We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900
Open access books available

185,000
International authors and editors

200M
Downloads

Our authors are among the

154
Countries delivered to

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Chapter

COVID-19 and Psychological Distress among Older Adults in Ghana

Anthony Kwame Morgan, Justin Cobbold, Beatrice Aberinpoka Awafo, Daniel Katey, Theophilus Quartey and Rahinatu Ibrahim

Abstract

COVID-19, the novel of all respiratory pandemics, has since its global invasion remained a significant threat in all spheres of human endeavour. This phenomenon has led to short-term and long-term psychosocial and mental health implications for many populations, particularly vulnerable groups, of which older people form part. This paper fills the lacuna in research on how the pandemic is breeding psychological distress among older people. Cross-sectional data were obtained from an Ageing, Health, Lifestyle and Health Services (AHLHS) study conducted between June 2020 and August 2020 (N = 400) in the Ashanti and Greater Accra regions of Ghana. Sequential logistic regression models were performed to estimate the variables that predict psychological distress, whereas descriptive statistics were used to determine the extent of psychological distress among the study population. This study revealed that psychological distress was somehow prevalent, necessitating early intervention to minimise the risks of the said health risk. Additionally, gender, employment status, chronic NCDs, perceived health status and receipt of COVID-19 information were significantly associated with psychological distress among the respondents. It is necessary to employ strategies to minimise the psychological distress in Ghana during this pandemic.

Keywords: ageing, COVID-19, Ghana, older adults, psychological distress

1. Introduction

Psychological distress has been identified as one phenomenon that is common to all humans irrespective of age and gender differentiations. In children, Roma et al. [1] identified that the inability of parents to sometimes meet the most pressing needs of children in their adolescence pose some level of psychological turmoil to them. Nania et al. [2] also posited that adolescents' quest to understand the reasons behind social stratifications in their societies induce the feeling of anxiety and worry in them especially when they belong to the disadvantaged end of the spectrum. Psychological distresses are more prevalent among the young adult category (18–30) and the older adult group (above 60 years) [3]. Vahedian-Azimi and others further explained that access to diversified information on social media incubates

IntechOpen

anxiety and some sense of worry among young adults whereas depression, which is induced by loneliness and regret, is common among people within the older age group.

COVID-19, the novel of all respiratory diseases has since its global invasion remained a major threat in all spheres of human endeavour. According to the Oregon Health Authority [4], COVID-19 has posed the greatest of economic depressions the world has ever experienced. In the same vein, the World Health Organisation [5] also identified COVID-19 as a key threat to human relationships. Inasmuch as COVID-19 has in recent times increased the threshold of people developing psychological distresses, Gorenko et al. [6] noted that the case with older adults is remarkable in that, prior to the pandemic most older people had astounding psychological issues. This, coupled with the socioeconomic depressions fueled by the pandemic have led to several workers been laid off thereby posing no small threat to the dependent aged population especially in developing nations [7]. According to Rutayisire et al. [8], anything that threatens livelihood sustaining activities always creates multiplier indices for depression and anxiety. Extending the argument, Stiegler and Bouchard [9] further identified that some measures put in place by global leaders and national governments in their bid to manage and curtail the pandemic have in recent times worsened the dilemma of psychological distress among older people. In that regard, Gorenko et al. [6] revealed that social distancing and some lockdown measures across the world have worsened the plight of older people who already fell neglected and left out in most societal engagements.

According to Cinelli et al. [10] the inability of older adults to effectively use social media platforms such as Facebook and Twitter to engage with cohorts and relatives has contributed to their psychological distresses during the pandemic. The concept of mass media communication was further expounded by Roy et al. [11] when they noted that, during the COVID-19 pandemic, most young people spend much time interacting on social media than they do in-person. This form of social engagement has been identified by Twenge & Joiner [12] as vital for relieving psychological stresses.

Contrarily, the gradual shift from an in-person form of commerce to the digital has inadvertently increased households' population [13]. According to them, households which hitherto the COVID-19 used to be partially or entirely empty, now have their full occupancy almost always intact. This has been adjudged by Bhatti et al. (2020) as a vital means to managing feelings of isolation and depression among the aged. Tran [14] also noted that the presence of people around the aged creates social security and emotional empowerment to them. This is supported by Twenge & Joiner [12] when they indicated that depression and feeling of isolation among younger and older people are stimulated by the absence of close relatives or friends. In this regard, Qiu et al. [15] identified that psychological distresses such as depression and feeling of isolation have in recent times, partially reduced among older people in China by virtue of the relatively longer stay of other householders at home. Hence, as a way of helping the aged overcome psychological distresses during the pandemic, Amzat et al. [16] indicated that friends and relatives should make deliberate efforts to spend quality time with their older folks. Similarly, Alsheikh Ali [17] also intimated that adult education needs to be intensified to equip the aged with basic skillsets and knowledge relevant for keeping abreast with contemporary advancement in technology.

Evidence from earlier epidemics suggest that such occurrences are associated with higher psychological distress. For illustration, the Ebola epidemic which affected some West African countries in 2014 and 2015 resulted in massive psychological problems for victims, healthcare workers and the entire population of the

affected countries [18, 19]. While there exist a plethora of studies which examined psychological distress and its associated factors among different population cohorts like healthcare workers, students and the general population [20–26], evidence on older adults is limited or non-existent in some African countries. Additionally, the few available studies were conducted in other jurisdictions outside of Ghana. The only known research on COVID-19 and psychological distress in Ghana was conducted by Ofori et al. [27] to highlight the psychological impact of COVID-19 on Ghanaian health workers and indirectly serve as a needs assessment survey for input to support affected staff and the broader health system. Against this background, this study seeks to examine psychological distress among adults in Ghana in light of the pandemic.

