life

Introduction

Traditionally, culture in Ireland has been intertwined with religion, particularly Roman Catholicism (Inglis, 2017). Over 80% of people aged 60 and older identify as Roman Catholic (Central Statistics Office, 2023), and over 50% of people aged 50 and older in Ireland attend religious service at least once per week (Orr et al., 2019). Importantly, religious involvement has been found to be related to better psychological health among those face adverse life events (Harris, et al., 2013; Kidwai et al., 2014). To date the effect of COVID-19 restrictions on religious involvement and the potential impact on the well-being of religious older adults has not been investigated. In March 2020, restrictions were introduced in Ireland to prevent the spread of COVID-19. It was recommended that adults aged 70 years and over limited their social participation outside of the

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home, shopped at special times, and refrained from face-to-face contact with family and friends who were not a part of their household (HSE, 2020). During these restriction periods, older adults felt increased stress, anxiety, and lower quality of life and life satisfaction, as well as experiencing increased loneliness (Burns et al., 2022; Ward, 2020). Among the restrictions enacted in Ireland, participation in in-person religious activities was prohibited at various times, particularly in the early months of the pandemic.

Religious attendance has been found to be negatively related to loneliness and psychological distress and positively related to Quality of Life (QoL), life satisfaction and well-being (Garssen et al., 2021; Krause, 2016; Moon & Kim, 2013). Spirituality was also shown to have a protective effect against depression and be associated with higher QoL (Moon & Kim, 2013; Vitorino et al., 2018). Furthermore, personal religious practice promotes emotional tools which encourage positive coping when faced with Negative life events (Fernando & Berger, 2017; Harris, et al., 2013; Kidwai et al., 2014).

It has also been shown that intrinsic religiosity, which focuses on the personal experience and perceived relationship with a higher power, was the strongest predictor of depression and quality of life among religion variables such as non-organisational religious behaviour, organisational religious activity, and spirituality in community dwelling older adults (Moon & Kim, 2013).

During the COVID-19 pandemic in Ireland, over one third of adults aged 65 and older in Ireland reported feeling lonely at least some of the time (Ward, 2020). Lockdown restrictions greatly reduced the opportunities for social interaction, including religious participation, increasing the threat of loneliness. During this period, people aged 60 and over in Ireland reported average loneliness two times higher than in 2019/2020 (Ward, 2020). Social connectedness also somewhat mediates the relationship between religious attendance and depressive symptoms, which suggests that the social benefits gained by being a part of a religious group could be responsible for some of the psychological health benefits associated with religious involvement (Orr et al., 2019).

Though in person attendance was restricted, many turned to private personal prayer. Prayer searches increased by 50% globally during this period (Bentzen, 2021), while a survey sampling Catholics in the United Kingdom found that 59% of participants sampled reported an increase in private personal prayer (Village et al., 2021). In Ireland, 87% of faith organisations provided some form of remote service (Ganiel, 2021).

Thus far, the relationships between remote religious practice and psychological health are not well understood. In a survey of German adults with a mean age of 67.45, those who used online religious service tended to report more severe depressive symptom (Kretzler et al., 2023). In a study of Irish adults aged 50 and older, more frequent online religious participation was associated with higher anxiety, but lower levels of loneliness (O'Maoileidigh et al., 2023). Other studies have found online religious practice to be associated with decreased depression and anxiety but also associated with increased loneliness (Rosenberg & Eckstrom, 2023; Yoo, 2022). This makes the relationship between religion and psychological health all the more important to explore.

With restrictions to social interaction with friends and family, and the stress of being vulnerable to the virus, the older population of Ireland would have experienced barriers to the positive religious coping behaviours outlined by Pargament (2001). The impact of restrictions on participation in religious activity during this period however are not well understood.

Using data from a large cohort of older adults, this paper examines religious involvement and psychological health in older Irish adults during the first COVID-19 lockdown.

As it has been shown that more frequent attendance of religious services is associated with better psychological health, and well-being, and less loneliness, we hypothesise that these more frequent attenders will have experienced the greatest reduction in wellbeing, psychological health, and loneliness as a result of their attendance being restricted.

