



Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/13740
DOI URL: <http://dx.doi.org/10.21474/IJAR01/13740>



RESEARCH ARTICLE

ANXIETY-DEPRESSIVE DISORDERS IN THE GENERAL POPULATION DURING A PERIOD OF CONFINEMENT IN MOROCCO

Stati Soukaina¹, Kharbach Ahmed², Tbatou Leila³, Khalouk Aouatif¹, Nafaa Hind³, Obtel Majdouline² and
Ouanass Abderrazzak¹

1. Research Team of Psychiatry, Medicalpsychology and History of Medicine.
2. Laboratory of Biostatistics, Clinical Research and Epidemiology (LBRCE), Faculty of Medicine and Pharmacy of Rabat.
3. Faculty of Medicine and Pharmacy, Mohammed V University, Rabat.

Manuscript Info

Manuscript History

Received: 15 September 2021

Final Accepted: 17 October 2021

Published: November 2021

Key words:-

Depression, Anxiety, Containment,
Covid-19, General Population, Morocco

Abstract

Summary: Faced with the spread of the coronavirus, the Moroccan population is in confinement, this period of confinement is difficult to live for all and especially for some vulnerable people, they are worried for their health and that of their families, and they risk having psychological repercussions: anxiety-depressive, which negatively influences their socio-professional life.

Objective: to measure the degree of depression and anxiety in the general population during a period of confinement

Method: cross-sectional, descriptive and analytical study conducted from 30 April to 10 August 2020, using a questionnaire, including the BECK scales for depression, the GAD (Generalized Anxiety Disorder) for anxiety

Results: 632 responses were collected, of which 70.8% were women, 40.9% were between 18 and 30 years old, 47.8% were single, 76% had higher education, 14.4% had a psychiatric history. 64.8% of the participants had depression, of which 28.6% had mild depression, 24.3% had moderate depression, 11.9% had severe depression and 8.3% had anxiety.

Age, presence of children, marital status, agreement to confinement, work during confinement and type of occupation; presented a statistically significant difference with a $P < 0.005$ between the 2 groups presenting or not a depression.

Univariate logistic regression analysis showed that the presence of anxiety (OR = 7.307; 95% CI: 2.4977 - 21.379), and physical presence at the work site compared to the non-work group (OR = 0.5097; 95% CI: 0.2728 - 0.950) were independently associated with the occurrence of depression.

Conclusion: Exploration of depression and anxiety concluded that there was a definite impact of containment on the general population in Morocco.

Research data are needed to develop strategies to reduce psychological impacts and psychiatric symptoms during the epidemic.

Corresponding Author:- Stati Soukaina

Address:- Research Team of Psychiatry, Medicalpsychology and History of Medicine.

Introduction:-

The emergence of a new form of Coronavirus (2019-nCoV) in Wuhan has created a confusing situation (1) and in the face of its spread, the world population and included Moroccan is in confinement, this current period of confinement is difficult to live for all and even more so for some vulnerable people.

The uncertainty and low predictability of Covid-19 not only threatens the physical health of people, but also affects the mental health of people, especially in terms of emotions and cognition, as shown by many theories (2)

In effects of the crisis of Covid 19 to impact several areas of life, so the economy, society and the environment are impacted.

According to the IMF General Manager, Kristalina Georgieva "global economic growth will turn negative in 2020, and worse in 2021" A study by the Regional Central Bank of New York, believes that the IMF has a pessimistic view; (3) the pandemic has not destroyed the infrastructure of the system, which makes the recovery of production instantaneous. The OECD predicts that global growth will decline. The world economy is at risk and with this weakness, it must face this pandemic which has caused considerable human suffering and major economic disorder (4).

This pandemic has forced the implementation of a containment, which seems to have serious psychological consequences on some humans.

In Lancet Psychiatry (5) experts have drawn attention to patient populations that may require tailored interventions (6) Thus patients with psychiatric disorders may experience distress (2)

In addition, they may not have access to care due to confinement restrictions and public transportation closures (7). Several authors (8) describe how confinement caused a sense of collective hysteria, leading staff to desperate measures. So fear seems most certainly a consequence of these conditions.

