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Research Article

"This Too shall Pass": Age-Based Perceptions of Changes in Routine, Coping and Stress

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Abstract

The spread of COVID-19 mandated several restrictions, mediated changes in routines, and impacted coping abilities and mental health outcomes. In terms of physical health outcomes, undoubtedly, adults 50 years and older were more severely affected by a higher death rate, medical complications and hospitalization. Nevertheless, how do older adults respond to the uncertainty and scare for life compared to other age groups within the context of COVID-19 remains partially unexplored. The current study enrolled 432 participants all across the US and examined age-based differences among three age groups regarding precautions, demands, changes in family routines, perceptions of changes in family routines, coping and perceptions of stress. The study's findings suggested that there are significant differences among three age groups on most variables, and older adults experience the lowest negative impacts. Additionally, even though older adults are stressed, the stress is moderated by effective coping, consistency of routines and emotional and cognitive skills. The study has important implications for practices to support older adults who are not coping positively, have higher stress and need social support.

Keywords: Age-based perceptions; COVID-19; Mental health outcomes; Social support

Introduction

Globally, 138,450,452 individuals have been tested positive for COVID-19, and there have been 297,622,9 deaths [1]. Research suggested a strong correlation between growing increased risk for severe illnesses due to COVID-19 and, therefore, a higher probability of needing hospitalization, intensive care, and ventilators, and death. In the US alone, hospitalization was 25% higher among people over 50 than younger age groups, and 80% of the COVID-19 related deaths were associated with individuals 65 years and older [2].

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COVID-19-consistency in routines and older adults

Empirical evidence suggested that consistent daily routines are associated with positive mental health outcomes. Consistent routines provide stability and lower stress associated with change and the learning of new skills. Additionally, routines, in general, may promote an active lifestyle and social interactions. To further elaborate, Horgas e al., [3] emphasized the role of routines in successful aging. The authors concluded that successful aging requires moving beyond basic daily living activities (such as eating, bathing and dressing). Opportunities such as consistent engagement and interaction with the external environment and communal activities may offer goals and meaning to older adults' lives and have a salutatory impact on their physical and mental health. Despite the merits, it is true that how much an individual can engage in communal activities can be a function of opportunities and restrictions imposed on them by their health conditions and context. Notably, COVID-19 placed several restrictions on older adults, in addition to greater fear related to illness and mortality. Consequently, these restrictions led to feelings of social isolation, financial difficulties, cancelation of non-emergency health appointments and social events, psychological distress associated with caregiving of older spouse and fear of travel [4].

COVID-19 disruptions in daily routines, coping and stress among older adults

As stated earlier, consistent routines that include leisure activities may stimulate an active lifestyle. Additionally, leisure activities were associated with enhanced physical and mental health outcomes, regardless of the demands they place on older adults [5]. Therefore, greater physically demanding activities, such as hiking, may help older adults remain active and have fewer illnesses, whereas lower physically demanding leisure activities, such as knitting or talking with friends, may boost positive mental health. Even in the context of COVID-19, Evergard's [5] findings are in sync with Fuller & Huseth-Zosel's [6] preliminary findings on coping among older adults. Fuller & Huseth-Zosel suggested that older adults who kept themselves busy with small projects and established consistent routines reported coping positively. Unsurprisingly, adults with positive coping also reported increased communication, better support from family and friends, and, consequently a positive mindset.

Thus, in addition to increased communication and better perceptions of support, positive coping augments positive mental health. Chen [7] theorized the affirmative role of resilience/coping in dealing with COVID-19 among older adults. He explained that a sense of cohesion, control over the situation, and mastery are essential protective factors during a crisis. These protective factors aid rebound from hardships and effective navigation of difficulties, restoration of sanity and culmination to a positive mindset. Therefore, although lack of social interaction and fear of mortality, and high infection rate with COVID-19 may seem baneful for the mental health among older adults, Fuller & Huseth-Zosel [6] revealed contrary findings among older adults and highlighted the resilient nature of older adults during COVID-19.

Interestingly, the findings on the resilient nature of older adults are not new. Pre-pandemic researchers argued that increasing age means numerous negative and positive life events that require individuals to manage and regulate their routines and effectively cope. For example, Studies on Past Epidemics (SARs), natural disasters, and calamities (hurricanes) have shown that older adults were more effective in diverting their negative thoughts constructively and used more emotion-focused strategies for coping [8-10]. Thus, these numerous life events that demand effective coping may further bolster wisdom, inner strength, self-reliance, and, therefore, resilience. For the most part, older adults may have a unique understanding of the circumstances, and, because they have undergone and solved many problems in their life, know that "this too shall pass" ([6] p. 121). Whitehead and Torossian ([11], p.40) reminded everyone that it is due to "the heterogeneity of experience-not everyone experiences a given event as stressful".

