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ORIGINAL ARTICLE

Are COVID-19's restrictive measures associated with people's quality of life and the prevalence of anxiety and depression in Kinshasa in the Democratic Republic of Congo?

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Abstract

Background. The spread of COVID-19 and the economic repercussions of several restrictive measures have worsened the lives of the Congolese and caused panic, fear, and anxiety. No study has yet examined the effect COVID-19's restrictive measures had on the quality of life in the Congo.

Aims. The purpose of this study is to determine if the restrictive measures of COVID-19 are associated with the quality of life and the prevalence of anxiety and depression in Kinshasa.

Methods. A cross-sectional survey was conducted in seventeen Kinshasa municipalities. N=100 adults over the age of 18 were recruited (41 females, 58 males and 1 prefer not). Social Contacts Assessment (SCA), Time Use Survey (TUS), Manchester Short Assessment of quality of life (MANSA), Health status EQ-5D-3L, UCLA Loneliness Scale; Patient Health Questionnaire (PHQ-9); General Anxiety Disorder (GAD-7) and COVID-19 related questions were utilized. We conducted descriptive statistics and multiple regression analyses.

Results suggest that depression and anxiety are more prevalent (PHQ-9 and GAD-7 scores were 9.1 (SD=6.8) and 8.5 (SD=6.1) respectively). Negative associations were found between the quality of life and living alone (B=-0.35, p=0.05) and mental health decline due to COVID-19 (B=-0.30, p=0.04). Those who described themselves as less lonely reported a higher quality of life (B=0.34, p=0.03).

Conclusions. Living alone is associated with a lower quality of life. This study fills a gap in the literature on public health in the DRC and low- and middle-income countries.

Keywords: COVID19 pandemic, social isolation, quality of life, anxiety and depression, mental health conditions, Kinshasa.

INTRODUCTION

The emergence and consequences of the 2019 coronavirus disease (COVID-19) have caused worldwide panic, fear, anxiety, and concern (13). Due to the rapid person-to-person transmission of COVID-19, countries around the world are implementing restrictions and policy measures in the context of social withdrawal, distance working, and self-isolation beginning in December 2019 in the Chinese city of Wuhan (36). When information on the clinical characteristics of affected patients was limited, the number of new cases of COVID-19 increased rapidly. Thus, on 30 January 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a global public health emergency. Since this COVID-19 outbreak, several measures, including quarantine, travel bans and restrictions, social distance enforcement, lockdown, closure of public places, and cancellation of public events, have had severe economic consequences (31).

Previous research has found a correlation between COVID-19's restrictive measures and mental illness. On a global scale, studies have documented the negative mental health consequences of outbreaks (13). Fear, the anxiety of becoming ill, depression, panic attacks, hallucinations, and psychosis can be induced by a disease outbreak such as COVID-19 (13). More patients were impacted by the suspension of visits, sudden closure of services, postponement of soon-to-be-begun periods of psychological therapy, and remote appointments (13, 29). Due to COVID-19, some people have reported loneliness, social isolation, and loss of usual activities (29).

However, few studies have been conducted in sub-Saharan Africa to examine the effect of COVID-19 on mental health. For instance, a study conducted in Nigeria revealed a prevalence of poor mental health outcomes among Nigerian healthcare personnel and the general population during the COVID-19 crisis. In addition, the study found that socioeconomic status has significant implications for depressive symptoms (1). People have been affected by the national lockdown implemented in South Africa between late March and early May of 2020. Higher perceived COVID-19 risk was associated with increased depressive symptoms, especially among adults with a history of childhood trauma (17). Less research has been conducted on the effects of COVID-19 on the mental health of Sub-Saharan African nations, and responses may vary from country to country. According to a study conducted in Kenya, there is no formal COVID-19 mental health response plan. During the COVID-19 pandemic, neither funding nor training for community health workers in psychological first aid were allocated or planned, according to the study (14).

Democratic Republic of Congo response to COVID-19

On March 10, 2020, the first confirmed COVID-19 case was reported, and within two weeks, a state of emergency was declared (23). Several measures, including travel bans, lockdowns, widespread testing, quarantine, regular hand washing, wearing masks, not shaking hands when greeting, meeting up to 20 people, and social distancing, were implemented. On August 26, 2020, the Democratic Republic of the Congo reported 9,891 cases of COVID-19 and 251 deaths, with the capital city Kinshasa as the epicenter and Gombe commune (the administrative and commercial center of Kinshasa) as the hotspot area (23).

