

Mental health among doctors and nurses in the light of some variables

الصحة النفسية لدى الأطباء والممرضين في ضوء بعض المتغيرات

Phd Ghebouli Yasmina¹, Pr Benghedfa Cherifa²

¹Laboratory of research in invasive disorders of development and autism,
Mohamed Lamine Debghine -Setif2- University (Algeria),
ya.ghebouli@univ-setif2.dz

²Mohamed Lamine Debghine -Setif2- University (Algeria),
benghedfa@gmail.com

Received: 06/03/2024 Accepted:13/05/2024 Published:.01/06/2024

Abstract:

The main goal of this study is to assess the mental health status of doctors and practicing nurses in the city of Bordj Bou Arreridj. Additionally, it aims to investigate potential variations in mental health scores based on gender and professional experience. The sample for this study comprised 87 participants. The researchers employed the mental health scale developed by Salah Fouad Mohamed Makkawi and followed a descriptive approach. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). The study yielded the following findings:

-The psychological health level among the sampled individuals is deemed high.

-No disparities in mental health levels were observed among the sampled individuals based on gender.

-Similarly, no variations in mental health levels were noted among the sampled individuals based on their level of experience.

Keywords: Mental health, doctors, nurses.

ملخص:

هدفت الدراسة الحالية إلى الكشف عن مستوى الصحة النفسية لدى عينة من الأطباء والممرضين الممارسين في مدينة برج بوعرييج، بالإضافة إلى التعرف على الفروق في درجات الصحة النفسية لدى أفراد العينة حسب متغيرات الجنس والخبرة. حيث تكونت عينة الدراسة من 87

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

فردا. وللتحقق من فرضيات الدراسة تم الاستعانة بمقياس الصحة النفسية المعد من طرف صلاح فؤاد محمد مكاوي، وبإتباع الباحثين لخطوات المنهج الوصفي، تم تحليل النتائج باعتماد برنامج الحزمة الإحصائية للعلوم الاجتماعية SPSS حيث توصلت الدراسة إلى النتائج التالية:

مستوى الصحة النفسية لدى أفراد العينة مرتفع.

-لا توجد فروق في مستوى الصحة النفسية لدى أفراد العينة تعزى لمتغير الجنس.

-لا توجد فروق في مستوى الصحة النفسية لدى أفراد العينة تعزى لمتغير الخبرة.

ليتم تفسير هذه النتائج في ضوء التراث النظري والدراسات السابقة.

كلمات مفتاحية: الصحة النفسية، الأطباء، الممرضين.

Corresponding author: Ghebouli Yasmina

1. Introduction

The concept of health encompasses both mental and physical well-being, constituting an integrated unit. Notwithstanding this, mental health was not given enough attention in the scientific community. However, studies on mental health have become more prominent in the present day, which is marked by increased psychological stress. This change is explained by its critical function in influencing personal conduct, which forms the basis for the growth and progress of society.

The World Health Organization (WHO) is one of many international organizations that has given mental health a high priority. The World Health Organization developed a strategy to investigate ways to improve and promote mental health that runs from 2013 to 2030. This approach emphasizes an individual's ability to contribute to their surroundings by being productive at work and managing pressures efficiently. Furthermore, mental health is acknowledged as a condition of well-being that permits people to identify and capitalize on their strengths (WHO, 2022).

A person's productivity is greatly impacted by their mental health in a variety of fields and work settings. Professional circles, especially those focused on services, are among the most complex settings for evaluating mental health. Because it has a significant impact on both the general well-

Title: Mental health among doctors and nurses in the light of some variables

being of society and the well-being of individuals, the healthcare industry is particularly important in this regard.

Understanding the unique features of the healthcare sector and the challenges faced by its personnel especially the physicians and nurses who are highly regarded for their humanitarian endeavors is crucial. These workers bear heavy professional and psychological responsibilities because they are employed in a vital field that is in charge of providing for the mental and physical health of patients. This reality is underscored by studies such as the one conducted by Riyash, Saeed, and Masadi Asia in 2016, which revealed varying degrees of psychological stress among surgical doctors. Similarly, research by Tijani Mansour and Ibrahim Bayd al-Qoul in 2018 corroborates that doctors experience elevated levels of occupational stress.