During epidemics, community anxiety can increase for several reasons, especially with the first deaths, the rapid and easy access to information (info-demic) and the increasing number of new cases and certainly the period of confinement (1).

This is in favor (9) of an increase in psychological repercussion including anxiety, depression and stress.

Cuiyan Wang and colleagues in 2020 (10) assessed the psychological impact of confinement as moderate or severe, 16.5% reported moderate to severe depressive symptoms, 28.8% reported moderate to severe anxiety symptoms. Jianyin Qui and collaborator in 2020 (11) showed that nearly 35% of respondents experienced psychological distress

The present study aims to assess the psychological impact of confinement on the general population in Morocco, including depression and anxiety, and to investigate the factors that contribute to the different psychiatric disorders studied. The results of this study will help develop interventions and strategies designed to reduce the psychological impacts of this epidemic.

Materials and Methods:-

Type of study

Cross-sectional study, descriptive and analytical, was conducted from 30 April to 10 August 2020, using an anonymous questionnaire, which explores the three main areas of this work, firstly the socio-demographic conditions, which focused on age, gender, level of education, marital status, the presence of children, region, function and job position during this pandemic, the agreement for the containment, secondly on the clinical characteristics of the participants; the medical-surgical and psychiatric antecedents, and finally the evaluation of the psychological experience during the confinement by psychological scales; the BECK for the depression, the GAD (Generalized Anxiety Disorder) for the anxiety

Psychological Experience Scales

BECK scale is a 13-item scale scored from 0-3 with a maximum score of 39, this instrument can be useful to assess depressive symptoms, or to screen for major depressive disorders in target populations, its interpretation in favor of depression if it is higher than three with an identification of 3 intensities of depression, mild for a score of 4 to 7, moderate for a score of 8 to 15 and severe if the score is higher than 16

GAD scale: a 7 item scale scored from 0-3 with a maximum score of 2, this instrument can be useful to evaluate anxiety symptoms, its interpretation in favor of a significant anxiety requiring a bio-psycho-social care if the score is higher than 15

If it is lower than 15 it is in favor of a minimal anxiety requiring a psychoeducation and a monitoring

Inclusion criteria:

- Subjects older than 18 years.

Exclusion criteria:

- Questionnaires with missing primary data.
- Foreign population residing in Morocco

Data management and statistical analysis

Qualitative variables were presented as frequencies and percentages, quantitative variables were presented as mean standard deviation (SD) or median (interquartile range, IQR). The Chi-square test (χ^2) or Fisher's exact test were performed according to their particular conditions of application, to identify differences in proportions of categorical variables between two groups (group of participants with depression versus those without depression).

In addition, univariate logistic regression analyses are used to identify risk factors for depression.

All independent variables with a statistically significant value with $P < 0.05$ between the two groups were included in the univariate logistic regression.

Data management and statistical analysis were performed using JAMOVI software for Windows 2016(12)

Results:-**Descriptive statistics:****1. Socio-demographic characteristics (Table 1)**

A total of 632 participants meeting the study criteria were included, The predominant sex was female (70.8%), the most predominant age range was between 18 and 21 with a frequency of 40.9%, the majority were without previous history with a frequency of 65.1%, 76% had completed higher education,

2. Occupational characteristics during confinement (table 2)

81.7% of the participants are under confinement, 90.6% are completely in agreement with the confinement, 32.4% travel to work despite the confinement, 60.5% work in fields other than health

3. Depression and anxiety in the study population (table 3)

The most frequent disorder found was depressive disorders (64.8%) with three intensities: 28.6% had a mild depression, 24.3% a moderate depression and 11.9% a severe depression.

For anxiety and according to the GAD score, 8.3% of the participants had anxiety.

