Pre- And Post-COVID-19 Vaccination: Stories of Elderly Persons At-Risk

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The European Conference on Aging & Gerontology 2023
Official Conference Proceedings

Abstract
Using an exploratory sequential mixed research design, this study aimed to capture the lived experiences of 23 elderly persons at-risk during the pre- and post- COVID-19 vaccination seen at Department of Geriatric Medicine St. Luke's Medical Service Center Quezon City, Philippines from August 2021 to November 2021. Specifically, it aimed to: (1) explore the participants lived experiences in relation to their concept and understanding of COVID-19, their conflicts and struggles, and coping resolutions during pre and post COVID-19 vaccination, (2) determine the perception of elderly at-risk patients on their mental, physical, and social-emotional wellness using the Wellness Questionnaire, and (3) interface the lived experiences of the participants to their mental, physical , and social-emotional wellness. Data collection employed a one-on-one personal interview and a Wellness Questionnaire in form of a rating scale. Obtained data from the interview and questionnaire were analyzed using NVivo 12 Plus software program. The themes from the lived experiences of the participants dealt mainly on health protocols, vaccine confidence, and wellness. The participants rated their state of well-being during pre-vaccination as "fair" with an improved rating of "good" at post vaccination. Comparative analysis of the means of their state of wellness from the pre-vaccination to the post-vaccination periods were found significantly different at the .05 significance level using the Wilcoxon Signed-Ranks Test. These findings may lead to improvement of existing geriatric practices amid sustained pandemic.

Keywords: Elderly, At-Risk, Lived Experience, Vaccination, Wellness

Introduction

The COVID-19 pandemic has posed several challenges particularly among the aging population. Adults 65 years and older and those with underlying medical conditions such as cardiovascular disease, hypertension, and diabetes are at higher risk for developing more serious complications from COVID-19 (Applegate and Ouslander, 2020; Rocklov and Sjodin, 2020). Heid, et al (2021) highlighted the fact that constraints in social interaction and restriction of physical activities were the greatest stressors among the older adults during the initial period of the pandemic. Studies of Buenaventura, Ho & Lapid (2020) and Goethals, et al (2020) confirmed that the impact of lockdowns, quarantine and social distancing have affected not only the decline in the physical and mental health of older adults living at home but also in the estrangement of social connectedness and engagement, unmet spiritual needs and feelings of uncertainty and loneliness.

With 262 males and 377 females with an average age of 73 across Flanders, Belgium as respondents, De Pue et al (2021) used self-report measures on the impact of the COVID-19 on well-being, activity level, sleep quality and cognitive functioning using the Cognitive Failures Questionnaire, Geriatric Depression Scale and Personal Well-being Index. Results showed that 76% of the participants reported significant decrease in well-being, prominently in general life satisfaction, safety, community connectedness and future security. Paired-samples *t*-tests with Bonferroni correction (α=0.0045) indicated that participants reported that they had been significantly less active compared to before COVID-19 and experienced poorer quality of sleep. As to cognitive functioning the participants reported problems with remembering, concentration, doing two things at the same time, recalling and forgetfulness although the changes were not statistically significant. Regression analysis revealed that depression is a significant single predictor in the changes of life satisfaction, physical activity, quality of sleep and the total well-being of older adults.

Consequently, the on-going fight against COVID-19 has remained critical in all regions of the country posing greater dangers to the elderly population. Buenaventura et al (2020) mentioned the Philippines aging population as greatly vulnerable to COVID-19 due to high population density.The Philippine population density is 337 persons per square kilometer, although in the National Capital Region (NCR) Luzon, the population density is a staggering 20,785 persons per square kilometer (Philippine Statistics Authority, 2016b).Since the spread of COVID-19 is related to population density (Rocklov and Sjodin, 2020 cited in Buenaventura et al), the high densities in the Philippines where people are in relatively close contact with each other in both personal and public spaces make social distancing difficult, facilitate virus spread more easily, and lead to higher rates of infection and death. Moreover, Buenaventura et al cited that a large proportion of senior citizens in the country receive no pension thus making it difficult for them to avail of quality health care and pay for healthcare bills. Adding to the factors that make Philippines vulnerable to the spread of the virus are the cultural beliefs and practices such as the rituals during religious events and the multi-generational households making social distancing difficult to implement. Within Southeast Asia, the Philippines has the highest number of coronavirus infection, with a mortality of 40% (Lema and Morales, 2020) Latest situation report of the Philippines Department of Health (May 10, 2021) showed that 43.2% of the total number of cases are from the National Capital Region (NCR). This datum made NCR as the epicenter of the pandemic in the country.

