

Psychological Immunity of the Medical Staff in the City of Aleppo

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Abstract- This research aims to study the psychological immunity of medical staff in Aleppo – Syria. It investigates the differences in psychological immunity according to some demographic variables, such as gender, hospital type and years of service. The sample of (130) resident doctors and nurses is taken in an intentional method from hospitals in Aleppo and uses psychological immunity scale designed by the researcher. The descriptive analytical approach is used to answer the research question. The data is collected and analyzed statistically based on (SPSS) and the results are as follows: There are low levels of psychological immunity among the medical staff in the city of Aleppo. There are no statistically significant differences in psychological immunity attributed to gender, but there are statistically significant differences in psychological immunity attributed to hospital type in favor of private hospital, and there are statistically significant differences in psychological immunity attributed to years of service in favor of more than 15 years.

Index Terms- psychological immunity, medical staff, Aleppo.

I. INTRODUCTION

The concept of psychological immunity is one of the relatively recent concepts in positive psychology. It has attracted increasing interest in the recent period as an indicator of the individual's physical and psychological health. The concept of psychological immunity appeared for the first time at the end of the 1990s, and Albert Gilbert was the first to refer to it. However, Olah devoted most of his efforts and research to this concept (Gilbert et al, 1998, p: 619). Psychological immunity refers to self-immunity through latent resources and developable personal capabilities that protect the individual from mental illness and help him to adapt positively to difficult and traumatic

situations. This term is derived from three main tributaries: health psychology, neuropsychological immunology and interaction between the brain and the immune system (Hasanen, 2013, p: 22-23).

Psychological immunity is a complex, organized and protective system whose function is to protect the individual from the negative effects of trauma, psychological stress and negative feelings, similar to the vital immune system in the individual's body. Psychological immunity does not refer to a fixed built-up component in the individual, but rather it improves with the presence of other factors such as social support, self-efficacy and problem-solving skill (Rutter, 1990, P: 43). Hans Selye confirms that each individual has a specific ability to withstand shocks and resist pressures and negative emotions. If there is balance between the capabilities of the individual and the demands imposed on him, he may succeed in overcoming shocks and stressful situations; but if the sources of shock and stress are outside his control, they may affect his psychological immune system, which is called "psychological immunity" (Abd Algalbar, 2010, p: 16).

1- Study problem:

Today, the world is witnessing many economic, social and technological changes that have affected all areas of life and have led to increase in burdens, problems and pressures on the individual, causing psychological effects that multiply with the passage of time. Success in crisis management and coping with stress depends on having psychological immunity that includes a number of characteristics and attributes, which contribute to alleviating the symptoms of crises and adapting to them. Therefore, the medical staff group of resident doctors and nurses is one of the social groups that are exposed the most to crises, risks and psychological pressures because of their work

environment and nature. They are exposed throughout the day to various psychological pressures, and it is imperative that they have the ability to cope with these pressures without affecting the environment around them, and that they have the determination to provide support and medical assistance to others when needed.

The researcher did not find studies in the Arab world that focus on the psychological immunity of the medical staff. Most of the previous Arab studies focus on the two categories of students and adults in general, and the researcher focused on studying this category (resident doctors and nurses) because of its importance for providing medical service. The research problem lies in the following question:

What is the level of psychological immunity among the medical staff in the city of Aleppo?

2- Study questions:

- a) What is the level of psychological immunity among the medical staff in the city of Aleppo?
- b) Are there statistically significant differences in the psychological immunity of the medical staff attributed to gender (male/ female)?
- c) Are there statistically significant differences in the psychological immunity of the medical staff attributed to hospital type (public / private)?
- d) Are there statistically significant differences in the psychological immunity of the medical staff attributed to the years of service (1-5 years/6-15 years/ more than 15 years)?

3- Objectives of the study:

- a) Identify the level of psychological immunity among the medical staff in the city of Aleppo
- b) Identify differences in psychological immunity which are defined according to some demographic variables such as (gender, type of hospital and years of service).

4- Importance of the study:

- a) The importance of the research lies in the fact that it is the first in the Arab world to deal with the psychological immunity of the medical staff (resident doctors - nurses).
- b) Lack of studies on psychological immunity in the Syrian environment, especially in light of the conditions that the Syrian society has seen in terms of the crisis, pressures and

traumatic experiences that have caused psychological effects, which multiplied over time.

