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Mental Health Effects of the COVID-19 Pandemic on Older Adults

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Abstract

Problem: Significant psychological effects such as anxiety, depression, stress, and loneliness are shown to affect the older adult population, aged 65 years and older**.** The social isolation and disconnectedness related to the COVID-19 pandemic potentially worsens anxious and depressive feelings, increasing the risk for adverse outcomes in the high-risk older adult population. This project aimed to identify older adults at risk for acute, situational mental health issues associated with the pandemic.

Methods: A descriptive study design was used. Telephone interviews were conducted to explore effects of the COVID-19 pandemic on mental health responses in older adults. A convenience sample of eight older adult patients and a purposive sample of one key informant were interviewed using open-ended, literature-based questions.

Results: Data were analyzed and coded into seven main themes: *family, socialization, anxiety, loneliness, concern for others, the future, and benefits of the pandemic.* Overall, the sample population of older adults did not experience any clinically relevant mental health effects (i.e., isolation, loneliness, depression, or anxiety) as a result of the pandemic. No notable challenges were voiced.

Implications: Older adults in this project did not experience disruptive life changes as a result of the pandemic restrictions. Rather, mental health protective factors (i.e., financial stability, good health, adequate social support, and health insurance coverage with routine medical care) potentially shielded patients from pandemic-related adverse mental health outcomes. Further refinement of these factors in a larger population is warranted to guide providers in strategies to assess possible mental health issues in the older adult population.

The SARS-CoV-2 virus, also known as Coronavirus or COVID-19, spread quickly around the world and was declared a global pandemic in March 2020 (Pitilik, 2020). Efforts to limit the spread of the virus were complicated by its highly contagious nature, high proportion of asymptomatic cases, and initial lack of a vaccine (Pitilik, 2020). The older adult population, designated high risk for severe illness due to age and comorbid conditions, was disproportionately affected by the virus (Centers for Disease Control and Prevention [CDC], 2020). Additionally, apart from the physical effects of COVID-19, significant psychological effects such as anxiety, depression, and loneliness are shown to affect individuals of all ages including the older adult population, individuals aged 65 years and older (Wang et al., 2020). In a prevalence study of the rates of mood and anxiety disorders among older adults, this population is identified as vulnerable to an increased risk of mental health complications as a result of normal consequences of aging (Byers, Yaffe, Covinsky, Friedman, & Bruce, 2010). Social isolation and disconnectedness related to the COVID-19 pandemic potentially worsens anxious and depressive feelings, increasing the risk for adverse health outcomes in the already high-risk older adult population (Wang et al., 2020). Documentation of local mental health effects secondary to the pandemic offered opportunity for early intervention and continued care with these at-risk older adults.

Therefore, the purpose of this evidence-based practice (EBP) project was to describe mental health issues experienced in an older adult population, individuals aged 65 years and older, approximately one-year post start of the COVID-19 pandemic. This project aimed to identify older adult patients at risk for acute, situational mental health issues associated with the pandemic. The outcome was a catalog of common mental

health responses to the pandemic situation experienced by a sample of older adult individuals. The question of interest was: In the older adult population, individuals aged 65 years and older, what are the mental health consequences related to pandemic experiences and/or events?

Review of Literature

A comprehensive search of the literature for the time period 2000-2020 was conducted using Cochrane Library, CINAHL, and PubMed databases, with terms *elderly, geriatric, older adults, well-being, depression, anxiety, loneliness, isolation, COVID-19, pandemic, and mental health*. The initial database search yielded approximately 480,000 results. The results were further narrowed to research studies using inclusion criteria of *community-dwelling, community or primary care setting, participants aged 65 years and older, and English language.* Exclusion criteria included key words, *cognitive deficits, long-term care, and non-English language.* Results were further filtered to only include research studies that explored the prevalence of loneliness, depression, and anxiety in the older adult population. Research describing depression and anxiety disorders related to a specific medical condition or subset of older adult individuals was excluded. A total of 76 potential articles were identified, of which 13 were included in this review. Sixty-three were excluded as they focused on the treatment of anxiety and mood disorders, were duplicate publications, or unavailable as full text. Research completed prior to the COVID-19 pandemic was included to provide insight into prevalence and risk factors for loneliness, depression, and anxiety in the older adult population in a more stable, situational context. Of the 13 articles included in this review, six focus on prevalence of loneliness, depression, and anxiety in the older adult population. A total of seven studies

describe mental health effects associated with the current pandemic, two of which are specific to the older adult population.