While the government's efforts has been successful in reducing COVID-19 cases, DOH recently reported the detection of COVID variants such as the Delta, Alpha, Beta, 9P.3 and very recently Omicron variants in the country (DOH, July 25, 2021) raising fear of another surge in densely populated areas. Recent pandemic Philippines profile report (Ritchie, et al, 2021) showed an increase of 29.92 percent from August 22, 2020 to August 22, 2021 confirmed cases of COVID-19 although this can be lower than the actual cases due to limited testing. Daily death cases had reduced by 89 per cent from its highest day of April 12, 2021 to August 22, 2021. In comparison with other countries, Philippines had recently a mortality rate due to the pandemic of 1.92 percent per one million of the population (Ritchie, et al).

The vaccination campaign to arrest the spread of the virus was another challenge for the government among the elderly population regarding their willingness to receive vaccination. Vergara (2021) opined that despite of the government's effort to persuade the public to participate in its vaccination program against COVID-19, vaccine hesitancy remains to be a big challenge in the Philippines due to the social traumas associated with Dengvaxia vaccine in 2016. However, according to Reyes et al (2021) recent surveys, have shown that vaccine confidence has begun to improve with the lessons from the past highlighting the importance of a strong partnership between health leaders and the local community.

Despite these numerous challenges and the government's efforts to cope with the situation, there is very minimal literature to understand the elderly persons' cope during this pandemic before and after being inoculated against COVID-19. Knowing how elderly persons respond to the pandemic could provide an opportunity for the government and medical professionals to revisit their approaches to minimize the problems, dangers and deaths during any pandemic.

Thus, this study aimed to capture the lived experiences of elderly Filipinos at-risk during the pre- and post- COVID-19 vaccination from August 2021 to November 2021. Specifically, it aimed to (1) explore the themes derived from the participants lived experiences through their stories related to their concepts and understanding of COVID-19, their conflicts and struggles, and coping resolutions during pre and post COVID-19 vaccination, (2) determine the perception of elderly at-risk patients on their mental, physical, and social-emotional wellness using the Wellness Questionnaire, and (3) interface the lived experiences of the participants to their mental, physical , and social-emotional wellness.

Study Design and Procedure

This study employed the exploratory sequential mixed method research design**.** Sequential exploratory mixed method research obtains two types of data. It begins with qualitative data then collects quantitative information to estimate the proportion of the sample experiencing the particular phenomenon. (Creswell, 2008: 561; Mertens, 2015: 312-313). Qualitative data were obtained using the phenomenological approach while a validated researcher-made Wellness Questionnaire in the form of a rating scale was utilized to obtain the quantitative data.

Study participants were recruited and selected from the list of outpatients seen at the Department of Geriatric Medicine Social Service St. Luke's Medical Center, Quezon City, Philippines from August 2021 to November 2021. Using the purposive convenient sampling technique based on an inclusion criteria, 40 patients qualified for the study. However, out of the 40, only 23 indicated their willingness to participate after the orientation session. As an

ethical principle, an Informed Consent Form for participation and recording responses was shown and read to them together with his or her guardian by the researcher after which the participant affixed his/her signature to indicate the willingness to participate.

Average age of the 23 participants was 81 categorized as middle-old (Little, 2016) the youngest being 68 years old and the oldest 93. The participants composed a homogenous group of low-income families and residents of Metro Manila officially known as the National Capital Region (NCR). Figure 1 shows the demographic profile of the study participants as to age, sex, educational attainment, source of income and family.

