

Research Article

Assessment of Mental Health and Well-Being during Covid 19 Pandemic among Moroccan Medical Students

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Abstract:

Introduction: lockdown was experienced as a source of frustration for those who suffered from it.

The purpose of this survey is to assess well-being and psychological impact of lockdown on Moroccan medical students during COVID-19 pandemic.

Equipment and methods: This is an observational cross-sectional study using a self-questionnaire for medical students in Morocco. The Peri-traumatic Distress Inventory and the Warwick-Edinburgh Mental Wellness Scale were integrated into it. Statistical analysis were performed using SPSS software

Results: 505 medical students from Morocco participated.

Univariate and multivariate analysis were done revealing several significant correlations between the Warwick-Edinburgh BEM score and the Peri-Trauma Distress Inventory and several parameters.

Discussion: A non-negligible proportion of medical students are suffering from depression, anxiety, burn-out and more generally, a sense of unease and psychological stress.

Anxiety and fear of social distancing drive students to consult social networks.

The Warwick-Edinburgh BEM score was found to be significantly correlated with the time spent doing sports, creative activities, talking with relatives. Regarding eating habits, confinement is accompanied by negative emotions responsible for food restriction, emotional eating and hyperphagia. However, we did not find an increase in the consumption of addictive substances.

Conclusion: The novelty of the pandemic, caused by the COVID-19, has a psychological impact on the general population and specifically on medical students. There is a need to remain vigilant about the remote onset of psychological disorder among medical students in Morocco

Keywords: lockdown, COVID-19, medical students, wellness, Morocco

I. Introduction

On March 21, 2020, following the dissemination of COVID-19, lockdown, an unprecedented situation in the world, was introduced in Morocco.

This measure was set up to protect and fight against the pandemic dissemination and it involved restricted abilities for traveling and penalization of violations of this new rule.

Lockdown was experienced as a source of frustration for those who suffered from it, and this led to psychological effects: mood disorders, anxiety disorders, particularly post-traumatic stress disorder, as well as behavioral disorders... (1)

These disorders are the result of different pressures to which the confined person is exposed during this period such as fear,

Solitude, promiscuity, boredom, abuse of anxiety-provoking information and an unexpected situation

The factors which greatly influence the way a person manages this crisis are as follows: Personality, presence of vulnerability or protective factors, lockdown environment and functioning mode of each individual (2).

Psychological suffering of doctors has been known for more than a century, but the psychological problems that medical students experience have been recognized more recently. Numerous studies and meta-analyses have assessed the prevalence of depression, anxiety and burn-out among medical students and more generally their lack of well-being (3).

In the presence of such vulnerability factors, it is believed that this health crisis with its attendant confinement would have further impacted the quality of life of medical students.

The objective of this survey is to assess well-being and psychological impact of lockdown on Moroccan medical students during COVID-19 pandemic.

II. Equipment and methods:

This is an observational cross-sectional study using a computerized self-questionnaire for medical students in Morocco carried out by the child psychiatry department of the Harouchi-CHU Children's Hospital in Casablanca. It took 12 minutes to complete.

Questionnaire:

Anonymous, self-administered, includes 72 questions accessible after consent available online from a dedicated link and distributed on April 24, 2020. The Peri-traumatic Distress Inventory and the Warwick-Edinburgh Mental Wellness Scale were integrated into it.

Dissemination:

Within several social network groups and messaging applications used by medical students in Morocco. Data collection was closed May 31, 2020.

Questionnaire's target:

Students in general medical practice and dentistry from private and public universities in Morocco.

Statistical analysis:

Results are presented in descriptive and analytical form:

- Descriptive for answers to each of the 72 questions of the questionnaire as a percentage or number of students (n). They were collected in an Excel©.
- Univariable and multivariable analysis using SPSS software to reveal different correlations that exist within the medical informatics and biostatistics department of the Faculty of Medicine and Pharmacy of Casablanca.

III. Results:

1. Descriptive results:

The study was carried out with the help of 505 medical students from Morocco.

The age of the students ranged from 17 to 35, the average students age being 22. The female/male sex ratio was 3/1.

The majority of the students, 93.7%, were single and without children.

16.7% had a diagnosed psychiatric condition, of which 32.2% had an anxiety disorder, 26.3% an anxiety disorder and 23.8% a depressive disorder.