WHO and the DRC Ministry of Health coordinated the COVID-19 response. The Democratic Republic of the Congo has experienced numerous disease outbreaks in the past, including cholera, Ebola, and measles, which continue to claim thousands of lives. The COVID-19 pandemic has made the situation worse. Due to previous outbreaks, the Congolese Ministry of Health, in coordination with WHO and other partners such as the International Committee of the Red Cross (ICRC), has learned to initiate measures to control the outbreak, including case

Supplementary information The online version of this article (Tables/Figures) contains supplementary material, which is available to authorized users.

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investigation, contact tracing, surveillance at points of entry and checkpoints, isolation of suspected cases, laboratory confirmation, Infection prevention and control (IPC) measures in health facilities, and community engagement. The National Institute of Biomedical Research (INRB) in Kinshasa, for instance, can examine blood samples and oral swabs for Ebola, COVID-19, and other diseases. All COVID-19 patients were admitted to the seven largest hospitals in Kinshasa (one public, two Catholic, and two private) (23).

Although these COVID-19 restrictive measures have helped to stop the spread of COVID-19, they have also caused a number of other issues, such as unemployment, unpaid wages, a lack of diversions, and poverty (9). According to the World Bank, the Democratic Republic of the Congo has the third-largest population of poor people in the world. DRC is home to nearly 14%, or one out of every six people living in extreme poverty in Sub-Saharan Africa. In the Democratic Republic of the Congo, poverty is severe, pervasive, and has increased as a result of COVID-19. In 2020, it was estimated that 73 percent of the Congolese population, or 65,7 million individuals, lived on less than two dollars per day (the international poverty rate) (9). Some authors described the Democratic Republic of the Congo as a chronic emergency with endemic poverty, conflict, violence, forced dislocation of ethnic groups, torture, and rape as weapons of war (22), all of which have devastating effects on the mental health of the population (11, 15). In DRC, there are very few facilities for the treatment of mental illness. There are 0.737 beds for every 100,000 people, as there are only six mental health hospitals in the entire nation with 500 beds (9,25,26). People with mental health conditions in the DRC are more likely to seek assistance from non-health professionals, such as traditional healers and religious leaders, than from health professionals (2,18,24). The most vulnerable populations are already negatively impacted by the interaction between poverty and mental health stresses. A study examining the socioeconomic and mental health effects of COVID-19 on South African adolescent girls and young women, for instance, found that COVID-19 restrictions led to increased stress and anxiety (7). Therefore, research on mental health is desperately needed in the DRC.

In addition, previous research indicates that people with mental health conditions tend to be highly socially isolated (10) and that socially isolated individuals have a lower quality of life (3,4). The global health challenge and the existence of a vast treatment gap between high-income and low-income countries can be addressed by expanding mental health research and widely disseminating interventions based on scientific evidence (6,20,36).

This study examines the relationship between COVID-19's restrictive measures and the prevalence of anxiety and depression in Kinshasa, Democratic Republic of the Congo.

This study aims to pursue the following objectives:

1. Do the Congolese government's several measures such as the movement control order are linked to people's quality of life?

2. Are factors such as social contacts, living situation, leisure activities, loneliness, depression, and generalised anxiety associated with the quality of life?

3. Are measures such as loneliness, anxiety, and depression across different gender and age groups. Which group of people (e.g. males or females) is the most affected by COVID-19's restrictive measures?

4. Do people feel that their mental health has changed since the COVID-19 outbreak?

MATERIALS AND METHODS

Study design and participants

A cross-sectional survey was conducted in the city of Kinshasa, which is the capital of DRC. Kinshasa is now a megacity with an estimated population of more than 11 million.

From 1st to 18th July, participants were recruited in 17 areas (municipalities) in the capital: Ngaliema, Mont Ngafula, Ngiri-Ngiri, Bumbu, Gombe, Kitambo, Bandalungwa, Lemba, Matete, Selembao, Kalamu, Kasavubu, N'sele, Lingwala, Masina, Kinshasa, and Makala. Participants were identified by field workers (research team) who were trained about how to be involved in the study and how to recruit

participants from several places including community centres, churches, universities, and businesses. The plan was to recruit in each area: 17 areas x 10 participants = 170 potential participants. Due to COVID-19's restrictive measures, some participants were not reachable or eligible (under 18 years). Only 100 consented to take part.

