



Prevalence of Mental Disorders among Moroccan Students during the COVID-19 Pandemic

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Abstract

The mental health of university students was already a public health problem even before the outbreak of the COVID-19 Pandemic. It was the subject of several international studies before and during the Pandemic which revealed worrying prevalence of disorders. In Morocco few studies have been conducted on university students. The main objective of our study was to help improve the prevention and management of mental disorders in students during a pandemic. A cross-sectional study with an analytical aim was carried out among university students in the RSK region. 401 university students aged 18 to 29 answered a structured electronic questionnaire comprising validated psychometric scales, pre-tested and shared online. Data analysis was performed using Epi-Info™ 7.2. The prevalence of psychological distress among university students in the RSK region is 59% of the students surveyed (95% CI [56%; 63%]). One in three students had symptoms of depression (95% CI [31%; 38%]) and 38% had symptoms of anxiety (95% CI [34%; 41%]). More than one in two students showed signs of loneliness (95% CI [47%; 55%]) and more than half suffered from the absence or poor social support (95% CI [53%; 61%]). The study allowed us to highlight the fragility of the mental health of students in the phase of a serious health crisis.

Subject Areas

Global Health, Physiology, Psychiatry & Psychology, Psychology, Public Health, Statistics

Keywords

University Student, Mental Disorders, Prevalence, COVID 19, Pandemic

1. Introduction

In December 2019, the novel coronavirus pneumonia (COVID-19) first spread in Wuhan City, Hubei Province. On January 30, 2020, the World Health Organization declared the COVID-19 outbreak a public health emergency of international concern [1]. Following several countries, such as China, Italy and France, the Moroccan government implemented control measures to slow the spread of SARS-CoV-2. Citizens were asked to confine themselves to their homes, and unnecessary travel was prohibited. Based on recorded lockdown experiences in response to previous outbreaks, a recent literature review concluded that quarantine measures could have negative psychological effects, including symptoms of post-traumatic stress, stress, anxiety and of depression [2]. 2020 assessments of mental health in the general population of China and Iran, countries that have experienced major outbreaks, show heightened levels of stress due to the pandemic. A key concern during the pandemic is the mental health of vulnerable populations. The Center for Collegiate Mental Health's 2019 annual report indicated that anxiety continues to be the most common problem (62.7% of 82,685 respondents) and that general panic related to the epidemic and the risk of exposure contribute to the increased level of depression in students who have completed the Counseling Center's Psychological Symptom Assessment [3]. Among the general population, university students seem particularly sensitive to the negative effects of quarantine. Indeed, before the COVID-19 epidemic, the mental health of young adults was already a global concern [4]. At the national level, since the beginning of 2020, Morocco, like the majority of countries in the world, has been facing the SARS-CoV-2 pandemic. This epidemic has led the Moroccan government to take various measures in terms of restricting travel, and closing shops and even schools. Thus, on March 13, the Moroccan Ministry of National Education, Vocational Training, Higher Education and Scientific Research (MEN) announced the closure of nurseries, schools, colleges, high schools and universities, from Monday March 16, 2020 and "until further notice", courses were given remotely and pedagogical continuity had been established. On September 14, 2021, the vaccination of young pupils and students was made public with a postponement of the start of the school and university year, a resumption of face-to-face classes postponed to October 1, 2021 [5]. Faced with this pandemic, little research generating scientific data concerning the mental health of Moroccan students during the COVID-19 pandemic is available. During this phase of the pandemic, it is necessary, even essential, to conduct this study in Morocco, to get an idea of the real mental health situation of students and to take stock of the situation. Our study will provide evidence to support policy decision-making in this area. It will also make it possible to inform Moroccan decision-makers about the effects of confinement on the mental health of Moroccan university students through various indicators, namely: Psychological distress, social support, loneliness, symptoms of depression and anxiety in the health crisis.