Overall, although there is a handful of empirical evidence to suggest that older adults may be resilient in the context of COVID-19, there is a need to confirm affirmative findings and more aspects through further research. Additionally, as Heid et al., [4] recommended, there is a need for an in-depth examination of perceptions of disruptions in routines; the current article will delineate age-based differences in precautions, demands, changes in family routines, perceptions of changes in family routines, coping, and perceptions of stress. Finally, age-based comparative studies within the context of COVID-19 have not been completed but are warranted to understand the full impact of COVID-19 on human lives and has implications for practice and family policies. Thus, the hypotheses of the study are.

- Hypothesis #1 Older age will be positively correlated with higher precautions and negatively correlated with demands, changes in family routines, negative perceptions of disruptions in family routines, negative coping and higher stress.
- Hypothesis #2 Older adults will have significantly higher mean scores on precautions and lower scores on demands, family routines, perceptions of family routines, coping and stress than other younger age groups. In addition to testing above hypothesis, the article will also identify and elaborate on age-based differences in narratives to provide further evidence of age-based correlations and group mean differences.

Methods

Sample size, sampling strategy and data collection

After IRB approval, 432 participants were recruited across the United States. Undergraduate students studying research methods course with a learning outcome of experiencing data collection through survey method collected data from their family, friends, others. Additionally, students used their social media and networking sites to promote the study. Overall, 14-quantitative and qualitative questions were uploaded to Qualtrics, an online survey tool with several enhanced features to maintain the participants' anonymity and confidentiality. Personal data, including IP addresses, names, streets, and email addresses, were not collected. The survey took 12 to 15 minutes to complete, and the study was IRB approved before data collection. SPSS 27 was used to analyze data. The eligibility criteria for the survey were an adult resident of the US and being an English speaker as the survey was not available in other languages. Overall, 432 individuals responded to the survey. The participants did not receive any gift cards or other benefits for their participation in the study.

Measures of the study

The 14-questionsurvey consisted of six sections. These sections and their details are as follows.

- Section #1 Demographics consisted of six items to collect necessary information about participants' age, gender, income and more.
- Section #2 Demands* consisted of 15 items. The purpose of the demand section was to count the number of members impacted by the various negative/high-stress situations within the family, e.g., pregnancy, disability, unemployment, etc. Several family members experiencing negative situations may pose additional demands and hardships on the respondent. Higher scores will indicate higher demands on the individual.
- Section #3 Family Routines* (CR) was a 5-point scale and consisted of 22 items. The scale ascertains how many family routines, such as cooking, and traveling have been impacted by COVID-19 in time expenditure. The ratings ranged from significantly lower than before to significantly higher than before. The lowest score on the scale can be 22, and the highest score can be 110. Higher scores will indicate more time spent by the family members on the activities now than before COVID-19.
- Section #4 Disruptions in the Family Routines* (PCR) was a 5-point scale and consisted of 18 items. The scale assessed participants' perceptions of the disruptions in various routine activities from much worse to much better. The lowest score on the scale can be 18, and the highest score can be 95. Lower scores will indicate greater negative perceptions of the disruptions in routines.
- Section #5 Coping was measured through COPE inventory, a 4-point scale with 28 items. Participants selected from "I have not been doing this at all" to "I have been doing this a lot" [13]. The scale has adequate reliability (Cronbach's Alpha = 0.70) and validity; it has been translated into several languages [14]. The inventory has three scales COPE Approach, COPE Avoidant and COPE Neutral
- Section #6 Perceptions of Stress (PSS) was a 5-point scale ranging from never to very often and consisted of 10 items. The scale measured the degree to which life situations are appraised as stressful [15]. The scale has high reliability (Cronbach's Alpha = 0.84) and validity; it has been translated into several languages [16]. The total scores can range from 0 to 40, indicating very low health concern (0-7), low health concern (8-11), average health concerns (12-15), high health concern (16-20), very high health concern (21+)

*Please note, in the absence of appropriate scales, Precautions, Demands, Family Routines and Disruptions in the Family Routine were created explicitly for the current study. Some items in the Family Routines and Disruptions in the Family Routine scale are adapted from the family routines inventory [12].

Data Analysis and Findings

Little MCAR's test indicated that data were not missing at random, and, therefore, Expectation-Maximization imputations (EM)

were conducted. Overall, out of the 432 participants, most of the participants were young adults (59%) and resided across the US. Almost 77% of the participants were females, almost half were single (n= 255), and most of them had at least had a bachelor's degree or were completing their bachelor's degree (43%). Due to technical issues, the data on race and ethnicity and household income are not available. The age of the participants was a continuous variable and was recoded into three groups. Thus Group#1 ranged from 18-25 years old, Group#2 ranged from 26- to 50-year-old, and Group3# consisted of individuals 51 years and older. The groups were formed based on developmental stages of lifespan development and the higher risk of illness associated with COVID-19. Please refer to table 1 for age-based descriptive findings on gender, marital status and education level of the participants.