As a result, prioritizing the mental health of healthcare professionals is imperative given the sensitivity and significance of the sector. In alignment with this imperative, Algeria enacted Ministerial Instruction No. 18 on October 27, 2002, aimed at addressing the psychological and mental well-being of healthcare workers. This directive highlights the considerable professional, intellectual, and emotional burdens faced by health professionals, particularly those working in emergency and intensive care units.

Based on the studies reviewed, which focus on the critical issue of mental health within the medical profession an integral segment of society this study aims to provide further insights. To address this topic, the following research questions were formulated:

- What is the level of mental health among the sample members?
- Are there differences in the level of mental health among sample members depending on the gender variable (females - males)?
- Are there differences in the level of mental health among sample members depending on the variable of experience (less than 10 years - 10 years or more)?

2. Hypotheses of the study:

- The level of psychological health among the sample members is high.
- There are no differences in the level of mental health among sample members according to the gender variable (females - males).
- There are no differences in the level of mental health among sample members depending on the variable of experience (less than 10 years - 10 years or more).

3. Aims of the study:

- Identifying the level of mental health among sample members.
- Detecting differences in the level of mental health among sample members according to the variables of gender and professional experience.

4. The Significance of the Study:

The significance of this study stems from the contemporary and crucial nature of the topic it addresses within the realm of positive psychology. The importance can be outlined as follows:

The significance of this study lies in its ability to offer healthcare sector leaders a comprehensive understanding of mental health, an increasingly vital research area, particularly given the evolving and intricate nature of modern lifestyles. Mental health assumes prominence as it enables individuals to recognize their capacities and effectively utilize them within their available capabilities. These capabilities vary due to several factors, including gender and professional experience, which can influence mental health levels based on unique characteristics associated with each variable.

Furthermore, the study sheds light on a group that has received relatively little attention in research despite its significance and pivotal role in society. It illuminates a crucial aspect of the experiences of professionals within this sector, specifically doctors and nurses. Moreover, this study serves to enrich the theoretical foundation necessary for the development of preventive and supportive programs for mental health within this demographic. This contribution is of significant importance.

Title: Mental health among doctors and nurses in the light of some variables

5. The methodological approach of the study:

The descriptive approach was chosen as it aligns well with the nature of the research problem and effectively fulfills the research objectives. This approach involves describing a phenomenon and attempting to elucidate it, which is particularly relevant to our study on mental health. Through this approach, we aim to assess the level of mental health and identify potential influencing factors.

6. Previous studies:

6.1 A study by Ibtisam Ahmed Abu Al-Amrin (2008) on the level of mental health of nursing professionals in government hospitals in the Gaza governorates and its relationship to their level of performance:

The study aimed to assess the levels of mental health among male and female nurses working in government hospitals in the Gaza governorates, as well as to explore any differences based on gender, academic qualification, department of work, and years of experience. Additionally, the research sought to investigate the relationship between mental health levels and professional performance. The researcher employed a descriptive-analytical approach and collected data from a sample of 222 participants. The study utilized a mental health scale developed by the researcher and a performance evaluation model endorsed by the Palestinian Ministry of Health.

- The study concluded that male and female nurses have high levels of both mental health and professional performance.
- There are statistically significant differences in levels of mental health between male and female nurses.
- There are no statistically significant differences in the level of mental health according to academic qualification and years of experience.

6.2 Jaarir Salima's study (2019) "The level of mental health among nursing professionals in hospital institutions and its relationship to self-efficacy." A field study in the state of Chlef:

This study aims to identify the level of mental health among nursing professionals in hospital institutions and its relationship to self-efficacy. To achieve the study's objectives, the descriptive approach was used, and the

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

mental health scale and the self-efficacy scale were applied to a sample of male and female nurses, which amounted to (50) male and female nurses.