Inclusion criteria

- 18 years and over from the general population and patients
- Capacity to provide informed consent
- Ability to communicate

Exclusion criteria

- Does not meet inclusion criteria
- No capacity to provide informed consent

Consent

Different groups or Communities were informed about the study using posters or via their weekly meetings. Those who are interested were identified by members of their wider community or team leader. They were allowed to contact the Centre Spécialisé dans la Prise en charge Psychosociale en Santé Mentale en RDC (CSPEMRDC) field workers or the main office. The fieldworker designated for that area was informed and given the information sheet. Informed consent was obtained from eligible participants to participate in this study.

Ethics Committee approval

The UCKIN Ethics Committee approved the study. All participants were given the information sheet about the survey and written informed consent was obtained from all participants.

Survey procedures and measures

The survey took place in quiet rooms in different locations including a community centre, churches, universities, or at participants' homes. The survey's original language was English but participants in DRC do speak French. Thus, a certified translation service was used to translate the questionnaire from the English language to the French language; and then translated back from the French language to the English language. To check the accuracy, an independent translator (who has no contact with the original text) was used to translate it back into the original language. The interview was conducted by the fieldworker who completed a questionnaire form by recording participants' responses. Field workers were trained about how they should recruit and be involved in this study. The survey includes questions about the number and quality of social contacts on each day of the previous week (10); Time Use Survey (TUS) (10); Health status EQ-5D-3L (8); UCLA Loneliness Scale (37); Patient Health Questionnaire (PHQ-9)(32); Generalised Anxiety Disorder (GAD-7)(30); MANSA Manchester Short Assessment of quality of life (5,28); and COVID-19 related questions.

Among measures used, for example, the Social Contacts Assessment (SCA) was used for participants to report the number of social contacts in the previous week. According to the SCA, a "social contact" was someone the participants could name and with whom they would have had at least a brief conversation (more than just a greeting) in the last week. Participants were asked not to include people they were living with or mental healthcare professionals. For employed participants, people they worked with could only be included if contacts took place outside their workplace and were not related to their work.

Participants were asked to self-report their health status on a scale from zero to 100 if zero represents the worst health they can imagine and 100 represents the best health. The Loneliness UCLA scale assesses the lack of companionship when people feel left out, feel isolated from others, when they do not have anyone to turn to or when they feel that people are around them but not with them. The PHQ-9 looks at depressive symptoms such as having little interest or pleasure in doing things, feeling down or hopeless, feeling tired, restless, feeling bad about yourself, having trouble concentrating, and having thoughts that you would be better off dead. The GAD-7 helps us to assess people's anxiety symptoms such as feeling nervous, anxious, worrying too much, becoming easily annoyed, and feeling afraid as if something awful might happen. GAD-7 scale has been used widely (35) to measure the severity of anxiety by asking 7 questions, each marked on a scale of 0–3. Responses are recorded as 0 (not at all), 1 (several days), 2 (more than half of the days), 3 (nearly every day). The overall scores then range from 5 to 9 (Mild

anxiety), 10 to 14 (Moderate anxiety), 15 and above (Severe anxiety). Also, participants reported satisfaction with the quality and quantity of friendships, measured using the sixteen items of the Manchester Short Assessment of Quality of Life (MANSA), which was rated on a score from 1 (very dissatisfied) to 7 (very satisfied). MANSA is a reliable measure and has been used to assess the quality of life of people with mental health conditions (5, 27, 28). Two direct COVID-19-related questions were asked to participants to know how the coronavirus pandemic affected the amount of contact they have with people outside of their homes. Also, whether they feel that their mental health has changed since the coronavirus outbreak. Moreover, the questionnaire collected additional information such as participants' gender, age groups, marital status, living situation (whether participants were living with someone or alone), education level and employment. This was a one-off survey which took approximately 45 minutes to complete.

Statistical analyses

The analyses were conducted using Stata 17.0 software (16).

