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Stability and shifts in the combined positive and negative mental health of clergy: A longitudinal latent class and latent transition analysis study of united methodist pastors before and after the onset of COVID-19

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ABSTRACT

COVID-19 and its associated restrictions presented unprecedented challenges for those in the helping professions. In this study, we seek to understand how the mental health of those who belong to one specific helping profession – clergy – changed in the context of COVID-19. Using longitudinal data of a sample of United Methodist pastors from the North Carolina Clergy Health Initiative, we conduct both cross-sectional and person-centered analyses to investigate how the overall mental health of this occupational group changed, as well as how different subgroups of clergy fared within the context of the pandemic, depending on their well-being prior to the onset of COVID-19. We found that the mental health of pastors suffered within the context of the pandemic, but that individual changes in mental health differed based on what the combined positive and negative mental health patterns of clergy were prior to the pandemic, for which we used latent class analysis to identify as Flourishing, Distressed, Languishing, or Burdened but Fulfilled. Of these subgroups, having Flourishing pre-pandemic status was protective of mental health following the onset of COVID-19, whereas the other three subgroups' mental health statuses worsened. This study is the one of the first longitudinal studies of helping professionals which has tracked changes in mental health before and after the onset of COVID-19. Our findings demonstrate the utility of considering positive and negative mental health indicators together, and they point to certain groups that can be targeted with well-being resources during future periods of acute or abnormal stress.

1. Introduction

COVID-19 and the associated health risks and social and organizational restrictions presented unprecedented challenges for those in the helping professions, affecting their mental health. Research has documented high levels of mental distress among doctors, nurses, paramedics, police officers, social workers, and teachers throughout the COVID-19 pandemic. However, the mental health of clergy during the pandemic has been, on the whole, overlooked. As clergy were "on the front lines" of the pandemic tending to individuals' spiritual and religious well-being during a time of nation-wide sickness and upheaval, this is a key omission in the study of the well-being of helping professionals during COVID-19.

In this study, we sought to understand how the mental health of clergy changed after the onset of COVID-19 in 2020. We investigated this using both cross-sectional and person-centered approaches, to understand the ways that our sample of clergy changed in the aggregate, as well as how clergy fared during the pandemic depending on their mental health status prior to the pandemic. To do this, we used the 2014–2021 Clergy Health Initiative Longitudinal Survey of United Methodist Church clergy. We conduct a repeated measures latent class analysis (LCA) using data from 2014 to 2019, followed by a latent transition analysis (LTA) including the 2021 data to examine how clergy mental health changed during this period.

We identified four distinct subgroups of clergy according to their mental health prior to the onset of COVID-19 and related stressors, and then investigated how the experiences of clergy within each subgroup changed between 2019 and 2021. Using a combination of positive and negative mental health measures, we found that while mental health worsened for our sample of clergy in the aggregate, the severity of the decrease and the potential for resilience differed according to individual clergy's mental health patterns in the years leading up to the pandemic.

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In addition to highlighting the complex ways that helping professionals responded to the demands on the pandemic, this study sets forth a method to identify which individuals may most benefit from additional support during future periods of acute occupational stress.

2. Background

2.1. COVID-19, helping professions, and mental health trajectories

Mental health in the U.S. population has been worsening in recent years, even prior to the onset of COVID-19. In the decade prior to the pandemic, deaths due to drug overdose (Shiels et al., 2018) and suicide rose (Garnett et al., 2022), the prevalence of anxiety disorders rose (Goodwin et al., 2020), and the prevalence of major depression rose (Weinberger et al., 2018; Greenberg et al., 2021). The onset of the COVID-19 pandemic accelerated these trends, with one national study finding that the prevalence of serious mental distress was eight times higher among adults in 2020 compared to 2018 (Twenge and Joiner, 2020).

Those in helping professions specifically experienced high rates of mental distress since the onset of the COVID-19 pandemic. This was most notable among healthcare workers, including nurses, doctors, and paramedics. Many studies have demonstrated high levels of anxiety symptoms, depression symptoms, PTSD symptoms, insomnia, and burnout (Fauzi et al., 2020; Kim et al., 2021; Magnavita et al., 2020; Shah et al., 2020; Vizheh et al., 2020; Asaoka et al., 2021; Kok et al., 2021; Roberts et al., 2021; Sampaio et al., 2021; Varghese et al., 2021; Hendrickson et al., 2022; Petrie et al., 2022; Wagner et al., 2023; Umbetkulova et al., 2023). These studies point to increased occupational stress for individuals in these occupations, stemming from the lack of preparedness in the healthcare system for the conditions caused by COVID-19, uncertainty about personal safety at work and frequent exposure to COVID-19, and the challenge of following changing and sometimes contradictory operating protocols within the medical system regarding COVID-19.

However, medical professionals were certainly not the only professional group acutely affected by the conditions of the COVID-19 pandemic. Research also demonstrated the difficulties faced by teachers, social workers, police officers, and child protection workers during COVID-19, and the associated mental health penalties. These occupational groups also became recognized as "front line" workers responding to the heightened social and emotional needs of communities in the context of COVID-19. In a similar manner to the research among health professionals, studies have demonstrated high levels of depressive symptoms, anxiety symptoms, burnout, and emotional exhaustion among helping professionals outside of the medical field (Baker et al., 2021; Ho et al., 2022; Jakubowski and Sitko-Dominik, 2021; Kush et al., 2022; Roberts et al., 2021; Lizana et al., 2021; Kim et al., 2022).

Two things of note stand out from this body of research. First, these studies overwhelmingly use data collected after the onset of COVID-19 to show high levels of mental distress or increases in mental distress among medical and other helping professionals during the COVID-19 pandemic. Though these studies certainly demonstrate high levels of mental distress, the lack of a clear within-person longitudinal comparison using data collected prior to and during the COVID-19 pandemic makes it difficult to assess the degree to which mental distress changed in the context of COVID-19. To our knowledge, only three studies have examined longitudinal trends of medical or helping professionals' mental health before and after the onset of COVID-19 (Asaoka et al., 2021; Kok et al., 2021; Lizana et al., 2021). These three studies each employ only one measure of mental health,[1] are based on small samples with limited response rates,[2] and rely on only one data point prior to the onset of COVID-19. Each of these studies found that mental health worsened among their sample after the onset of COVID-19, but they are limited by a lack of respondent information prior to COVID-19 and scant analysis of respondent demographic characteristics. These works are also based on samples located outside of the U.S. context. Additional research is needed to understand how these changes correspond with the trajectory of professionals' mental health prior to the pandemic, how these trends vary by demographic characteristics, and how these patterns may or may not replicate in the U.S. setting.

Second, these studies have thus far assessed the mental health of professionals who worked to serve individuals' physical well-being, emotional well-being, and social well-being during the difficulties of the pandemic. To our knowledge, no longitudinal study to date has directly measured the mental distress among those servicing individuals' spiritual and religious well-being – namely, clergy – in the context of COVID-19. We argue that this group of professionals was a key helping profession on the "front line" of pandemic response, and will be for future periods of turmoil, such that their well-being during the COVID-19 pandemic is important to account for.