Analytical statistics:

Considering the very important frequency of depression in the participants (64.8%), the analytical study was made in comparison between 2 groups: the group of the participants presenting a depression and the group of the participants who do not present a depression according to the score of BECK

1. Depression (Table 1 and 2):

Comparing the 2 groups and using the Chi-square test (χ^2) or Fisher's exact test we find that there is a statistically significant difference with a $P < 0.005$ of age, presence of children, marital status, and agreement for confinement, work during confinement and type of occupation for the presence of depression

2. Depression/anxiety cross-tabulations (Table 4):

By crossing anxiety and depression, we found that the latter is strongly dependent on the presence of anxiety with a highly significant difference ($p < 0.001$)

3. Binomial logistic regression (Table 5):

Using univariate logistic regression and adjusting for confounding factors, we concluded that the presence of anxiety multiplies the risk of developing depression by 7 with ($P < 0.001$, OR = 7.307; 95% CI: 2.4977 - 21.379) (12)

And physical presence at the workplace compared with the group of people who do not work reduces the risk of depression by 50% ($P = 0.034$, OR = 0.5097; 95% CI: 0.2728 - 0.950)

Table 1:- Cross-tabulation of socio-demographic characteristics and presence of depression.

Characteristics	Population size (N=632)	Absence of depression	Presence of depression	P
Age (years)				0.019
18-29	256(40.9%)	80(30.1%)	176(68.8 %)	
30-39	226(36.1%)	79(35%)	147(65%)	
40-49	89(14.2%)	31(34.8%)	58(65.2 %)	
50-65	52(8.3%)	29(55.8%)	23(44.2 %)	
>65	3(0.5%)	1(33.3%)	2(66.7 %)	
SEX				0.093
Men	184(29.2%)	74(40.2%)	110(59.8%)	
Female	446(70.8%)	148(33.2%)	298(66.8%)	
Region				0.159
Rabat-Salé-Kénitra	255(40.5%)	102(40%)	153(60.0 %)	
Casablanca-Settat	136(21.6%)	40(29.4 %)	96(70.6 %)	
Fès-Meknès	41(6.5%)	11(26.8 %)	30(73.2 %)	
Tanger-Tetouan-Al Hoceima	22(3.5%)	8(36.4 %)	14(63.6 %)	
Oriental				
Béni Mellal-Khénifra	15(2.4%)	5(33.3 %)	10(66.7 %)	
Marrakech-Safi	11(1.7%)	3(27.3 %)	8(72.7 %)	
Darâa-Tafilalet	28(4.4%)	12(42.9 %)	16(57.1 %)	
Souss-Massa	18(2.9%)	7(38.9 %)	11(61.1 %)	
Guelmim-Oued Noun	27(4.3%)	9(33.3 %)	18(66.7 %)	
Laâyoune-Sakia El Hamra	16(2.5%)	10(62.5 %)	6(37.5 %)	
Dakhla-Oued Ed-Dahab	60(9.5%)	15(25 %)	45(75.0 %)	
	1(0.2%)	0(0%)	1(100%)	
Presence of a child				0.007
Yes	281(44.6%)	115(40.9 %)	166(59.1 %)	
No	349(55.4%)	107(30.7 %)	242(69.3 %)	
Marital status				0.038
Single	301 (47,8%)	92(30.6 %)	209(69.4 %)	
Married	295 (46,8%)	121(41%)	174(59%)	
Divorced	24 (3,8%)	6(25%)	18(75%)	
Widowed	10 (1,6%)	3(30%)	7(70%)	
Level of education				0.148
Illiterate	2(0.3%)	1(50%)	1(50%)	
Primary	27(4.3%)	5(18.5 %)	22(81.5 %)	
Secondary	122(19.4%)	39(32%)	83(68%)	
Higher	479(76%)	177(37%)	302(63%)	
Medical&surgihistory				0.659
Yes	220(34.9%)	35(74.1%)	145(65.9 %)	

No	410(65.1%)	147(35.9 %)	263(64.1 %)	
Psychiatric history				0.074
Never followed	539(85.6%)	198(36.7 %)	341(63.3 %)	
Currently followed	29(4.6%)	5(17.2 %)	24(82.8 %)	
Formerly followed	62(9.8%)	19(30.6 %)	43(69.4 %)	

Table 2:- Cross-tabulation of occupational conditions during confinement and the presence of depression.