2. Methodology

This section of the study presents a review of the methodology adopted in the conduct of the research. The first part focuses on the research philosophy underpinning the study. The second section deals with the research design adopted in the study. The third part takes into consideration the study variables comprising dependent and independent variables. The fourth part is devoted to sources of data. Unit of analyses, sample size determination data collection instrument, sampling techniques and data collection procedure in addition to the methods of data analysis were captured in the remaining sections of the methodology.

2.1 Research philosophy

Research philosophy is considered as a central and a fundamental component of every research, as it spells out how the author(s) or researcher(s) perceive the functioning of the world and, centres primarily on reality, knowledge, and existence [28–31]. This suggests that when choosing a research paradigm, attention must be accorded to its semblance with the fundamental assumptions, as it defines the methodological choice, research strategy and means of data collection and the analytical frameworks that must be employed [32]. The research is underpinned by the positivist approach to knowing or studying the world. This approach helps in establishing relationship among variables [33, 34], by the application of rigorous statistical analysis [35, 36].

2.2 Research design

Research design demonstrates the procedure for data collection and analysis in a manner that integrates the importance of the study [36]. The cross-sectional research design was employed to ensure that data was collected in a one-of fashion to make inferences about the population of interest (older persons within the Accra and Kumasi Metropolitan areas of Ghana's Greater Accra and Ashanti Regions respectively). Cross-sectional surveys are useful in proving or disproving assumptions and capture multiple variables at the time (Bethlehem, 1999). It is further argued that cross-sectional research provides a picture of the results and the traits associated with it and at a particular period in time [37–39]. Adoption of the research design also helped in establishing the prevalence rate of psychological distress among older adults in Ghana during a pandemic such as COVID-19 in addition to the odds ratios, to study the association between exposure and the outcome variables [39]. The exposure variables in this study were, therefore,

demographic, socio-economic, health status variables and COVID-19 associated variables, whereas that of the outcome variable was psychological distress from COVID-19.

2.3 Sources of data

Within the scope of research, sources of data comprise both primary and secondary sources [40]. The primary data constitute any data gathered by the researcher(s) or investigator(s) directly from the unit of analysis or the respondents of the study. These data are often obtained by way of questionnaire administration, interviews, focus group discussions (FGDs) and sometimes through participant observation. The secondary data, nevertheless, refers to data provided to the researcher(s) or investigator(s) by another entity. In other words, secondary data is collected by someone else other than the researcher(s) or investigator(s). The data for this study was obtained from primary sources. Specifically, the primary data was obtained from older adults who were 50 years and above, living in Accra and Kumasi Metropolitan areas.

2.4 Unit of analyses

Unit of analyses in research denotes the particular entity or group that makes up what is being investigated or studied within the research. Older people (50 years and above) constituted the unit of analyses for the study. As such, persons below 50 years of age were excluded from the potential participants of the study.

2.5 Sample size determination

Samples are essential in social surveys as it is nearly impossible to reach or cover the entire population of interest due to myriad reasons. Estimating an appropriate sample size that has the characteristics of the population from which the sample will be drawn is of concern in the research process. The required sample size was estimated using Lwanga and Lemeshow's [41] formula for estimating sample sizes since no sampling frame exists for older people in the Accra and Kumasi Metropolitan areas.

$$n = \left(Z^2 * P * (1 - P)\right)/d^2 \quad (1)$$

Where n = sample size, Z = Z statistic for a level of confidence (1.96 for 95% confidence level), P = expected prevalence or proportion (the proportion or prevalence rate of 50%, P = 0.5%), and d = precision (in proportion of one; if 5%, d = 0.05). These parameters were factored into the equation.

$$n = \left(Z^2 * P * (1 - P)\right)/d^2 \quad (2)$$

$$n = \left(1.96^2 * 0.5 * (1–0.5)\right)/0.05^2; n = 384.16. \quad (3)$$

The results indicated a sample size of 385 respondents. To cater for non-response rate, 10% (39) sample size was added to the sample, thus totalling 424 respondents. In all, 400 online questionnaires and researcher administered questionnaires were fit for purpose (fully completed). By this, responses from 400 older adults were included in the final analysis.

2.6 Data collection instruments

A single close-ended questionnaire was used to gather information from the online survey and the face-to-face interaction with a section of the older people. The questionnaires were drafted in a close-ended format to ensure easy reading by the participants to save time and to increase response rate [42]. The questionnaire was structured in four sections. The first section captured information on the demographic features of the respondents such as age, gender, marital status among others. The second aspect comprised information on socio-economic features like educational level, income or livelihood strategy, among others. The third section captured information on health status variables such as being diagnosed with a non-communicable disease, disability, past illness and self-rated health. Information on COVID-19 associated variables (such as increasing number of cases and deaths) constitute the focus of the fourth aspect of the questionnaire, whereas psychological distress from COVID-19 (such as feeling calm, feeling rushed, not seeming to have enough time and having physical aches and pains among others) was the focus of the fifth section of the questionnaire.

2.7 Sampling techniques and data collection procedure

The purposive sampling technique was used to sample the respondents. By this, the online survey forms were forwarded to people who have attained the minimum age of 50 years. This was to reduce the likelihood of individuals below the age of 50 years participating in the study. Additionally, the face-to-face researcher administered questionnaire was only administered to persons who were 50 years or above. This sampling method (purposive sampling technique) requires researchers to have prior knowledge about the purpose of their studies so that they can properly choose and approach eligible participants. The study's purpose is to explore the impact of COVID-19 on psychological distress among older adults (50 years or above), eligible participants comprised only older adults (50 years or above). Researchers use purposive sampling when they want to access a particular subset of people, as all participants of a study are selected because they fit a particular profile. By this, the homogenous purposive sampling was used because members of the sample have a shared characteristic or a shared set of characteristics. The homogeneous purposive sampling was used because the research question being addressed is specific to the characteristics of the particular group of interest, which was subsequently examined in detail.