Reported prevalence rates of anxiety and depression in older adults vary widely. One systematic review focusing on data from 15 years ago of prevalence of depression in older adults reported rates of major depression range broadly from 0.9% to 9.4% (Djernes, 2006). Another systematic review found prevalence rates of anxiety in adults age 60 years and older to be up to 15% in the community-based population and as high as 28% in the clinic-based population (Bryant, Jackson, & Ames, 2008). These reviews as well as prevalence studies over the last 20 years report anxiety and depression continue to be common in the older adult population, however, there is a pattern of decline as participants aged (Byers et al., 2010). Notably, a systematic review, using a time from 1995 to 2005, of risk factors for depression in the older adult population emphasizes adverse consequences of depression, particularly diminished quality of life and excess mortality in this population (Vink, Aartsen, & Schoevers, 2008).

Specific factors in older adults, including somatic illness, poor health, cognitive or functional impairment, history of depression, lack of close social contacts are identified as main predictors of depressive disorders (Byers et al., 2010). Acute episodes, including stressful or recent negative life events, documented in Vink et al.'s (2008) systematic review of risk factors for depression and anxiety during later life, are linked to depressive symptoms and depressive disorders. Comparably, risk factors for anxiety disorders mirror findings related to depression, to include chronic medical conditions, sensory or cognitive deficits, functional limitations, and psychiatric history (Vink et al., 2008).

      Loneliness is often present among the older adult population; however, similar to anxiety and depression, prevalence rates vary (Gerst-Emerson & Jayawardhana, 2015). Prevalence studies demonstrate loneliness is considered a major determinant for both mental and physical illness for this population and can lead to higher rates of depression and mortality (Gerst-Emerson & Jayawardhana, 2015) and is a positive predictor of depression (Krendl & Perry, 2020). There are, however, certain risk factors for loneliness common across the literature, which include never married, being widowed or divorced, lower level of education, no children, living alone, lack of socialization, dependent for activities of daily living (ADL), and chronic diseases (Koc, 2012; Krendl & Perry, 2020).

      Present-day research associated with the COVID-19 pandemic, most of which is prevalence studies, describes mental health effects in the general population, not differentiating older adults. In an historical study of the swine flu pandemic of 2009, a relationship between anxiety and ability to cope with uncertainty was demonstrated in this similar acute event (Taha, Matheson, Cronin, & Anisma, 2013). Taha et al. (2013) concluded threats associated with a pandemic, such as widespread illness, have a negative impact on physical health and cause psychological distress in the adult population over the age of 18. In a 2020 systematic review of 11 cross-sectional and longitudinal studies conducted during this pandemic, a strong association was identified between psychological effects such as worry, anxiety, and mental anguish with pandemic behaviors such as social distancing and enhanced hygiene measures such as frequent handwashing (Usher, Jackson, Durkin, Gyamfi, & Bhullar, 2020). Alarmingly, mental health distress secondary to quarantine and isolation drives behavior changes in

individuals without any history of mental health conditions, not only those with pre-existing mood and anxiety disorders (Usher et al., 2020).

Prevalence studies specific to the COVID-19 pandemic comparing psychological health and well-being and depression and anxiety in adults 18 years and older show increased prevalence of both when compared to pre-pandemic (Vindegaard & Benros, 2020; Wang et al., 2020). Additionally, greater than 50% of participants rated the psychological impact, specifically presence of anxiety and depressive symptoms and elevated stress levels directly associated with the COVID-19 pandemic, as moderate to severe during the initial stage of the pandemic (Wang et al., 2020). In addition to anxiety and depressive symptoms, the general population was reported to have increased levels of insomnia, anger, and fear secondary to the pandemic (Vindegaard & Benros, 2020).

As can be expected, research specific to mental health consequences of the COVID-19 pandemic on older adults is limited. However, a 2020 cross-sectional study supports negative impacts on mental and physical health of older adult populations as a consequence of social distancing associated with the pandemic, specifically the presence of anxious and depressive symptoms (Lei et al., 2020). This finding is corroborated by higher levels of loneliness and depression following the start of the pandemic (Krendl & Perry, 2020; Robb et al., 2020), with a substantial association between self-reported loneliness and worsened anxious and depressive symptoms (Robb et al., 2020).

Evidence from 20 years of research supports the presence of mood and anxiety disorders in older adults, both commonly occurring in this population. Ongoing research and clinical improvement projects will likely be better able to target the psychological effects of the COVID-19 pandemic for all populations, including older adults.