Characteristics	Population size (N=632)	Absence of depression	Presence of depression	P
Agree to containment				0.004
Somewhat disagree	19(3%)	6(31.6 %)	13(68.4 %)	
Neither agree nor disagree	40(6.3%)	5(12.5 %)	35(87.5 %)	
Strongly agree	571(90.6%)	211(37. %)	360(63%)	
Type of population				0.004
Public	483(76.7%)	154(31.9 %)	329(68.1 %)	
Close contact with contaminated people	5(0.8%)	2(40%)	3(60%)	
Health care workers	142(22.5%)	66(46.5 %)	76(53.5 %)	
Person under confinement				0.750
Yes	515(81.7%)	180(35%)	335(65%)	
No	115(18.3%)	42(36.5 %)	73(63.5 %)	
Work during containment				<.001
Without	199 (31,6%)	57(28.6 %)	142(71.4 %)	
Physical presence in the work area	204 (32,4%)	94(46.1 %)	110(53.9 %)	
Remote work	158 (25,1%)	54(34.2 %)	104(65.8 %)	
Loss of work due to confinement	69 (11%)	17(24.6 %)	52(75.4 %)	
Profession				<.001
Without	73(11.6%)	18(24.7 %)	55(75.3 %)	
Health sector	176(27.9%)	84(47.7 %)	92(52.3 %)	
Other :	381(60.5%)	120(31.5 %)	261(68.5 %)	
Education	54(8.6%)			
Police	8(1.3%)			
Liberal profession	32(5.1%)			
Employee	105(16.7%)			
Civil servant	57(9%)			
Student	96(15.3%)			
Housewife	21(3.3%)			
Retired	8(1.3%)			

Table 3:- Depression and anxiety in the study population.

Characteristics		Population size (N=632)
Depression	BECK score	5(2.5 ; 10)
	Absent	222(35.2%)
	Slight	180 (28.6%)
	Moderate	153 (24.3%)
	Severe	75 (11.9%)
Anxiety	GAD score	4(1 ; 8)
	Absent or minimal	578 (97,9%)

	Significant	52(8.3%)
--	--------------------	----------

Table 4:- Cross-tabulation of anxiety and presence of depression.

Characteristics	Absence of depression	Presence of depression	P
Anxiety			< .001
Absent or minimal	218(37.7 %)	360(62.3 %)	
Significant	4(7.7 %)	48(92.3 %)	

Table 5:- Binomial logistic regression table between characteristics statistically significant with the presence of depression.

Binomial logistic regression				
Characteristics	P	Confidence interval		Odds ratio
		Lower	Upper	
Age (years)				
30-39/18-29	0.422	0.7416	2.042	1.230
40-49/18-29	0.361	0.6967	2.696	1.371
50-65/18-29	0.170	0.2634	1.266	0.577
>65/18-29	0.703	0.1318	20.220	1.633
sex				
Female/ Male	0.312	0.5093	1.834	1.229
Presence of a child				
Yes / No	0.271	0.3835	1.309	0.709
Marital status				
Married/Single	0.950	0.5093	1.883	0.979
Divorced/Single	0.364	0.5217	5.889	1.753
Widowed/ Single	0.654	0.1153	3.880	0.669
Psychiatric history				
Currently followed / Never followed	0.080	0.8906	7.904	2.653
Formerly followed / Never followed	0.672	0.6123	2.140	1.145
Agree to containment				
Neither agree nor disagree/	0.247	0.5539	9.953	2.348
Somewhat disagree				
Strongly agree/ Somewhat disagree	0.706	0.2708	2.422	0.810
Type of population				
Close contact with infected people/ Public	0.726	0.0713	6.289	0.670
Health care worker/ Public	0.338	0.7023	2.796	1.401
Infected or suspected case/public	0.986	0.00	inf	12891.62
Work during containment				
Physical presence in the work area /	0.034	0.2728	0.950	0.509
Without				
Telework / None	0.453	0.4794	1.388	0.816
Loss of work due to confinement / None	0.438	0.6495	2.709	1.326
Profession				
Health sector / Without	0.107	0.2096	1.165	0.494
Other / None	0.781	0.4701	1.763	0.911
Anxiety				

Absent or minimal/Significant	<.001	2.4977	21.379	7.307
-------------------------------	-------	--------	--------	-------

Discussion:-

Regarding dependency relationships depression is related to age, presence of children, marital status, and agreement for confinement, work during confinement and type of occupation.