The data collection spanned a period of three months, between June 2020 and August 2020. The data collection was in two forms. First, an online survey was used to obtain results from older adults on the psychological stress of COVID-19 in Ghana. Google forms were used to disseminate the questionnaires on various media platforms including Facebook, WhatsApp and Emails. Over the three months, a total of 310 older adults filled and submitted the online survey forms. Acknowledging that there is a higher likelihood of excluding older adults who cannot read nor write from the sampled population, face-to-face interviews were conducted for older adults who fell within this category. Although the face-to-face researcher administered questionnaire was supposed to capture information from respondents who could neither read nor write about 10% of the respondents could read or write but did not fill the online survey forms and intimated their willingness to be interviewed. Before the interview with the older adults, verbal informed consent was taken from the respondents. Following the recommendation of Kumekpor [42], the purpose of the research was explained to the study participants. By using the convenient sampling approach, the respondents who agreed were interviewed, and their responses were ticked or noted on the questionnaire. In all, responses from

400 older adults were obtained (comprising of 310 responses through the online survey and 90 responses from face-to-face questionnaire administration).

2.8 Data analysis

The data obtained were verified, carefully checked for consistency by cross-referencing it to the original questionnaires for corrections and modifications. The data was imputed into the database and was analysed using descriptive and inferential statistical tools within the SPSS software (Version 20.0). Descriptive statistical tools were used to summarise the data and presented in tables. Additionally, a multivariate logistic regression model was developed to estimate the variables that were associated with psychological stress among the study participants. Four different sets of models were developed to estimate psychological stress among the participants. Model 1 consists of demographic variables. Model 2 comprised socio-economic variables in addition to all variables in Model 1. Model 3 consist of all variables in Model 2 in addition to health-related variables. Model 4 (full Model) comprise all variables in Model 3 as well as COVID-19 related variables. The test results were considered significant at 0.05 or less.

2.9 Ethical consideration

The study conformed to all ethical standards. Firstly, the notion of voluntary consent [43] as pertains to social science research was adhered to during the data collection process. The respondents were briefed about the purpose of the study and how the data collected was to be used. Secondly, anonymity and privacy was guaranteed when reporting the findings from the respondents.

3. Results

The results from of the data collected from the field survey with older adults on COVID-19 and psychological health are presented in this section. The results are presented under three themes. The first section covers the socio-demographic characteristics of the respondents. The prevalence of self-reported psychological distress from COVID-19 was presented in the second section, whereas the determinants of psychological stress among older adults was captured under the third and final section.

3.1 Socio-demographic characteristics of the participants

A total of 400 older adults were involved in this study. Of this participants, 218 (54.5%) reside within the Kumasi Metropolis, and 151 (37.8%) of them were males, and 249 (62.3%) were females. Up to 211 (52.8%) of the participants were aged between 50 and 60 years, 149 (37.2%) were aged between 61 and 70 years, and 40 (10%) were above 70 years. Among the participants, 331 (82.8%) were Christians, 229 (57.3%) were married, 121 (31%) had primary or basic education, 250 (62.5%) were employed (either by an entity-state or private institutions or are

Variable	Categories	Count (400)	Percentage (%)
Location	Greater Accra Metropolis	182	45.5
	Kumasi Metropolis	218	54.5
Gender	Males	151	37.8
	Females	249	62.3

Variable	Categories	Count (400)	Percentage (%)
Age *(years)*	50–60 years	211	52.8
	61–70 years	149	37.2
	Above 70 years	40	10.0
Religion	Christian	331	82.8
	Non-Christian	69	17.3
Marital Status	Married	229	57.3
	Divorced	79	19.8
	Widowed	92	23.0
Level of Education	No formal education	70	17.5
	Basic education	124	31.0
	High school education	99	24.8
	Tertiary education	107	26.8
Employment	Employed	250	62.5
	Retired	150	37.5
Socio-economic status	Extremely poor	68	17.0
	Quite poor	121	30.3
	Not very well off	157	39.3
	Quite well off	54	13.5

Table 1.
Socio-demographic characteristics of the participants.

self-employed), 157 (39.3%) were quite well off (based on self-reported social status ranking) among others (see **Table 1** for further details).

3.2 Prevalence of self-reported psychological distress from COVID-19

The psychological distress from COVID-19 was measured by the Psychological stress measure PSM-9, a measure was developed by Lemyre and Tessier [44]. The participants were asked to rank their experience of psychological distress from COVID-19 on an 8-point Likert scale; ranging from 1 = Not at All; 2 = Not Really; 3 = Very Little; 4 = A Bit; 5 Somewhat; 6 = Quite A Bit; 7 = Very Much; and 8 = Extremely. Descriptive statistical tools like the mean and standard deviation as well as frequencies and percentages were used to summarise the results. Additionally, the Relative Importance Index (RII) was used to rank the forms of bullying within the school using the formula RII = $\sum$PiUi/N (n), where w is the weighting as assigned by each respondent on a scale of one to five with one implying the least and five the highest. A is the highest weight and N is the total number of the sample. **Table 2** presents the results on the Psychological stress measure PSM-9.

With a mean score of 3.9 (and a standard deviation of 2.2), 3.9 (2.0) and 4.5 (2.0), the respondents feel calm, feel rushed; do not seem to have enough time and have physical aches and pains: sore back, headache, stiff neck, stomach ache a bit of the time. Also, a bit of the time the older adults feel preoccupied, tormented, or worried (mean = 4.5 and standard deviation = 2.0) and feel stressed mean = 4.3 and standard deviation = 1.9) while somewhat most of them feel a great weight on their shoulders (mean = 4.74 and standard deviation = 1.9). Most of them also somewhat feel confused; with muddled thoughts; lacking concentration and focus. However, quite a bit of the time, they are full of energy. Ranking the variables on the RII scale, feeling full of energy and keen ranks first with an index of 0.78, feel a great weight on their shoulders ranks second with an index of 0.66, whereas feeling confused with muddled thoughts; lack concentration and focus as well as feeling preoccupied, tormented, or worried ranked third and fourth respectively. The study thus reports a moderate incidence of psychological distress from COVID-19 among the respondents.