- The researcher concluded that male and female nurses enjoy a high level of mental health.
- There are statistically significant differences in the level of mental health among male and female nurses due to the gender variable in favor of males.

6.3 Study by Merbah Malika and Rachid Saidi (2019) Mental health among nurses in hospital institutions specializing in mental illnesses:

The objective of this study was to investigate variances in the mental health levels of nurses within an institution in the state of Tiaret, based on gender and years of experience. The research employed a descriptive approach, utilizing the Cornell Mental Health Scale with a sample size of 40 nurses (23 females and 17 males). The findings indicated statistically significant differences in mental health levels among nurses concerning both gender and years of experience.

6.4 Study by Kazkouz Hamida, Eghemine Nadhira (2021) The level of mental health among nurses working in the Covid Department:

The objective of this study was to assess the mental health status of nurses amidst the COVID-19 pandemic and determine if marital status and years of experience influenced their mental health levels. Employing a descriptive approach, the researcher distributed a questionnaire to a sample of 30 individuals. The findings revealed a high level of mental health among nurses working in the COVID-19 department. Additionally, there were no statistically significant differences observed in mental health levels concerning marital status and years of experience.

7. The theoretical frame work of the study:

7.1 The concept of mental health:

The World Health Organization defines mental health as “a state of well-being in which each individual realizes his or her potential, which enables him or her to deal with life’s stresses, work productively, as well as be able to contribute to his or her society” (WHO, 2022).

Operationally, in this study, mental health is quantified by the score

Title: Mental health among doctors and nurses in the light of some variables

obtained by doctors/nurses on Fouad Salah Makkawi's mental health scale.

8. Methodological procedures of the study:

8.1 Limitations of the study:

Spatial boundaries: represented by Bouzidi Lakhdar Hospital and some private clinics in the city of Bordj Bou Arreridj.

Time limits: The study was conducted from June to October 2022.

8.2 Study sample:

The study sample consisted of 87 doctors and nurses practicing in the public and private sectors in the city of Bordj Bou Arreridj.

8.3 Study tool:

Mental Health Scale: Developed by Salah Fouad Muhammad Makkawi, the scale aims to assess an individual's psychological health. It comprises 56 items categorized into eight dimensions: happiness in life, self-satisfaction, professional satisfaction, relative freedom from disease symptoms, meaning in life, psychological security, and economic security.

8.4 Psychometric properties of the study tool:

The validity and reliability of the scale were confirmed in the current study:

Validity: The stability coefficient of the half-split, assessed using the Gitman coefficient, yielded a value of 0.950, indicating a high level of stability.

Reliability:

Discriminant validity (terminal comparison):

When we calculated discriminant validity, It is evident that the average score of the lower third, estimated at 95.625 with a standard deviation of 7.150, is lower than the average score of the upper third, which was estimated at 137.875 with a standard deviation of 6.812. The test value ($t = 12,100$) and the significant value SIG were also estimated. $=0,000$ It is less than the level of significance (0.01). This means that there are statistically significant differences of an absolute nature between the scores of the upper and lower groups, and therefore the study tool has a high discriminatory ability.

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

Internal consistency validity:

The study relied on internal consistency validity, which measures the extent of the relationship between the item score and the total score of the mental health scale. It became clear that there is a significant correlation at both the 0.01 and 0.05 levels between the score of each item and the total score of the questionnaire. Therefore, the questionnaire is considered valid and applicable in the field.

9. Discussion and analysis of results:

The Statistical Package for the Social Sciences (SPSS) program was used in the statistical treatment of the study hypotheses.

9.1 Presentation of the results of the first hypothesis:

- The first hypothesis:

We expect that the level of psychological health among the sample members is high.

(H0): $m_1 = m_2$

(H1): $m_1 \neq m_2$

* Where “M1” is the theoretical mean of the mental health scale / “M2” is the arithmetic mean of the research sample.

