

Contemporary Issues Affecting Aged Participation in Connected Communities

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ABSTRACT: Communicable diseases (i.e., Seasonal influenza or/and COVID-19) pandemic has affected the social interactions, physical and mental health of ageing. Due to these pandemic outbreaks, the physical distancing and lockdown measures are implemented, which results in extreme stress, loneliness feeling, and negative emotional experiences among elder people. However, social interactions have possible effect in reducing stress and loneliness. In this study, the disease pandemic impact on ageing social interactions was examined. The data of 65 years and older people demographic characteristics were collected. Moreover, data were gathered from online survey; here, 71 participants were selected for questionnaire survey, in which 30 people are responded and the respondent's data are collected; using multiple-regression analysis, it was analysed. The control variables were taken as age, education, gender, relationship and employment status, technology use, and pension; moreover, the independent variables were taken as loneliness and depression, misinformation, physical health, ageism, and economic impact. The multiple-regression analysis results indicated that the important variable which has negative impact on Communicable diseases on ageing social interaction is loneliness and depression. Moreover, from this research point of view, useful implications were recommended to implement and formulate future improvements. Also, limitations and future research work was also included to enlarge this research work.

KEYWORDS: Communicable diseases, ageing, social interaction, loneliness, physical health, depression

I. INTRODUCTION

In the end of 2019, Coronavirus Disease (COVID-19) as communicable diseases had resulted above 71 million corona positive cases over worldwide, as of December 2020[1]. To reduce the transmission of virus, governments have implemented protective and isolation measures to all over the world. Physical separation, hand washing, social gathering limits, face masks usage, and stay-at-home policies are the above-mentioned measures[2]. Thus, the normal population has faced high-level of communicable diseases related fear, significant changes in daily life, and a slew of psychological consequences including increased sleep issues, financial problems, and depression[3]. However, the level with which the communicable disease impacts indicated by the overall population are felt by elderly population is unknown. Protective and isolative measures seem to be especially important for the elderly, who are more susceptible to COVID-19-related fatalities[4]. However, protective and isolative measures may exacerbate concerns, which already exist in ageing, like excessive anxiety, age discrimination, and loneliness. Recognizing that physical distance usually leads to a certain level of social alienation, discussion about the negative effects of social distancing on elder persons' psychological health, cognitive impairment, and daily activities is reasonable[5]. The COVID-19 epidemic could exacerbate age discrimination through limiting access to information, assistance for informal carers, healthcare services, and family activists[6].

The present COVID-19 outbreak has disproportionately harmed vulnerable groups. It has obliterated in-person interaction between elderly residents and the rest of society. COVID-19 is more prevalent in elderly persons, who generally have numerous illnesses and pre-existing diseases, making the disease more severe[7]. As a result, during this outbreak, elder persons must maintain social distance, and shelter-in-place. Such changes in behavior are expected to have an impact on elderly individuals' quality of life and social relationships. Simultaneously, elder persons are much less prone than younger adults to be ready to take benefits of current Information and Communication Technology (ICT) like high-speed network connectivity, tablets, and smartphones. This is due to the fact that many ageing decide not to use online, can't acquire ICT devices or internet access, lacking technology for using video-chat based applications to virtually communicate with others, or lack in knowledge for using ICTs even if they do have

access. Physical or cognitive disabilities may impede elder persons in long-term care facilities (LTCFs) from using ICTs on their own without support. There is a lot of variety in older individuals' skill, willingness, and enable to ICTs. We focus on community-dwelling elders, to highlight important issues that each group was experience during Communicable diseases.

Elderly persons who are fragile and don't have access to the internet face a double hardship of social isolation. This lack of involvement also affects elder persons' ability to obtain internet services and features like social networking, digital social occasions, and health information. About 20% of residents aged 65 and older in the neighborhood indicated engaging in such a virtual social occasion or virtual event with relatives or friends, according to a recent U.S. study dated March 2020[8]. At situations of social distancing, elder people may feel socially excluded if they do not participate in the virtual world. As the internet has grown more widely available around the world, empirical investigations have discovered a digital divide among younger and elder persons[9]. According to a national survey done in 17 European nations, 51% of persons aged 50 and above don't use online[10]. Personal characteristics (i.e., gender, health, education, marital status, income, prior technological experience), national contexts (i.e., ICT infrastructure, national wealth), and social salience (i.e., usage of internet among social networks members) those were influenced the internet usage among elder people. Though the technology usage by healthy elder people has increased over the years, the scenario is unique for someone with numerous functional impairments, and morbidities as well as those who are in advanced old age[11].

1.1 Study objective

The main objective of this study is to determine the impact of communicable diseases such as COVID-19 pandemic on online social community of ageing. In addition, the study also investigated how online social network can support ageing daily needs during communicable diseases pandemic.

The rest of the paper structure is organized as follows: In section 2 literature review, conceptual framework, and research hypotheses are described. Section 3 describes the research methodology that includes data collection; section 4 explores the data analysis and results; in section 5 the paper discussion is explored; and section 6 provides the conclusion and future implications.