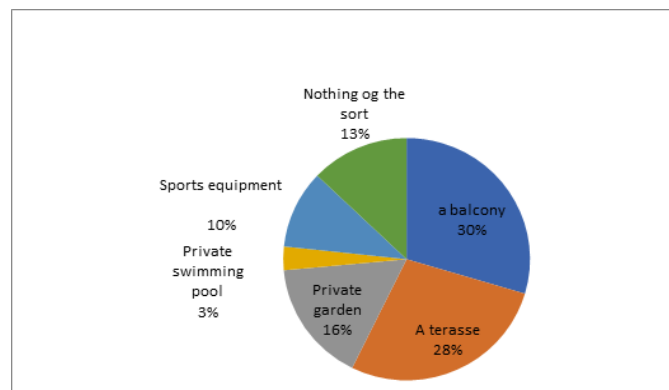
Participants contacted their families by telephone at least once a week in 80% of cases and via social networks in 86% of cases. In addition, 64% of the students lived with their families.

The Warwick-Edinburg BEM score was calculated for all participants. The average was 45.3.

During the lockdown period, 91% of students agreed with this measure and 98% were confined. 53.6% lived in accommodation with 4 to 5 people, 23.4% of the students

were not located in their usual accommodation and 23% of students did not have a garden, terrace or balcony in their accommodation (Figure1).

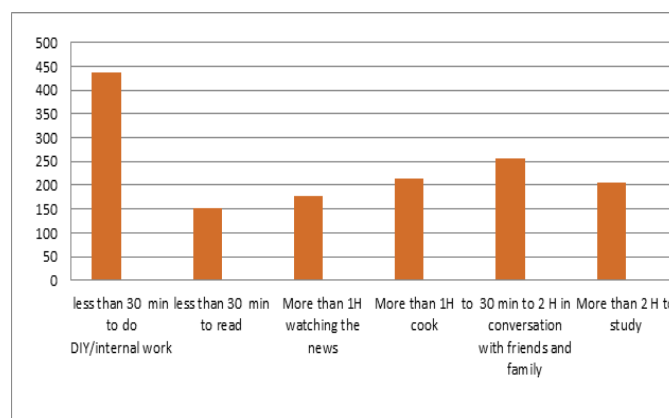
Figure 1 : Home conveniences among medical students in Morocco



65.9% of students continued to take academic courses, 38.9% of whom were satisfied overall.

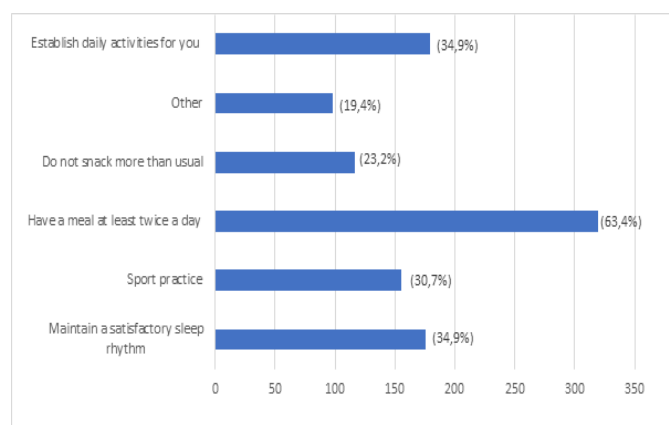
44% of the students did not feel supported (Figure 2).

Figure 2 : The time spent on activities during confinement among medical students in Morocco



The use of screens in 75% of them, as well as the consumption of fatty foods increased in 35% of cases. However, the consumption of additive substances did not increase among the 10% of students who consumed them (Figure 3).

Figure 3 : Changes in the lifestyle of medical students in Morocco during confinement



58.5% thought that the duration of the pandemic will be counted in months. 9.1% of the students saw it as a conspiracy orchestrated by some states for economic purposes.

2. Analytical results:

2.1 Peri-traumatic distress inventory:

A significant correlation was found between the peri-traumatic distress inventory and the following variables:

Sex: The inventory average was higher for women (13.3 ± 8.39) versus (10.5 ± 6.59) for men. ($p < 0.01$).

Terrace, balcony, garden: the peri-traumatic distress inventory was lower for students who had a balcony, terrace or garden in their dwelling (12.3 ± 7.72) versus (13.9 ± 9.02) for students who did not ($P = 0.05$).