Descriptive statistics (mean, median, standard deviation, range and the interquartile range) for the sample characteristics and for quality of life were calculated. We had one dependent variable "quality of life" because we targeted the general population. For this outcome measure, we estimated relative risks and 95% confidence intervals (95% CI) using OLS regression analysis with robust error variance according to the method described by previous studies (19,28). Prior to conducting data analysis, diagnostic tests for our data were performed to assess distribution, variance and multicollinearity, demonstrating that none of the assumptions for using parametric tests had been violated. For example, the quality of life was normally distributed; the one-way ANOVA showed the difference between groups: chi2(1)=2.6178 Prob>chi2=0.106.

We conducted multiple regression analyses to investigate the relationship between quality of life and other variables of interest. Descriptive statistics (i.e., Mean and Standard Deviation) were reported for the quality of life, self-reported health status, social contacts, leisure activities, sports activities, loneliness, PHQ-9, GAS-7, and COVID-19-related questions. The correlations pairwise and regression analysis were set at a significance level of $p<0.05$. In the regression analysis, we had the quality of life as the outcome variable and other variables as the independent variables such as those who made any social contacts in the last seven days, online social contacts, sports activities, leisure activities, those who estimated their health status above 50 percent, participants who had moderate and severe depression, and anxiety, and those who were lonely. We created dummy variables to investigate the quality of life of some targeted groups such as the unemployed, those who were living alone, and in independent accommodation, those who were single, older age group, and female. The inclusion of covariates was according to the method described by previous similar studies (1,10,17).

RESULTS

Descriptive statistics

Table 1 presents the socio-demographic variables. Of 100 participants, 41% were females and 58 were males; 1% prefer not to disclose their gender. Most of the participants (42%) were young adults (18-35 years old); followed by 37% of adults (36-55 years old). Those who were aged between 56-69 years old formed 15% of the sample. The smallest percentage (6%) was formed from those who were 70 and over. The number of participants by age group is the correct representation of the Congolese population where the population is younger and life expectancy is 63.2 years for females and 60.0 years for males. The majority of participants 65% had further education and 26% had secondary education as their highest level of education. Most participants were married (47%), followed by those who were singles (33%). Of 100 participants, 59% were living in independent accommodation (owner or renting) and 35% were in supported accommodation (can't afford to pay the rent). Most participants lived with their partner or family (76%) versus 17% who lived alone. The remaining 7% of the participants lived with friends or in shared accommodation. Forty-nine

percent of the participants were in employment (full-time 35% and part-time 14%); 22% were unemployed and 12% were students.

The quality of life

The average quality of life was M=3.3 (SD=0.6) on a scale of 1 to 7. The average quality of life amongst females was slightly less (M=3.2, SD=0.7) compared to males (M=3.4, SD=0.5). Across the age groups, the quality of life slightly increased with the age of the participants: from young adults age 18-35 (M=3.3) to those aged 36-55 (M=3.3) and from age 56-69 (M=3.4) to those who were 70+ (M=3.4). The average self-reported health status was M=68.0 (SD=14.4) on a scale from 0 to 100. The average Loneliness was slightly less among females 17.0 (SD=4.2) versus males 17.15 (SD=4.1). On average, participants reported mild and moderate depressive symptoms with PHQ-9 score of M=9.1 (SD=6.8). Also, on average, participants reported moderate anxiety symptoms with GAD-7 score of M=8.5 (SD=6.1). On average, participants attended M=2.5 (SD=2.2) leisure activities. Females attended more leisure activities M=3.0 (SD=2.4) than males M=2.0 (SD=2.0). A similar pattern has been observed with sports activities. Living situation: the majority (87%) of participants were living with someone such as a partner, family member or friend versus 17% who were living alone.

Social contacts: of 100 participants who made social contacts in their last 7 days, 46% have been in contact with people they described as friends, 19% with partners, 19% with acquaintances and 5% with other people. Online contacts: most of the participants (38%) socialise with their friends, vs 17% who socialise with their partners, and 18% with acquaintances Sixty-two percent of participants have access to the internet and 52% said that they have a smartphone. Sharing your feelings and worries could be useful as a coping strategy for people with mental health conditions; 32% of the participants said that they could talk to their social contacts about their personal feelings and worries versus 41% of people who cannot (Table 2). COVID-19 pandemic has negatively affected people's amount of contacts as 58% of participants reported that they have fewer contacts with people outside of their homes (either face-to-face, over the phone, by text, or online). Nevertheless, 26% of participants have increased the number of their contacts during this pandemic. Sixteen percent of participants said that their contacts were about the same. The majority of the participants 63% feel that their mental health has not changed since the coronavirus outbreak. Nineteen percent of participants said that their mental health got worse versus 18% who reported that their mental health got better.