2.2. Clergy, pastoral ministry, and COVID-19

Though no work to date has assessed clergy mental health during COVID-19 using individual-level longitudinal data, research has accounted for the ways that clergy are coping with COVID-19 and its corresponding impact on pastoral ministry. Johnston et al. (2022) found that COVID had "fundamentally unsettled routine ways of doing ministry" for clergy (p. 375). Prior to the onset of COVID-19, the fundamental occupational responsibilities of pastors included leading worship services and providing pastoral care to parishioners. During COVID-19, pastors had to quickly figure out how to provide worship and care to parishioners in a manner conducive to social distancing guidelines, often mediated by technology (Raiber and Seabright, 2020; Adegboyega et al., 2021; Ben-Lulu, 2021; Funchess et al., 2022; Johnston et al., 2022; Torres-Pruñonosa et al., 2022). Pastoral care needs also increased during COVID-19, as congregants were coping with social isolation and the deaths of family members and friends. Pastors lacked the ability to interact with congregants and to care for them in direct ways, while calculating the risk between seeing parishioners and potential COVID-19 exposure (VanderWeele, 2020; Johnston et al., 2022). Finally, congregational finances were often tenuous during COVID, as pastors had to come up with new strategies to keep their congregations financially viable (Eagle et al., 2022; Funchess et al., 2022). These experiences caused drastically increased levels of occupational stress for pastors. Importantly, the severity of these difficulties varied by numerous factors, including congregational resources, geographical location, pastoral demographics, and religious tradition (Eagle et al., 2022; Holleman et al., 2022; Johnston et al., 2022).

However, it should not be overlooked that some research on the experience of pastors during COVID-19 suggests that this time may have had the potential to increase job satisfaction, fulfillment, and enthusiasm among pastors. Innovating and rethinking what it meant to engage in congregational leadership during COVID-19 was novel or even invigorating for some pastors and their ministries (Johnston et al., 2022; Taylor and Benac, 2022). Congregational participation sometimes increased in the switch to online worship services, which calmed fears

[1] Burnout (Kok et al., 2021); quality of life (Lizana et al., 2021); and psychological distress (Asaoka et al., 2021).

[2] N = 252, RR = 53.3% at baseline (Kok et al., 2021); N = 63, RR = 41% at baseline (Lizana et al., 2021); N = 398, RR = 4.1% at baseline (Asaoka et al., 2021).

about the future of their congregations (Funchess et al., 2022; Johnston et al., 2022). Some pastors reported that they were required to rely on God more so during COVID-19 than previously, which made them feel closer to God and more spiritually fulfilled (Village and Francis, 2021; Funchess et al., 2022). It may be the case that pastors were uniquely positioned to make spiritual meaning out of the pandemic, thus buffering the potential negative effects of COVID-19 and its associated restrictions and stressors.

Despite the upheaval in the lives and work of pastors during COVID-19, peer-reviewed research has not yet examined the ways that pastoral mental health changed during COVID-19. One study found that Black pastors in Mississippi experienced high levels of loneliness, depression, and grief during COVID-19 (Funchess et al., 2022), while another found that Church of England pastors in the United Kingdom reported high levels of fatigue and burnout during COVID-19 (Village and Francis, 2021). In addition to these studies reporting high levels of negative emotions, Francis and Village (2023) found that Episcopal priests in the United States self-reported both increased negative affect (such as frustration and exhaustion) alongside increased positive affect (such as hopefulness and confidence during the pandemic). However, these studies were cross-sectional, and thus cannot speak to how pastoral mental health changed comparing before and during the pandemic.[3] Using data collected just prior to the onset of COVID-19, researchers found that Mainline Protestant clergy specifically demonstrated high levels of depressive symptoms (Holleman and Eagle, 2023). Though this research cannot speak to clergy mental health during COVID-19, it indicates that the mental health of Mainline clergy specifically is important to track during this time of upheaval.

3. Data and methods

We used data from the Clergy Health Initiative Longitudinal Survey, a longitudinal study of United Methodist Church (UMC) clergy in North Carolina, from 2014 to 2021. All UMC clergy in North Carolina with current appointments, including recently retired clergy, were invited to participate in an hour-long, online survey. Data were collected between the months of August and October in 2014, between August and November in 2016 and 2019, and between August and December in 2021. The total number of participants ranged from 1454 to 1802 for each of the current study's four waves, with response rates ranging between 72 and 75%. (See Appendix B for details.) For our longitudinal analyses, we limited our sample to clergy who were engaged in congregational ministry at the time of data collection—resulting in an analytical sample of 1238 individuals with data from at least three waves between 2014 and 2021.

Considering the broader context of the pandemic at the time of data collection in the fall of 2021, K-12 public schools had recently re-opened for in-person and hybrid instruction, with vaccines becoming more widely available by the spring of that year (Vaughan and Hui, 2021). Colleges and universities had also begun to re-open in the fall, but concerns remained due to the spread of the delta variant (Anderson et al., 2021). By December 2021, the delta variant was largely replaced by the omicron variant, which continued to spread at high rates into the spring of the following year. As such, we consider the timing of data collection during the fall of 2021 to have occurred at a time when Americans were becoming more comfortable resuming many everyday activities, but the concerns around COVID-19 and its impacts markedly remained (Gramlich, 2022).

3.1. The United Methodist Church

The United Methodist Church (UMC) is one of the largest Protestant denominations in the United States, involving 5.7 million members (The United Methodist Church Online Directory and Statistics, 2021) and representing 9% of all religious congregations in the United States (Chaves et al., 2020). In North Carolina, the UMC is organized into two Annual Conferences with a combined membership in 2021 of almost 500,000 people, 2300 churches, and 1800 clergy. Theologically, the UMC falls into the designation of Mainline Protestant, a category of moderate-to-liberal Protestant Christian denominations, characterized by an emphasis on social and economic justice, tolerance of diverse religious beliefs, and openness to modernity (Steensland et al., 2000). Our sample of UMC clergy in North Carolina has a similar demographic composition to all Mainline clergy in the United States (Chaves et al., 2022).

When COVID-19 was recognized as a national emergency in the United States in March 2020, the UMC, like other religious denominations and congregations, had to quickly determine how to proceed with religious life amidst shutdowns and social isolation requirements. Though a North Carolina executive order passed in March 2020 limited indoor religious gatherings, this order was overturned by a federal court in May 2020, meaning congregations were allowed to set their own COVID-19 protocols (Bridges, 2020). Neither of the two UMC conferences in North Carolina issued direct orders, but instead issued recommendations to congregations to honor public health guidelines encouraging mask-wearing and social distancing (UMC Western NC Conference, 2020; UMC NC Conference, 2020). Thus, individual clergy had considerable freedom to determine their congregation's response to COVID-19, in line with their specific needs, preferences, and resources (Johnston et al., 2022). Most UMC congregations in North Carolina pursued a combination of online, in-person but socially distanced or outdoor, or in-person and not socially distanced worship services throughout 2020 and 2021, often shifting worship modes with the fluctuating COVID-19 risk in their geographical area. Almost all UMC congregations in North Carolina were meeting in-person for worship services by the end of 2021, though some congregations continued to follow social distancing or other measures to avoid the spread of COVID-19 (UMC NC Conference, 2021).