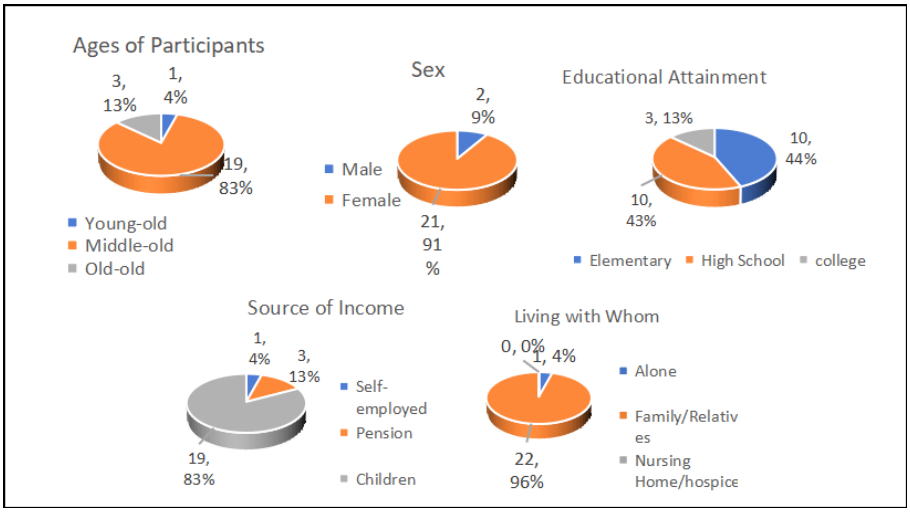

Figure 1: Demographic profile of the study participants

Data collection was conducted in two phases. To obtain data from the stories of the participants, an interview guide was constructed by the researcher. The questions focused on the participants' concepts about COVID-19, their conflicts or struggles, and how they coped to resolve their conflicts before and after they were vaccinated. Filipino was the language used in the interview primarily because it is the native tongue of the participants. Schedule of the interview was provided each participant indicating the date and time in a virtual meeting via Google Meet due to health restrictions during that time. The interview was conducted by the researcher as a Geria Fellow trained in interviewing elderly persons. A guardian (a family member or a caregiver) was permitted to assist the participant during the procedure when needed. The interview lasted approximately for 45 minutes but at times longer, depending on the capability of the interviewee. To check the authenticity of the responses, the researcher scheduled another date for a virtual session and read to the participants the transcribed copy of their responses.

After the storytelling, the participants were requested to answer the 2 sets of Wellness Questionnaire. The questionnaire covered three dimensions, namely, mental, physical, and social-emotional wellness in form of a rating scale. Each dimension has 15 items where participants were asked the extent of being bothered by the pandemic phenomenon on a scale of 3 where *0 as not at all bothered* and *3 nearly everyday***.** Hence, the lower the score the better is the state of wellness.

The 2 sets of questionnaires contain the same items to provide a comparison of their state of wellness before and after vaccination. They were coded BLUE for the pre-vaccination and GREEN for the post-vaccination. The Wellness Questionnaire was sent via Google Form or

email to the participants with the researcher giving appropriate and clear instructions how to answer and retrieval was done by the researcher in the same manner.s After the retrieval of the questionnaire, the researcher went through it to check that all items were answered. If there were skipped items, the questionnaire was returned to the participant and guided properly to be completed.

Statistical Analysis

Data for analysis were the textual lived experiences of the elderly participants and the responses to the Wellness Questionnaire. Responses of the participants in the interview were translated to English and encoded in NVivo 12 Plus software to identify emergent themes during the pre- and post-vaccination experiences. Likewise, data in the Wellness Questionnaire were encoded in NVivo 12 Plus and means were obtained for Mental Wellness, (MW) Physical Wellness (PW), and Social-Emotional Wellness (SEW) during pre- and post vaccination. Both descriptive and inferential statistics were used to to interpret the responses to the Wellness Questionnaire. The means for each were descriptively categorized as *Optimal* (M=0-4), *Good* (M=5-8) , *Fair* (M=9-12), and *Poor* (M=13-15). Overall means of the 3 dimensions were descriptively categorized as *Optimal* (M=0-11), *Good* (M=12-22), *Fair* (M=23 -33) and *Poor* (M=34 -45).

To further determine whether the changes in the means during the pre- and post vaccination were significantly different, the obtained means were submitted to Wilcoxon Signed- Rank Test (Elston & Johnson, 1995). The obtained results were interpreted at the 0.05 level of significance at a one-tailed test.

Conclusion

Analysis of the pre-COVID-19 vaccination lived stories of the elderly participants revealed three emergent main themes, (1) health protocols, (2) face mask and face shield, and (3) home chores. These themes were reflections of the participants' understanding of what COVID-19 as scary, infectious, and associated with death and health protocols. Their stories were expressed in very negative tone such as using the words COVID, infected, scared, sickness, afraid and dangerous were repeated in the responses 12 times while moderately positive words like might, good and careful were repeated in only 3 responses.

The theme of wearing face masks and face shield emerged as the conflict or struggle the participants during the pre-Covid-19 vaccination. They struggle breathing when wearing the mask and shield aside from feeling hot and sweating. They claimed that the face shield obstructs their vision aside from an added expense. However, they have to follow wearing them since it is a mandate during the pandemic despite the discomfort they are experiencing.