Correlation

The quality of life was corrected with several factors: social contacts (b=-0.27, p=0.01), online social contacts (b=-0.27, p=0.01), leisure activities (b=0.19, p=0.04), health status (b=0.19, p=0.05), moderately severe anxiety (b=0.25, p=0.01), living alone (b=-0.30, p=0.01), and mental health got worse due to COVID-19 (b=-0.20, p=0.04) (Table 3).

Multiple regression analysis

resents the relationship between the quality of life and severalvariables. A negative and significant association was reported between the quality of life and those who were living alone (B=-0.35, p=0.05), and also those who said that their mental health got worse due to COVID-19 (B=-0.30, p=0.04). The quality of life was positively associated with those who describe themselves as less lonely (B=0.34, p=0.03). On the other hand, the association between quality of life and other variables such as social contacts, leisure activities, and depression and anxiety were not significant; see Table 3.

DISCUSSION

This cross-sectional study looked at whether COVID-19's restrictive measures were associated with people's quality of life and the prevalence of anxiety and depression in Kinshasa in the Democratic Republic of Congo. This is a cross-sectional study, and no causal relationship has been investigated. A negative and significant association was found between the quality of life and those who were living alone, and also those who said that their mental health got worse due to COVID-19. The quality of life was positively associated with those

who described themselves as less lonely. During COVID-19's restrictive period, the quality of life of people who were living with partners or family members, or friends was higher than the quality of life of those who were living alone. However, social contact over the phone, online, or face-to-face was not associated with people's quality of life. Also, marital status such as being single, unemployed, or older was not linked with people's quality of life.

The quality of life of people in Kinshasa was below the mean average and the most affected people were females and young adults. Poor quality of life may be understandable in DRC, a country where 72% of the population live with less than two dollars per day and poverty and instability have been described by some authors as endemic (25). Our findings are in line with previous studies, reporting a negative impact of COVID-19 on people's quality of life and a prevalence of poor mental health outcomes during the COVID-19 crisis among Nigerian healthcare personnel and the general population (1,6,13,29).

Previous research has reported that a disease outbreak such as COVID-19 can induce psychiatric symptoms such as fear, anxiety of falling ill, depression, and panic attacks (13). Our study found those who felt that they always had someone to turn to had a quality of life. The fear of the COVID-19 pandemic was associated with people's quality of life. For example, those who said that their mental health got worse due to COVID-19 had lower quality of life.

The PHQ-9 score was M=9.1 (SD=6.8) and the GAD-7 score was M=8.5 (SD=6.1), which seems to be higher than other studies conducted during the Covid-19's quarantine period; for example, in Albania, the PHQ-9 score was 6.2 (SD=5.8) for students and 6.2 (SD=5.8) for family members (21). Nevertheless, no significant link between the quality of life and depression and anxiety was found. A recent study conducted in Nigeria found that socioeconomic status significantly influences the prevalence of depression symptoms among Nigerian residents during the COVID-19 pandemic (1).

Previous studies found that social support may play an important role in psychosocial adjustment after a traumatic event (12,29,33). In line with previous studies, our study found that to tackle loneliness and social isolation Congolese people used family support and built contact with trusted friends and family members. This study found that those who were living alone with other people such as with a partner, family members, or friends have a better quality of life than those who were living alone.

Nevertheless, social contact with people outside of their homes (including remote contacts) was not associated with their quality of life. This may be understandable because our survey was conducted during the lockdown when the Congolese government imposed several restrictions including quarantine, travel ban, social distance enforcement, and movement control order. Further studies are however needed to investigate why social contacts were not associated with the people's quality of life in Kinshasa. During the COVID-19 lockdown, participants had and have the opportunity to value indoor support and conversations. This may explain why participants who were living with their partner or family members or friends had a better quality of life than those who were living alone. Previous studies have suggested that the absence of social contacts may predict a poor quality of life in patients (4) and interventions that directly target social isolation will increase patients' networks and their quality of life (3). Our study found no link between leisure activities and quality of life. We presumed that during the COVID-19 lockdown people might find it difficult to attend leisure activities because of several restrictions. This may explain why leisure activities were not associated with people's quality of life.