Depression and anxiety seem to be strongly related, with an increase in one influencing an increase in the other.

A publication by Cuiyan Wang and collaborator in 2020 (10) used the Depression, Anxiety and Stress Scale (DASS-21), and included 1210 respondents from 194 cities in China shows that 53.8% of respondents rated the psychological impact of confinement as moderate or severe, 16.5% reported moderate to severe depressive symptoms, 28.8% reported moderate to severe anxiety symptoms;

Along with our results; female gender was correlated with higher levels of stress, anxiety and depression one adds to student status, specific physical symptoms (e.g., myalgia, dizziness, coryza) and poor self-rated health were significantly associated with greater psychological impact of the epidemic and higher levels of stress, anxiety and depression

A publication by Jianyin Qui and collaborator in 2020 (11) This study received a total of 52,730 valid responses from 36 provinces, 34,131 were women (64.73%). Nearly 35% of respondents experienced psychological distress

Along with our results; gender, age, education level and occupation are related to the presence of psychological distress

Female respondents showed significantly higher psychological distress than their male counterparts, people aged 18-30 or over 60 had the highest scores on the CPGL, higher scores among the young adult group (18-30) seem to confirm previous research findings: young people tend to get a lot of information from social media which can easily trigger stress. Given that the highest death rate occurred among older adults during the epidemic, it is not surprising that older adults are more likely to be psychologically affected. Similarly, people with higher education tended to be more distressed, probably because of high health consciousness.

A publication by Limcaoco and collaborator in 2020, (13) a research team of doctors from the hospital of Salamanca decided to make an assessment of the current emotional state of the general population with an online survey in English and Spanish, considered a useful and rapid method that could help them determine how people perceived stress and anxiety due to COVID-19

The survey included 22 items, gathering information in 3 sections: sociodemographic data, Cohen's Perceived Stress Scale (PSS-10) and additional queries assessing current worry and behavior change due to this pandemic. Along with our results; gender, age, and occupation were related to the presence of high levels of worry and stress,

The average age of the respondents was 43.1 years, and more than two thirds were women. 21.1% were health care workers. The average PSS-10 score was 17.4 (6.4). Significantly higher scores were observed among women, youth, students, and among those who expressed concern and those who perceived increased sensitivity to COVID-19

In contrast to our results, no significant differences were observed between health professionals and the general population. A weak correlation was observed between the mean relative RSV volume of the last 28 days and the number of reported cases ($\rho = 0.31$, $p < 0.001$) and deaths ($\rho = 0.28$, $p < 0.001$).

A longitudinal study (14) was conducted among the general population on two occasions (the first week of the epidemic and four weeks later), examining demographics, symptoms, knowledge, concerns, and precautionary measures against COVID-19. There were 1738 respondents in 190 Chinese cities (1210 respondents in the first survey, 861 in the second survey)

Psychological impact and mental health were assessed by the (IES-R) and (DASS-21) scales.

During the initial assessment, moderate stress score, severe anxiety and depression were found in 8.1%, 28.8% and 16.5% respectively and there were no significant longitudinal changes in the levels of stress, anxiety and depression ($p > 0.05$).

In parallel to our results respondents aged 12-21-4 years had significantly higher scores on the IES-R compared to respondents aged 49-6-59 years ($B = 0.77$, $t = 2.28$, $p < 0.05$).

In contrast to our results, respondents in the second survey living in a household of 3-5 people ($B = 1.32$, $t = 2.04$, $p < 0.05$) and more than 6 people ($B = 1.36$, $t = 2.4$, $p < 0.05$) and more than 6 people ($B = 1.44$, $t = 2.20$, $p < 0.05$) scored significantly higher on the IES-R than did respondents remaining alone.