The emergent theme on home chores included household chores like cooking, cleaning or laundry and home routine activities such as praying, entertainment routines like watching television or listening to the radio, or exercising. The home chores were the coping resolutions of the participants to reduce fear and boredom of staying at home and not permitted to go out.

Post-vaccination stories of the participants revealed four main themes, namely, (1) big changes, (2) negative and bad effects of vaccine, (3) wellness, and (4) health protocols. The big changes were expressed in the way they understood the pandemic and the improvement in

their wellness especially on the emotional aspect. They also shared that their understanding of the disease was made clearer due to the availability and benefits of the vaccine.

The participants' conflict and struggle stemmed from their ambivalent perception of COVID-19 vaccine. Foremost was their perception on the negative and bad effect of the vaccine on their health and age. Their apprehensions were bolstered by neighborhood rumors about the negative side effects of vaccine that augmented further their resistance. The vaccine hesitancy according to Vergara (2021) could be a social trauma attributed to the Dengvaxia vaccine in 2016. However, they shared that their vaccine confidence was brought about primarily by their children and grandchildren and secondarily by their doctor and local officials. To cope with the pandemic situation, the participants continued to observe the Department of Health protocols. They expressed that their fear of the pandemic was reduced if not gone since, as they claimed, "they have something to fight against the virus."

Wellness as an emergent theme included the self-evaluation of the participants in their stories regarding their mental, physical and emotional wellness after getting the vaccine. This theme, likewise, revealed family support, doctor's advise and the acceptance of COVID vaccine. The stories about their wellness mostly supported the change in their physical and emotional reactions of being free from fear and the threat of being infected with the virus.after being vaccinated. NVivo 12 analysis showed several positive words were used to describe their opinions and feelings regarding this theme such as vaccinated, health, children, convinced, follow, happy like, and many other positive descriptions. It can be implied that the improved vaccine confidence accounted for the experience of peace of mind, calmness, and confidence of a greater chance not to be infected by coronavirus.

The obtained mean of the participants' self-evaluation of their Mental Wellness before getting the vaccine was 9.47 suggesting a *Fair* state of being. The obtained mean for Physical Wellness was 7.38 described as *Good*_and_9.41 for Social-Emotional Wellness which is described *Fair*,_When the responses for the mental, physical, and social-emotional wellness were taken altogether, the obtained mean was 7.81 suggesting a *fair* state of being. After getting the vaccine he obtained mean of the participants' evaluation of their Mental Wellness was 7.29 described as *Good.* For Physical Wellness the obtained mean was 6.26 and Social-Emotional Wellness had a mean of 6.65. Both means fell into the *Good* category. The obtained mean for the overall wellness was 5.76 which is the borderline between Good and Optimal.

The Wilcoxon Signed-Rank Test of the participants pre- and post-vaccination wellness, MW=2.75, p=.006, PW=-2.62, p=.009, SEW= -3.308, p = .001, demonstrated significantly significant differences in state of wellness between the pre- and post-vaccination experiences. Interfacing these statistics with the themes derived from the stories suggests the big changes in the experiences of the participants before and after they received the vaccine.

Some limitations of this study might be acknowledged. Firstly, the nature of the research design uses purposive small samples so the results might not be generalized for the total population; secondly, the Wellness Questionnaire was submitted for face and content validity but has not undergone test of reliability; and thirdly, while care was strictly observed in the translation of responses from Filipino to English for purposes of NVivo analysis some English expression may not reflect the authentic context since there are Filipino words with no English equivalent.

The findings, however, opened interesting questions regarding the quality of life of elderly persons at-risk in times of a pandemic. What extent does the elderly population from low-income group receive health services, both medical and psychological, on a fair basis? Questions on the quality of family care-giving could, likewise, be enabling. Future researchers might think of looking into a longitudinal study on the journey of elderly persons at-risk in times of a pandemic to obtain a comprehensive picture how elderly Filipinos manage their lives. Another recommendation could be addressed to the field of Geriatrics with regards policies and practices toward a more responsive health care to ensure the aged population a healthier life as life expectancy is increasing.

Acknowledgments

I would like to express my sincere gratitude to St. Lukes Medical Center, Quezon City, Philippines for providing me an excellent training as a fellow in Geriatrics and the venue of this study and West Visayas State University, Iloilo City, Philippines for giving access to NVivo 12 Plus software program.

I would like to thank Dr. Miguel A. Ramos Jr., MD, PhD, FPCP, FPCGM, (MHM) for providing the necessary assistance and inspiration during the conduct of this study, and O Beriones Dañocup, University Professor and Researcher for editing and proofreading this paper.

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