Strengths and limitations

This study has several strengths. First, this is the first cross-sectional study investigating whether COVID-19's restrictive measures were linked with Congolese quality of life and the prevalence of anxiety and depression. Second, interviews were face-to-face to give access to people from different socioeconomic statuses such as those who did not have internet access. Third, this study addresses the gap in public health service provision in the DRC, a country where mental health treatment is not supported by the government as there are no budgetary allocations for mental health. This study may help to increase

mental health awareness in the general population and implement psychosocial interventions for people with mental health conditions.

Nevertheless, it is important to recognise a few key limitations in this study. First, the small number of participants may affect the outcomes of this study. Moreover, our sample was not representative across the 17 municipalities in Kinshasa. Second, this is a cross-sectional study, and no causal relationship has been investigated. Thus, longitudinal studies are needed. Third, this study looked mainly at the negative aspects of COVID-19 on people's quality of life; however, further studies should also investigate how COVID-19 could make Congolese people stronger (12, 29). Finally, this study did not target people with psychosis who are particularly vulnerable to social isolation. There is a need for psychosocial interventions for people with psychosis in a country (DRC) where there are no budgetary allocations for mental health (34).

CONCLUSIONS

The quality of life is positively associated with people's living situations. Living alone is linked with poor quality of life. The depression and anxiety scores seem to be higher than in other countries in similar conditions. This study addresses the gap in public health service provision in the DRC and may help to implement psychosocial interventions for people with mental health conditions in DRC. Our findings are very important for community engagement and may help to implement public health interventions in low-income countries.

INFORMATION

Authors' contributions : KHN carried out the literature review, and selection of the references and led the study protocol development. LSL and IKM supervised data collection and compilation. KHN and LDL prepared the data for the analysis. KHN analysed the data. KHN takes responsibility for the integrity of the data and the accuracy of the data analysis. JPE contributed to the writing and checked the accuracy of the writing. All authors reviewed the manuscript and contributed to its final draft.

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Table 1. Descriptive statistics: socio-demographic variables.

Socio-demographic factors	N (%)
Gender	100 (100)
Female	41 (41)
Male	58 (58)
Transgender	0
Prefer not to say	1 (1)
Age groups	100 (100)
18-35	42 (42)
36-55	37 (37)
56-69	15 (15)
70+	6 (6)
Education	100 (100)
Primary	5 (5)
Secondary	26 (26)
Tertiary/Further	65 (65)
Other general	4 (4)
Marital status	100 (100)
Single	33 (33)
Married	47 (47)
Cohab/civil partn.	4 (4)
Separated	3 (3)
Divorced	5 (5)
Widow/Widower	7 (7)
Not known/Missing	1 (1)
Accommodation	100 (100)
Independent accom.	59 (59)
Supported accom.	35 (35)
Homeless/Roofless	1 (1)
Other accommod.	4 (4)
Living condition	100 (100)
Living alone	17 (17)
Living with a partner or family	76 (76)
Living with friend(s)	5 (5)
Living in a shared accom.	2 (2)
Employment	100 (100)
Full-time or self-empl	35 (35)
Part-time or self-empl	14 (14)
Voluntary employ.	3 (3)
Unemployment	22 (22)
Student	6 (6)
Housewife/husband	8 (8)
Retired	9 (9)
Other	6 (6)

Table 2. Descriptive statistics: quality of life and targeted variables.