II. LITERATURE REVIEW

Some of the recent literatures related to communicable diseases impact on elder people are described as follows: The COVID-19 outbreak has wreaked havoc on communities around the world. While the effects of the concurrent economic slump on ageing are only now becoming apparent, historical history suggests that the repercussions could be disastrous for many. Hence, Yang Li and Yan E Mutchler [12] conducted a COVID-19 pandemic economic effect analysis, which found that more approximately one in every 5 Americans aged over 65 live in places with high disease rates and significant economic instability concerns. These findings indicate a link between existing infection rates and the ensuing problems to ageing's economic stability. The huge segment of ageing who depend on income far into old age must be considered in approaches and assistance for getting individuals back to work. Across the socioeconomic spectrum, social Stability serves as economic security foundation for ageing, yet it is often inadequate within itself, or even just during such crisis. Understanding the relevance of living costs in determining economic stability emphasizes the necessity for the national, state, and local governments to include ageing in their economic recovery efforts

Anne C krendl and Brea L Perry [13] have examined the sheltering-in-place effects during COVID-19 outbreak on older adults. Moreover, analyzed the social isolation because of COVID-19 was linked with higher level of depression and loneliness or not. This survey was done in United States and the characteristics were measured by both questionnaire and phone interview. The result indicated that the older adults were affected by greater loneliness and higher depression. Sarah De Pue et.al [14] have conducted a study on COVID-19 pandemic impacts on older or 65 years adults, which was carried out in an online basis. The research indicated that COVID-19 outbreak has a greater effect on older adults' mental health. Thus, older adults need attention of healthcare and governments. Erwin Stolz et.al [15] have analyzed the COVID-19 restriction measures impact on older adults loneliness. Three analyses were conducted to assess the link between COVID-19 restriction measures and loneliness i.e., Comparison between pandemic and pre-pandemic loneliness level, Correlation analysis among cross-sectional survey based on loneliness and COVID-19 restriction measures, and weekly alterations in loneliness longitudinal analysis. The result indicated that the level of loneliness was increased comparing with pre-pandemic years. Moreover, the study was conducted for shorter restriction

measures effects. Stefano Amore et.al [16] have presented a quantitative research of COVID-19 outbreak impact in Italy. The correlation between LTCFs people confirming the COVID-19 tremendous impact and older adults' mortality was defined. Moreover, the correlation between undiagnosed cases and health-system dysfunction effect was also observed. The study result indicated that COVID-19 greatly affects the ageing.

Marie Kivi et.al [17] have investigated the communicable disease outbreaks early effects related to (1) effect of risk perception, physical distancing, and worry, (2) wellbeing's longitudinal effects, and (3) levels of social distancing, worry, and risk perception. The study result demonstrated that the wellbeing are stabled, worrying about financial and health are relatively less. Moreover, the long-term psychological related consequences and health factors in broad ranges are required. Lesley Brown et.al [18] have investigated the COVID-19 lockdown measures impact on older people lives. To recognize theme, thematic analysis has been conducted and the results indicated that 27% older people were lonely sometimes. Theo G van Tilburg et.al [19] have conducted a study on mental health and loneliness among older adults during communicable diseases. The Dutch community peoples from 65-102 years aged participants data were gathered. The result of the study indicated that older adults' loneliness was increased and mental health was stable in this outbreak. Beatrix Labadi et.al [20] have conducted a study on ageing coping strategies and psychological wellbeing during communicable diseases in Hungary. The Structural Equation-Modeling (SEM), and hierarchical linear method analyses was conducted. The study findings indicated that due to loneliness and catastrophizing, the life quality, changes in mood, and social connectedness were affected negatively. Moreover, this study will help to create coping strategies for ageing. Rita Latikka et.al [21] have investigated the part of use of social media in psychological distress and loneliness during and before the communicable diseases outbreak. The regression analysis based multilevel mixed-effects have used to analyze the data. The result demonstrated that the risk factor is perceived loneliness, which negatively affects the mental health during this pandemic. The overview of reviewed literature is demonstrated in table.1.

Table.1 Overview of reviewed literature

References	Authors	Year	Respondents	Survey country	Research area	Survey method
[12]	Yang Li and Yan E Mutchler	2020	N/A	US	communicable diseases pandemic economic impact and older adults	N/A
[13]	Adbelrjal et al.,	2020	N/A	ML	Online Community Elderly Activities Social the Daily	Questionnaire and interview
[14]	Alsayed et al.,	2025	640	Belgium	communicable diseases impact on older adults cognitive functioning and wellbeing	Online Questionnaire survey
[15]	Erwin Stolz et.al	2021	520	Austria	COVID-19 limitation measures effects on older adults loneliness	Telephone interview and offline interview
[16]	Alsayed et al.,	2025	N/A	Lib	communicable diseases effects on ageing	N/A

[17]	Asmaa, Aljilany et al.,	2025	1071	Hungary	Innovative Interactive Model to Enhance Self-Directed Learning and Autonomy in Elementary Education	Annual survey based on questionnaire
[18]	Antisaret al.,	2025	N/A	United Kingdom	Predicting Oral Cancer using a Firefly Optimized CNN-Transformer	N/A
[19]	Aboulqassim et al.,	2025	10	Netherland	Mental health and loneliness study of older adults	Questionnaire survey via house visit, letter, or telephone
[20]	Asmaa, Aljilany et al.,	2025	589	Hungary	Coping strategies and psychological of youngest	Online questionnaire survey
[21]	Rita Latikka et.al	2022	840	Finland	Psychological distress and loneliness during and before COVID-19 outbreak	Questionnaire survey

2.1. Hypotheses development and Conceptual framework

Depression and loneliness, ageism, economic impact, physical health, and misinformation are among the five issues covered.