Demographics	Group 1 (18-25)	Group 2 (26-50)	Group 3 (51 and above)	Missing
Age	255	122	54	1
Gender				1
Male	64	18	15	
Female	190	102	39	
Others	1	1	0	
Education (pursuing or completed)				09
High School	41	23	16	
Bachelor's	188	68	29	
Master's	21	24	7	
Doctoral and above	2	2	1	
Marital Status				02
Single	165	29	6	
Engaged	10	07	0	
Cohabiting	61	08	5	
Married	13	66	35	
Separated/Divorced	0	08	04	
Widowed	0	01	04	
Others	6	01	0	

Table 1: Number of participants in each age group and their demographics.

Hypothesis #1 Older age will be positively correlated with higher precautions and negatively correlated with demands, changes in family routines, negative perceptions of disruptions in family routines, negative coping and higher stress

As hypothesized, Spearman Correlations confirmed that age is negatively and moderately correlated with changes in routines (r=-.394, p= .00) (r=-.402, p = 0.00) perceptions of changes in routines, approach coping (r=-.307, p= 0.00), perceptions of stress (r=-.229, p= 0.00). Age was positively, but weakly, correlated with precautions (r= -.139, p= 0.00) and moderately correlated with avoidant coping (r= 0.323, p= 0.00).

Hypothesis #2 Older adults will have significantly higher mean scores on precautions and lower scores on demands, family routines, perceptions of family routines, coping and stress than other younger age groups?

First, group#3 (51 and above) significantly reported fewer demands, fewer changes in routines, yet had lower positive perceptions of changes in routine. Group#3 also significantly more avoidant coping, lower approach coping, and lower perceptions of stress. Second, regardless of the age group, the average score on PSS was a very high health concern for all groups. Finally, although older individuals were more likely to take more precautions and adhere to government guidelines, it was not significantly different from other groups (Table 2).

Measures	Groups 1 = 18-25 years (n= 255) 2= 26-50 years (122) 3= 51 years and above (n=54)	Mean	SD
Precautions	1	4.75	1.45
	2	4.72	1.6
	3	4.9	1.4
Demand*	1	12.7	8.1
	2	11.0	6.7
	3	10.6	5.7
Total CR*	1	72.46	4.6
	2	70.40	5.9
	3	66.81	0.8
Total PCR*	1	57.06	2.6
	2	55.71	2.8
	3	54.66	2.9
Total COPE Avoidant*	1	34.94	5.8
	2	37.7	5.3
	3	39.5	4.1
Total COPE Approach*	1	30.01	6.7
	2	26.65	6.6
	3	24.2	5.7
PSS*	1	32.5	5.6
	2	30.6	5.5
		29.5	6.0

Table 2: Means and Standard Deviations of total scores of Groups 1, 2 and 3.

*Suggests significant mean differences.

A two-way Multivariate Analysis of Variance (MANOVA) procedure was used to test the significance of the direct and interaction effects of age and dependent variables. The Box's test revealed the homogeneity of variance-covariance with a value of 24.04 was not significant (p= 0.789, > 0.001); therefore, Wilks' test was used to interpret the multivariate test statistic. The Levene's test revealed that the assumption of homogeneity of variances was met for precautions ($F(428) = 0.516$, $p > 0.05$), demand ($F(428) = 0.355$, $p > 0.05$),changes in routine ($F(428) = 0.377$, $p > 0.05$), perceptions of changes in routine ($F(428) = 0.500$, $p > 0.05$), COPE Approach ($F(428) = 0.894$, $p > 0.05$), and Perceptions of Stress ($F(428) = 0.385$, $p > 0.05$). The assumption of homogeneity of variances was not met for COPE Avoidant ($F(428) = 4.412$, $p = 0.013$).

The Wilks' Lambda results for age indicated significant group differences with respect to the overall dependent variables examined (Wilks' value = 7.914., F = 2.587, p = 0.000). The results of univariate ANOVA revealed a significant group effect for the independent variable age on the dependent variables Demand (F = 3.122, p= 0.04), changes in routine (F = 27.6, p =0.00), perceptions of changes in

routine (F = 22.3, p =0.00), COPE Avoidant (F = 8.9, p =0.00), and Perceptions of Stress(F= 8.9, P = 0.00). No significant group effect was found for the independent variable gender on the dependent variables Precaution (F = 0.342, p =0.711). Since the assumption of homogeneity of variances was not met for COPE Avoidant, Welch's and Brown-Forsythe were conducted. Both Welch's and Brown-Forsyth test suggested significant differences (F(158.001) = 26.125, p =0.00), (F(289.013) = 26.901, p =0.00). Multiple comparisons on Games Howell suggested significant differences between all groups.