Methods

Data were from The Irish Longitudinal Study on Ageing (TILDA), a nationally representative, multidisciplinary, longitudinal study of the Irish population aged 50 years and older and their partners of any age (Whelan & Savva, 2013). TILDA was designed to evaluate the ageing population of Ireland using comprehensive assessments with the goal of informing policy makers and encouraging better strategies in health and social care (Whelan & Savva, 2013). TILDA utilised the RANSAM sampling system; a comprehensive nationally representative sampling frame system based on the Irish Geodirectory (Whelan & Savva, 2013). This allowed for a multi-stage stratified sampling approach (Whelan & Savva, 2013). First, all residential addresses were grouped into clusters proportionate of socio-economic group (Whelan & Savva, 2013). Next, a set of addresses within each cluster ($n = 50$) were selected with 10 in reserve (Whelan & Savva, 2013). A total of 25,600 addresses were visited with 8,178 participants aged 50 years and older agreeing to participate in the study, achieving a response rate of 62.0% (Donoghue et al., 2017; Whelan & Savva, 2013). Commencing in 2009, TILDA has collected data every two years, with a health assessment every four years (Donoghue et al., 2017).

To-date, TILDA has collected six waves of data along with one COVID-19 self-completion questionnaire (SCQ) collected between July and November 2020 that focused on the lives of those 60 and older during the initial phase of the COVID-19 lockdown in Ireland (Ward et al., 2021). Ethical approval for TILDA was obtained from the College Ethics Committee, and informed consent was obtained from all participants prior to data collection.

Figure 1 shows how we arrived at our final analytic sample of 3,044 participants. In our analysis, we used three waves of TILDA data, Waves 4, 5, and the COVID-19 specific Wave. At Wave 4, 5971 participants completed a series of questions about their religious involvement (Figure 1). Of these, 981 did not complete Wave 5 psychological health items, leaving 5080 available participants. Of that 5080, 3557 completed the COVID-SCQ, with 339 declining to complete the psychological health section. Finally, an additional 170 participants under 60 years were excluded, leaving 3044 in the final sample.

Religious involvement

Religious involvement was measured most recently at Wave 4 in 2016, with four single item measures (Religious Attendance; Religious Importance; Comfort and Strength; Frequency of Prayer). This data was collected two years prior to the baseline Wave 5 psychological health measures. There is evidence to support the stability and even increase in religious participation, with a decline in the oldest age groups (Hayward & Krause, 2013). It has also been reported that over 50% of older adults in Ireland attend religious service at least once per week (Orr et al., 2019). Participants who reported no religious