2.1.1. Depression and loneliness

Earlier to communicable diseases, there has been a lot of research on loneliness among elderly persons in the literature based on public health [22]. Approximately half of ageing experience chronic loneliness at a certain point in their lives, with around 5% feels lonely all of the time. Some who isolate themselves from everyone and experience loneliness are more likely to suffer from poor physical health, anxiety, and cognitive impairment [23]. Furthermore, society's desire to remove itself from ageing may intensify the formal physical distancing procedures mandated by communicable diseases, exacerbating the effects of loneliness and isolation in ageing[24]. Does not only this trend have significant ramifications for the ageing care and support during this pandemic, but also concerns further ingraining age discrimination into Western society. Loneliness is indeed not unique towards the ageing, although it is strongly connected to poor health in this population. In ageing, isolation, or the lack of personal relationships perception, hypertension, raises the high blood pressure risks, cognitive decline, obesity, disability, and mortality[25]. People are social creatures, and an absence of public interaction increases the likelihood of sickness or mortality[24]. The greater mortality rates and unequal number of elderly persons who've already infected communicable diseases demonstrate this concern; people 65 years or older accounted for 8/10 deaths in the US owing to COVID-19. The social isolation effects are compounded by the natural ageing process, which affects individual's sensory functions, mobility, and health[26].

In addition to the absence of personal contacts, the gap between the social quality ties people have as well as what they really want might have a negative impact on their health. Due of the restrictions on meeting individuals now during an epidemic, it becomes much harder to link with each other in significant ways, particularly in ageing[27]. Individuals with pre-existing medical problems are at higher risk and might even require additional protections as a result of their pre-existing diseases. Such precautions separate them even more and make them feel lonely [28]. Late-life based depression is associated with decreased self-rated health and life quality, as well as higher numbers of impairment, mortality, and poor health [26]. The depression, loneliness, and social isolation on the activities and moods of ageing are related but different. Whereas these health problems are linked and act jointly, it can appear sequentially or concurrently, and they also have the potential to amplify each other [25]. Loneliness, financial difficulties, and health

concerns all result in a rise in sadness and anxiety, putting ageing at high risk for maltreatment [29]. In the previous, elders may seek help from their healthcare physician whether they were having psychological problems. Elders may not have been receiving medical care they want due to limitations on face-to-face appointments and the risk of not knowing about using devices needed for remotely healthcare consultations [22].

2.1.2 Ageism

Another effect of the epidemic was an increase in ageism, which seems to be the word for discrimination over ageing as well as the stereotypes widespread usage [30]. In public debates, people above the age of 70 are increasingly portrayed as weak, fragile, and being unable to contribute value to the community. Individuals of all ages can internalize unfavorable age stereotypes, as per Stereotype Embodiment-based Theory [31]. Whenever these viewpoints become social standards, as they've been in ageing, and then have an impact on people's self-perceptions which can have a detrimental effect on health [29]. A gloomy view of ageing is deleterious in a range of health aspects and stress levels in ageing, according to extensive laboratory, observational, and cross-cultural studies [31]. Negative stereotypes regarding ageing like mortality and deterioration, put ageing at danger [32]. There seem to be significant perceptions in Western society that even individuals mature, they lack worth, becoming reliant, and fragile, and all these attitudes can jeopardize both mental and physical health as individuals mature [31]. Whenever ageism evolves into age discrimination in the health care decisions, including when medical devices like ventilators is really in low supply, it's extremely troubling.

People caregiving for elderly patients must also be aware that themselves, also, could become socially isolated, incur financial hardship, and have difficulty accessing critical help and resources. Caregivers are already under lot of stress because of their own health challenges, financial worries, and increased priorities on their work [29]. Caregivers of ageing frequently suffer from lack of assistance. During communicable diseases, these caregivers will face even more challenges, perhaps increasing the likelihood of caregivers harming or ignoring the people they are cared [31]. Furthermore, communicable diseases prevention efforts that compel older individuals to remain at home may put them in even more risk if their home is not a secure environment but they're already experiencing or vulnerable to mistreatment. Following disease outbreaks, aggression might spike. Exploitation of the elderly has negative consequences and might possibly result in death.

2.1.3. Economic impact

communicable diseases have a significant economic effect. Unemployment levels that have not been seen before Great Recession, as well as work-related closures, have harmed individuals of all ages as well as demographic groups. Younger employees lost jobs first, but elder workers were projected to see a more tough time rejoining the labour market once the economy stabilizes [26]. In addition, contrasted to young colleagues, workers 65 years or older are much less prone to be available to WFH and may endure prolonged high rates of unemployment [12]. Ageism exists in the recruiting process, and it is particularly prominent during periods of higher unemployment. While dealing with a difficult number of candidates, employers tend to use subjective choice factors to determine to whom to recruit, and they are frequently impacted by adverse age stereotypes. Furthermore, whereas the income loss long-term implications and the retirement savings financial effect are yet unknown, numerous older employees will be forced to reconsider when they are afford to retire, and then some whom have left already may be asked to retreat to work. Even before to communicable diseases, individuals were opting to work longer including both financial and personal considerations, and transitional work, encore careers, and delayed retirement were all on the rise. Also with economic slump, more individuals were forced to work extra hours to compensate for lost assets and earnings [26]. In "regular" circumstances, many elderly persons face financial difficulties [12]. As the nation progresses through COVID-19, ensuring the elderly persons financial security will necessitate policy reform on several levels. Governments at all levels, including the national, regional, and local levels, will have to consider ageing as part of their financial rescue efforts. With thousands of older Americans obviously suffering from the effects of the pandemic, solid government income are needed to keep seniors from falling farther behind financially [12].