Using a one-sample t-test, we obtained the following results:

Table (01): includes calculating a single-sample t-test to calculate the differences between the theoretical mean of mental health and the arithmetic mean.

Title: Mental health among doctors and nurses in the light of some variables

the decision Statistician	D
Margin of error	0.05
indication (th. h)	>0.00
Degree of Freedom	86
T	6.64
Standard deviation	17.84
SMA	124.7
theoretical mean	112
the sample	87
Variable	Psychological health

Source: SPSS results.

Based on Table (01), it is evident that there is a significant difference between the theoretical average of the mental health scale and the arithmetic average of the research sample, which is estimated at 112 degrees. Analyzing the statistical significance of this difference at a degree of freedom of 86 (using the binomial hypothesis), we find that the significance value is greater than 0.00, which is less than the margin of error (0.05). Therefore, there is statistical significance, leading to the rejection of H0 (which states that $m_1 = m_2$) and acceptance of H1 (which states that there are statistically significant differences between the theoretical mean of the mental health scale and the arithmetic mean of the study sample members). This implies that the level of mental health among the study sample of doctors and nurses is high.

The findings of this study are in line with those of previous research, such as the study conducted by Ibtisam Ahmed Abu Al-Omrin in 2008, which also found a high level of psychological health among the study sample. Similarly, the results are consistent with the findings of a study by Kazkouz Hamida and Aghemine Nadhira in 2021, which indicated a high level of psychological health among participants despite the challenges posed by the COVID-19 pandemic. The psychological well-being of healthcare practitioners during this period was probably influenced by the

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

monetary and moral assistance they got. Furthermore, the results of Jarir Salima's 2019 study, which examined the connection between self-efficacy and mental health among nursing professionals, are consistent with the current investigation. The study's findings indicated that nurses had a high degree of psychological health, which was partially explained by their feeling of self-efficacy and the positive behaviors they displayed, which improved mental and physical health as well as productivity.

It can be proven that a wide range of internal and external circumstances can have an impact on mental health. Internally, a person's mental health is significantly affected by personal characteristics like personality traits, self-efficacy, and physical health. An individual's living and social environment, which includes family dynamics, social support systems, and cultural norms, has a significant external influence on mental health. Because of this, a thorough understanding of mental health necessitates taking into account both environmental and personal elements as well as acknowledging the intricate interactions between them.

The study sample is drawn from a community that is firmly based on Islamic principles and teachings, which place a high priority on maintaining mental health and fostering psychological wellness. In this context, it is thought that upholding moral standards, religious tenets, and rituals promotes inner contentment and inner calm, which in turn supports psychological equilibrium. This is consistent with the study by Belazam (2022) showing a beneficial association between psychological health and multiple aspects of religion, including spiritual relationships, religious activities, and personal growth. Therefore, the impact of religious practices and beliefs on mental health emphasizes how crucial it is to take cultural and spiritual aspects into account when comprehending and advancing psychological health in the community.

An individual's ability to control their stress and anxiety is greatly influenced by their surroundings. Confidence and feelings of security are enhanced in a respectful and encouraging supportive family setting. According to Moqawsi (2017), family and social support networks are essential for maintaining mental health. Current research highlights how

Title: Mental health among doctors and nurses in the light of some variables

important social support is for preserving one's physical and mental health. This emphasizes how crucial it is to foster networks of support within a person's social circle to boost psychological resilience and well-being in general.

The research participants' higher-than-average level of mental health can be ascribed to several previously mentioned characteristics, each of which plays a different role in promoting an individual's overall well-being. Among these are self-awareness, social participation, and contentment with one's situation as defined by a higher authority. Moreover, empirical studies highlight the importance of specific markers in assessing psychological well-being, with psychological resilience emerging as a critical component. An individual's ability to successfully handle pressures, keep a positive attitude, and carry out their commitments and responsibilities is reflective of their psychological toughness. People who possess high degrees of psychological toughness are less vulnerable to physical or mental ailments brought on by the stresses and hardships of daily life.