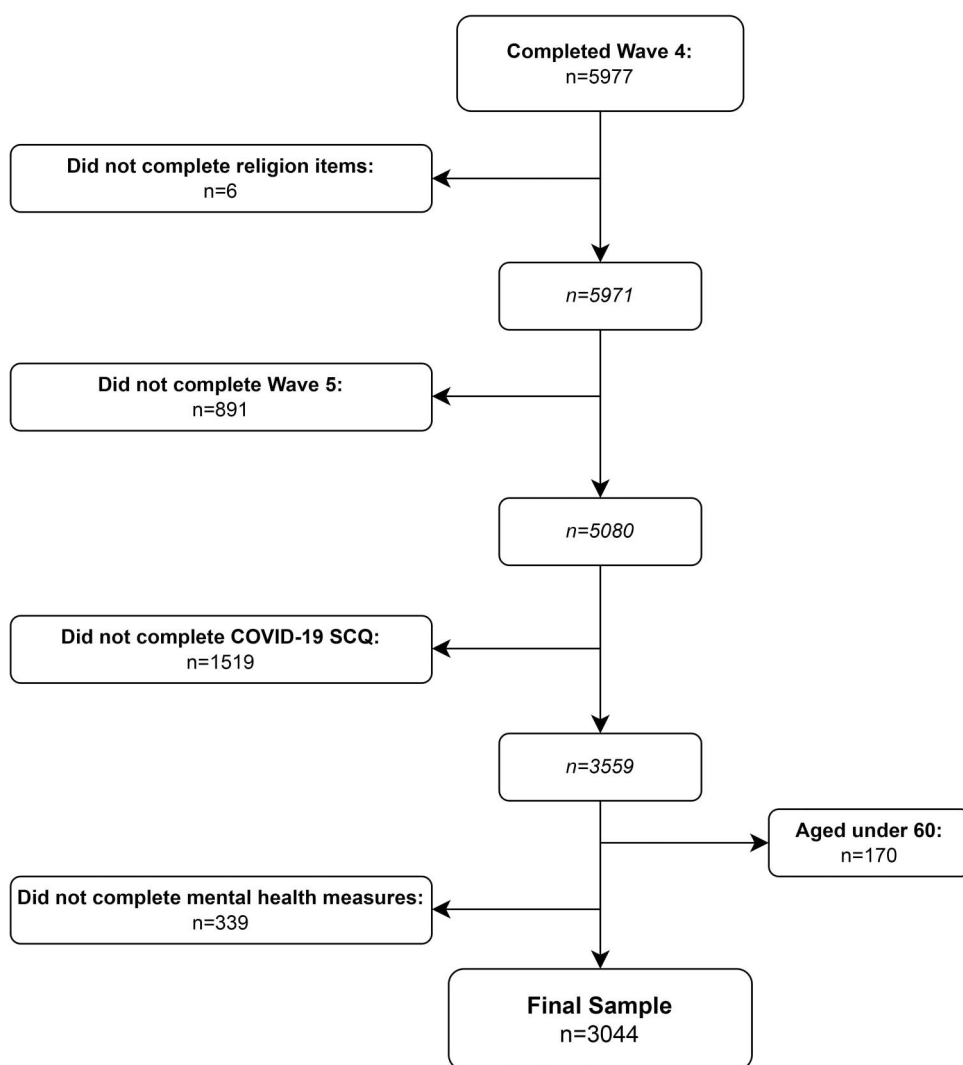


Figure 1. Flow chart describing how the final sample was parsed.

affiliation were routed past this set of questions. These participants were added as a “non-religious” comparison group to each religious involvement variable.

Religious Attendance: Religious attendance was measured with the following question: “About how often do you attend religious service?” The item was scored from 0–6, with possible responses of 6 (never/almost never), 5 (once or twice a year), 4 (every few months), 3 (once or twice a month), 2 (once a week), and 1 (more than once a week). The variable was reverse coded prior to analysis for ease of interpretation. The non-religious category was coded as 0.

Religious Importance: Religious importance was measured with the following question: “How important would you say religion is in your life?” This item was scored from 0–3, with possible responses of 1 (very important) 2 (somewhat important) and 3 (not too important). For analysis, the variable was reverse coded for ease of interpretation. The non-religious category was coded as 0.

Comfort and Strength: To measure finding comfort and strength in religion, a single item was asked: “Do you find that you get comfort and strength from religion or not?”. Possible responses were 1 (No) and 2 (Yes). The non-religious category was used as a reference category for analysis.

Frequency of Prayer: Prayer was measured with a single item which asked: “About how often would you pray, apart from religious services?”. Possible responses were 1 (More than once a day) 2 (Once daily) 3 (A couple of times a week) 4 (Once a week), 5 (Less than once a week) and 6 (Never). The variable was reverse coded prior to analysis for ease of interpretation. The non-religious category was coded as 0.

Longitudinal analysis loneliness, quality of life, stress, self-rated mental health

The following variables were modelled using a multi-level approach to measure the change in psychological health between Wave 5 and COVID-19. Each of these variables were chosen for multilevel models based on their having appropriately comparable measures at baseline and at COVID-19.