In addition to COVID-19, the period of data collection for this study encompasses increased upheaval and division in the UMC. The UMC (as of 2023) is currently undergoing a denominational schism over LGBTQ rights – specifically, the issues of ordaining clergy in same-sex relationships and clergy performing the weddings of same-sex couples (Smith, 2023). Though the UMC traditionally remained ambivalent on the full inclusion and acceptance of LGBTQ individuals (Cadge et al., 2008; Udis-Kessler, 2008), the issue came to the fore of denominational debates in 2016. Between 2016 and 2019, the UMC created a taskforce to study the issue and make recommendations, to be presented at the 2019 international gathering of the UMC denominational leadership. The 2019 recommendation to the denomination endorsed a conservative view towards LGBTQ inclusion, indicating that more liberal-leaning congregations would likely seek to eventually leave the denomination. However, because of protracted negotiations and delays resulting from the COVID-19 pandemic, more conservative congregations decided to initiate the split. Political polarization and rising tension over ideological differences impacted the UMC during this time, much like the rest of the US (Pew Research Center, 2022). No congregations in North Carolina had disaffiliated during the period of data collection for this study.

[3] The Church of England has also produced a non peer-reviewed report, based on a longitudinal study of 473 Anglican priests in the United Kingdom (response rate = 24%). Comparing data from 2019 to 2021, the Church of England reported that average experiences of positive affect, measured by the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS), dropped slightly, from an average of 50 to 47.5 (McFerran and Graveling, 2021). The WEMWBS scores reflect discrete types of positive affect, such as feeling confident or feeling useful, and do not directly correspond to clinically relevant symptoms of diagnosable conditions.

3.2. Analytic strategy

Our analytic approach consisted of three main components. First, we examined cross-sectional data to consider aggregate changes in mental health among clergy from 2014 to 2021. We focused on symptoms of negative mental health, specifically depression, anxiety, and burnout, and on indicators of positive mental health and flourishing. In doing so, we were able to study how the mental health of our sample of clergy changed in aggregate before and after the onset of COVID-19 across multiple dimensions.

Second, to explore within-person changes in mental health, we conducted a repeated measures latent class analysis (LCA) using survey measures from 2014, 2016, and 2019. We identified subgroups among our sample of clergy who experienced similar latent patterns of baseline mental health symptoms including depression, anxiety, burnout, and flourishing. LCA is a data reduction technique that identifies latent classes (i.e. subgroups of individuals in the population) with distinct patterns of responses to specified survey measures, called indicators (Lanza et al., 2007). Using LCA, we identified distinct subgroups of mental health experiences among our sample of clergy, estimated the prevalence of each subgroup in the population, and calculated the item-response probabilities of each indicator across all identified subgroups, which we used to describe and distinguish each subgroup from one another. We also examined how these subgroups of clergy mental health experiences vary by sociodemographic and ministry-related characteristics. We used both the one-step approach (i.e. the LCA model and covariate calculations are estimated simultaneously, using LCA with covariates) and the step-wise approach (i.e. individuals are first assigned to their most likely latent class and then variations by covariates are estimated separately, using multinomial logistic regressions) to explore these covariate relationships (Bolck et al., 2004; Vermunt, 2010).

Third, we used latent transition analysis (LTA) to examine the likelihood of stability or change in mental health among clergy before and after the onset of COVID-19 (Lanza et al., 2015).[4] Using the latent subgroups of clergy mental health that we identified in the repeated measures LCA, we conducted LTA to calculate the relative prevalence of each mental health subgroup in 2019 and 2021, and the transition probabilities of whether those in a given subgroup based on their 2014–2019 data were likely to stay or shift to a different latent class in 2021.

These statistical analyses were conducted in SAS 9.4. Missing data across latent class indicators were addressed using maximum likelihood estimation in the repeated measures LCA and LTA models, assuming data are missing at random.

3.3. LCA and LTA measures

Our main indicators in the repeated measures LCA and LTA models were symptoms of depression, anxiety, flourishing, and burnout. While some of our indicators may be correlated, these correlations were accounted for once our latent classes were delineated, resulting in local independence within each latent class (Lanza et al., 2007). LCA makes no assumption about the distribution of these indicators (Lanza et al., 2007).

We used a trichotomized measure of the Patient Health Questionnaire-8 (PHQ-8) (Kroenke et al., 2009) as our indicator of individual depressive symptoms. This measure consists of eight items measuring the frequency of depressive symptoms in the past two weeks (each ranging from 0 "not at all" to 3 "nearly every day"). Based on the sum of these scores, individuals with PHQ-8 scores equal to 10 or higher were categorized as likely to have "moderate to severe" depressive symptoms, those with scores between 5 and 9 categorized as likely to have "mild" depressive symptoms, and those with scores 4 and below categorized as having "minimal" depressive symptoms (Kroenke et al., 2009).

For anxiety symptoms, we used a trichotomized measure of the Generalized Anxiety Disorder-7 (GAD-7) questionnaire (Spitzer et al., 2006). This measure consists of seven items that inquire about the frequency of anxiety symptoms in the past two weeks. Based on the sum of these scores (each ranging from 0 "not at all" to 3 "nearly every day"), individuals with GAD-7 scores equal to 8 or higher were categorized as likely to have "moderate to severe" anxiety symptoms, those with scores between 5 and 7 categorized as likely to have "mild" anxiety symptoms, and those with scores 4 and below categorized as having "minimal" anxiety symptoms (Lowe et al., 2008).

For our indicator of overall mental flourishing, we used the Mental Health Continuum-Short Form (MHC-SF) (Keyes, 2002). This measure consists of fourteen items that inquire about the frequency of experiencing emotional, social, and psychological well-being during the past month. Based on these responses, individuals who experienced at least one of the three indicators of hedonic well-being and at least six of the eleven indicators of good psychological and social functioning "every day" or "almost every day" were dichotomized as having "flourishing" mental health, while those who did not were categorized as "less than flourishing."

For our indicators of burnout, we used the Maslach Burnout Inventory (Maslach and Jackson, 1981; Koeske and Koeske, 1989), which identifies emotional exhaustion, depersonalization, and personal accomplishment as three distinct dimensions of occupational burnout. Using cutoff scores which are defined in the MBI-manual (Maslach et al., 1996) based on the sum of items within each of these dimensions, we used trichotomized measures indicating whether respondents were experiencing high, medium, or low levels of burnout, and included all three types of burnout as separate indicators in our LCA and LTA models.