According to a 2018 study by Bin Kamshi and Maamria, medical professionals have a high degree of psychological resilience. They contend that because medical professionals are frequently exposed to potentially fatal situations, psychological fortitude is an essential quality. Furthermore, the renowned character of the nursing and medical fields may also be responsible for the high degree of mental health among research participants. Because they are frequently regarded and valued in their particular responsibilities, practitioners of these occupations are instilled with a sense of self-confidence. Moreover, the inherent responsibilities associated with healthcare work, such as caring for others and adapting to diverse situations, contribute to the continuous development and resilience of healthcare professionals as they strive to fulfill their duties effectively.

9.2 Presentation of the results of the second hypothesis:

The second sub-hypothesis:

We hypothesized that there are no differences in the level of mental health among sample members depending on the gender variable (females - males).

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

(H0): $m_1 = m_2$

(H1): $m_1 \neq m_2$

* Where “M1” is the arithmetic mean for the male sample/ “M2” is the arithmetic mean for the female sample

Using a t-test for two independent samples, we obtained the following results:

Table 02 presents the results of the t-test for two independent samples, aimed at assessing the variance in mental health levels attributed to gender differences:

Gender	the sample	SMA	Standard deviation	Levene's test for homogeneity		T value	Degree of freedom	indication (th h)	Margin of error	Statistical decision
				F	Sig					
Males	29	125.21	19.58	2.18	0.114	0.186	85	0.85	0.05	Not a sign
Females	58	124.45	17.07							

Source: SPSS results.

Based on the SPSS outputs, the analysis indicates that the mean scores for both male and female samples are comparable, with a minimal difference of 0.75 units. To validate the homogeneity of variance between the two groups, the Levene test was conducted. The results reveal an F value of 2.18 and a corresponding significance value (sig) of 0.114. Given that the sig value exceeds the predetermined threshold of 0.05, indicating homogeneity, the t-test for homogeneous samples is deemed appropriate for further analysis. When considering the significance of differences in mental health levels under conditions of homogeneity, with degrees of freedom at 85 (for the binomial hypothesis), the calculated significance value is 0.85.

Title: Mental health among doctors and nurses in the light of some variables

This value exceeds the predetermined threshold of 0.05, indicating a lack of statistical significance. Consequently, we accept the null hypothesis (H_0), suggesting that the mean mental health scores for male and female doctors and nurses are equal ($M_1 = M_2$). Therefore, we reject the alternative hypothesis (H_1), which suggests significant differences in mental health levels based on gender among the study sample.

The findings of the present study diverge from those of previous research, such as the study conducted by Ibtisam Ahmed Abu Al-Amrin in 2008, which explored the mental health levels of nursing professionals in government hospitals in the Gaza governorates and their correlation with performance. Abu Al-Amrin's study concluded that there were statistically significant differences in mental health levels based on gender. Similarly, another study by Mirbah Malika and Rashid Saeedi in 2019 found significant gender-based differences favoring females in mental health levels among nurses. These disparities in findings could be attributed to variations in study environments. The gender inequalities in Abu Al-Amrin's study might have been influenced by the unstable era in which it was conducted in the Gaza Strip. On the other hand, Merbah and Saeedi's research concentrated on nurses working in mental hospitals, where environmental variables and workplace dynamics may be responsible for variations in mental health levels between genders.

This contrasts with the findings of our current investigation, which showed that the gender variable did not affect the study sample's degree of mental health.

The fact that these jobs are compatible with the traits of both sexes explains why gender inequalities in professional responsibilities have vanished. Men and women can share responsibility across a variety of sectors thanks to modern training programs that guarantee they receive equal training and achieve comparable abilities. The modern social environment places a strong emphasis on gender equality, guaranteeing that people of all genders have the same chances and rights in the workplace. This all-encompassing strategy increases psychological comfort and overall productivity. Gender gaps have been reduced in part by the cultural shift that supports women's education and involvement in the workforce while upholding their rights. Islam has been a major force in promoting gender equality because of its teachings, which respect women's worth and dignity

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

in the advancement of society. Maternity leave and breastfeeding accommodations are only two examples of the legal frameworks and rules that have been put in place to help women balance their dual duties to their families and their careers. These actions demonstrate a dedication to fostering an atmosphere in which women can flourish professionally and carry out their societally assigned tasks.