Loneliness: TILDA uses a modified version of the University of California Los Angeles (UCLA) Loneliness scale (Russell, 1996). This modified scale asks five questions: four positively framed, and one negatively framed question. The scale offers three possible responses: 0 (Hardly ever or never), 1 (Some of the time), and 2 (Often). The scale is summed, ranging from 0-15, with higher scores representing higher levels of loneliness.

Quality of Life (QoL): The Control, Autonomy, Pleasure and Self-Realization-12 (CASP-12) (Wiggins et al., 2008) was designed to measure subjective quality of life in older people from a psychosocial perspective. This 12 item Likert scale is a highly reliable and valid and has been used previously in examining the older population of Ireland (Sexton et al., 2015). The scale is summed, with higher scores indicating higher levels of loneliness.

Stress: The Perceived Stress Scale-4 (PSS-4) (Cohen et al., 1983) is a four item, five-point Likert scale that is designed to be a short, reliable, and accessible measure of subjective stress (Mitchell et al., 2008). The scale is summed, ranging from 0-16, with higher scores representing higher levels of stress.

Self-Rated Mental Health: (SRMH) was measured using a single item. At Wave 5 participants were asked “What about your emotional or mental health”, and during the COVID-SCQ participants were asked “What about your emotional or mental health during the COVID-19 pandemic?” Both measures had possible responses of 1 (Excellent), 2 (Very Good) 3 (Good) 4 (Fair) 5 (Poor). For analysis, the responses were recoded into two categories 0 (Fair/Poor) and 1 (Excellent/Very Good/ Good).

Control variables

Several known covariates of the dependent variables were controlled for, including age, gender (male, female), education (primary, secondary, third level), self-rated physical health (Excellent, Very Good, Good, Fair, Poor), and marital status (Married, Widowed, Divorced, Never Married).

Social connectedness was also controlled for as it has been found to mediate the relationship between religious involvement and psychological health (Orr et al., 2019). To measure

social connectedness at Wave 5, participants were asked how frequently they socialised with family, children, and friends. At COVID-19, a digital option was included (phone calls, zoom, and text messages). We created a composite score by summing both social connectedness variables and standardising as a z score. To test the validity of this new variable, it was tested against known associates of social connectedness, such as gender, age, marital status, and education, and found to predict each in the expected direction.

Analysis strategy

Prior to the longitudinal analysis of QoL, SRMH, loneliness, and stress, model assumptions were tested using residual plots and histograms. The stress variable was found to approximate a Poisson distribution; the variance was found to exceed the mean; thus, a negative binomial mixed effects model was used to analyse the change in stress between Wave 5 and COVID-19 relative to religious involvement. The QoL variable was negatively skewed violating the assumption of normality so, prior to analysis, a cubic transformation was used to ensure the suitability of the variable. Mixed effects logistic regression was used to model SRMH. Multilevel linear regressions were used to model the change in both QoL and Loneliness relative to religious involvement.

For each of the negative binomial models, results are presented with incidence rate ratios (IRR) and 95% confidence intervals. This is a relative difference measure used to compare the incidence rates of an event and can be interpreted as plus or minus 1, with values below 1 indicating a negative relationship and values above 1 indicating a positive relationship.

The results of each of the mixed effect linear regression models are presented with beta coefficients (β). The results of the mixed effects logistic regression are presented with odds ratios (OR), which measures the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure. The OR values can be interpreted as plus or minus 1, with values below 1 indicating a negative relationship and values above 1 indicating a positive relationship.

Missing data were dropped using a listwise deletion method; any case with a missing value in one or more of the religion or psychological health variables were dropped from analysis as outlined in [Figure 1](#). Statistical analyses were performed using Stata version 17 (Stata Corp, 2021). Statistical significance was set at $p < .05$.

Results

Sample demographics

Sample demographics are presented in [Table 1](#). 58.5% of the sample identified as female, 70% reported being married, and 62.4% reported having at least a secondary level education. The mean age of the sample at Wave 5 was 69.8 years (SD = 7.7) and 71.4 years (SD = 7.7) at COVID-19.