2.1.4. Physical health

Social isolation has a negative effect on physical and mental health of ageing. It causes havoc in their everyday life and has a negative impact on their physical health [33]. Although it is well established that confining and socially isolating ageing has a negative influence on their psychological health, this also expressed concern about autoimmune, neurocognitive, cardiovascular, and other health issues [34]. Since lonely people are staying more in hospitals, need more hypertension therapies, and have general health decline, the physical contact absence for ageing is expected to be

related with 6.7 billion dollars in additional healthcare expenditure each year. Fear of acquiring COVID-19 sometimes deter some ageing with deteriorating health from receiving the care they require, despite the fact that hospitalization for non-COVID-19 infections has decreased significantly [35]. Moreover, in-person evaluation alternatives such as video conferencing and telephone may provide specific obstacles for ageing. Some ageing finds it challenging to use various modalities of communications due to unfamiliarity, hearing loss, and cognitive impairment with emerging innovations [31]. Many digital platforms also weren't designed with ageing in consideration which may be difficult to adapt for their use. However, for several ageing, these electronic platforms offer their primary method of communicating with respective healthcare professionals in timely manner [33].

2.1.5. Misinformation

Radwan et.al [36] has been stated that false or misleading data breeds mistrust, contempt, and doubt, as well as worry, instability, and emotional stress, all of which can negatively impact the elderly's life quality. Understating the communicable diseases severity and underplaying the hazards encountered by young people contribute to the virus's widespread distribution. A burst of false rumors, life-threatening remedies, and conspiracy theories regarding the communicable disease source worsened the pandemic, which was accompanied by discrimination and public alarmism. Moreover, misinformation is spread and magnified by social networks and the 24-hour news, that can have negative consequences like encouraging individuals to attempt unsubstantiated cures, stockpile food and supplies they don't want or can justify paying, make impulsive investment choices, and fall prey to fraud and scams. However, misinformation preys on individual's hopes and instils dread, with the elderly being particularly vulnerable. This research's conceptual framework is shown in Figure.1.