Individuals who live and work in the same environment tend to have similar psychological states, especially when they are part of the same study sample, which includes both men and women. This shared environment exposes them to similar stressors and pressures, thereby influencing their psychological well-being in comparable ways.

3.9 Presentation of the results of the third hypothesis:

- The third hypothesis:

-There are no statistically significant differences in the level of mental health among doctors and nurses depending on the variable of experience (more than 10 years - less than 10 years).

(H0): $m_1 = m_2$

(H1): $m_1 \neq m_2$

* Where “M1” is the arithmetic mean of the sample of professional experience less than 10 years / “M2” is the arithmetic mean of the sample of experience of 10 years or more.

Using a t-test for two independent samples, we obtained the following results:

Table (03): It includes calculating the t-test for two independent samples to measure 4 differences in the level of mental health due to the variable of professional experience:

Title: Mental health among doctors and nurses in the light of some variables

the Statistic	Not a sign	
Margin of error	0.05	
indication (th.h)	0.29	
degree Freedom	85	
value	-1.06	
Levene's test for homogeneity	the decision	The two samples are homogeneous
	Sig	
Standard deviation	F	1.973
SMA	16.52	18.64
the sample	>10 years	122.23
	≤10 years	126.37
Experience	35	52

Source: SPSS results.

Through Table No. (03), it is observed that the mean scores for both the sample with professional experience of less than 10 years and the sample with professional experience of 10 years or more are similar, with a difference of less than one degree, estimated at -4.1. Utilizing the t-test for two independent samples, the homogeneity between the two groups is examined initially using the Levene test. The test reveals an F value of 1.97 and a sig value of 0.16, which surpasses the significance threshold of 0.05, indicating homogeneity between the two samples. Consequently, the t-test will be employed given the homogeneity observed.

In assessing the significance of differences under the assumption of homogeneity, with a degree of freedom of 85 (based on the binomial hypothesis), the significance value is found to be 0.29, exceeding the significance threshold of 0.05. Consequently, no statistical significance is observed, leading to the acceptance of H₀, which posits that M₁ = M₂. Consequently, H₁, which suggests statistically significant differences in mental health levels among doctors and nurses due to professional experience, is rejected.

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

Therefore, it can be concluded that years of experience do not have a significant impact on the mental health level among doctors and nurses. This finding aligns with the results of the study conducted by Ibtisam Ahmed Abu Al-Omrain in 2008, which focused on the mental health of nursing professionals in government hospitals in Gaza governorates and its correlation with their performance level. Comparably, it aligns with the results of Kazkouz Hamida and Eghemine Nadhira's 2021 study. That is not, however, the same as the findings of the 2019 study by Merbah Malika and Rashid Saeedi.

Several variables may be responsible for the absence of variances in mental health based on years of experience. Because they are passionate about what they do, practitioners with fewer than ten years of experience may show high levels of motivation.

Furthermore, chances for advancement could encourage people to acquire the abilities required to handle work-related stress, protecting their mental health in the process. However, those with ten or more years of experience might have acquired useful coping strategies over time, making it easier for them to handle pressures at work. Moreover, years of experience can lead to emotional and social development that strengthens psychological flexibility and resilience. Since most of the tasks given to them are similar, the absence of variations resulting from the experience variable may be explained by the fact that practitioners with varying levels of experience typically complete the same tasks.