Statements	Not At All		Not Really		Very Little		A bit		Somewhat		Quite a Bit		Very Much		Extremely		Mean	Std. Dev	RII	RII Level	Rank
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%					
I feel calm	75	18.8	63	15.8	52	13	54	13.5	52	13	47	11.8	31	7.8	26	6.5	3.9	2.2	0.55	High-Low	9
I feel rushed; I do not seem to have enough time.	49	12.3	48	12	97	24.3	49	12.3	77	19.3	28	7	27	6.8	25	6.3	3.9	2.0	0.55	High-Low	8
I have physical aches and pains: sore back, headache, stiff neck, stomach ache.	25	6.3	25	6.3	75	18.8	125	31.3	28	7	48	12	25	6.3	49	12.3	4.5	2.0	0.63	High	5
I feel preoccupied, tormented, or worried.	22	5.5	48	12	76	19	54	13.5	76	19	49	12.3	26	6.5	49	12.3	4.5	2.0	0.63	High	4
I feel confused; my thoughts are muddled; I lack concentration; I cannot focus.	25	6.3	49	12.3	24	6	101	25.3	49	12.3	76	19	51	12.8	25	6.3	4.6	2.0	0.64	High	3
I feel full of energy and keen.	25	6.3	1	0.3	27	6.8	29	7.3	76	19	115	28.8	76	19	51	12.8	5.6	1.8	0.78	Higher	1
I feel a great weight on my shoulders.	25	6.3	25	6.3	24	6	126	31.5	77	19.3	50	12.5	24	6	49	12.3	4.74	1.9	0.66	High	2
I have difficulty controlling my reactions, emotions, moods, or gestures.	72	18	25	6.3	51	12.8	75	18.8	75	18.8	26	6.5	26	6.5	50	12.5	4.2	2.2	0.59	High-Low	7
I feel stressed.	23	5.8	46	11.5	98	24.5	55	13.8	74	18.5	52	13	26	6.5	26	6.5	4.3	1.9	0.60	High-Low	6
Overall psychological distress	18	4.5	7	1.8	12	3	140	35	172	43	51	12.8	—	—	—	—	4.5	1.1	—	—	—

Table 2.
Prevalence of self-reported psychological distress from COVID-19.

	Model 1		Model 2		Model 3		Full Model	
Variable	**AOR**	**95% C.I**	**AOR**	**95% C.I**	**AOR**	**95% C.I**	**AOR**	**95% C.I**
Demographic								
Gender[a]								
Female	**1.898***	**(0.614–1.543)**	**1.015***	**(0.632-1.630)**	**1.009***	**(0.625-1.628)**	**1.004***	**(0.609-1.595)**
Age (years)[b]								
61–70	0.838	(0.519–1.352)	0.907	(0.554–1.485)	0.850	(0.513–1.410)	0.867	(0.521–1.444)
Above 70	**1.482***	**(0.729–3.013)**	1.668	(0.776–3.584)	1.662	(0.766–3.607)	1.715	(0.781–3.764)
Marital Status[c]								
Divorced	0.966	(0.548–1.702)	1.266	(0.620–2.587)	1.313	(0.640–2.695)	1.409	(0.679–2.921)
Widowed	0.756	(0.428–1.338)	1.101	(0.413–2.936)	1.023	(0.379–2.759)	1.129	(0.414–3.083)
Religious group[d]								
Non-Christian	1.236	(0.688–2.222)	1.273	(0.694–2.337)	1.331	(0.715–2.475)	1.310	(0.702–2.445)
Socio-Economic								
Education[e]								
Basic			1.107	(0.531–2.308)	1.092	(0.518–2.299)	1.059	(0.500–2.243)
Secondary or high school			1.592	(0.735–3.448)	1.561	(0.711–3.423)	1.529	(0.692–3.379)
Tertiary			1.978	(0.956–4.094)	2.014	(0.961–4.219)	2.026	(0.961–4.273)
Employment Status[f]								
Retired			**0.972***	**(0.601–1.570)**	0.414	(0.146–1.177)	**0.396***	**(0.138-1.140)**
Socio-economic status[g]								
Quite poor			0.516	(0.246–1.083)	0.516	(0.244–1.089)	0.504	(0.238–1.070)
Not very well off			0.440	(0.159–1.221)	0.489	(0.174–1.375)	0.475	(0.168–1.340)

	Model 1		Model 2		Model 3		Full Model	
Variable	**AOR**	**95% C.I**	**AOR**	**95% C.I**	**AOR**	**95% C.I**	**AOR**	**95% C.I**
Quite well off			0.805	(0.365–1.776)	0.855	(0.380–1.923)	0.863	(0.383–1.945)
Health-Related Variables								
No diagnosis with NCD[h]					**0.759***	**(0.428-1.345)**	**0.694***	**(0.308-1.561)**
No past illness[i]					2.763	(0.994-7.677)	3.011	(1.065–8.509)
Poor health status[j]					**1.906***	**(0.548-1.497)**	**1.927***	**(0.558-1.541)**
COVID-19 Related Variables								
Accurate information[k]							**1.669***	**(0.378-1.182)**
Increasing cases and deaths[l]							1.323	(0.733–2.388)
Comprehensive measures[m]							1.262	(0.699–2.282)
Model fitting information -2Log Likelihood		470.635		461.176		456.592		453.064
Hosmer-Lemeshow χ^2 (significance)		2.356(0.968)		12.433(0.133)		5.387(0.716)		3.901(0.866)
Nagelkerke R^2		0.013		0.047		0.063		0.075

*$p < 0.05$.