Limitations to this literature review include use of older literature regarding mental health conditions in older adults in a different, more stable situational context. In contrast to studies from 2000 to the present timeframe of the pandemic, current research is more descriptive in nature and does not specifically target the older adult population. Given the unique occurrence of a pandemic, it is difficult to predict consequences, particularly mental health effects. Thus, this uncertainty supported need for this EBP project.

This project utilized the Johns Hopkins Nursing Evidence-Based Practice Model as its framework (Dang & Dearholt, 2017). This model uses a three-pronged approach termed PET: *practice question, evidence, and translation*. In the first phase, the practice question was established: In the older adult population, individuals aged 65 years and older, what are the mental health consequences related to pandemic experiences and/or events? Secondly, in the evidence phase, the most relevant evidence relating to the topic of interest was collected, appraised, summarized, and synthesized. For this project, data collection related to isolation and associated government and public health stay-at-home orders in older adults using telephone interviews with patients and one key informant was carried out. Interview results were then extracted and summarized into matrices characterizing specific constructs in collaboration with an experienced qualitative researcher. Lastly, in the translation phase, the interview data can be used as guide for further investigation into mental health protective factors in other populations.

Methods

Design

This EBP project utilized a descriptive study design. Telephone interviews were used to explore effects of COVID-19 pandemic-related government and public health

stay-at-home orders on mental health responses in older adults. A convenience sample of eight older adult patients and a purposive sample of one key informant were interviewed over a two-month timeframe approximately one year after the onset of the pandemic. Analysis of telephone interview data were completed to identify key themes related to mental health issues associated with the pandemic.

Setting

The study was conducted by remote access to participants using telephone contact. The sample was obtained from an outpatient primary care clinic affiliated with a large multi-state health system in a large Midwestern metropolitan area. In the county where the primary care clinic is located, 67.9% of the population is non-Hispanic White with a median household income of $67,420 (United States Census Bureau, 2021). However, the demographics of the clinic's zip code are much different and more closely align with this project's sample population, with 93.8% of the population non-Hispanic White and a median household income of $84,714 (United States Census Bureau, 2021).

Sample

A convenience sample of eight patients was recruited for this study. Inclusion criteria were individuals age 65 years and older, all genders and races, English-speaking, had access to a telephone, consented to participate, and were patients in the practice with a relationship to the collaborating physician. Exclusion criteria were individuals with cognitive deficits or hearing deficits who did not use hearing aids, non-English speaking, refusal to participate, or did not have access to a telephone. A second, purposive sample of key informants yielded one nurse practitioner participant employed at the primary care clinic. This provider was recruited due to her informed perspective by working directly

with the older adult population in the selected clinic where data collection took place. To be included as a key informant, the nurse practitioner was English-speaking, had access to a telephone, was willing to participate, and regularly provided care to the older adult population in the clinic. Exclusion criteria were refusal to participate and no direct contact with the older adult sample population.

Procedures

The patient interview phase of the study began with recruitment of potential participants. Patients meeting inclusion criteria were identified by clinic staff and were provided with a printed information packet describing the project and expectations for participation. If patients indicated interest in participating in the study, they contacted the DNP student by telephone; informed consent was then obtained. Participants signed a provided informed consent and HIPAA authorization form and returned via mail to the DNP student. Telephone interviews, conducted by the DNP student, took place after written informed consent was received.

Potential key informants received a printed information packet provided by the collaborating physician. Clinic staff interested in participating contacted the DNP student by telephone, and verbal consent was obtained. As with patient participants, the key informant signed the provided informed consent form and returned via mail to the DNP student. The telephone interview occurred after written informed consent was received by DNP student.

Data Collection and Analysis

Telephone interviews with patient participants and key informant took place during the data collection timeframe, the months of March and April of 2021. No

validated tools were used, however, open-ended, literature-based interview questions were developed with feedback from an experienced qualitative researcher. These questions were pre-tested using a sample of five nurse practitioners experienced in geriatric care. The questions were focused on common signs and symptoms of loneliness, depression, and anxiety. Demographic data were collected from patient participants at the time of the telephone interview. Telephone interviews were conducted for approximately 30 minutes following the interview guide. To assure ethical concerns were addressed in relation to mental health issues, all older adult participants were provided a handout with contact information for local counseling resources.

Data analysis of patient telephone interview results was completed using the *Framework Method for Qualitative Analysis* (Gale et al., 2013). Procedures for gathering and analyzing data included: (1) Field notes were written down by the DNP student during telephone interviews with participants; (2) Data were immediately reviewed by the student following the interview; (3) Key words or phrases were highlighted and coded for each individual interview; (4) After all patient interviews and coding were completed by the student, common themes were identified. A framework matrix consisting of rows and columns was created to summarize data by identified themes. To validate the interpretation, the collaborating researcher cross-checked interview field notes, reviewed themes identified in the matrix data, and provided feedback on interpretation of data. Descriptive statistics summarized patient demographic data.