2. Method

2.1. Study Design and Population

This is a cross-sectional analytical study. A quantitative approach used a structured, pre-tested electronic questionnaire shared with university students aged 18 to 29. For each participant in the study, a unique identification number was assigned by the application allowing him a single response to the electronic questionnaire. To have a better representativeness of the student population, we adopted a reasoned choice sample according to the number of students from each of the two universities of the RSK region, respecting gender, foreign students, the level of studies causing the number of girls and foreign students and the level of studies in our sample to be proportional to their number in the universities of the RSK region. The electronic questionnaire survey began in October 2021 and was spread over a period of 4 months.

2.2. Data Collection Tools

We used for the collection of data:

An electronic self-questionnaire respecting the anonymity of the participants that we have adapted and subjected to a preliminary pre-test. It includes questions grouped under different headings, A first part focuses on the general data for identifying the socio-demographic characteristics the gender of students, A second part assesses students' knowledge about mental health [4]. The third part is organized into different questions relating to:

- Level of Psychological Distress through the Mental Health Inventory-5 (MHI-5) [6].
- Level of social support through the OSSS-3 test [7].
- Level of loneliness according to the UCLA loneliness scale version 3 [8].
- Anxiety and depression test according to HAD (Hospital Anxiety and depression scale) [9].

2.3. Data Analysis Plan

The data from the questionnaire were coded, entered, cleaned and analyzed using the Epi-Info version 7. The statistical analysis focused on a description of the population studied according to different socio-demographic, academic and medical history characteristics. habit-related, psychological indicators, and suicidal ideation. The results are presented by maps, graphs and tables, using descriptive statistics to describe the study population in relation to the relevant variables. The prevalence of mental disorders and psychological indicators was calculated according to the report.

Number of university students who have been screened according to the psychometric scales used out of the total number.

2.4. Ethical Consideration

We ensured the informed consent of the students; we explained to them that

they would be the subject of our study, the purpose of which was presented to them explicitly, emphasizing respect for their anonymity. The data collected was stored in a secure location with access to this data restricted to the research team, then destroyed as soon as the results were disseminated and the research published. Respect for anonymity was guaranteed, only anonymous and summarized data were communicated as part of the statistical analysis. The study was only launched after obtaining official authorizations from the Ministry of Health and the Ministry of Higher Education sponsoring this project and after approval of the study protocol by the CERB (ethics and research committee in biology) of the Faculty of Medicine and Pharmacy of Mohamed V University in Rabat.

3. Results

A total of 401 students responded to the entire electronic questionnaire. The characteristics of the students who responded were gathered according to the conceptual framework of the study.

Descriptive Analysis

Prevalence of mental disorders and psychological indicators screened among university students participating in our study. Psychological distress, loneliness, social support, anxiety, and depression were diagnosed according to the DSM-5 classification through several questions addressed to the participants according to the psychometric scale adopted in our study. (See **Figure 1**)

Of the sample of 401 students, 59.35% suffer from psychological distress, 38% have symptoms of definite anxiety, and 36% have symptoms of definite depression. (See **Figure 2**)

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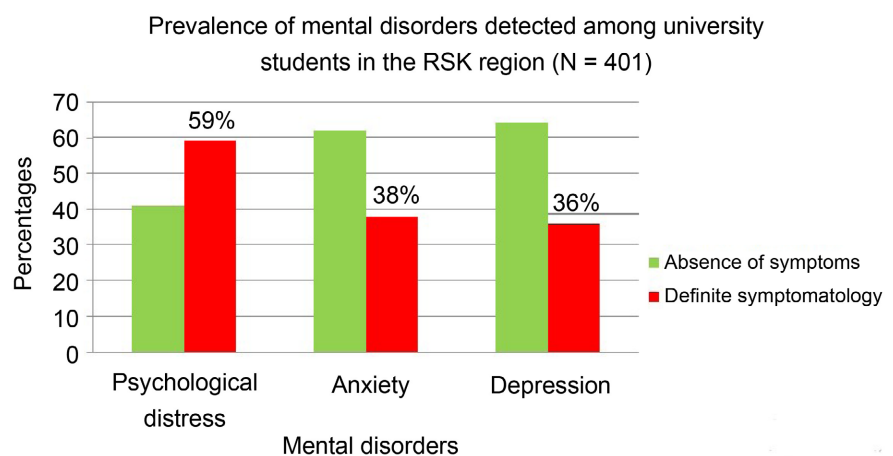