[a]*Male is the reference category for gender variable.*

[b]*50–60 years is the reference category for the age variable.*

[c]*Married is the reference category for marital status variable.*

[d]*Christian is the reference category for religious variables.*

[e]*No formal education is the reference category for education variable.*

[f]*Employed is the reference group for the employment variable.*

[g]*Extremely poor is the reference category for socio-economic status.*

[h]*Have been diagnosed with NCDs is the reference category for NCDs variable.*

[i]*Recorded past illness is the reference category for past illness variable.*

[j]*Good health status is the reference category for the health status variable.*

[k]*Yes is the reference category for accurate information on COVID-19.*

[l]*Yes is the reference increasing cases and deaths from COVID-19.*

[m]*Yes is the reference category for the existence of comprehensive measures.*
Model 1 = Socio-demographic variable; Model 2 = All variables in Model 1 plus self-rated health variables; Model 3 = All variables in Model 2 plus COVID-19 related variables.
CI = Confidence Interval; OR = Odd Ratio; AOR = Adjusted Odd Ratio.

Table 3.
A multivariate logistic regression on the determinants of psychological stress among older adults.

intechopen

3.3 Determinants of psychological stress among older adults

A sequential logistic regression analysis was performed to find the factors associated with psychological stress among older adults (see **Table 3**). In Model 1, the study revealed that female older adults were significantly more likely to experience psychological distress as compared to their male counterparts (AOR = 1.898; CI = 0.614–1.543). Again, the study found that respondents who were above 70 years were significantly more likely to experience psychological distress as compared to respondents who were between 50 and 60 years old AOR = 1.898; CI = 0.729–3.013). In Model 2, female respondents were significantly more likely to experience psychological distress as compared to their male counterparts (AOR = 1.015; CI = 0.632–1.630). It was also established that respondents who have retired were significantly less likely to experience psychological distress as compared to respondents who were employed (AOR = 0.972; CI = 0.601–1.570). The introduction of socio-economic variables in Model 2 particularly, employment status rendered the association between the age of the respondents and psychological distress insignificant. This outcome suggests that employment status as a socio-economic variable is a good predictor of psychological distress from COVID-19 than the age. On the contrary, the introduction of the socio-economic variables was unable to dissipate the association between gender and psychological distress from COVID-19.

In Model 3, it was also established that female respondents were significantly more likely to experience psychological distress as compared to their male counterparts (AOR = 1.009; CI = 0.625–1.628). It was also established that respondents who have never been diagnosed with non-communicable diseases were significantly less likely to experience psychological distress as compared to older adults who have been diagnosed with non-communicable diseases (AOR = 0.759; CI = 0.428–1.345). Older adults who have poor self-rated health were significantly more likely to experience psychological distress than older adults who perceived their self-rated health as good (AOR = 1.906; CI = 0.548–1.497). The introduction of health-related variables in Model 3 particularly, diagnosis with non-communicable diseases and self-rated health rendered the association between employment status and psychological distress from COVID-19 insignificant. This outcome suggests that family diagnosis with non-communicable diseases and self-rated health are good predictors of psychological distress among older adults than their employment status. On the contrary, the introduction of the health-related variables was unable to dissipate the association between gender and psychological distress.

In the Full Model, females (AOR = 1.004; CI = 0.609–1.595), older adults who perceived their self-rated health as good (AOR = 1.927; CI = 0.558–1.541) and older adults who received inaccurate information on the COVID-19 (AOR = 1.669; CI = 0.378–1.182) were significantly more likely to experience psychological distress than their respective counterparts. Additionally, respondents who have retired (AOR = 0.396; CI = 0.138–1.140) and respondents who have never been diagnosed with non-communicable diseases (AOR = 0.694; CI = 0.308–1.1561) were significantly less likely to experience psychological distress than their respective counterparts. The introduction of the COVID-19 related variables did not dissipate the association between gender, non-communicable diseases and self-rated health and psychological distress from COVID-19. Even though there was no association between employment status and psychological distress from COVID-19 in Model 3, the Final Model observed an association between employment status and psychological distress from COVID-19, with retired older adults significantly less likely to experience psychological distress from COVID-19 (AOR = 0.396; CI = 0.138–1.140).

4. Discussion

This study examined COVID-19 and psychological distress and its associated factors among older adults in Ghana. Being the first study to report on COVID-19 and psychological distress and its associated factors among older adults in Ghana, the research largely contributes to literature, methodology and policy and practise on mental health; particularly during a pandemic like COVID-19. As found in the study, 43% of the participants (translating into 172 in 400 older adults) have somewhat suffered psychological distress from COVID-19. This finding showed a higher incidence of psychological distress among the respondents compared to the findings from earlier studies on psychological distress due to COVID-19 [21, 23–26]. The moderate level of stress reported in our study lends credence to the similar finding discovered by Grover et al. (2020). That said, the findings of this study represent a lower prevalence rate of psychological stress than the 71% stress level reported by Son et al. [45] when they examined the effects of COVID-19 on college students' mental health in the United States.

The discrepancies in the prevalence rates could be attributed to the differences in the study designs, variations in populations studied and the conceptualization of psychological stress. For instance, while some of the studies adopted only online surveys, some adopted face-to-face interaction. Additionally, some of the works that reported low prevalence were conducted among the general population of 18 years above in some case, and 14 years and above in other instances. However, our study was conducted among a population cohort that is known to suffer a wide array of psychological distresses, chronic conditions and multimorbidities [46–49]. The COVID-19 pandemic appears to have had a minor psychological impact on the older adults in the Greater Accra Metropolitan Area and the Kumasi Metropolitan Area. However, psychological health promotion in the general public is still required, with much emphasis on older adults to avert the situation.

In our study, gender, employment status, chronic NCDs, perceived health status and receipt of the information on COVID-19 were significantly associated with psychological distress among the respondents. Gender was a predictor of psychological distress among older adults. The findings confirm earlier studies in which the female gender was associated with a higher risk for developing depression and anxiety symptoms [23, 50–56]. The nearly unanimous view of literature on the higher risk of psychological distress among females has been somehow attributed to their increased care burden. "While women were already doing most of the world's unpaid care work before the onset of the COVID-19 pandemic, emerging research suggests that the crisis and its subsequent shutdown response have resulted in a dramatic increase in this burden" [57]. The increased care burden could be the reason for the association between the female gender and psychological distress.