Sample breakdown by religious involvement and psychological health

Most participants (57.7%) report attending religious service at least once per week. Among those who are religious, 79.5% report that religion is somewhat or very important,

Table 1. Descriptive characteristics of sample at Wave 5 and COVID-19.

Sample characteristic	Wave 5	COVID-19
Gender, % (n)		
Female	58.5 (1731)	–
Male	41.5 (1313)	–
Marital Status, % (n)		
Married	69.9 (2128)	–
Never Married	8.5 (259)	–
Separated/Divorced	6.8 (208)	–
Widowed	14.8 (450)	–
Highest Level of Education % (n)		
Primary or less	18.4 (561)	–
Junior Cert or Equivalent	21.2 (644)	–
Leaving Certificate	20.0 (549)	–
Diploma or Certificate	23.4 (713)	–
Degree or Higher	19.0 (578)	–
Age (years), mean (SD)	69.8 (7.7)	71.4 (7.7)
Age Group, % (n)		
50–59 years	6.6 (202)	0.0 (0)
60–69 years	45.7 (1392)	45.5 (1386)
70–79 years	34.8 (1060)	37.8 (1151)
80+ years	12.8 (390)	16.7 (508)
Self-rated Physical Health, % (n)		
Excellent	15.4 (468)	16.9 (510)
Very Good	38.4 (1165)	40.9 (1234)
Good	34.6 (1052)	30.8 (928)
Fair	10.2 (311)	9.6 (288)
Poor	1.4 (41)	1.8 (54)
Social Connectedness, mean (SD)	2.9 (0.89)	3.3 (0.71)

75.1% report finding strength and comfort in religion, and 55.5% report praying at least once per day (Table 2).

Overall, mean loneliness increased throughout the sample, from 1.40 (SD = 1.88) at Wave 5, to 4.38 (SD = 2.12) during the first lockdown period, as did mean scores in stress from 3.58 (SD = 2.93) at Wave 5 to 4.38 (SD = 4.38) at COVID-19. The largest increase in loneliness was among those who report praying more than once per day, increasing from 1.54 (SD = 1.98) to 2.39 (SD = 2.16).

From Wave 5 to the first COVID-19 lockdown period, the percentage of participants who reported having very good or excellent mental health decreased from 93.0% to 84.3% ($n = 2539$). The largest decrease in proportion of those who report having excellent or very good mental health was among those who report never or almost never attending religious service, from 92.7% at Wave 5, to 77.1% during the initial lockdown period.

Longitudinal multi-level analysis of stress, self-rated mental health, quality of life, and loneliness:

Model results are presented in Table 3. A significant interaction between more frequent religious attendance and SRMH from Wave 5 to COVID-19 was found [OR = 1.15, 95% CI = .1.00, 1.32, $p < .05$], indicating that those who attend religious service more frequently were more likely to report higher SRMH between Wave 5 to COVID-19 (Table 3). Religious importance, finding strength and comfort in religion, and prayer were not found to significantly interact with SRMH.

Table 2. Prevalence of religious affiliation, attendance, importance, strength and comfort, and frequency of prayer.

	Wave 4 % (n)
Religious Affiliation	
Roman Catholic	84.9 (2584)
Anglican/Episcopalian	3.3 (100)
Methodist	0.4 (11)
Presbyterian	0.8 (23)
Other Christian	1.6 (50)
Other Religion	0.9 (28)
No Religion	8.1 (245)
Religious Attendance	
Never/Almost Never	10.2 (284)
Once or Twice a year	11.8 (331)
Every few months	10.3 (287)
Once or twice a month	9.1 (277)
Once a week	43.9 (1229)
More than once a week	13.8 (386)
Religious Importance	
Very important	46.9 (1312)
Somewhat important	32.6 (911)
Not too important	17.0 (475)
Not at all important	3.50 (98)
Strength and Comfort	
Yes	75.1 (2101)
No	23.5 (658)
Frequency of prayer	
More than once a day	22.0 (670)
Once daily	33.4 (1018)
A couple of times a week	11.3 (343)
Once a week	6.0 (181)
Less than once a week	10.3 (312)
Never	16.9 (515)

There was also a statistically significant interaction between Wave 5 and COVID-19 in terms of loneliness relative to prayer reported at Wave 4 [$B = .06$, 95% CI = $-.10, -.02$, $p < .01$] suggesting those who reported more frequent prayer were more likely to experience increased loneliness between Wave 5 and COVID-19. There were no significant interactions between loneliness and religious attendance, religious importance, or finding strength and comfort in religion.