- c) The importance of the sample, as the medical staff is one of the segments of society most engaged in pressures and crises due to the frequent outbreaks of epidemics and diseases in our current era, in addition to the importance of the role they play, which requires them to enjoy a high degree of psychological immunity.
- d) Knowing the level of psychological immunity among the medical staff helps psychiatrists in providing the necessary services to support and raise the level of psychological immunity among the medical staff.

5- Terminology of study:

a) Psychological Immunity: It is the ability of the individual to protect himself from the potential negative effects of pressures, threats, risks, frustration and psychological crises; it also refers to the ability to get rid of them through psychological immunization by using self-resources and potentials inherent in personality, such as: (positive thinking, creativity, problem-solving, self-control, emotional balance, steadfastness, toughness, challenge, perseverance, effectiveness, optimism, flexibility, and adaptation to the environment (Zedan, 2013, P: 812).

b) The medical staff: They are the workers in the Ministry of Health who are qualified by the colleges (Medicine and Nursing) to work in public and private hospitals in the city of Aleppo.

6- Limits of study:

- a) **Objective limits:** Psychological Immunity of the medical staff in in City of Aleppo
- b) **Time limits:** The research was applied from 11/14/2022 to 2/15/2023.
- c) **Spatial limits:** The research was applied in public and private hospitals in the city of Aleppo.
- d) **Human limits:** The research was applied to a component sample (n =130) including resident doctors and nurses.

7- Study terms:

The concept of psychological immunity appeared at the end of 1990s, and this concept is called by many names,

including: Behavioral Immunity System, Mental Immunity, Emotional Immunity and the Psychological Immunity System. Nevertheless, the most widely used term is "psychological immunity" due to its ease, simplicity, comprehensiveness and accuracy (Zedan, 2013, P: 817). A hypothetical, emotional and interactive system participates with the physical immune system by maintaining the stability and balance of the individual by preserving the emotional state from the threats of negative emotions resulting from emergency events and achieves a high degree of stability by confronting urgent fluctuations of life. This is carried out through the cognitive capabilities of the harmonic subconscious drawn from the inputs of consciousness, which help to deal with and resist pressures and support mental health (Alsharif, 2015).

Psychological immunity is a complex process, which works alongside biological immunity in protecting the individual psychologically and physically in dealing with crises and difficulties facing him. Attitudes support adaptation to changing and emergency conditions and contribute to raising the individual's well-being and psychological happiness.

Scientists have divided psychological immunity to:

- 1- Natural psychological immunity: It is present in the individual in the nature of his psychological formation that grows with him through the interaction between heredity and the environment.
- 2- Naturally acquired psychological immunity: It is acquired through learning, experiences and knowledge that the individual learns by facing crises as these experiences are considered psychological vaccinations that activate and strengthen the immune system.
- 3- Artificially acquired psychological immunity: It is similar to the physical immunity that the individual acquires by deliberately injecting the body with the germ that causes the disease, in which the individual is deliberately exposed to stressful and angry situations while training him to control his emotions and thoughts (Mursy, 2000, P: 96-97).

Individuals with high psychological immunity have the following characteristics:

The ability to think logically, the ability to self-control, resist failure, express oneself positively, face challenges in creative

ways, optimism and a positive outlook on life, the ability to solve problems, and focus effort on the goal.

As for individuals with low psychological immunity, they have the following characteristics:

Closed-mindedness, intellectual stagnation, isolation, poor interaction with others, resistance to change, emotional immaturity, weak self-control, surrender to failure, and a tendency to be sad and pessimistic (Mohammad, 2018, p: 181).

The surrounding environment around the individual plays a role in enhancing his psychological immunity. As the family is the first to boost psychological immunity, its role is evident in providing children with necessary expertise and skills to contribute to the formation and production of psychological vaccinations that activate and strengthen the psychological immune system, and this is what makes the individual prepared, in principle, to confront the outside world. Then the role of the school comes as a mini-community in which individuals interact according to the premises that each member brings from his family, and it refines them through the interactive relationships between him and others. The personality of the individual blossoms and other skills are added to it through the various cognitive and social experiences and experiences that he lives in the school. It is the widest family and the richest diversity in terms of experiences, knowledge and skills (Soaed, 2016, P: 21-32).