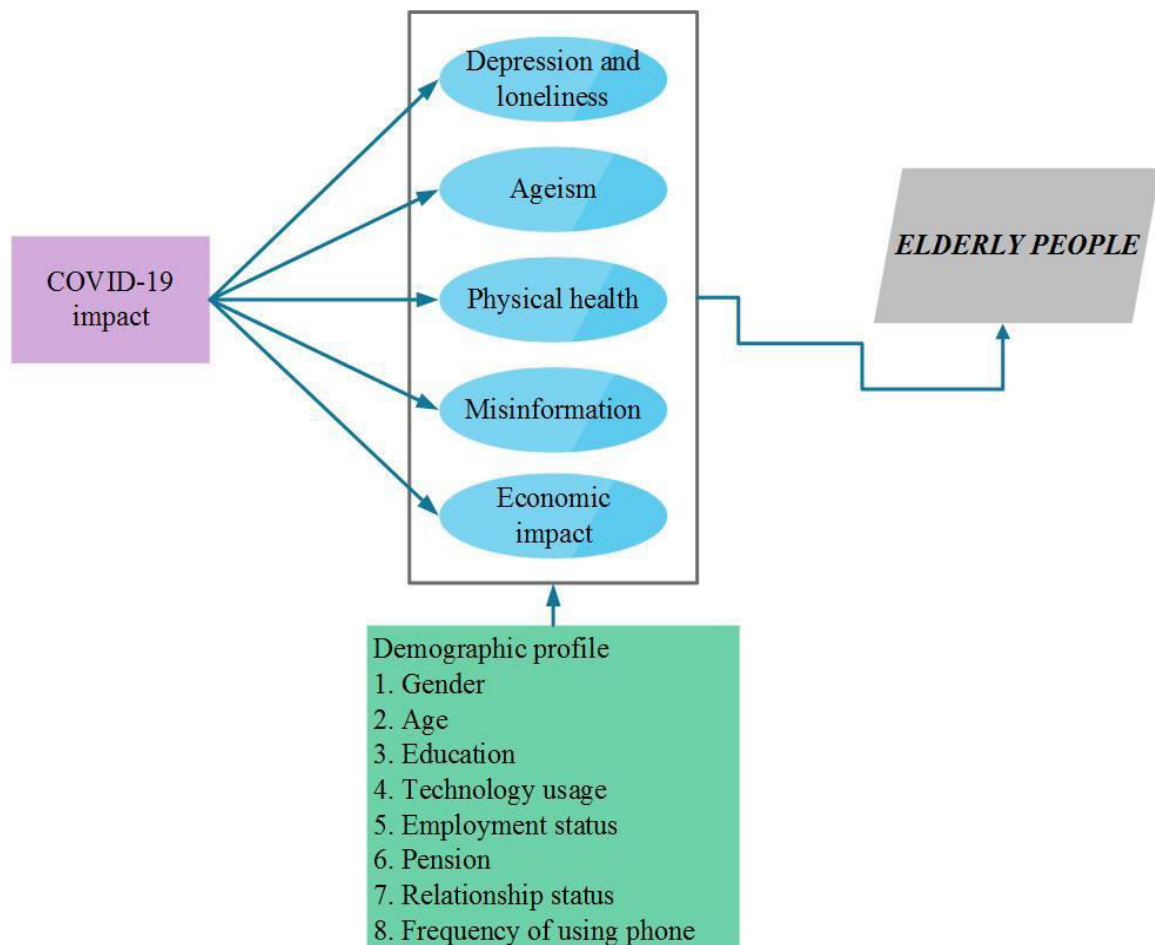


FIGURE.1 Conceptual framework

2.2. Coronavirus Disease overview

The recently affected contagious disease is Coronavirus disease, which was first discovered in Wuhan, China in the year 2019. Later, the World Health Organization (W.H.O) coded this disease as communicable diseases i.e., Coronavirus Disease-2019. Moreover, the outbreak of communicable diseases is still remembered as one of the world's worst pandemics in decades. The death rate increased and the disease to spread in easier way was upsetting. According to (W.H.O, 2020) research, the older people and those with medical issues like diabetes, cancer, cardiovascular disease, and chronic respiratory-disease are more prone to serious illness from coronavirus. The common symptoms of Coronavirus are constant sneezing or coughing, fatigue, running nose, breathing difficulty, and sore throat. There have been no viable therapies for Coronavirus at the starting time of spreading, although a number of studies were underway all around world in the hopes of developing a clinical vaccine.

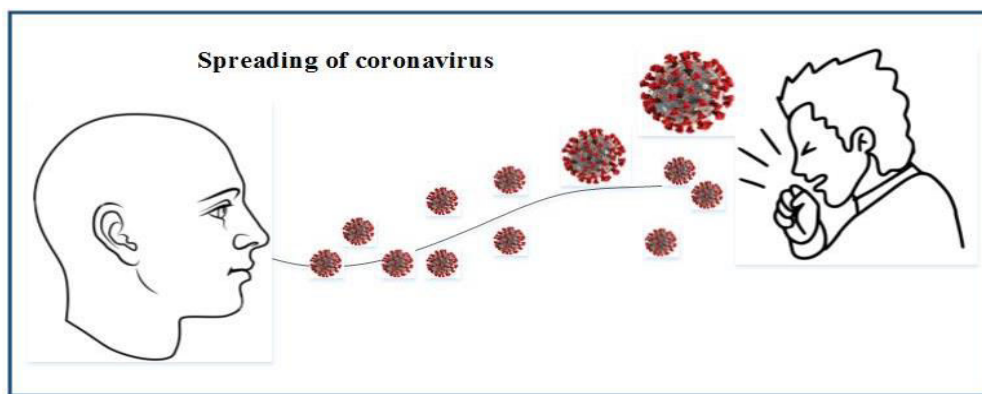


FIGURE.2 Coronavirus morphology illustration and coronavirus spreading

However, recent research suggests that behavioral adjustment can aid in coronavirus containment. Enhance individual habits like good respiratory attitude, which includes close sneezing and coughing, personal hygiene, which includes constant washing of hands with sanitizers, and other personal protective practices like social distancing, face mask wearing, avoiding touching, and limiting contacts with individuals through avoiding nonessential trips or home isolation are the recommended measures to slow or stop the coronavirus disease outbreak. Coronavirus seems to be a worldwide issue that necessitates more global cooperation and effective coordination in order to effectively manage the epidemic and cope with its consequences. Subsequently, the United Nations has requested \$2 billion to boost global rescue operations in the fight against the coronavirus outbreak. If people do not comply or follow strictly to public health standards and guidelines, the repercussions of COVID-19 may be more extreme. The illustration of coronavirus morphology and spreading of coronavirus is shown in Figure.2.

2.3. Global Responses towards Coronavirus Pandemic

A preemptive reaction is crucial to any disease outbreak containment; however the coronavirus caught the globe off guard, and most countries, even world powers, were unprepared for such pandemic at first. The WHO provided guidelines and updated on how to reduce the COVID-19 spread shortly after the epidemic, and several nations took other steps in response towards the WHO guidelines to control the spreading of disease. In the world's most part, there have been lockdowns, and respondents were asked to do Work From Home (WFH). Some governments have used armed forces to strict the coronavirus limitations and minimize the covidots. Sanitizers, hand gloves face masks, and protective gowns were among the items in high demand. Medical experts like nurses and doctors who have been willing or working to treat the COVID-19 effects were also allowed to travel countries like United Kingdom and the United States. Large meetings and sporting events have also been halted at both international and local level. Until they were halted, major sporting tournaments such as the coveted European Champions League matches were held under closed doors. The global reaction to the Coronavirus pandemic differed from country-to-country.

2.4. Impact of communicable diseases on ageing social and medical life

One amongst communicable disease's social impacts is its effect on healthcare. The caregivers' experiences with patient care and the care delivery are two major shifts in healthcare. Healthcare personnel tried to keep pace with rising demands, increased stress, lower capacity, and heavy work, and protective equipment lack when the communicable

diseases epidemic began. COVID-19 shifted providers' perspectives on caring of patient. During communicable diseases, studies on care of patient suggested the nurses. Patients and other healthcare professionals got a better understanding of nursing field, as nurses saw their career as important and had more professionalism. communicable diseases contamination is more likely to affect the elderly, specifically those who have chronic health issues including cardiovascular disease, diabetes, and hypertension. Not only do older people face increased health risks, but they are also more willing and able to sustain themselves in loneliness. While social separation is required to keep the infection from spreading, if done incorrectly, it can result in increased social exclusion among the elderly at a period while they are really in need of assistance.