10. Conclusion

In order to maintain psychological well-being, mental health is essential. It also greatly enhances productivity and the capacity to carry out daily tasks in a variety of settings and conditions. This is especially true in demanding and important industries like healthcare, where workers like doctors and nurses have a lot of responsibility, including for the safety and well-being of a lot of people who are under their care. The demands placed on healthcare professionals by their jobs highlight how crucial it is for them to maintain good mental health.

Given the importance of mental health in maintaining motivation and performance in the medical and nursing fields, this study aims to evaluate the mental health status of a sample of medical professionals and explores

Title: Mental health among doctors and nurses in the light of some variables

potential disparities based on professional experience and gender. The research seeks to clarify the following findings:

- The level of psychological health among the sample members is high.
- There are no statistically significant differences in the degree of mental health among sample members due to the variable of gender and professional experience.

Accordingly, and based on the above, the researchers propose the following recommendations:

- Conducting more in-depth studies on the mental health of doctors and nurses to find out the variables that can affect it and propose ways to improve it.
- Providing moral and material incentives to achieve material and moral security and thus raise the level of mental health.
- Establishing a psychological follow-up cell for health sector workers and organizing courses to train them to cope with stress and raise the level of their psychological health.

11. Bibliography List:

1. Abu Al-Omrain, Ibtisam Ahmed. (2008). *The level of mental health among nurses working at Governmental Hospitals in Gaza provinces and its relation with performance*. Published doctoral thesis, Islamic university, Palestine.

<https://www.manaraa.com/upload/b01e512c-9603-4603-8757-b895791a8b73.pdf>

2. Belazam, Nadia. (2022). The relation between religiosity and mental health. *Afak for sciences*.7(1), Algeria,167-180.

<https://www.asjp.cerist.dz/en/article/175609>

3. Benkemchi, Fouzia, Maamria, Bachir. (2018). the differences between doctors and nurses, males and females, and three levels of Professional experience on psychological hardiness –field study in emergency medical departement in the state of Batna-. *Journal of human resources development*. 13 (1), Algeria,140-158.

<https://www.asjp.cerist.dz/en/article/54481>

Phd.Ghebouli Yasmina, Pr. Benghedfa Cherifa

4. Jaarir, Salima. (2019). The level of mental health among nursing professionals in hospital institutions and its relationship to self-efficacy -A field study in the state of Chlef-. *Review of educational and didactic research*. 8 (1), Algeria, 131-152.

<https://www.asjp.cerist.dz/en/article/93663>

5. Kazkouz, Hamida, Eghemine, Nadhira. (2021). Mental health of nurses working in the period of the spread of the covid-19 pandemic – a field study in the hospital institution Mother and Child Guelma-. *Annals of Social and Human Sciences of the University of Guelma*. 15 (2), Algeria, 279-298.

<https://www.asjp.cerist.dz/en/article/172412>

6. Merbah Malika, Saeedi Rashid. (2019). Mental health among nurses at the psychiatric institution in the Province of Tiaret. *ElKhaldounia Journal of Human and Social Sciences*.11 (1), Algeria, 59-70

<https://www.asjp.cerist.dz/en/article/102441>

7. Moqawsi, Karima. (2017). Impact of social support on health and illness. *JOURNAL SOCIAL STUDIES AND RESEARCHES*,5 (3), Algeria, 7-15.

<https://www.asjp.cerist.dz/en/article/79446>

8. Riyash, Saeed, Masadi, Asia. (2016). Psychological stress among health sector employees (a field study among surgeons). *Studies in human and social sciences*. 16 (1), Algeria, 217-236.

<https://www.asjp.cerist.dz/en/article/132458>

9. Tijani, Mansour, Ibrahim Bayd al-Qoul. (2018). Professional stress among doctors working in the public hospital institution: field study among a sample of doctors working in Djelfa hospital. *Journal of Economic Studies*, 11 (1), Algeria, 115-128.

<https://www.asjp.cerist.dz/en/article/84328>

10. World Health Organization (2022), Mental health strengthening our response, <https://www.who.int/ar/news-room/factsheets/detail/mental-health-strengthening-our-response> (consulted on 20/02/2023)