8- Previous studies:

- a) Study (Dubey & Shahi, 2011): entitled (Psychological Immunity and its Relationship to Methods of Coping with Psychological Stress among Medical Professionals) in the city of Gorakhpur, Copenhagen. The study adopts the descriptive approach, and the sample consists of (200) male and female doctors, in which the researchers use the psychological immunity scale, the psychological stress scale and the stress coping strategies scale. The results of the study are the following: Medical professionals enjoy a high level of psychological stress. In addition, there is an inverse correlation between psychological immunity and psychological stress. Psychological immunity has an effect on psychological stress, as individuals with high

psychological immunity score low on the psychological stress scale, and psychological immunity works in parallel with biological immunity.

b) Study (Sobh, 2020): entitled (Psychological Immunity among Educational Rehabilitation Diploma Students at Tishreen University). The study aims to identify differences in psychological immunity according to some demographic variables (gender, age). The study adopts the descriptive approach, and the sample consists of (217) male and female students, and the researcher uses the psychological immunity scale prepared by (Al-Sharif, 2015). The study concludes the following: There are statistically significant differences in psychological immunity due to the age variable in favor of individuals between the ages of (40-49) years, and there were no statistically significant differences in psychological immunity due to the gender variable.

c) Study (Dale, 2021): Entitled (The Relative Contribution of Psychological Empowerment in Predicting Psychological Immunity among Health Practitioners In Light Of Covid 19 in Riyadh Hospitals). The study aims to reveal the predictive ability of psychological empowerment for psychological immunity and to identify the differences in psychological immunity according to the two variables of gender and duration of experience. The study sample consists of (209) health practitioners whose ages range between (24-59) years. The researcher uses the psychological empowerment scale of Aker (2013) and the psychological immunity scale of Al-Maliki (2016). The study shows that it is possible to predict psychological immunity through psychological empowerment. In addition, there are statistically significant differences in psychological immunity according to the gender variable in favor of males, and in variable of experience period in favor of those with five years or more.

9- Research Methodology and Procedures:

a- Research Methodology:

The analytical descriptive approach is used because it is the most appropriate approach to the nature of the research problem and its objectives. This approach is based on describing the studied phenomenon and collecting accurate descriptions and

information about it, so that the phenomenon gives a qualitative and numerical description that shows the magnitude of the phenomenon, its size and the degree of its association with other phenomena (Altal, 2007, p:42).

b- The research community and its sample:

The statistical population of the research consists of resident doctors and nurses in public and private hospitals in the city of Aleppo, and the study sample consists of (130) resident doctors and nurses in the hospitals of Aleppo, and they are distributed as follows:

Table No (1): Participants' demographic information

	gender		Hospital type		Years Of Service		
	male	female	public	private	1-5 years	6-15 years	More than 15
Resident doctors	15	25	40	----	38	2	----
nurses	13	77	34	56	21	46	23
total	28	102	74	56	59	48	23
	130		130		130		

c- Instruments:

The researcher used the psychological immunity scale (designed and standardized by the researcher) and included (76) items distributed over nine dimensions of psychological immunity. As for Cronbach's alpha stability coefficient, the dimensions of the scale reached the following: (positive thinking 0.84, the ability to solve problems 0.80, emotional stability 0.71, psychological toughness 0.72, self-efficacy 0.79, self-confidence 0.66, psychological resilience 0.66, challenge and perseverance 0.79, optimism 0.79). Meanwhile, the half-partition coefficient for the scale as a whole is (0.92), which indicates that the scale has a good level of validity and reliability.

d- Procedures and statistics:

The researcher reviewed the theoretical framework and previous studies on psychological immunity, then the scale was applied to a sample of (30) residents and nurses to check the psychometric properties of the scale, and then applied to the study sample consisting of (130) residents and nurses. After that, the data were analyzed statistically, and the results were discussed and interpreted.

10- Results and discussion:

a- Result of the first question: What is the level of psychological immunity among the medical staff in Aleppo city?