Furthermore, the study found a statistically significant association between employment status and psychological distress among the respondents, with retired older adults having a lower odd of experiencing psychological distress. The coronavirus outbreak is, first and foremost, a public health threat, but it is also, and increasingly, becoming an economic threat [49]. In addition to its significant social impacts and human dimension, the outbreak is a major economic shock, calling for a decisive and coordinated political response [58]. Job losses and pay cuts that have occasioned the response to the economic fallouts of the pandemic has led to significant financial constraints to the affected people. As such, older people who were employed and have experienced job losses or pay cuts will suffer much more psychological distress. By this, Crayne [59] noted that more and more people will

suffer devastating effects of job losses and pay cuts, an occurrence that will have deleterious impacts on mental wellbeing. Policies and interventions that make living conditions a bit better are highly advocated.

Older adults without chronic NCDs were less likely to experience psychological distress compared to those with chronic NCDs. Again, this study found that self-rated health (ones perceived health status) influences psychological distress from COVID-19 among the respondents. Thus, the older adults who have poor self-rated health were significantly more likely to experience psychological distress from COVID-19 than older adults who perceive their self-rated health as good. According to De Ridder et al. [60], persons diagnosed with NCDs often suffer psychological distress. A similar argument was made by Turner and Kelly [61] when they observed being diagnosed with NCDs increases stress among the patients. With comorbidities high touted as a risk factor as far as mortality from COVID-19 is concerned, people with poor health status and those diagnosed with NCDs have seen their stress levels increased [62]. However, evidence abounds that receiving accurate information about COVID-19 reduces apprehension and its attendant psychological stress. It is by this that older adults who do receive accurate information about the virus had a higher likelihood of experiencing psychological distress. This implies that appropriate information must be disseminated about the virus to reduce the excessive fear and frightening message that is often churned out into the public domain. This will go a long way to reduce the psychological distress among older adults in Ghana.

The study offers valuable insights into psychological distress among older adults in a developing country like Ghana – during a pandemic (COVID-19). To the best of our knowledge, this research represents the icebreaker, as no known study has examined the prevalence and the determinants of psychological distress among older adults in Ghana. This study provides information to health policymakers to have a better understanding of demographic, socioeconomic, health-related and COVID-19 related associates of psychological distress among older adults in Ghana. Notwithstanding the contributions of this study, some notable limitations must be highlighted. Our findings may be prone to a possible selective survival bias which may somewhat be ascribed to the selection procedure of the sample and criteria for defining or conceptualising older adults within the study. Similarly, given the cross-sectional nature of the study, the causal relationship between psychological stress and its associated factors among older adults cannot be determined. The results largely demonstrate a significant association between these variables. An investigation into the causality of the associations is recommended in future studies.

5. Conclusion

This study examined the prevalence and factors associated with psychological distress among older adults in Ghana. The study was birthed out of the necessity in understanding the associations between various factors predicting psychological distress among older adults during the COVID-19 pandemic, as this can be supportive in devising strategies aimed at reducing the impact of the health problem among the target population. Besides, this will help in creating awareness among the participants about how to cope with the virus and the importance of seeking accurate information about the COVID-19. The results revealed that a significant fraction of the older adults had suffered some form of psychological distress. Nonetheless, gender, employment status, chronic NCDs, perceived health status and accurate information on COVID-19 were significantly associated with psychological distress. This study revealed that psychological distress was somehow prevalent,

necessitating early intervention to minimise the risks of the said health risk. It is necessary to employ strategies to minimise the psychological distress in Ghana during this pandemic. To achieve this, there is the need to provide adequate psychosocial support for older adults. The initiatives for improving psychological health among the general public could focus on delivering COVID-19 knowledge and alleviating avoidant coping styles. Establishing a targeted mental health support program during the time of public emergencies, such as the disease outbreak, is advised. The government and its partners must implement strategies and policies to shore up the economic and financial consequences of the pandemic, to reduce job losses and their attendant psychological challenges. Overall, our findings could provide important insight for the development of psychological support strategies in Ghana, as well as in other places affected by the epidemic.

Acknowledgements

The authors acknowledge the contributions of Eunice Awuye-Kpobi and all the participants for helping obtain and provide data to aid the successful completion of this work.

Conflict of interest

"The authors declare that there is no conflict of interest as far as the study is concerned."

Author details

Anthony Kwame Morgan[1*], Justin Cobbold[2], Beatrice Aberinpoka Awafo[2], Daniel Katey[1], Theophilus Quartey[2] and Rahinatu Ibrahim[1]

1 Department of Geography and Rural Development, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana

2 Department of Planning, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana

*Address all correspondence to: anthoniomorgano280@gmail.com

IntechOpen

© 2021 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. CC BY

References

[1] Roma, P., Monaro, M., Colasanti, M., Ricci, E., Biondi, S., Di Domenico, A., ... Mazza, C. (2020). A 2-month follow-up study of psychological distress among italian people during the covid-19 lockdown. International Journal of Environmental Research and Public Health, *17*(21), 1–12.

[2] Nania, T., Dellafiore, F., Caruso, R., & Barello, S. (2020). Risk and protective factors for psychological distress among Italian university students during the COVID-19 pandemic: The beneficial role of health engagement. *International Journal of Social Psychiatry*, 0020764020945729.

[3] Vahedian-Azimi, A., Moayed, M. S., Rahimibashar, F., Shojaei, S., Ashtari, S., & Pourhoseingholi, M. A. (2020). Comparison of the severity of psychological distress among four groups of an Iranian population regarding COVID-19 pandemic. BMC Psychiatry, *20*(1), 1-7.