No significant interactions were found between psychological health and stress or QoL.

Discussion

This research examined the relationship between religious involvement and psychological health during the first COVID-19 lockdown period among a large cohort of older adults living in Ireland.

Self-rated mental health increased between Wave 5 and COVID-19 among those who report attending religious service more frequently. Religious involvement has been shown to have a positive effect on psychological health (Garssen et al., 2021; Moon & Kim, 2013; Vitorino et al., 2018). Perhaps most analogous to this research, religious involvement has been shown to encourage positive coping behaviour during negative life events (Fernando & Berger, 2017; Harris et al., 2013; Kidwai et al., 2014). Religious involvement also

Table 3. Multilevel model results: change in psychological health relative to religious attendance, importance, strength and comfort.

	Stress		Self-rated Mental Health		Quality of Life		Loneliness	
	IRR	95% CI	OR	95% CI	B	95% CI	B	95% CI
Attendance	1	.98, 1.01	.94	.83,1.07	188.42	−48.18, 425.02	−.02	−.07, .03
Attendance#Wave	.99	.97, 1.01	1.15*	1.00, 1.32	162.63	−69.07, 394.33	.04	−.01, .09
Importance	1	.97, 1.03	.94	.79,1.12	57.3	−279.03, 393.52	.02	−.05, .08
Importance#Wave	1.02	.99, 1.04	1.09	.90,1.33	295.4	−30.40, 621.14	.04	−.03, .12
Comfort: Yes	.99	.89, 1.11	1.01	.48,2.13	486.55	−926.59,1774.27	.01	−.27, .29
Comfort: No	.94	.83, 1.80	1.28	.58,2.83	225.02	−1274.58, 1724.61	−.04	−.33, .26
Comfort: Non-religious	REF	REF	REF	REF	REF	REF	REF	REF
Comfort#Wave: Yes	.93	.83, 1.05	Y: 1.03	.45, 2.39	798.6	−557.20, 2154.40	.24	−.04, .52
Comfort#Wave: No	.99	.88, 1.12	N: 0.69	.28, 1.70	401.8	−1040.19, 1843.79	.21	−.09, .51
Comfort#Wave: Non-Religious	REF	REF	REF	REF	REF	REF	REF	REF
Prayer	.99	.98, 1.01	.95	.86,1.06	120.74	−82.34, 325.98	.02	−.02, .06
Prayer#Wave	1.01	.99, 1.02	1.01	.89,1.13	178.46	−16.15, 373.06	0.06**	.10, .02

Note: IRR: Incidence Rate Ratio; OR: Odds Ratio; B: Beta Coefficient. * $p < .05$; ** $p < .01$; *** $p < .001$. All models adjusted for age, gender, education, marital status, self-rated physical health, and social connectedness.

promotes less risky physical health behaviours, such as hazard drinking and drug use, which in turn is linked to better psychological health (King et al., 2013). These effects may have lingered over the COVID-19 pandemic and lockdown.