For our covariate analyses, we use categorical measures for race (white or non-white), sex (female or not), marital status (currently married or not), having children at home (yes or no), geographical location (rural or urban), and financial stress (not at all, slightly, moderately, very, extremely). We also include continuous measures of age and years in ministry. We include these measures as past research has demonstrated that older individuals, non-white individuals, married individuals, and those with less financial stress generally exhibit better mental health (Kessler et al., 1992; Phelan et al., 2010; Kim and McKenry, 2002; Proeschold-Bell et al., 2016). Past research has also demonstrated that clergywomen experience worse mental health than clergymen (Holleman, 2023), that clergy with more years of experience in ministry exhibit worse mental health (Proeschold-Bell et al., 2013), that clergy with children in the home report increased stress concerning the effects of the pastorate on their children (Proeschold-Bell et al., 2011), and that rural-serving clergy generally face a greater number of stressors that they are required to handle alone (Miles and Proeschold-Bell, 2012).

All procedures were approved by the [withheld for blind review] Institutional Review Board (IRB) and survey waves through 2016 were additionally approved by the Westat IRB.

[4] We use the two waves of our data collected in 2019 and 2021 to approximate the time periods before and after the onset of COVID-19. However, we only have one data point after March 2020, when COVID-19 infections and restrictions were widespread in the United States. Some studies of shifts in mental health patterns after the onset of COVID-19 have suggested that while there were initial spikes in mental health symptoms directly following COVID-19's onset, these numbers returned to normal levels as time passed (Shuster et al., 2021; Riehm et al., 2021; Daly and Robinson, 2022). Other studies, however, have indicated that negative mental health symptoms persisted for longer periods of time, beyond the initial wave of the pandemic (Ettman et al., 2023; Daly et al., 2022). Our data was collected in August–October of 2021, after two initial spikes of infections and after social restrictions in North Carolina had eased.

4. Results

Of the 1238 congregational clergy in our analytic sample, 87% were white, 34% female, and their mean age was 53.7 (SD = 12.3). (See Appendix C for approximate comparisons of demographic characteristics between responders and non-responders to the survey.)

We explored the overall frequencies of mental health measures in our clergy data, as summarized in Table 1. Based on these cross-sectional comparisons of mental health, we find that our sample of clergy experienced significant changes in all measures between 2019 and 2021, including significant increases in depressive symptoms, anxiety symptoms, emotional exhaustion, and depersonalization, and significant decreases in positive mental health and personal accomplishment. For some measures, such as anxiety symptoms and emotional exhaustion, we also found that clergy may have begun to experience changes prior to 2019. However, the shift between 2019 and 2021 stands out as a significant decrease in overall mental well-being across measures.

4.1. Identifying and comparing subgroups of clergy mental health

To more holistically understand how clergy experienced changes in their mental health during the early years of the pandemic compared to their baseline levels of mental well-being, we first used repeated measures LCA to identify the number of subgroups or latent classes that best represented the overall patterns of our sample's mental health. We did this by running a series of repeated measures LCA models across a varying number of latent classes and comparing the fit statistics of each model. We include details about our model selection process in Appendix A. We found that the best-fitting model was the four-class LCA model, which ultimately represented four distinct subgroups of clergy experiences of mental health. Given that this model also had a relatively high entropy score of 0.78, each individual was likely to be identified with one of the latent classes more than any of the others.

The repeated measures LCA output provides two main sets of results: gamma estimates (γ) which indicate the probabilities of an individual belonging to each latent class, and rho estimates (ρ) which represent the probability of each categorical outcome for every mental health indicator included in the LCA model (Lanza et al., 2015). The rho estimates are particularly central to understanding the unique characteristics of each clergy subgroup, as summarized in Table 2.

Based on the unique combination of characteristics across the four latent classes, we assigned descriptive names to each subgroup of baseline clergy mental health: Flourishing, Distressed, Languishing, and

Table 1
Cross-sectional frequencies of mental health indicators, 2014–2021.

	2014 *n* (%)	2016 *n* (%)	2019 *n* (%)	2021 *n* (%)
PHQ-8 depressive symptoms				
Minimal (0–4)	1210 (67.7)	956 (67.0)	831 (64.6)	737 (59.8)
Mild (5–9)	431 (24.1)	345 (24.2)	315 (24.5)	348 (28.2)
Moderate-severe (10+)	147 (8.2)	125 (8.8)	140 (10.8)	148 (12.0)*
GAD-7 anxiety symptoms				
Minimal (0–4)	1393 (77.9)	1100 (77.2)	865 (67.3)	799 (64.6)
Mild (5–7)	261 (14.6)	204 (14.3)	251 (19.5)	238 (19.3)
Moderate-severe (8+)	134 (7.5)	121 (8.5)	170 (13.2)*	199 (16.1)*
MHC-SF positive mental health				
Flourishing	1223 (69.4)	1003 (71.2)	865 (69.0)	778 (65.1)
Less than flourishing	539 (30.6)	406 (28.8)	389 (31.0)	417 (34.9)*
MBI emotional exhaustion				
High burnout	214 (13.9)	183 (13.3)	221 (17.4)*	264 (21.6)*
Medium burnout	393 (25.5)	383 (27.7)	376 (29.7)	381 (31.1)
Low burnout	935 (60.6)	815 (59.0)	670 (52.9)	580 (47.3)
MBI depersonalization				
High burnout	163 (10.6)	143 (10.4)	132 (10.5)	146 (11.9)*
Medium burnout	254 (16.5)	243 (17.6)	241 (19.1)	233 (19.0)
Low burnout	1124 (72.9)	995 (72.0)	889 (70.4)	846 (69.1)
MBI personal accomplishment				
Low burnout/high personal accomplishment	699 (45.3)	600 (43.4)	530 (42.0)	446 (36.4)
Medium burnout	427 (27.7)	390 (28.2)	390 (30.9)	373 (30.4)
High burnout/low personal accomplishment	416 (27.0)	391 (28.3)	343 (27.2)	406 (33.1)*

Note: Statistically significant differences compared to the previous year indicated with asterisks.

Table 2
Item-response probabilities (rho estimates) for the 4-class LCA model of clergy mental health, 2014–2019.