2.5. Technological Therapy for ageing social interaction

Establishing good relationships is indeed an important aspect of healthy ageing. Because of age-related transitions like bereavement, retirement, and health problems, person's social groups continue to decrease as they get elder. As a result, when contrasted to younger-age groups, ageing are more prone to feel lonely and socially isolated. Aged care workers and HCI academics is increasingly studying the communication technology use to help people stay socially engaged as they grow to overcome this concern. Several studies have shown that technology can help to reduce feelings of social isolation, improve older individuals' social lives, and improve their general well-being. Communication-based technologies can assist older persons engage in social engagement by addressing obstacles to connectivity, like geographical isolation and mobility problems, and by making them feel less lonely, although if in-person interaction is rare. Video conferencing, in specifically, can allow ageing and its long-distance relatives to have rich communication-related experiences and a sensation of "showing up" with someone. In times of physical distancing and isolation, like the COVID-19 outbreak, the communication technologies benefits become increasingly more apparent. Despite implementing physical distancing rules, channels of communication like as the smart gadgets or computer can give ways for elderly persons to keep engaged with their neighborhoods (e.g., community centres, places of worship, fitness programmes), friends and family. Nevertheless, elderly persons have expressed some reservations about using technology for social connection in the previous, like the lack of deeper dialogue and the time allocation needed for online engagement[37].

2.6. Online social interaction community platform

The online community is the communities were social accumulations that develop from the online when enough people continue on such public talks long sufficient, with enough human emotion, to build personal relationships webs in cyberspace," according to Rheingold (1993). In the evidence-based literature, the phrases "social support," "social media," and "social network" are sometimes used commonly used in reference to the same socioeconomic aggregate. However, online communities are typically web-based platforms that give a platform for such gathering of individuals who share different experiences, opinions, problems, passions, and hobbies. The social network is gaining popularity among the elderly today due to its ability to maintain them linked with their beloved even as they grow older. The formulation and application of social media sites for the elderly to enhance the quality of life and assist them in carrying out their daily activities are all in its infancy. There are many online social interaction platforms that facilitate online interaction in times of COVID-19 outbreaks. Some of these technology platforms/applications and their functions are shown in table.2.

Table.2 Technology platforms

Application name	Functions	Purpose of App
Skype	Used on computers and mobile devices; allows to communicate among Skype users via video calls or phone	Communication purpose
FaceTime	Used on the Apple products like iPad, MacBook, etc; enables video and phone calls	Communication purpose
Teladoc	Connects patients with doctor via phone 24/7	Medical checkup
Doctor-on-demand	Provides digital connection with patients and doctors	Medical consultation in different languages
K Health: primary care	Provides primary concern for patients via digital and COVID-19 free risk evaluation	Primary care taker
MyFitnessPal	It counts the calorie and provide a plan for diet	Planning diets and calorie counter

	via online	
Instacart	To deliver and request grocery	Grocery delivery
Yoga: Down Dog	Practice of yoga via online in homes	Online yoga practice
Calm	For meditation and mindfulness and enhance sleep	Online meditation

III. RESEARCH METHODOLOGY

3.1. Data collection

The subject of this research is COVID-19 pandemic impacts on online social community of ageing. This research was conducted based on questionnaire in online, which has the sample of 71 and totally 30 were respondent for the questions. The samples demographic profile is illustrated in table.3. Based on the samples demographic characteristics, the COVID-19 pandemic impact on ageing was identified.

Table.3 Samples demographic profile

Measures	Characteristics	Counts	Percentage (%)
Gender	Female	23	75.3
	Male	7	24.7
Total		30	100
Age	65-75	17	58.2
	76-86	8	26.5
	>87	5	15.3
Total		30	100
Education	Primary	4	15.1
	Secondary	10	32.4
	High school graduate	8	26.8
	University graduate	5	15.9
	Post graduate	3	9.8
Total		30	100
Technology use	Mobile	8	28.2
	Computer	3	10.5
	Telephone	13	41.8
	Smart home devices	2	6.3
	Tablet	1	4.8
	Wearable	3	8.4
Total		30	100
Employment status	Retired	29	95.4
	Semi-retired	1	4.6
Total		30	100
Pension	No pension	26	86.5
	Disability, seniors, widow	4	13.5
Total		30	100
Relationship status	Married (Living with spouse)	6	20.2
	Unmarried	5	18.4
	Widowed	16	51.8
	Divorced	3	9.6
Total		30	100
Frequency of using phone for staying touch during lockdown	Once a day	3	11.2
	A few times a day	8	25.6
	Once a week	2	6.5
	A few times a week	4	14.4
	N/A	6	18.4
	Less than once a month	7	23.9

In this sample, the male respondents are about 24.7%, and female respondents are about 75.3%. In terms of age, the respondents from age 65-87 are 90% and 15.1% respondents are primary, 32.4% respondents are secondary, 26.8% respondents are high school graduate, 15.9% respondents are university graduate and 9.8% are post graduate.

IV. DATA ANALYSIS AND RESULTS

The multiple regression analysis was performed in this research to check our hypotheses supporting the relationships among misinformation, economic impact, physical health, aegis, and loneliness and depression. The multiple regression analysis outcomes indicated that there is strong correlation among each developed hypotheses. The results demonstrated that loneliness and depression have negative impact on COVID-19 pandemic impact on ageing social community ($p < 0.01$, $\beta = -0.172$). Aegis has a positive effect on COVID-19 pandemic impact on ageing social community ($p < 0.001$, $\beta = 0.241$). Physical health has positive effect on COVID-19 pandemic impact on ageing social community ($p < 0.05$, $\beta = 0.114$). In addition, misinformation has positive impact on COVID-19 pandemic impact on ageing social community ($p < 0.001$, $\beta = 0.232$), and the economic impact has also positive COVID-19 pandemic impact on ageing social community ($p < 0.05$, $\beta = 0.113$). Moreover, multiple regression analysis result is shown in table.4.