Consumption of fatty foods: the peri-traumatic distress inventory was higher for students who had increased consumption of fatty foods ($p = 0.01$).

Time spent talking to loved ones: the peri-traumatic distress inventory was higher for participants who spent less than 30 min talking to loved ones ($p = 0.03$).

Reading time: the peri-trauma distress inventory was higher for students who did not read ($p = 0.041$).

Difficulty with creative activities: the inventory was higher for students who did not engage in or engaged in less than 30 minutes of creative activities per day ($p = 0.047$).

Playing sports: the peri-traumatic distress inventory was higher for students who did not play sports ($p = 0.001$).

Meditation/relaxation: the inventory was higher for participants who did not meditate/relax ($p < 0.001$).

Rumination/being the object of anxious fears: the peri-traumatic distress inventory was higher for students who ruminated/had anxious fears and ($p < 0.001$).

Feeling supported: the peri-traumatic distress inventory was higher for those who did not feel supported ($p < 0.001$).

→ No significant correlation was found between the peri-traumatic distress inventory and the following parameters: medical and psychiatric history, being locked down alone, religious faith, toxic substance usage, time spent watching the news.

2.2 Warwick-Edinburg BEM score:

A significant correlation was found between the Warwick - Edinburg BEM score and the following variables:

Sex: the mental well-being score was statistically higher for men than for women (47.0 ± 7.9 vs. 44.8 ± 8.26) ($p = 0.013$).

Religious faith: the mental well-being score was statistically higher for subjects with a religious faith (46.2 ± 8.29 vs. 43.8 ± 8.29) ($p = 0.002$).

Fatty food consumption: mental wellbeing score was statistically higher for students who consumed less fatty food during lockdown ($p = 0.019$).

Time spent at work/study: mental well-being score was lower for participants who did not spend time at work and/or studying during the lockdown period ($p = 0.002$).

Time spent talking to relatives: mental well-being score was lower for students who spent less time talking to their relatives during the lockdown (very low average score compared to those who spent more time talking to their relatives) (40.2 ± 8.57 vs. 49.2 ± 6.76) ($p < 0.001$).

Time spent on homework, cooking: mental well-being score was higher for students who spent long hours cooking

compared to students who spent less than 30 minutes per day ($p = 0.001$) and similarly for the mental well-being score and time spent on homework ($p < 0.001$).

Reading time: the well-being score was higher for participants who read between 30 min and 4 h per day ($p < 0.001$).

Creative activities (drawing, music...): mental well-being score was significantly more altered for students who did not engage in creative activities ($p = 0.002$).

Playing sports: the absence of sports activity was significantly associated with an alteration of mental well-being ($p < 0.001$).

Talking on the phone: participants who spent little or no time talking on the phone had a significantly lower mental well-being score ($p = 0.015$).

Browsing on Internet: mental well-being score was significantly lower for those who spent less time browsing on Internet ($p = 0.004$).

Rumination/being the object of anxious fears: the mental well-being score was higher for students who had no/low rumination and anxious fears.

Feeling supported: the mental well-being score was higher for students who felt supported (48.2 ± 7.47 vs. 41.8 ± 7.47) with a ($p < 0.001$).

→ No significant correlation was found between the Warwick-Edinburgh BEM score and the following parameters: level of education, medical history, being confined alone, marital status (although divorced people had a significantly lower mental wellbeing score), presence of a terrace, balcony or garden in the dwelling and use of addictive substances.

2.3 Mental Well-Being Score and Peri-traumatic Distress Inventory:

A negative correlation was found between the two ($r = -0.49$). This correlation was statistically significant ($p < 0.05$).

IV. Discussion :

The unprecedented situation we are currently experiencing, linked to the corona virus pandemic, is causing significant anxiety and psychological distress.

Confinement and epidemics such are major triggers. This stress is reinforced by the fear of being confined, of dying and/or of seeing one's loved ones fall ill; in addition, factors such as isolation, uncertainty, feeling of loneliness, possible intra-family tensions, loss of daily routines, boredom, rejection, discrimination also contribute to increased stress level (4)

Now we will consider main results of our study, comparing them to relevant psychological literature.

A non-negligible proportion of medical students are suffering from depression, anxiety, burn-out and more generally, a sense of unease and psychological stress (1).