Limitations Of The Study :

Cross-sectional nature of the study, only one population assessment

The geographical distribution of our population was not equitable between the different regions of the kingdom (40.5% in the region of Rabat-Salé-Kenitra versus 0.2% in the region of Dakhla-Oued Eddahab).

Nature of the remote survey

Conclusion:-

In conclusion, we identified a major psychological impact of confinement on the general population during the COVID-19 epidemic, young women with anxiety were particularly exposed to psychological problems including severe depression

Psychological first aid can be provided by trained individuals to help the general population find effective and sustainable solutions to alleviate the stress of the general public during a crisis. Interventions should be based on a comprehensive assessment of risk factors leading to psychological repercussions, including poor mental health prior to a crisis, bereavement, emotional shocks to self or family members, poor life circumstances, panic, family separation and low household income. (9)

Lessons learned from the Pentagon terrorist events and the anthrax attacks in the United States have shown the importance of building community coalitions in advance to effectively mobilize resources and successfully address the mental health needs of those affected by the disaster.

The COVID-19 outbreak highlighted many of the issues related to the provision of psychological services (3).

(3) Therefore, public health system strategies, based on sound scientific advice, must be put in place to effectively address the mental health problems caused by the public health emergencies by public health emergencies and natural disasters.

Bibliographies:-

1. Olaseni AO, Akinsola OS, Agberotimi SF, Oguntayo R. Psychological distress experiences of Nigerians during Covid-19 pandemic; the gender difference. Soc Sci Humanit Open. 2020;2(1):100052.
2. Rajkumar RP. COVID-19 and mental health: A review of the existing literature. Asian J Psychiatry. août 2020;52:102066.
3. Sinapin MN. Les conséquences de la pandémie de Covid -19 sur la sphère socio-économique et environnementale: quelle place à l'utilité commune socle de l'agilité future? :12.
4. Kuma JK. L'économie mondiale face à la pandémie de la Covid-19: état des lieux, analyses et perspectives. :51.
5. Lima CKT, Carvalho PM de M, Lima I de AAS, Nunes JVA de O, Saraiva JS, de Souza RI, et al. The emotional impact of Coronavirus 2019-nCoV (new Coronavirus disease). Psychiatry Res. mai 2020;287:112915.
6. Yang Y, Li W, Zhang Q, Zhang L, Cheung T, Xiang Y-T. Mental health services for older adults in China during the COVID-19 outbreak. Lancet Psychiatry. avr 2020;7(4):e19.
7. Xiang Y-T, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet Psychiatry. mars 2020;7(3):228-9.

8. Barbisch D, Koenig KL, Shih F-Y. Is There a Case for Quarantine? Perspectives from SARS to Ebola. *Disaster Med Public Health Prep.* oct 2015;9(5):547-53.
9. Duan L, Zhu G. Psychological interventions for people affected by the COVID-19 epidemic. *Lancet Psychiatry.* avr 2020;7(4):300-2.
10. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *Int J Environ Res Public Health.* 6 mars 2020;17(5):1729.
11. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen Psychiatry.* mars 2020;33(2):e100213.
12. The jamovi project (2020). jamovi. (Version 1.6) [Computer Software]. Retrieved from <https://www.jamovi.org>. R Core Team (2020). R: A Language and environment for statistical computing. (Version 4.0) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from MRAN snapshot 2020-08-24).
13. Gamonal Limcaoco RS, Mateos EM, Fernández JM, Roncero C. Anxiety, worry and perceived stress in the world due to the COVID-19 pandemic, March 2020. Preliminary results [Internet]. *Psychiatry and Clinical Psychology*; 2020 avr [cité 20 mai 2021]. Disponible sur: <http://medrxiv.org/lookup/doi/10.1101/2020.04.03.20043992>
14. Wang C, Pan R, Wan X, Tan Y, Xu L, McIntyre RS, et al. A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain Behav Immun.* juill 2020;87:40-8.