Table.4 Multiple regression analysis results

Variables	Model 1	Model 2
Demographic variables		
Gender	0.03(0.025)	0.04(0.025)
Education		-0.044(0.051)
Age	0.067(0.034)	-0.058(0.03)
Employment status	0.042(0.021)	0.038(0.025)
Pension	0.096*(0.041)	0.094*(0.033)
Technology use	0.06(0.04)	-0.054(0.03)
Relationship status	0.03(0.06)	0.08*(0.04)
Frequency of using phone	0.04(0.032)	0.03(0.02)
Independent variables		
Physical health		0.114***(0.08)
Aegis		0.241*(0.072)
Misinformation		0.232*(0.064)
Economic impact		0.113***(0.052)
Loneliness and depression		-0.172**(0.055)

Note. Dependent variable: ** $p < 0.01$, * $p < 0.05$, *** $p < 0.001$ (N = 30)

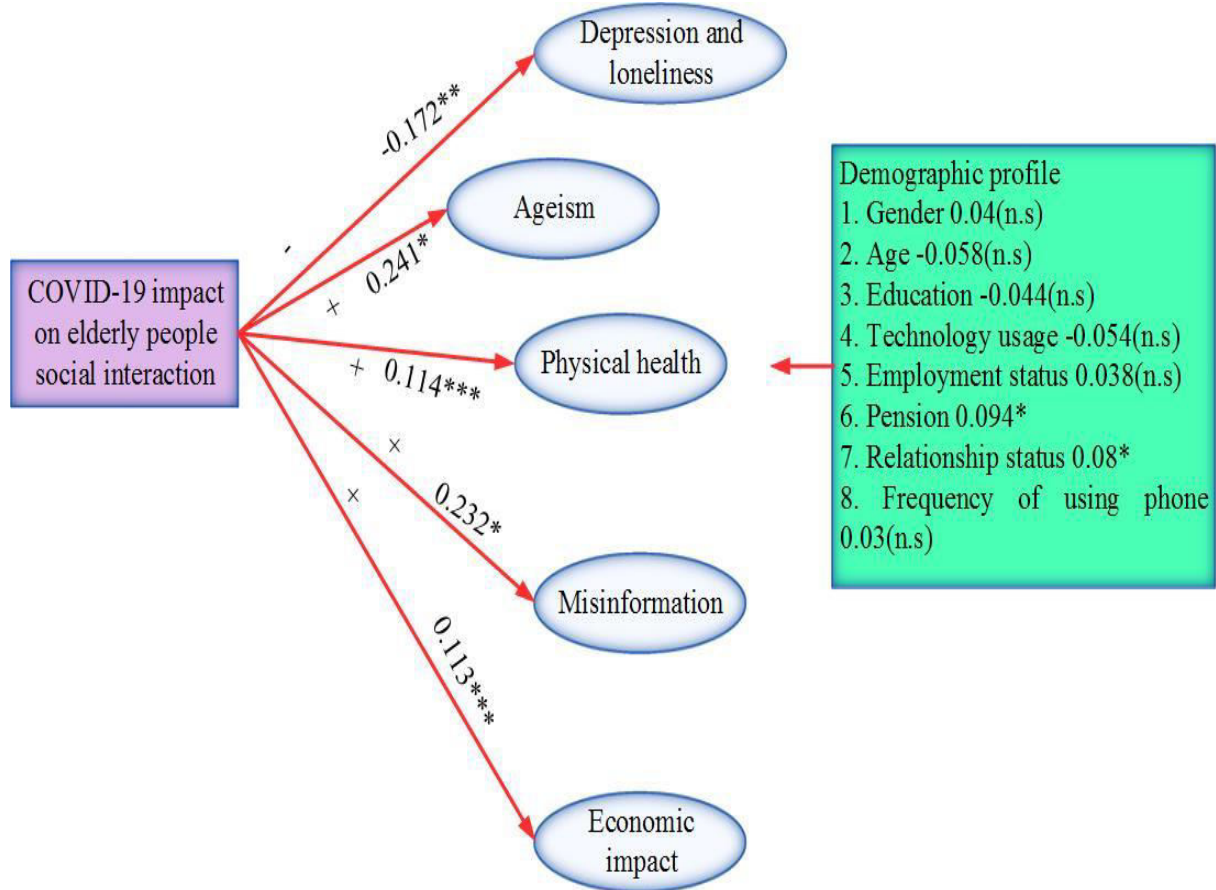


FIGURE.3Hypotheses results (Note. Non-significant = n.s)

The outcome of multiple regression analysis has stated that all the developed hypotheses have positive impact on COVID-19 pandemic on ageing social interaction except loneliness and depression. From the factors, the standard coefficients of regression shown that the loneliness and depression ($\beta = -0.172$) is the highest impact on COVID-19 pandemic on ageing social interaction trailed by aegis ($\beta = 0.241$), physical health ($\beta = 0.114$), misinformation ($\beta = 0.232$), and economic impact ($\beta = 0.113$). The hypotheses test result is shown in Figure.3.