Approval Processes

Preliminary verbal approval was obtained from the project site. Additional approval was finalized by the student's advisory committee at the University of Missouri

– St. Louis (UMSL) College of Nursing, the sponsoring facility's Institutional Review

Board (IRB), and exempt project status to the University's Institutional Review Board

(IRB). As this project posed minimal risk to participants, exempt status was granted.

Results

During March and April of 2021, nine interviews were conducted: eight patient

participants and one key informant. Patient ages ranged from 66-78 years with a mean of

71.4 years. The patient sample included three females (37.50%) and four males (62.50%).

Seven of eight participants identified as non-Hispanic White (87.50%); one participant

was Asian (12.50%). All patients identified as retired, with two individuals working part

time for pleasure. Four of eight patients reported having at least one chronic illness

(50%), however, no patients indicated having difficulty performing ADLs independently.

All individuals reported having Medicare as their primary payer source, with the primary

care clinic as the primary source of healthcare services. All eight participants were either

partially or fully vaccinated against COVID-19 at the time of interview.

Seven main themes related to mental health effects associated with the COVID-19

pandemic emerged from the interview data, based on comments noted in the student's

field notes: *family, socialization, anxiety, loneliness, concern for others, the future, and*

benefits of the pandemic. Overall, patients did not identify clinically relevant mental

health effects (i.e., loneliness, depression, or anxiety) as a result of the pandemic. One

patient indicated "feeling down" at times but did not report this feeling was clinically

significant. Another reported feeling some degree of anxiety and depression during the

pandemic but "not severe". All patients reported they managed well from a mental health

perspective during the pandemic compared to the impact they believed the pandemic

hand on individuals both younger and older as well as sicker. All reported minor inconveniences or difficulties with daily life requiring adjustments such as wearing a mask in public, limiting time in public places, and keeping distance between others.

All eight patients indicated concern for family or loved ones, focusing on adult children and grandchildren. All patients reported a low to moderate degree of disruption to their socialization habits, with social interactions decreased in frequency when compared to pre-pandemic. Three patients indicated they were unable to see close family members living out of state or country from March 2020 to present but still communicated via telephone. Patients expressed difficulty not having social gatherings as they did prior to the start of the pandemic. However, they did indicate increased frequency of social interactions outside the home in the last three months when compared to the start of the pandemic in March of 2020. This increase was associated with vaccine availability and participation in vaccine clinics. Two patients indicated feeling lonely or isolated at times but stated they had support from friends and family when needed.

Level of concern and anxiety regarding COVID-19 were reported as higher in the beginning of the pandemic with decreased levels more than one year later. Rollout of vaccines helped alleviate some fear of contracting the virus. Though participants did not report feeling overly anxious during the pandemic, seven participants noted anxiety for others personally affected by the virus or pandemic. Seven patients indicated feelings of hope and a positive outlook for the end of the pandemic. These participants attributed their feelings of hope to the rollout of vaccinations and overall decreased number of COVID-19 cases. Benefits of the pandemic were identified by four patients to include improved hygiene, more time spent outdoors, and a sense of thankfulness for health.

Conversely, the nurse practitioner interview cited mental health challenges in this population, specifically feelings of isolation, loneliness, and depression. In her view, difficulties in personal relationships and lack of face-to-face interaction with family members caused patients the most anxiety or distress. She stressed, community resources offered limited hours during the pandemic, resulting in less availability to access services typically used for socialization.

Discussion

Patient participants interviewed did not indicate they experienced clinically relevant levels of isolation, loneliness, anxiety, or depression during the pandemic as anticipated. This finding was unexpected based on the literature that describing negative impacts on mental and physical health of older adult populations secondary to the pandemic, with higher levels of anxious and depressive symptoms and loneliness reported (Krendl & Perry, 2020; Lei et al., 2020; Robb et al., 2020). This discrepancy between the literature and this project's results suggests mental health consequences reported by patient participants may be unique to this particular older adult population. The patient sample was homogenous comprised of younger, primarily non-Hispanic White individuals without chronic conditions that may limit day-to-day activities. The sample lacked individuals of lower socioeconomic status, particularly African Americans, who tend to be at higher risk for poor health outcomes.

The discrepancy between the key informant's perspective and the patient sample results may be due to differences in the clinician's case load as compared to the relatively healthy, independent 'at-home' sample in this study. Furthermore, the provider may have

predetermined expectations of older adults at risk for loneliness, anxiety, or depression.