To answer this question, the researcher calculated the hypothetical average of the psychological immunity scale. The hypothetical average of the scale is (228) degrees, and then the researcher used the T-student test for one sample to know the significance of the difference between the hypothetical average and the average scores of the sample on the psychological immunity scale, and the following results have been reached:

Psychological immunity	N	Mean	S.D	d.f	T value	Sig	guidance
	130	206.98	40.719	129	15.369	0.00	significance

Table No (2): psychological immunity level of the medical staff in the city of Aleppo

It is evident that the value of sig was (0.00), which is smaller than (0.05). Therefore, there are statistically significant differences between the hypothetical average and the average scores of the respondents on the psychological immunity scale in favor of the hypothetical mean, which indicates a low level of psychological immunity among the medical staff in the city of Aleppo.

The researcher explains the low level of psychological immunity among the medical staff through two factors; the first of which is the state of exhaustion and tension experienced by the medical staff. Recent studies focus that stress is linked to the level of cortisol in the body, as its increase in the body for extended periods leads to a negative impact on the immune responses in the body and weakens them, as it reduces T and B cells in the vital immune system, which in turn negatively affects psychological immunity and weakens it through the close relationship between them. The second factor is the difference in cognitive, emotional, environmental, behavioral factors, social conditions and special sources of support for the medical staff, which help them satisfy their needs for sympathy, care, and a sense of security, which constitute the basic basis for the growth and strengthening of psychological immunity.

b- Result of the second question: Are there statistically significant differences in the psychological immunity of the medical staff attributed to the gender variable?

To answer this question, the researcher used the T-student test for the two independent samples, and the results are

Psychologica l Immunity	gender	N	mean	S.d	T val ue	d.f	Sig	Guidance
	Male	28	216.25	47.133	1.218	128	0.231	Non-Significant
	Female	102	204.44	38.646				

as follows:

Table No (3): Differences in psychological immunity according to gender

It is evident that the value of sig is (0.231), which is greater than (0.05); therefore, there are no statistically significant differences in psychological immunity attributed the variable of gender.

This result is consistent with the result of the Sobh study (2020). The researcher suggests that there are no differences in psychological immunity attributed to the gender variable because of the similarity of the political, economic, social and educational conditions in the environment for both genders, and equal opportunities for culture and education, especially in light of the different values that are used to differentiate between the two genders. It is a logical result in an era in which we have equality between the sexes in all areas of life.

c- Results of the third question: Are there statistically significant differences in psychological immunity attributed to the variable of hospital type (public/private)?

To answer this question, the researcher used the t-student test for the two independent samples, and the results are as follows:

Psychological Immunity	Hospital type	N	Mean	S.d	T value	d.f	Sig	Guidance
	Public	74	200.99	38.447	1.952	128	0.040	Significant
	Private	56	214.91	42.598				

Table No (4): Differences in psychological immunity according to Hospitals type

It is evident that the value of sig is (0.040), which is smaller than (0.05), so there are statistically significant differences in psychological immunity attributed to the variable of hospital type in favor of private hospitals, and the researcher suggests that there are several factors behind this, including:

- Nature of work: The medical staff in public hospitals face greater psychological pressure due to the large number of patients and emergency cases they deal with, compared to private hospitals.
- Psychological support: The level of psychological support available to the medical staff in private hospitals is greater due to more financial resources available for this type of hospitals.
- In addition, the level of wages, rewards and benefits of those working in private hospitals are much higher than government hospitals.

d- Result of the fourth question: Are there statistically significant differences in psychological immunity attributed to the variable of years of service?

To answer this question, the researcher used the one-way Anova test to identify differences in psychological immunity according to the variable of years of service, and the results are as follows:

	Sum Of Squares	Freedom level	Mean Of Squares	F value	Sig
Between groups	144685.50	2	72342.75	132.75	0.000
Within the groups	69204.46	127	544.917		
Total	213889.96	129			

Table No (5) Differences in psychological immunity according to years of service

It is evident that the sig value was (0.000), which is smaller than (0.05), so there are statistically significant differences in psychological immunity attributed to the variable years of service. To identify the differences, the Levin test was

used, as it helps to determine the appropriate follow-up test for the sample, as the sig value in Levin's test is (0.001), which is smaller than (0.05). This means that there are differences in the variance between groups, so the societies are heterogeneous, and accordingly, the researcher used the Dennett test for post-comparisons, and the results are as follows:

Table No. (6) Dennett's test to identify differences in psychological immunity according to years of service