		Flourishing 43.6%	Distressed 15.8%	Languishing 21.6%	Burdened but fulfilled 19.0%
PHQ depressive symptoms[a]					
2014	Mild	0.05	0.48	0.34	0.39
	Mod-Severe	0.00	0.40	0.04	0.07
2016	Mild	0.04	0.45	0.40	0.34
	Mod-Severe	0.00	0.42	0.08	0.02
2019	Mild	0.04	0.39	0.36	0.40
	Mod-Severe	0.00	0.48	0.05	0.09
GAD anxiety symptoms[a]					
2014	Mild	0.03	0.35	0.19	0.23
	Mod-Severe	0.00	0.39	0.00	0.09
2016	Mild	0.02	0.35	0.24	0.13
	Mod-Severe	0.00	0.39	0.05	0.06
2019	Mild	0.06	0.26	0.23	0.34
	Mod-Severe	0.00	0.58	0.05	0.12
MHC positive mental health[b]					
2014	Flourishing	0.92	0.20	0.48	0.78
2016	Flourishing	0.96	0.17	0.50	0.86
2019	Flourishing	0.96	0.24	0.42	0.81
MBI emotional exhaustion[c]					
2014	High	0.00	0.56	0.07	0.17
	Medium	0.07	0.37	0.38	0.42
2016	High	0.00	0.61	0.09	0.12
	Medium	0.07	0.32	0.45	0.51
2019	High	0.00	0.64	0.12	0.21
	Medium	0.10	0.31	0.41	0.55
MBI depersonalization[c]					
2014	High	0.00	0.43	0.07	0.10
	Medium	0.06	0.29	0.20	0.26
2016	High	0.00	0.47	0.08	0.07
	Medium	0.04	0.32	0.28	0.24
2019	High	0.00	0.43	0.05	0.11
	Medium	0.04	0.34	0.27	0.28
MBI personal accomplishment[c]					
2014	High	0.69	0.09	0.10	0.61
	Medium	0.20	0.29	0.38	0.31
2016	High	0.68	0.10	0.00	0.63
	Medium	0.20	0.30	0.39	0.33
2019	High	0.66	0.15	0.08	0.53
	Medium	0.24	0.33	0.34	0.38

[a] Minimal category not shown..
[b] Less than flourishing category not shown.
[c] Low category not shown.

Burdened but Fulfilled[5] (see Figs. 1 and 2 for a graphical summary of each subgroup). We found that all latent subgroups generally have a consistent pattern across the three waves from 2014 to 2019, which are indicative of a baseline experience of mental health sustained for an extended period (e.g. five years or longer) prior to the onset of COVID-19. Drawing upon the rho estimates and covariate analyses (Tables 3 and 4), we briefly describe the distinct characteristics of each subgroup of mental health among clergy. In Tables 3 and 4, we present the covariate results with Languishing as the reference category in order to illustrate the extent to which sociodemographic characteristics matter to both positive and negative mental health statuses, relative to moderate mental health.

First, the Flourishing group, which made up 43.6% of our clergy sample, consisted of clergy who were most likely to report having minimal depressive symptoms (ρ = 0.95-0.96 during the years 2014–2019), minimal anxiety symptoms (ρ = 0.94-0.98), and high levels of flourishing (ρ = 0.92-0.96) across all waves. This group was also least likely to experience symptoms of burnout, with levels of low emotional exhaustion (ρ = .90-.93), low depersonalization (ρ = 0.94-0.96), and relatively high personal accomplishment (ρ = 0.66-0.69) across all waves. Compared to all other groups, the Flourishing pastors were significantly more likely to be older and have lower levels of financial stress; they were also more likely to be married, compared to Distressed and Languishing pastors.

The Distressed group, who made up 15.8% of our sample showed a clear contrast from Flourishing pastors. Distressed pastors were most likely to experience elevated depressive symptoms (ρ = 0.40-0.48 moderate-severe), elevated anxiety symptoms (ρ = 0.74-0.84 mild-severe), and low levels of flourishing (ρ = 0.17-0.24) across all waves. This group is also most likely to experience higher levels of burnout, including high levels of emotional exhaustion (ρ = .56-.64) and depersonalization (ρ = 0.43-0.47), and low levels of personal accomplishment (ρ = 0.52-0.62) across all waves. Compared to all other groups, the Distressed pastors were significantly more likely to be younger and have higher levels of financial stress. Distressed pastors were also more likely to be white, compared to Flourishing and Languishing pastors.

The Languishing group, who made up 21.6% of our sample, consisted of clergy with moderate mental health symptoms overall—not as poor as Distressed pastors, but also not as positive as Flourishing pastors. Languishing pastors were likely to experience mild depressive symptoms (ρ = 0.34-0.40), mild anxiety symptoms (ρ = 0.19-0.24), and moderate levels of flourishing (ρ = 0.42-0.50) across all waves. Likewise, this group was likely to experience moderate levels of emotional exhaustion (ρ = .38-.45) and moderate levels of depersonalization (ρ = 0.20-0.28), although they had similar levels of low personal accomplishment as Distressed pastors (ρ = 0.52-0.61). While other subgroups had several defining demographic characteristics relative to Languishing pastors, we found that this group did not have distinct or defining demographic characteristics.[6]

Lastly, the Burdened but Fulfilled group—constituting 19.0% of our sample—represented a subgroup of clergy with moderate mental health, but with notable differences from the Languishing group. Much like Languishing pastors, the Burdened but Fulfilled pastors were likely to experience mild depressive symptoms (ρ = .34-.40), mild anxiety symptoms (ρ = 0.13-0.34), moderate levels of emotional exhaustion (ρ = 0.42-0.55), and moderate levels of depersonalization (ρ = 0.24-0.28). However, Burdened but Fulfilled pastors experienced a unique combination of both positive and negative mental health symptoms that set them apart, including relatively high levels of flourishing (ρ = 0.78-0.86) and high personal accomplishment (ρ = 0.53-0.63). Demographically, Burdened but Fulfilled pastors were significantly more likely to be women, compared to all other groups. This group was also more likely to be white, compared to Flourishing and Languishing pastors. Compared to Flourishing pastors, Burdened but Fulfilled pastors were more likely to live in a non-rural area, have children at home, and have worked more years in ministry.[7]

4.2. Latent transition analysis of stability and change in 2021

Having identified these four longitudinal patterns of clergy mental health that were generally consistent across the 2014–2019 waves, we then investigated how pastors' latent subgroup classifications may have changed in response to the uniquely stressful period of COVID-19. By 2021, about 16% of Flourishing pastors, 12% of Burdened but Fulfilled pastors, 11% of Distressed pastors, and 9% of Languishing pastors reported having had COVID-19. By using LTA, we were able to estimate changes in the overall proportions of mental health subgroups in 2019 and 2021 (i.e. delta estimates), and more specifically, the probabilities of whether individuals in each mental health subgroup were likely to stay in the same group or transition to a different mental health status in 2021, given their status in the previous wave (i.e. tau estimates). These results are summarized in Table 5 and presented as a visualization in Fig. 3.

We found that the overall proportions of the Burdened but Fulfilled and Languishing groups remained the same between 2019 and 2021 (18% and 24%, respectively), while the relative size of the Flourishing group decreased from about 44% to 36%, and the Distressed group increased from 14% to 22% between these years before and after the onset of COVID-19. However, these overall proportions do not account for how much change or stability may have occurred among individual pastor's trajectories.