This assumption was not assessed with the provider during the interview.

While none of the patient participants experienced any clinically relevant feelings

of anxiety, depression, isolation, and loneliness, this is not to say they were completely

unaffected by the pandemic. The sample population may have processed pandemic events

better than others their age. However, they indicated difficulty not seeing family or

friends as often as they did prior to the pandemic as well as decreased frequency of social

interactions with friends.

Limitations to this project included small sample size with eight patient

participants and one key informant. In addition, convenience sampling of community-

dwelling, predominately non-Hispanic White individuals from a specific higher

socioeconomic geographic area severely limit generalization of these results. Data

collection took place over one year after the start of the pandemic. Therefore,

participants' perspective on pandemic-related mental health consequences may have

changed over time, particularly recent rollout of vaccines two months prior to this study's

data collection period. At the time of participant interviews, vaccinations were becoming

widely available for the older adult population, and COVID-19 case counts were trending

downward. Time constraints for project implementation for participant recruitment and

remote data collection due to social distancing restrictions were limitations as well.

This project's findings suggest higher resilience to the mental health effects of

COVID-19 in this sample of older adults. This result may reflect protective factors

unique to this group to support mental health. Specifically, these factors are financial

stability, good health, adequate social support, and health insurance coverage with routine

medical care. Further recommendations include a cycle two of this EBP project to better understand factors that drive resilience using a larger, more heterogeneous sample of older adults, targeting both unrepresented minorities and/or those with lower socioeconomic status, as well as including a variety of individuals across the older adult age spectrum. Discrepancy between patient and key informant results indicates further exploration of assumptions, and possible bias or stigma among healthcare providers caring for the older adult population is indicated.

Conclusion

The literature identifies feelings of isolation, loneliness, anxiety, and depression are prevalent in the older adult population, which were potentially worsened during a pandemic (Krendl & Perry, 2020; Lei et al., 2020; Robb et al., 2020). However, project participants did not indicate they experienced clinically relevant levels of isolation, loneliness, anxiety, or depression during the pandemic as anticipated. Discrepancies between the literature and results of this project suggest there may be a gap in the literature as to which protective factor(s) are most impactful and are of priority to support mental health well-being in older adults. Ultimately, this project's results provided preliminary information that serves as a template for further investigation into mental health protective factors in other populations. The impact to mental health in times of crises are areas appropriate for ongoing assessment in clinical practice with design and implementation of tailored interventions, consistent with DNP expectations in practice.

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Table 1

Patient Participant Framework Matrix

Participant	Family	Socialization	Anxiety	Loneliness	Concern for others	The future	Benefits of the pandemic
1	Lives with wife	Small adjustments, doesn't see others very often	Watching others die causes anxiety	Felt lonely at times	Concerns for those who haven't seen a doctor in a year	Feels hopeful about the future and pandemic ending	Improved hygiene
2	Lives alone, has family for support	Routine not dramatically different	Initially had trepidation	"I am never lonely."	Concern for families who have lost someone	"You can't be afraid to not live your life."	Learned importance of hobbies and friends
3	Lives with wife	Goes out less frequently than before the pandemic	Anxious for people directly affected by COVID	"I have felt a little isolated."	Likes to support struggling businesses	Not sure it's a good idea to open everything up	Improved hygiene
4	Lives with wife and adult children	Activities haven't changed much, doesn't go out as much	"I have had no feelings of anxiety."	"I have not experienced any loneliness."	Special needs son's schedule has been disrupted	Looking forward to COVID being in "the rearview mirror"	None
5	Lives with husband	Haven't seen friends or family routinely during pandemic	Concerned about the virus in the beginning	"I haven't really experienced loneliness."	Concern for people who lost jobs	Starting to see more people now	Feeling thankful for one's health
6	Lives with husband, most family living abroad	Day-to-day life hasn't changed much, limited social interactions	Worries about friends and family overseas	"You can't help but feel lonely sometimes."	Worries about friends and family overseas	"I'm hopeful that things will get better."	Feels lucky to be in the United States
7	Lives with husband, family all across the U.S.	Socializing much less frequently, no visitors.	"A weight has been lifted since getting the vaccine."	"I go out less often and see fewer people."	"I think about how many people are grieving."	"While it's not over, things are improving."	Spend more time outside
8	Lives with wife, does not see family regularly	Rarely socializing with others, staying home a lot	"I feel better now with the vaccine."	"I have never felt lonely."	"We were so lucky."	"I'm hopeful we're emerging from this."	More willing to overlook things and be more forgiving