16.7% had consulted for a psychiatric disorder, including 32.2% for anxiety disorders, 26.3% for an anxiety-depressive disorder and 23.8% for a depressive disorder. In China 17.9% of the medical students experienced anxiety during confinement due to COVID (5). In addition, students who participated in COVID-19 reported lower levels of anxiety,

depression, and burnout compared with their uninvolved peers (6).

Longitudinal pre-and post-pandemic studies found no increase in mental distress in healthcare workers due to COVID-19 compared with the general population (7).

For our female population, the peri-traumatic distress score was higher, and the Warwick-Edinburg BEM score was lower. The literature has shown that women are twice as likely as men to suffer from depression and stress, in addition to having fewer resilience factors (8, 9).

At the time of confinement, 64% of our students were living with family and 23.4% of students were not confined to their usual housing. Authors have shown that many students were forced to move in with their parents, where they had not lived for many years. Other students remained among peers separated from the usual support networks (10).

77% of our students had a balcony, terrace or garden in their home. In France, half of the medical students had a house with access to an outdoor space such as a courtyard or garden (11).

Particular attention should be paid to the increase in the use of screens found in 75% of our students, which is in line with data from recent studies (1). In Nepal, 36.8% of medical students were addicted to smartphones (12).

Nevertheless, some authors have shown that anxiety and fear of social distancing drive students to consult social networks (13). The negative impact of confinement on social bonding could be moderated by smartphone use, which could provide a sense of belonging and opportunities for social support, thus improving psychological well-being(14).

Other authors have shown that the use of smartphones, for the purpose of searching for information about COVID, helps to manage anxiety about the pandemic (15). However, in our study, a significant correlation was found between the peri-traumatic distress score and the time spent looking for information.

This is in accordance with what can be found in current literature. Indeed, constant exposure to information about the virus can increase anxiety, especially since this information may be erroneous or contradictory. In addition, the scarcity of social contacts and the fear of contamination also increase social anxiety (1).

Furthermore, in our study, the Warwick-Edinburg BEM score was found to be significantly correlated with the time spent doing sports, creative activities, talking with relatives. These variables are among the interventions recommended and implemented by some authors to improve the well-being of medical students(3).The decrease in physical activity and the substantial increase in sedentary behaviour during confinement have been demonstrated by recent studies(16, 17). The authors suggest short breaks and activities during the day to combat sedentary behavior (18).

We also can underline the modification of the sleep rhythm observed for our students. Only 35% of them were able to maintain a satisfactory sleep pattern. Healthy sleep could play a critical role in managing negative affect during major crises, such as COVID-19 epidemic (19). Conversely, impaired sleep

could contribute to elevated negative affect, leading to increased vulnerability to anxiety (2).

In India, a recent longitudinal study of medical students during the COVID-19 pandemic found that poor sleep increased anxiety levels and stress symptoms (20).

Regarding eating habits, confinement is accompanied by negative emotions responsible for food restriction, emotional eating and hyperphagic fits (1). In fact, 35% of our students increased their consumption of fatty foods. An increase in the consumption of caloric/salty foods has been demonstrated mainly for young women confined in small homes (21). In addition, confinement makes food more accessible and available. Increased exposure to food ads (via increased media exposure) may be accompanied by more intense food cravings, compulsive eating, and short and long-term weight gain (22, 23).

However, we did not find an increase in the consumption of addictive substances, among the 10% of consumers, in contrast to what can be found in literature (1). Nonetheless, a recent study evaluating the preliminary impact of the COVID-19 pandemic on smoking found that a quarter of participants reported quitting smoking during confinement (24). Other authors have shown that social distancing and limited socialization reduce the possibility of peer pressure for substance use (25).

Finally, in France a study conducted during the first phase of COVID-19 containment, found that stress and impaired well-being were considered common risk factors for increasing all types of substance abuse habits (21).

V. Conclusion:

The novelty of the pandemic, caused by the Corona virus COVID-19, has a psychological impact on the general population and specifically on medical students. Recent studies and meta-analyses indicate a high prevalence of distress in medical students.

In these times of pandemic, there is a need to remain vigilant about the remote onset of psychological disorders among medical students in Morocco and to prevent their occurrence by helping students move towards a state of well-being that would enable them to cope with adversity. But these changes require a joint effort of political and educational leaders, as well as financial resources, including training of staff and other personnel.

Declaration of competing interest

All authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence this Work.

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