Looking more closely at the transition probabilities, the tau estimates provide further details for how likely individuals in each mental health subgroup were to change into a different subgroup classification after the onset of the COVID-19 pandemic. Overall, about 68–80% of individuals remained in the same subgroup between 2019 and 2021, with Distressed pastors notably having the highest probability of staying in the same group. Among Flourishing pastors in 2019, about 10% shifted to Burdened but Fulfilled and 13% shifted to Languishing in 2021, with minimal shifts into the Distressed group. Among Burdened but Fulfilled and Languishing pastors in 2019, about 24% from each subgroup became Distressed in 2021—marking the highest probabilities of change into any category in 2021. Notably, we also found a small minority of Distressed pastors with improved mental health, resulting in about 12%

[5] The language we adopted for three of the four latent classes comes from the work of Corey Keyes and Carol Ryff, who proposed the positive mental health categories of flourishing, moderate mental health, and languishing to be distinguished from mental illness (Keyes, 2002). However, we gave our own language to the Burdened but Fulfilled group. This group experiences a combination of positive mental health and mental distress, which is hypothesized as possible by Keyes (2002).

[6] E.g. The Languishing group was significantly more likely to be older compared to the Distressed group, but we do not consider being older as a distinct characteristic of Languishing pastors, because this is only in comparison to the Distressed group (which is likely to be younger compared to all other groups).

[7] In additional analyses, we explored the relationship between the mental health statuses of clergy and spiritual practices, like prayer, reading the Bible, keeping intentional Sabbath, and having a spiritual director. Unlike the main covariates that we examine in this paper, spiritual practices are more difficult to disentangle directionality in relation to mental health. (i.e., Does prayer contribute to better mental health among pastors, or do pastors engage more in prayer because they are Flourishing?) Although directionality is undetermined, we observed that prayer and Bible reading are significantly associated with being in the Flourishing group, while there is no difference in prayer or Bible reading among the other three groups. Distressed pastors were significantly less likely to keep intentional Sabbath, compared to all other groups. Burdened but Fulfilled and Languishing pastors were more likely to have a spiritual director, compared to Distressed and Flourishing pastors.

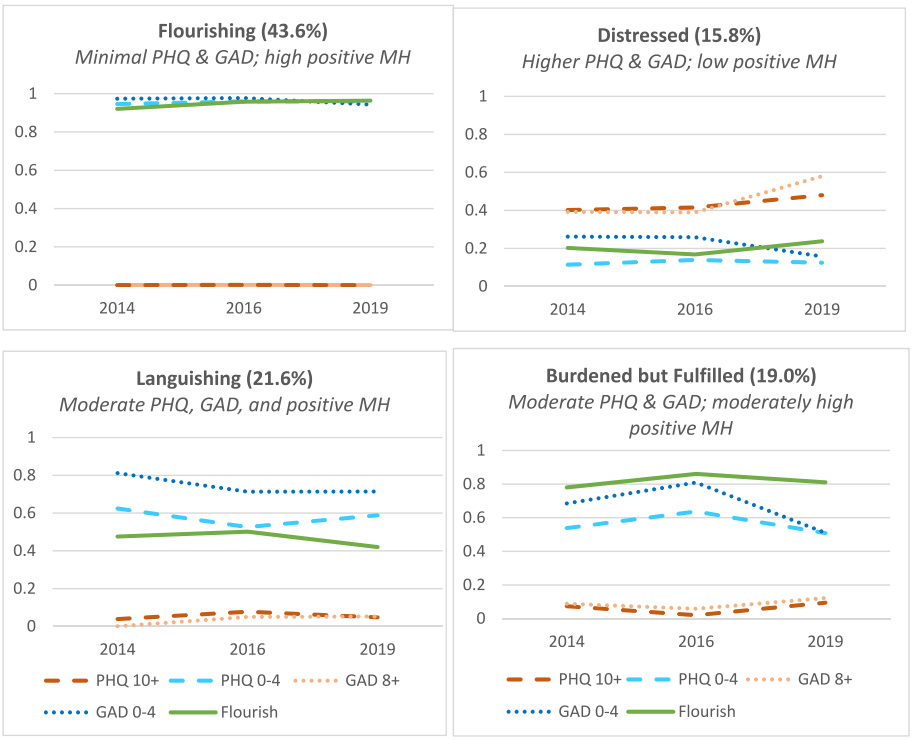

Fig. 1. Graphical summary of positive and negative mental health symptoms in the 4-class model of clergy mental health, 2014–2019.
Note: Shades of green and blue indicate positive mental health, and shades of red and orange indicate elevated symptoms of anxiety and depression. Measures on the same scale are indicated with the same line style (e.g., PHQ 10+ and PHQ 0–4 as dashed lines). PHQ 5–9 and GAD 5-7 omitted. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

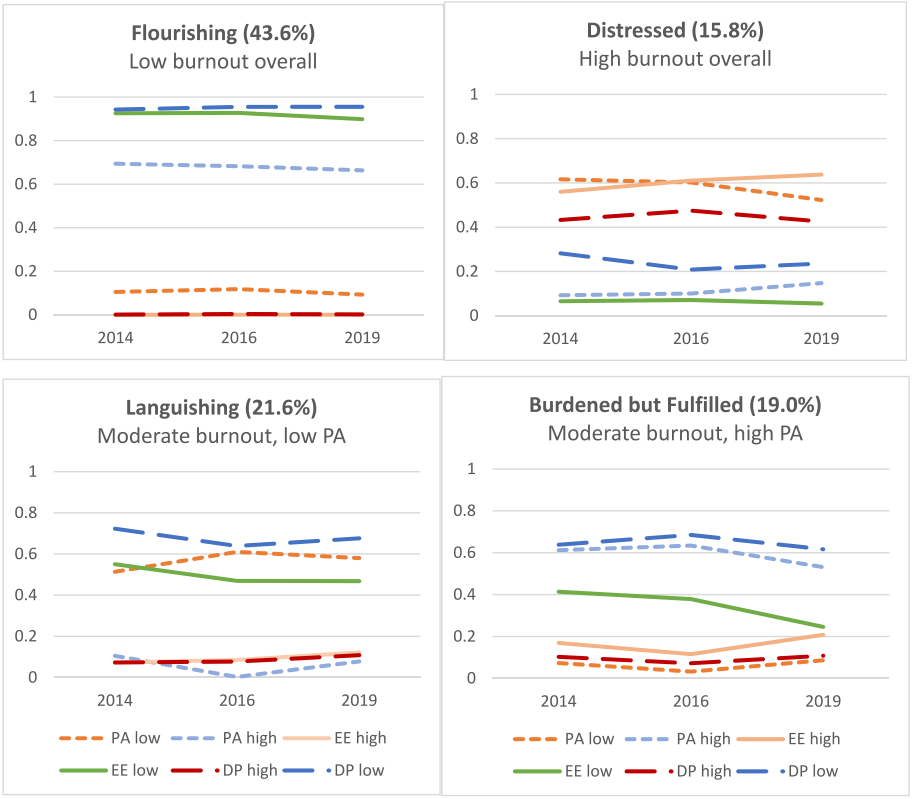

Fig. 2. Graphical summary of burnout patterns in the 4-class model of clergy mental health, 2014–2019.
Note: Shades of red and orange indicate high levels of burnout on each dimension, and shades of green and blue indicate low levels in each dimension of burnout. Measures on the same scale are indicated with the same line style (e.g., EE low and EE high as solid lines). Medium levels of burnout omitted. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