Figure 1. Prevalence of mental disorders detected among university students in the RSK region (N= 401).

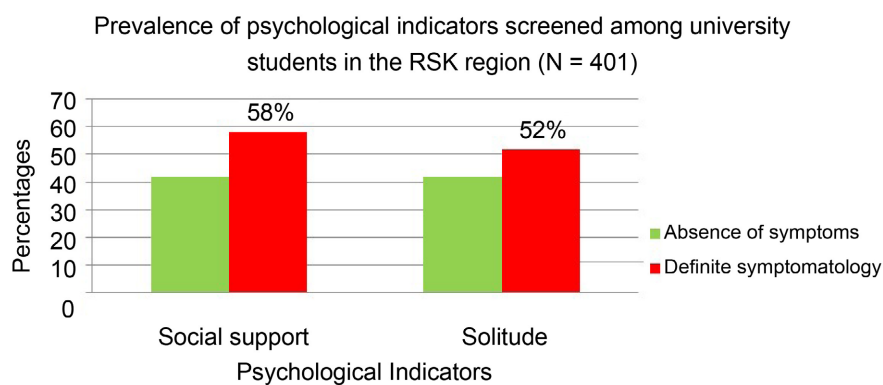


Figure 2. Prevalence of psychological indicators screened among university students in the RSK region (N = 401).

4. Discussion

First on board, several researchers from different countries around the world have highlighted the heavy impact of the pandemic on the mental health of university students. Our study reveals a high rate of psychological distress equal to 59% (95% CI [56%; 63%]). This proportion appears 1.9 times higher than the French study conducted in 2020 by OVE 31%, while it approaches the results of the same study published in 2021, the distress rate of which was estimated at 60.6%. These differences may be due to a cumulative deleterious effect of successive confinements, as suggested in the general population results of Public Health with the CoviPrev survey, given that the first study was carried out during the first confinement.

This sharp increase raises the hypothesis of a significant effect due to the measures related to COVID-19 on the mental health of students. In addition, it cannot be excluded that the successive confinements may have led to greater isolation of certain students, as transcribed by the 52% (95% CI [47%; 55%]) of the students questioned who feel a feeling of loneliness and do so. More than one in two students have very low social support.

Our study describes that 36% (95% CI [31%; 38%]) of the students surveyed have definite symptoms of depression. This figure is consistent with those put forward in the two studies on the mental health of students (37% in the French OVE study published in 2021 and from 27% to 30.6% in a study carried out at the Faculty of Medicine of Rabat [10]). In comparison with the prevalence of systemic reviews and meta-analyses, we find the anxiety rate 38% (95% CI [34%; 40%]) close to that of the study carried out on university students of Medicine of Rabat is 37.7% above the study of OVE 27%.

In view of a comparison with countries of a culture similar to that of Morocco, we found: research on the mental health of medical students in Tunisia which showed that one in two students suffered from psychological distress [11]; another in Egypt that reported higher rates of anxiety and depression [12]; and finally, a study in Lebanon that peddled lower rates of anxiety and depression [13]. The difference between the data may also come from the different psycho-

metric measurement scales used in each of the aforementioned studies, which could cause the estimates to vary.

The determinants associated with the various mental disorders considered in our study are consistent with certain determinants identified in the literature and less consistent with others.

Conflicts of Interest

The authors declare no conflicts of interest.

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