Religious attendance reported prior to the pandemic was hypothesised to negatively affect psychological health due to the government restrictions limiting access to religious services. However, Religious attendance was not found to be Significantly negatively related to the change in any of the psychological health variables. This result may be due to those who are frequent attenders practicing intrinsically as well as in person. Additionally, the availability of remote services, such as online prayer groups or religious service streaming, may have replicated in person religious experience while maintaining government guidelines to socially distance. During the COVID-19 pandemic, 87% of faith organisations provided some form of remote service (Ganiel, 2021). Remote religious practice was found to be utilised among samples of other European countries (Huygens, 2021; Molteni et al., 2021; Village et al., 2021), however it should be noted that among a sample of women living in Belgium through the pandemic, several reported remote religious practice to be an inadequate replacement for in person participation (Huygens, 2021). Among a sample of Catholics living in the United Kingdom who reported engaging in live streaming services, 85% reported finding them easy to access, 72% reported feeling blessed, 60% reported feeling inspired, 56% reported feeling energised, and 51% reported feeling fulfilled (Village et al., 2021). Among adults aged 60 and older, 43.1% accessed remote service at least once per week while 47.6% reported either never accessing or only having accessed once or twice per year (O'Maoileidigh et al., 2023). Additionally, these services would not have replaced the social interactions experienced through in person religious involvement.

There was an increase in loneliness between Wave 5 and the first COVID-19 lockdown relative to prayer. This could be the indicative of barriers to social aspects of religion. This result also may be due to limited opportunities for social interaction during the pandemic lockdown, especially among older adults who were asked to cocoon. Social connectedness has been shown to mediate the relationship between religious attendance and psychological health (Orr et al., 2019). It should be noted that, although not significant, loneliness increased between Wave 5 and COVID-19 relative to attendance, which may be related to the increase in loneliness found relative to prayer. Additionally, while mere belief in a higher power has been shown not to affect loneliness, the perceptions of the relationship with a higher power has been found to be negatively related to loneliness (Schwab & Petersen, 1990). As private prayer is indicative of a relationship with a higher power, that relationship may have been perceived to have changed negatively with a lack of in person attendance.

Another reason for this result may be negative coping behaviour when faced with adversity. Pargament (2001) outlines several behaviours associated with positive coping, including seeking spiritual support from religious leaders, seeking support from religious community members, and collaborative religious coping. Lockdown restrictions would have created a barrier to these behaviours and thus, people who pray more frequently may have turned to negative coping during this period, which has been shown to be negatively related to psychological health (Pargament et al., 1998). Follow up research should examine the effect of prayer on loneliness further into the COVID-19 pandemic which may show a stronger trend in loneliness as it relates to religious involvement.

This study had limitations. The most recent data on religious involvement was collected in 2016, two years prior to the baseline psychological health data used for this study, and four years prior to the first lockdown phase of the COVID-19 pandemic in Ireland. Data from the CSO (Central Statistics Office, 2023) shows that the Irish population of older adults has an extremely high prevalence of Roman Catholic identity and a large percentage of older adults in Ireland report attending religious service at least once per week thus, religious activity is likely stable (Orr et al., 2019).

All COVID-19 data was collected between June and November 2020. This period encompassed the first lockdown period and the subsequent easing of restrictions. Ireland has since experienced several periods of varying levels of restrictions. It is therefore important for future research to examine later points in the pandemic when psychological health may have been further altered. As such, the results are generalisable only to those who engage in religious activity not to those who are non-religious but are spiritually active.

The study also had several strengths. First, the use of a large, nationally representative cohort, which makes for more accurate results and a smaller margin of error and makes the results generalisable nationally. The TILDA dataset collects extensive information about their participant's social, economic and health circumstances allowing for a range of known confounders to be controlled for. To add to this was the availability of a large sample during the early stages of the COVID-19 pandemic, which allowed researchers to observe psychological health at a unique time point during the first lockdown period of the pandemic. In addition to the large sample size, the collection of repeated measures of stress, loneliness, quality of life, and self-rated made it possible to use sophisticated regression analyses to measure the change in each outcome variable, rather than rely on cross sectional data, which allowed for the measurement of psychological health over time as it relates to religious involvement.

Conclusion

During the COVID-19 pandemic lockdown, older people were asked to sacrifice a great deal of social interaction. Measures of religious involvement and spiritual attitude should be utilised to gain a clearer picture of the way in which religion affected psychological health during the COVID-19 pandemic. It is particularly important topic as restrictions could have a damaging effect on the older population and policy makers should be informed before any new restrictions are imposed.

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Disclosure statement

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