Table 3
Odds ratios for LCA with covariates, predicting membership in subgroups of clergy mental health (one-step approach).

	p-value	Flourishing	Burdened but Fulfilled	Languishing	Distressed
Non-white	***	0.84	0.21	ref	0.37
Female	***	0.81	1.67	ref	1.08
Rural	**	0.79	0.56	ref	0.89
Married	***	1.12	1.04	ref	0.47
Children at home	*	0.80	1.44	ref	1.10
Age	***	1.03	0.98	ref	0.95
Years in ministry	**	1.003	1.01	ref	1.03
Financial stress	***	0.70	1.10	ref	1.64

Note: Covariate measures from 2016; *p < .10, **p < .05, ***p < .01.

Table 4
Covariate analysis using multinomial logistic regression, after assigning clergy to their most likely latent class (step-wise approach).

	Flourishing	Burdened but Fulfilled	Languishing	Distressed
Non-white	−0.25	−0.90**	ref	−0.96**
Female	−0.28	0.62**	ref	0.15
Rural	−0.25	−0.02	ref	−0.21
Married	0.60**	0.50	ref	−0.12
Children at home	−0.30	0.15	ref	0.21
Age	0.04***	−0.008	ref	−0.03**
Years in ministry	0.006	0.02	ref	0.004
Financial stress	−0.35***	0.10	ref	0.49***

Note: Covariate measures from 2016; *p < .10, **p < .05, ***p < .01.

Table 5
Latent transition analysis (LTA) of shifts in clergy mental health statuses from 2019 to 2021.

Status membership probabilities (i.e. delta estimates)

	Flourishing	**Burdened but Fulfilled**	**Languishing**	**Distressed**
2019	0.44	0.18	0.24	0.14
2021	0.36	0.18	0.24	0.22

Transition probabilities (i.e. tau estimates)

	2021 Flourishing	**2021 Burdened but Fulfilled**	**2021 Languishing**	**2021 Distressed**
2019 Flourishing	0.76	0.10	0.13	0.02
2019 Burdened but Fulfilled	0.08	0.68	0.00	0.24
2019 Languishing	0.04	0.00	0.72	0.24
2019 Distressed	0.01	0.12	0.06	0.80

of pastors who were Distressed in 2019 shifting into the Burdened but Fulfilled group and 6% into the Languishing group in 2021.

On the whole, our analyses revealed that the largest shifts in mental health occurred among subgroups with moderate mental health prior to the pandemic (i.e. Burdened but Fulfilled and Languishing) moving into the Distressed group after the onset of the pandemic. However, shifts into the Flourishing group were minimal—which helps to explain the overall increased proportion of Distressed pastors and decreased proportion of Flourishing pastors between 2019 and 2021. Demographically, we find that living in a non-rural area, having young children, and having fewer years in ministry were significantly associated[8] with shifting into a subgroup with worse mental health or remaining in the Distressed group in 2021.

5. Discussion and conclusions

In this study, we sought to understand positive and negative mental health configurations of pastors prior to 2020, and to then trace patterns of change following the onset of COVID-19. Using a sample of United Methodist clergy in North Carolina, we found that the overall mental health of this sample of clergy was relatively stable between 2014 and 2019, despite ongoing denominational debates and conflict within the United Methodist Church regarding same-sex marriage and the ordination of LGBTQ individuals. Though there were some changes in the mental health patterns between 2016 and 2019, indicating some increasing mental distress potentially because of rising political polarization and conflict within the UMC denomination and the U.S. culture as a whole (Pew Research Center, 2022), the increases in poor mental health symptoms between 2019 and 2021—corresponding to the onset of COVID-19—revealed a distinct and pronounced trend.

Our study highlights that symptoms of depression, anxiety, and burnout increased for pastors generally after the onset of COVID-19, but that not all pastors were affected in the same way. Pastors' mental health symptoms after the onset of COVID-19 were highly dependent upon their mental health symptoms prior to the onset of COVID-19. Our study reveals that pastors with the worst mental health prior to COVID-19 were also those predisposed to the worst mental health following the onset of the pandemic, and the pastors who fared the best in terms of their mental health prior to the pandemic were also those who had the best mental health following the onset of the pandemic. The patterns were more complex for groups with moderate mental health prior to COVID-19. These groups (i.e. Languishing and Burdened but Fulfilled) were most at risk of worsening mental health, with about a quarter from each group shifting into the Distressed group between 2019 and 2021. These findings have important implications for the interpretation of cross-sectional research on mental health collected after the onset of COVID-19: to understand individual or population mental health during or after the COVID-19 pandemic, we need to first understand mental health prior to the pandemic.

Notably, our analyses reveal that a small but considerable minority of pastors (12% of those who were Distressed in 2019) appeared to improve in their overall mental health after the onset of COVID-19, shifting into the Burdened but Fulfilled group in 2021. These results mirror qualitative studies which have revealed that some pastors experienced positive changes amid COVID-19 (Funchess et al., 2022; Johnston et al., 2022; Taylor and Benac, 2022; Village and Francis, 2021). It is possible that the changing role of clergy during the pandemic may have reframed prior experiences of cynicism or depersonalization by highlighting a sense of purpose and calling during a time of crisis. Additionally, transitions into the Burdened but Fulfilled group may be an indication that the experience of clergy during COVID years often consisted of a complex combination of both positive and negative impacts on well-being—not only marked by immense challenges but also by opportunities for reflection and changes in perspective amid unprecedented times.

Three demographic variations stand out in our results. The first is among the Burdened but Fulfilled group, which includes a unique combination of moderate anxiety and depressive symptoms with relatively high levels of flourishing and personal accomplishment. This

[8] These associations were calculated using logistic regressions given the most likely subgroups that individuals belonged to in 2019 and 2021.