V. DISCUSSION

This research was conducted by two stages: preliminary and secondary analyses. In preliminary analysis the data are collected via online-questionnaire survey. In the secondary analyses, the multiple-regression analysis was performed to check the developed hypotheses. The result demonstrated that loneliness and depression have a negative impact on COVID-19 pandemic ageing social interaction. The economic effect has a strongest impact on COVID-19 pandemic ageing social interaction due to the ageing's pension

The outcome of multiple regression analysis has indicated that all the developed hypotheses have positive impact on ageing social interactions during COVID-19 outbreak except the loneliness and depression. The previous studies are based on the lockdown and pandemic measures. Moreover, due to self-isolation, the ageing's gets lonelier than normal days. This research yielded a number of significant findings i.e., the COVID-19 outbreak had a significant impact on the ageing mental health. They were more depressed and lonely than they've been before the outbreak. For ageing whom felt closest to existing social networks throughout the outbreak, loneliness was related to increased levels of sadness. In contrast, ageing whom felt less connected to existing social networks, regardless of their loneliness, were more depressed. Furthermore, during the outbreak, elder people were fairly flexible in terms of keeping connected. Particularly, ageing reported spending substantially more time on the internet to interact with individuals they worried

about, despite the fact that it did not alleviate their loneliness. Our findings also imply that during the outbreak, perceived proximity to social media links increased the link among depression and loneliness, but mostly for ageing who felt connected to their communities.

VI. CONCLUSION AND FUTURE IMPLICATIONS

Communicable diseases have harmed ageing of all nationalities more than almost any other demographic. Aside from the high transmission and mortality rates, attempts to halt the virus from spreading have paradoxically benefitted and harmed the mental and physical health of ageing. As mentioned above, communicable disease has intense focus mostly on ageing health, and that there is growing interest into or understanding of the difficulties that the elderly experience, providing some optimism for improvement. The current study examines the key feature that affects the ageing's online social community during COVID-19 pandemic. We used the prior literature's experiences to construct the survey questionnaire, and we consider real-world condition. The demographic and independent elements both have been investigated. We look at variables like gender, age, education level, pension, relationship status, technology use, employment status, and frequency of using phones, which are comes to demographic considerations. Loneliness and depression, misinformation, physical health, economic impact, and ageism are among the independent factors examined. A multiple-regression analysis has been applied to determine the effect of the selected hypotheses. The outcomes of the research demonstrated that the negative impact on ageing social interaction during communicable disease is loneliness and depression. In addition, the features like misinformation, physical health, ageism, economic impact, gender, occupation, age, pension status, relationship status, technology use, and education also play a vital part in determining the impact of communicable disease on ageing's social interaction. This finding improves our thoughtful on ageing's social interactions during the COVID-19 pandemic. Moreover, the future implications are described as follows:

6.1. Advanced technologies to support ageing

In order to reach disadvantaged groups, current technological options are insufficient. To ensure productive alternatives available and promote their use, government entities, for nonprofit and profit groups, community volunteers, and technologists are needed. Broadband connectivity, in particular, requires be raising and making cheaper for everyone. The video conferencing and telehealth benefits are numerous, and it is critical that scholars, instructors, and healthcare experts come up with novel strategies to expand the usage and outreach of these innovations, especially among vulnerable demographics. Remote connectedness via smart gadgets, computer, and telephone can help maintain and improve the quality, functional, and structural parts of social interactions that have become broken or decreased. The relevance of knowing the lives of digital natives, their demands, and also how layout influences accessibility has been demonstrated at communicable diseases. The communicable disease has helped device manufacturers to envision what has to be performed to improve the products and services like features and settings for the ageing. Social distancing limits had exposed technological deficiencies in meeting the elderly needs and raised concerns about the country's fitness for an ageing society. Technology designers are must know the behaviors of elderly persons and their environs in order to create flexible and inventive solutions that fit the demands of this sensitive demographic.

6.2. Additional research on health effects and social connections

More studies are required to explore the social disconnection types and how it affects health in order to develop and implement efficient and relevant public health therapies to enhance ties between people. Regarding medical care, addressing social isolation may lead to more effective evaluations and more pragmatic and appropriate therapy solutions. Knowing the risk of individuals and social isolation signs will also help healthcare professionals connect elder people to important community-based social services and public health, as well as improve clinical schemes' ability to customize their help and support and services to meet the elderly person's needs. To guarantee that ageing is recognized, monitored, and aided, uniformity in screening methodologies, regular communications, and unbroken referral protocols are essential.

6.3. Economic security and safety for ageing

Multiple measures will be required to ensure the economic stability of ageing, including approaches and assistance for putting people into work. Age discrimination and ageism should be addressed to guarantee that ageing isn't left out from the recovery. Additional rules should be explored, as well as the implementation of laws regulations. In addition, the nations could consider tax credits or incentives to induce firms to employ ageing by mitigating the disability payments and additional insurance cost. For ageing, who are hungry, poor, homeless, local, and/or facing eviction, federal

agencies and state must take considerations to: prevent heat, water services, and power from being shut off by utility companies; increase donations for secure net programs, and Supplemental Nutrition-based Assistance Program (SNAP); and allow participants of SNAP to purchase grocery and foods via online. Social Security is only insufficient to meet the ageing needs in a catastrophe, and national, state, and local governments should strengthen help for seniors who rely entirely on the programme.

6.4. Ensuring accurate information dissemination

More requires to be improved to combat disinformation and guarantee that ageing have access to accurate information. With the foreign language and sign language translator help, news broadcasts can be rendered more brief, transparent, and accessible. Media corporations and large digital companies such as Facebook, Google, and Twitter should avoid spreading clearly inaccurate information and drive their reporters, users, organizations, and journalists to the principles of honesty and professionalism. Infractions should be punished and held accountable for spreading misleading information. To attract elderly communities and deliver the news in basic, simple language, media sources should employ a variety of platforms; include landlines, newspapers, television, radio, and mobile applications.

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