Years of Service		N	Mean	Standard Deviation	Differences among means	Sig	Guidance
1-5 years	6-15 years	48	195.88	23.514	-26.799	0.000	Significant
	More than 15 years	23	251.88	28.403	-82.800	0.000	Significant
6-15 years	1-5years	59	168.08	14.810	26.799	0.000	Significant
	15 years or more	23	251.88	28.403	-56.001	0.000	Significant
more than 15 years)	1 -5 years	59	168.08	14.810	82.800	0.000	Significant
	6 – 15 years	48	195.88	23.514	56.001	0.000	Significant

The following notes are evident in the above table:

- There are statistically significant differences in the psychological immunity that are attributed to the variable of years of service, (1-5) years and (6-15) years, in favor of the service period (6-15) years.
- There are statistically significant differences in psychological immunity that are attributed to the variable of years of service between (1-5) years and (15 years or more) in favor of the service period (more than 15 years).
- There are statistically significant differences in psychological immunity that are attributed to the variable of years of service, (6-15) years and (more than 15 years), in favor of the period service (more than 15 years).

This result is consistent with the Dale study (2021).

The researcher suggests that the differences in psychological immunity in regard to years of service can be related to the fact that the medical staff who have more experience tend to be exposed, during their professional career, to many experiences and stressful situations that have worked on developing their personal characteristics. They have become more skilled in

solving the problems they face and are more able to control their emotions and express them in a balanced way. Thus they have more psychological immunity, compared to those who have less experience and who need more time to understand the pressures and how to deal with them in order to reach higher psychological immunity.

11- Recommendations and suggestions:

1. Directing the concerned authorities in the Ministry of Health to conduct training courses to raise the level of psychological immunity among the medical staff in the city of Aleppo.
2. Conducting cross-cultural studies on psychological immunity.
3. Carrying out a predictive study of the factors affecting psychological immunity.

REFERENCES

- 1- Abd Algabar, Abd Alwahab. (2010). **Psychological immunity and its relationship to personal competence and self-transcendence in patients with thyroid disease**, PhD thesis, al Mustansiriyah University, Iraq.
- 2- Alsharaf, Alaa. (2015). **The effectiveness of counseling program based on self- defining personality characteristics to strengthen psychological immunity and its impact on reducing the feeling of alienation among Palestinian university students**. Ph.D. thesis, Mansoura University.
- 3- Altal, Wail. (2007). **Scientific research in the humanities and social science**. Al hammed publisher, Oman.
- 4- Dael, Afnan, (2021). **The Relative Contribution of Psychological Empowerment in Predicting Psychological Immunity among Health Practitioners In Light Of Covid 19 in Hospitals of Riyadh**. Journal of Psychological Counseling, Vol (67), No (2), P: 77- 124.
- 5- Dubey, A. Shahi, D. (2011). **Psychological immunity and Coping Strategies: A study on medical professionals**. Indian Journal of Social Science Researches, Vol (8), No (1-2), p: 36-47.
- 6- Gilbert et al, 1998 - **immune neglect**. Journal of personality and social psychology, (75), p: 617-638.
- 7- Hasanen, Eman. (2013). **Activating Psychological Immunity To Develop Positive Thinking Skills And Reduce Teaching Anxiety Among Student Teachers**. Journal of Arab Studies in Education and Psychology, Vol (3), No (42), P: 11-63.
- 8- Mohammad, M. Mohammad, A. (2018). **Psychological Immunity among Returning University Students and Their Non – Returning Peers from Displacement**, Annual Scientific Conference, Anbar University, Iraq.
- 9- Mursy, Kamal. (2000). **Happiness and The Development of Mental Health**, Part 1, Universities Publishing, Cairo.
- 10- Rutter, M. (1990). **Risk and protective Factor in the Development of psychopathology**. Cambridge University Press, Cambridge
- 11- Soaed, Mervat. (2016). **Psychological Immunity and Its Relationship to Future Anxiety and Quality of Life**. Master Thesis, Islamic University, Gaza.
- 12- Sobh, Safaa. (2020). **Psychological Immunity of Educational Rehabilitation Diploma Students At Tishreen University**, Journal of Al- Baath University, Vol (42), No(13), p: 125-166.
- 13- Zedan, Esam. (2013). **Psychological Immunity: (Concept, Dimensions, and Measurement)**. Journal of the Faculty of Education, Tanta University. No (51). P: 812- 882.