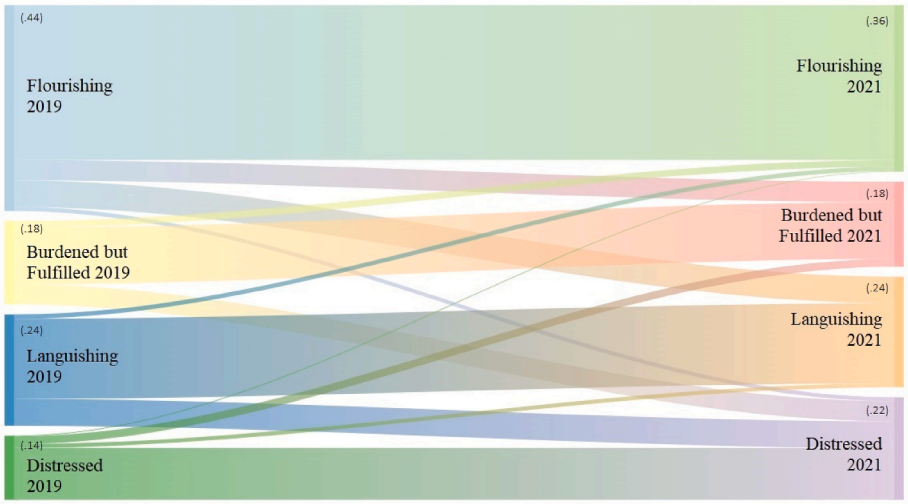

Fig. 3. Visualization of transitions in clergy mental health statuses from 2019 to 2021.
Note: Estimated total proportion of the sample (i.e. delta estimates) in parentheses. This graphic illustrates the fluid movement of individuals from one mental health status to another (e.g., When comparing the dark green Distressed group in 2019 to the purple Distressed group in 2021, the proportion of pastors moving out of the 2019 Distressed group are minimal, but there are substantially thicker bars in 2021 indicating the new pastors being added into the Distressed group, namely from previously Burdened but Fulfilled and Languishing groups.). (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

group shows how some pastors demonstrate resilience towards high levels of stress and burnout when their experiences are combined with a greater sense of purpose and personal accomplishment. Women were significantly more likely to be represented in this group compared to all other groups, which corresponds with past research which argued that resilience may be prevalent among clergywomen (Holleman, 2023). Second, Distressed pastors were more likely to be younger and unmarried, and Burdened but Fulfilled were more likely to have children at home and live in non-rural areas compared to Flourishing pastors. Our findings may be further useful for practical application towards considering the different characteristics and vulnerabilities of each subgroup of clergy, possibly for targeted mental health support during periods of heightened stress. Future research may also consider the relationship between clergy's mental health and spiritual practices, such as prayer, meditation, or keeping intentional Sabbath, and the extent to which such practices may contribute to improved mental health amidst stress in the workplace.

This research offers a novel contribution to the ongoing work concerning the impact of COVID-19 and pandemic-related conditions on the mental health of those in the helping professions. Though a plethora of past work has demonstrated the high rates of mental distress experienced by helping professionals after the onset of COVID-19, these works have overwhelmingly relied on data collected after the onset of COVID-19. The few works that have employed longitudinal analyses including data before and after the onset of COVID-19 have found decreased mental well-being among medical and helping professionals. However, these analyses have been limited in sample size, in the number of data points available prior to COVID-19, and in demographic characteristics accounted for. As a result, past work has made it difficult to discern patterns of change regarding mental well-being among these occupational groups following the onset of COVID, and the way these patterns differ based on individual mental health patterns prior to COVID-19 or individual demographic characteristics. We extend this line of inquiry using longitudinal data, including three data points over a six-year period prior to the onset of COVID-19, to demonstrate the change in mental well-being that members of one type of helping profession experienced. Further, by using repeated measures LCA, we were able to model the varying patterns of positive and negative mental health in flexible form to identify emerging patterns in the data, without the constraints of fitting growth parameters (as would be required for many trajectory analysis approaches).

Importantly, clergy resemble and differ from other helping professions in important ways. Clergy fill a variety of professional roles that overlap with traditional helping professionals, including administrator, manager, counselor, preacher, community organizer, spiritual director, teacher, and crisis responder (Carroll 2006; Chatters et al., 2011; Kuhne and Donaldson 1995; Lee 1999; Morris and Blanton, 1994; Pickard and Guo 2008)—roles they were expected to continue filling during COVID-19. However, clergy are more autonomous than those in most other helping professions. Many pastors were able to individually determine whether to cease holding in-person worship services or move to online worship upon the onset of COVID-19, and for how long to retain these changes. This differs from most other helping professions, who often work for larger hospital or governmental systems, and thus experienced less autonomy in their ability to re-imagine their work during the pandemic. Though clergy may have experienced this autonomy as stressful in some ways (Johnston et al., 2022), the ability to have a sense of self-determination in their occupational response to COVID-19 was lacking for most other helping professionals (Shah et al., 2020; Petrie et al., 2022). Thus, it may be that clergy experienced less stress as a result of having this autonomy during COVID-19 as compared to other helping professions, even if they experienced more responsibility. We believe these results offer a good first step in assessing the changes in mental well-being of helping professionals within the context of COVID-19; however, future research should investigate the way these patterns may differ among other helping occupations.

We acknowledge that this study is not without limitations. Importantly, this study is among one denominational group, in one state within the U.S. context, at one time point during COVID-19. COVID-19 infections, deaths, and restrictions varied considerably by state and by period following March 2020. Our sample of clergy is also homogeneously United Methodist, a denomination within the Mainline Protestant religious tradition. Recent research prior to the onset of COVID-19 found that Mainline Protestant clergy fare particularly poorly in terms of their mental health (Holleman and Eagle, 2023). This should be considered when attempting to generalize our findings to clergy from other religious traditions. Additionally, as denominational debates were occurring and schism was being contemplated during the data collection

period, it may be that some changes in mental health documented in these analyses were due to rising levels of denominational disagreement, rather than changes occurred by COVID-19. However, as COVID-19 was a highly politicized phenomenon (Hart et al., 2020), and as levels of political polarization are rising nationally (Pew Research Center, 2022), it would likely be impossible to disentangle patterns caused by COVID-19 from those caused by political division among any sample of individuals, even in the most politically uniform of organizations. It may also be the case that respondents that were particularly struggling with their mental health, or particularly disengaged from the UMC during heightened denominational debates, would have been less likely to respond to the survey. We are unable to assess the counterfactual in either case.

Further, the intervals between repeated mental health measures in our LCA each span about two years. Future work on longitudinal mental health patterns may benefit from more frequent measures of depression, anxiety, and burnout symptoms. We also invite future qualitative studies to elaborate on the nuances of the distinctions between these mental health subgroups and how pastoral experiences may differ depending on pastors' mental health. For instance, while both Flourishing and Burdened but Fulfilled pastors exhibit relatively high levels of "flourishing," does the meaning of "flourishing" change depending on its combined experiences with depression, anxiety, and burnout? Future studies may explore the specific ways in which Languishing and Distressed pastors are differently impacted by their mental health in the areas of ministry, family life, and personal life.

Ultimately, the support of helping professionals and frontline providers is critically important to the social fabric of society and the well-being of those they serve. This study demonstrates that clergy are susceptible to times of disruption and stress, and that clergy with different mental health profiles prior to the onset of disruption are more – or less – susceptible. This information can be used to target professionals most likely to experience a negative shift in mental health, and can be useful to individuals facing a new period of stress and instability.

CRediT authorship contribution statement

Bo-Hyeong Jane Lee: Conceptualization, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing. **Anna Holleman:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing. **Rae Jean Proesch-hold-Bell:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.socscimed.2024.116651.

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