Variables	N	Mean (SD)	Females M (SD)	Males M (SD)	Age 18-35 M (SD)	Age 36-55 M (SD)	Age 56-69 M (SD)	Age 70+ M (SD)
Quality of life MANSA	100	3.3(0.6)	3.2(0.7)	3.4(0.5)	3.3(0.6)	3.3(0.5)	3.4(0.9)	3.4(0.6)
Health status	100	68.0(14.4)	67.5(15.0)	68.5(14.1)	67.1(16.5)	67.8(12.8)	70(15.1)	70(7.0)
Loneliness UCLA	100	17.1(4.1)	17.0(4.2)	17.1(4.1)	17.3(4.3)	16.5(3.6)	18.3(4.3)	16.3(5.4)
Depressive symptoms PHQ-9	100	9.1(6.8)	8.9(6.2)	9.1(7.1)	8.0(6.0)	10.2(7.3)	9.4(7.2)	9(7.9)
Anxiety symptoms GAD-7	100	8.5(6.1)	9.1(6.2)	8.0(6.0)	8.5(5.9)	8.4(6.0)	8.9(7.2)	7.3(6.2)
Leisure activities attended	100	2.5(2.2)	3.0(2.4)	2.0(2.0)	2.2(2.1)	2.7(2.3)	2.8(2.5)	2.1(2.7)
Sport activities attended	100	1.5(1.9)	1.8(2.1)	1.2(1.7)	1.2(1.7)	1.6(2.0)	2.3(2.3)	0.8(1.3)
Social contacts	100							
Friends	46		21	25	22	16	5	3
Partner	19		5	14	7	6	4	2
Acquaintance	19		12	6	8	9	2	0
Other	5		1	4	2	1	1	1
No contacts	11		2	9	3	5	3	0
Remote contacts	100							
Friends	38		19	19	21	10	4	3
Partner	17		6	11	5	7	3	2
Acquaintance	18		7	10	9	7	2	0
Other	4		2	1	0	2	1	0
No contacts	24		7	17	7	11	5	1
Sharing personal feelings								
Yes	32		14	18	14	12	4	2
No	41		20	20	15	17	6	3
Contacts during COVID-19								
Less	58		25	32	24	21	10	3
The same	16		6	10	7	5	2	2
More	26		10	16	11	11	3	1
Mental health during COVID-19								
No change	63		27	35	28	19	12	4
Got better	18		6	12	7	9	2	0
Got worse	19		8	11	7	9	1	2

Table 3. Pairwise correlation between quality of life and other variables.

Variables	Quality of life	*P*
Quality of life MANSA	1.0000	
Having social contacts	-0.27**	0.01
Online social contacts	-0.27**	0.01
Sport activity	-0.15	0.13
Leisure activities	-0.19*	0.04
Health status above 50	0.19*	0.05
Depression moderate to severe	-0.11	0.26
Anxiety moderately severe	0.25**	0.01
Less loneliness	0.13	0.17
Unemployed	-0.03	0.71
Living alone	-0.30**	0.01
Independent accommodation	0.02	0.81
Single marital status	-0.02	0.81
Age over 56	0.08	0.39
Female	-0.15	0.12
Less contact due to COVID-19	-0.09	0.35
Mental health got worse due to COVID-19	-0.20*	0.04

Table 4. Multiple Regression analysis (Quality of life MANSA as a dependent variable).

Quality of Life MANSA	Coefficient B	Std. err.	t	*p value*	[95% CI]	
Social contacts	-0.28	0.25	-1.10	0.28	-0.78	0.23
Online social contacts	-0.33	0.19	-1.76	0.08	-0.70	0.04
Sport activities	-0.09	0.14	-0.66	0.51	-0.38	0.19
Leisure activities	-0.09	0.18	-0.52	0.61	-0.45	0.26
Health status above 50	0.40	0.27	1.46	0.15	-0.14	0.93
Depression: moderate and severe	-0.04	0.15	-0.26	0.79	-0.35	0.27
Anxiety: moderately severe	0.26	0.16	1.69	0.10	-0.05	0.57
Less Lonely	0.34*	0.15	2.25	0.03	0.04	0.64
Unemployed	0.04	0.17	0.25	0.80	-0.29	0.37
Living alone	-0.35*	0.18	-1.99	0.05	-0.70	0.00
Independent accommodation	0.07	0.15	0.44	0.66	-0.23	0.36
Marital status: single	0.20	0.16	1.23	0.22	-0.12	0.52
Age over 56	0.20	0.15	1.37	0.18	-0.09	0.50
Female	-0.13	0.12	-1.04	0.30	-0.37	0.12
Less contact due to COVID	0.06	0.15	0.38	0.70	-0.24	0.35
Mental health got worse	-0.30*	0.14	-2.14	0.04	-0.58	-0.02
Constant	3.47***	0.39	8.99	0.00	2.70	4.23
F(16, 83)	3.04					
Prob > F	0.001					
R-squared	0.36					
Adj R-squared	0.24					
N	100					