[4] Oregon Health Authority. (2020). COVID-19 Weekly Report. *Oregon Public Health Division*, 1–24. Retrived on February 15, 2021 from https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/DISEASESAZ/Emerging%20Respitory%20Infections/COVID-19-Weekly-Report-2020-12-30-FINAL.pdf

[5] World Health Organization. (2020). Weekly Epidemiological Update. *1* (October), 1–28. Retrieved from https://www.who.int/publications/m/item/weekly-epidemiological-update—3-november-2020%0Ahttps://www.who.int/docs/default-source/coronaviruse/situation-reports/20201012-weekly-epi-update-9.pdf

[6] Gorenko, J. A., Moran, C., Flynn, M., Dobson, K., & Konnert, C. (2021). Social Isolation and Psychological Distress Among Older Adults Related to COVID-19: A Narrative Review of Remotely-Delivered Interventions and Recommendations. Journal of Applied Gerontology, *40*(1), 3–13.

[7] Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., & Roma, P. (2020). A nationwide survey of psychological distress among italian people during the covid-19 pandemic: Immediate psychological responses and associated factors. International Journal of Environmental Research and Public Health. *17*(3165), 1–14.

[8] Rutayisire, E., Nkundimana, G., Mitonga, H. K., Boye, A., & Nikwigize, S. (2020). What works and what does not work in response to COVID-19 prevention and control in Africa. International Journal of Infectious Diseases, *97*, 267-269.

[9] Stiegler, N., & Bouchard, J. P. (2020, September). South Africa: Challenges and successes of the COVID-19 lockdown. In *Annales Medico-Psychologiques 178*(7), 695-698).

[10] Cinelli, M., Quattrociocchi, W., Galeazzi, A., Valensise, C. M., Brugnoli, E., Schmidt, A. L., ... & Scala, A. (2020). The covid-19 social media infodemic. Scientific Reports, *10*(1), 1-10.

[11] Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. Asian journal of psychiatry, *51*, 102083.

[12] Twenge, J. M., & Joiner, T. E. (2020). Mental distress among U.S. adults during the COVID-19 pandemic. Journal of Clinical Psychology, *76*(12), 2170–2182.

[13] Bhatti, A., Akram, H., Basit, H. M., Khan, A. U., Raza, S. M., & Naqvi, M. B.

(2020). E-commerce trends during COVID-19 Pandemic. International Journal of Future Generation Communication and Networking, *13*(2), 1449-1452.

[14] Tran, L. T. T. (2021). Managing the effectiveness of e-commerce platforms in a pandemic. Journal of Retailing and Consumer Services, *58*, 102287.

[15] Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations. General Psychiatry, *33*(2), 19–21. https://doi.org/10.1136/gpsych-2020-100213

[16] Amzat, J., Aminu, K., Kolo, V. I., Akinyele, A. A., Ogundairo, J. A., & Danjibo, M. C. (2020). Coronavirus outbreak in Nigeria: Burden and socio-medical response during the first 100 days. International Journal of Infectious Diseases, 98, 218-224.

[17] Alsheikh Ali, A. S. (2019). Psycho-social determinants of street beggars: A comparative study in Jordan. Journal of Content, Community and Communication, *10*(5), 96–113.

[18] Lehmann, M., Bruenahl, C. A., Löwe, B., Addo, M. M., Schmiedel, S., Lohse, A. W., & Schramm, C. (2015). Ebola and psychological stress of health care professionals. Emerging infectious diseases, *21*(5), 913-914.

[19] Rabelo, I., Lee, V., Fallah, M. P., Massaquoi, M., Evlampidou, I., Crestani, R., ... & Severy, N. (2016). Psychological Distress among ebola survivors Discharged from an ebola Treatment Unit in Monrovia, liberia–a Qualitative study. Frontiers in Public Health, *4*, 142-149.

[20] Akorede, S., Ajayi, A., Toyin, A., & Uwadia, G. (2021). Influence of COVID-19 on the Psychological Wellbeing of Tertiary Institution Students in Nigeria. Tanzania Journal of Science, *47*(1), 70-79.

[21] Chakraborty, K., & Chatterjee, M. (2020). Psychological impact of COVID-19 pandemic on general population in West Bengal: A cross-sectional study. Indian Journal of Psychiatry, *62*(3), 266-272.

[22] Grover, S., Sahoo, S., Mehra, A., Avasthi, A., Tripathi, A., Subramanyan, A., ... & Reddy, Y. J. (2020). Psychological impact of COVID-19 lockdown: An online survey from India. Indian Journal of Psychiatry, *62*(4), 354-362.

[23] Karpenko, O. A., Syunyakov, T. S., Kulygina, M. A., Pavlichenko, A. V., Chetkina, A. S., & Andrushchenko, A. V. (2020). Impact of COVID-19 pandemic on anxiety, depression and distress–online survey results amid the pandemic in Russia. Consortium Psychiatricum, *1*(1), 8-20.

[24] Shahriarirad, R., Erfani, A., Ranjbar, K., Bazrafshan, A., & Mirahmadizadeh, A. (2021). The mental health impact of COVID-19 outbreak: a Nationwide Survey in Iran. International journal of mental health systems, *15*(1), 1-13.

[25] Shi, C., Guo, Z., Luo, C., Lei, C., & Li, P. (2020). The Psychological Impact and Associated Factors of COVID-19 on the General Public in Hunan, China. Risk Management and Healthcare Policy, *13*, 3187-3199.

[26] Touré, A. A., Camara, L. M., Magassouba, A. S., Doumbouya, A., Camara, G., Camara, A. Y., ... & Beavogui, A. H. (2021). Psychosocial impacts of COVID-19 in the Guinean population. An online cross-sectional survey. *PloS one*, *16*(2), e0245751.

[27] Ofori, A. A., Osarfo, J., Agbeno, E. K., Manu, D. O., & Amoah, E. (2021). Psychological impact of COVID-19 on

health workers in Ghana: A multicentre, cross-sectional study. SAGE Open Medicine, *9*, 1-10.