Discussion

Many older adults in the United States have cardiovascular disease, diabetes, hypertension, COPD, and CKD [2], and individuals with these comorbidities had the highest risk for severe disease and death in COVID cases. Overall, the study's findings concurred with the findings of Heidi [4] and Horgas et al., [3]. Consistency in routines is essential for older adults [3] and older adults experienced greater fear of changes in routines. Similarly, even though older adults of the current sample reported fewer routine changes than younger groups, they perceived them more negatively. Given below are few narratives of older adults to corroborate the above findings.

- "A shift in personal connections away from in-person to virtual has left me feeling out of sorts and disconnected." (55-year-old)
- "Getting tired of having to wear masks and not being able to socialize." (69-year-old)
- "I'm tired of being so isolated from my friends. Most of my events have been canceled." (73-year-old)

The findings on significantly lower stress are consistent with Evergard's [5], Fuller &Huseth-Zosel's [6], who suggested that older adults who established consistent routines reported coping positively and reported increased communication and better support from family and friends. Given below are narratives of participants in older groups that illustrate effective coping in counting their blessings, better communication with family and friends, a positive mindset and resilient nature.

"We have been fairly lucky because we run an online business out of our home. We also only have two to three employees, so we have been able to create our own little bubble around us. We have followed state guidelines, have been able to take advantage of the paycheck program and SBA help. We are much more fortunate than many busi-nesses… Zoom has been a wonderful for us from church services to meetings. The technology is definitely helping us maintain good mental capabilities. We are very close to our adult children and keep in very good contact. We do carefully visit our daughters, who are also being careful and observing social distancing, mask wearing etc. We know many people are struggling and wish we could help out more. We do what we can through our church and community. We truly believe Americans will and do work together. We wish the political forces would stop dividing us." (62-year-old),

It is not that older adults are not upset with the lack of resources and information or stress out. For example, "My sister-in-law died from COVID at the beginning, and I was upset that she was alone. And her children were not notified until it got too late" (63-years old).

"Very concerned about my mother-in-law in a nursing home. Could not have contact with her, so it was a very worrisome time as there were already several reported cases of deaths due to COVID. Several workers also were tested as positive. She got sick and ended up passing, but the facility maintains she died of natural causes. We will never know for sure as they cremated her the next day. It was/is a sad situation for me and my husband's family and my heart breaks for all of us" (59-year-old).

However, even when older adults feared for their life or experienced COVID-19, they still effectively cope and lower their stress by utilizing avoidant coping techniques such as letting go of the control, i.e., understanding that some things are beyond their control, and, therefore, stressing about them is not fruitful. Given below are few examples that illustrate how older adults who, despite valid reasons for fear, coped effectively and kept a positive mindset. The positive mindset aided rebounding from hardships and effective navigation of difficulties, restoration of sanity, and culmination to a positive mindset [7].

"I have not had anyone close to me get COVID, but I do know how deadly it can be. I am always worried that someone I care for will catch it. I have had sleepless nights over this. I also feel so very badly for all those lost and feel so sorry for their families. My daughter is a nurse and there are others in our family in the medical field. I worry every second for them all. All we can do is follow the guidelines as close as possible, watch out for one another. Be kind to each other, you can never know what tomorrow will bring." (65-year-old).

"I was Covid-19 positive and for five days on a ventilator. For that reason, my life is a gift of my God. Believe in God. Love your family and help other people (56-year-old). COVID has been the most challenging experience of my life, and it's hard to keep thinking positive, but necessary for survival. Stay focused, be positive, breathe, be kind to one another and this will get better." (62-year-old).

To summarize, the study's overall findings provide further evidence for the more incredible resilient nature of older adults. However, it is also true that COVID-19 is a great equalizer. Therefore, unlike Whitehead and Torossian ([11], p.40), who propounded on "the heterogeneity of experience-not everyone experiences a given event as stressful," the findings of the study suggests that even older adults have very high levels of stress, yet this stress is moderated by effective coping, consistency of routines, and emotional and cognitive skills to lower stress.

Implications

The study has important implications for practices to support older adults who are not coping positively. Although the study findings suggest lower mean group differences between older adults and younger groups, the mean scores of PSS are still in a range of high health concern. Thus, intervention or prevention programs that can enhance consistent routines and online communication with family and friends to the moderate impact of social distancing and discontinued social engagement on stress levels of older adults are necessary. Finally, further research can be conducted to compare an older adult's mental and health outcomes before and after the onset of COVID-19.

Limitations

The study utilizes cross-sectional design, convenience sampling, and parts of the survey are retrospective in nature. Thus, causality

cannot be inferred, and the selected sample is not representative of the US population. Additionally, the online survey being accessible only to individuals with the internet, the findings may have some coverage bias.

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