[28] Burrell, G., & Morgan, G. (1979). Part I: In search of a framework. *Sociological paradigms and organisational analysis: Elements of sociology of corporate life. London: Heinemann*.

[29] Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.

[30] Holden, M. T., & Lynch, P. (2004). Choosing the appropriate methodology: Understanding research philosophy. The marketing review, *4*(4), 397-409.

[31] O'Gorman, K. D., & MacIntosh, R. (2014). Research methods for business and management. Goodfellow Publishers Limited.

[32] Saunders, M. N., Lewis, P., Thornhill, A., & Bristow, A. (2015). Understanding research philosophy and approaches to theory development.

[33] Creswell, J. W. (2014). *A concise introduction to mixed methods research*, Sage Publications.

[34] Creswell J.W. (2009). *Research design. Qualitative, quantitative, and mixed Methods Approaches* (3rd ed.). London, United Kingdom: Sage Publication.

[35] Gravetter, F.J, & Forzano, L-AB. (2015). Research methods for the behavioural sciences. Nelson Education.

[36] Kothari, C.R. (2004). Research Methodology: Methods and Techniques. New Age, International (P) Limited Publishers, ISBN (13): 978-81-224-2488-1.

[37] Burbridge, L. (1999). Cross-Sectional, Longitudinal, and TimeSeries Data: Uses and Limitations. In Miller, J.G & Whicker, L.M. (Ed). *Handbook of Research Methods in Public Administration*. New York, Arcel Dekker, Inc.

[38] Levin, K. A. (2006). Study design III: Cross-sectional studies. Evidence-Based Dentistry, *7*, 24–25.

[39] Setia, M. S. (2016). Methodology Series Module 3: Cross-sectional Studies. Indian Journal of Dermatology, *61*(3), 261–264.

[40] Prada-Ramallal, G., Roque, F., Herdeiro, M. T., Takkouche, B., & Figueiras, A. (2018). Primary versus secondary source of data in observational studies and heterogeneity in meta-analyses of drug effects: a survey of major medical journals. BMC Medical Research Methodology, *18*(1), 97-108.

[41] Lwanga, S. K., Lemeshow, S., & World Health Organization. (1991). *Sample size determination in health studies: a practical manual*. World Health Organization.

[42] Kumekpor, T. K. B. (2002). Research Methods and Techniques of Social Research, Accra. Son Life Press and Services. Manchester School of Economic and Social Studies, 24, 203-244.

[43] Coontz, P. D. (1999). Ethics in Systematic Research. In Miller, J.G & Whicker, L.M. (Ed). *Handbook of Research Methods in Public Administration*. New York, Arcel Dekker, Inc.

[44] Lemyre, L., & Tessier, R. (2003). Measuring psychological stress. Concept, model, and measurement instrument in primary care research. Canadian Family Physician, 49, 1159.

[45] Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. Journal of medical internet research, *22*(9), e21279.

[46] Adeoye, B. D. (2015). Demographic characteristics as determinants of the use of health care services: A case of

Nsukka, Southeast Nigeria. Open Journal of Social Sciences, 3(12), 23–28.

[47] Banerjee, S. (2015). Multimorbidity-older adults need health care that can count past one. The Lancet, 385(9968), 587–589.

[48] McCracken, K., & Phillips, D. R. (2017). *Global health: An introduction to current and future trends*. Routledge.

[49] Morgan, A. K., & Awafo, B. A. (2020). Lessons for Averting the Delayed and Reduced Patronage of non-COVID-19 Medical Services by Older People in Ghana. Journal of Gerontological Social Work, *63*(6-7), 728-731.

[50] Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. Psychiatry research, *288*, 112954.

[51] Imran, N., Masood, H. M. U., Ayub, M., & Gondal, K. M. (2020). Psychological impact of COVID-19 pandemic on postgraduate trainees: a cross-sectional survey. Postgraduate Medical Journal, 1-6.

[52] Kisely, S., Warren, N., McMahon, L., Dalais, C., Henry, I., & Siskind, D. (2020). Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: rapid review and meta-analysis. BMJ, *369:* m1642.

[53] Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., ... & Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA network open, *3*(3), e203976-e203976.

[54] Modabernia, M., Shodjai, T. H., Moosavi, S-R., et al. (2007). The prevalence of depression among high school and pre-university adolescents: Rasht, northern Iran. Archives of Iranian Medicine, *10*(2),141–146.

[55] Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., ... & Ho, C. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. Brain, Behavior, and Immunity, *87*, 40-48.

[56] Zhang, W. R., Wang, K., Yin, L., Zhao, W. F., Xue, Q., Peng, M., ... & Wang, H. X. (2020). Mental health and psychosocial problems of medical health workers during the COVID-19 epidemic in China. Psychotherapy and psychosomatics, *89*(4), 242-250.

[57] Power, K. (2020). The COVID-19 pandemic has increased the care burden of women and families. Sustainability: Science, Practice and Policy, *16*(1), 67-73.

[58] Morgan, A. K., Awafo, B. A., & Quartey, T. (2021). The effects of COVID-19 on global economic output and sustainability: evidence from around the world and lessons for redress. Sustainability: Science, Practice and Policy, *17*(1), 77-81.

[59] Crayne, M. P. (2020). The traumatic impact of job loss and job search in the aftermath of COVID-19. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(S1), S180.

[60] De Ridder, D., Geenen, R., Kuijer, R., & van Middendorp, H. (2008). Psychological adjustment to chronic disease. The Lancet, *372*(9634), 246-255.

[61] Turner, J., & Kelly, B. (2000). Emotional dimensions of chronic disease. Western Journal of Medicine, *172*(2), 124.

[62] Khan, M. M. A., Khan, M. N., Mustagir, M. G., Rana, J., Islam, M. S., & Kabir, M. I. (2020). Effects of underlying morbidities on the occurrence of deaths in COVID-19 patients: A systematic review and meta-analysis. Journal of Global Health, *10*(2).