

**THE ROLE OF THE MEDICAL SOCIAL WORKER IN CONFRONTING RUMORS  
DIRECTED AGAINST VACCINES AGAINST THE EMERGING CORONA VIRUS (COVID  
19). A DESCRIPTIVE STUDY APPLIED TO SOCIAL WORKERS IN HOSPITALS IN  
MAKKAH AL-MUKARRAMAH**

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**ABSTRACT**

This research explores the roles of medical social workers in addressing rumors directed against COVID-19 vaccines, focusing on a complete census of all female and male social workers (n=94) in Makkah hospitals. Employing the social survey method, data was collected from 90 individuals through a questionnaire. The study reveals that the key responsibilities of medical social workers include educating individuals about the significance of COVID-19 vaccines and dispelling misconceptions surrounding them. Furthermore, the results highlight the crucial skills employed by these professionals, emphasizing the formation of professional relationships and the provision of necessary awareness to counteract rumors. The research underscores the importance of medical social workers conducting awareness campaigns to educate patients, their families, and the local community about the dangers of rumors. Recommendations include motivating individuals to receive vaccinations for the sake of community health security and enhancing the knowledge and skills of social workers in addressing vaccine-related misinformation. Additionally, emphasis is placed on leveraging media for disseminating information and educating citizens about the importance of vaccination. This study contributes to the literature by shedding light on the multifaceted role of medical social workers in the context of vaccine misinformation during the COVID-19 pandemic.

**Keywords:** Medical Social Worker; Novel Coronavirus (Covid 19); Anti-Coronavirus Vaccines; Anti-Vaccine Rumours

**1. Introduction**

Global statistics indicate that the novel coronavirus (COVID-19) is spreading significantly and rapidly among individuals despite the extensive preventive measures taken by most of the countries around the world. Despite the development of global and local COVID-19 vaccines and the immunization of millions of people worldwide, the number of confirmed cases worldwide, according to estimates by Johns Hopkins University in the United States, reached 237,583,938 cases as of October 8, 2021. The number of recovered cases reached 214,669,447, while the number of deaths exceeded 4,849,854 globally (Anser et al., 2020).

Similarly, statistics in the Kingdom of Saudi Arabia indicate that the number of confirmed cases of the novel coronavirus is steadily increasing again despite many citizens and residents receiving the vaccine.

According to the statistics, the number of confirmed cases in the kingdom reached 547,449 as of October 8, 2021, with 536,493 recoveries and 8,736 deaths. The number of active cases is 2,220, with 147 in critical condition (Al-Mohaithef & Padhi, 2020).

As a result of the continuous increase in the number of cases, the government of the Kingdom of Saudi Arabia has taken several strict preventive measures to contain and eliminate the spread of the virus. The kingdom was one of the first Arab and Islamic countries to contract with global vaccine manufacturers, whether in the United States or Europe, to provide the vaccine to its citizens. It initially provided the Pfizer-BioNTech (American-German origin) and Oxford-AstraZeneca (British origin) vaccines. The distribution of vaccines in the kingdom began on December 17, 2020. Initially, there was limited enthusiasm among citizens to receive the vaccine, as some were hesitant. According to statistics from the Saudi Ministry of Health, the number of COVID-19 vaccine doses administered to citizens and residents has exceeded 43,114,667 as of October 8, 2021. The Saudi Arabian government aims to vaccinate 70% of the population by the end of 2021, prioritizing those who have not received their first dose or have not been infected with the COVID-19 virus in order to achieve herd immunity (Assiri et al., 2021)

The spread of rumours in society is considered one of the most dangerous social phenomena that threaten the security, stability, development and progress of society because of the many negative effects it has on the individual, the family and society, and the resulting demolition of the efforts made and the decline in the morale of citizens. Rumours have existed since ancient times in various human societies, whether developed or developing, but they vary in degree and intensity according to the development and progress of society. The cultural level of citizens in some of them. In spite of the tremendous technological progress and development that the world has witnessed in recent times in the means of communication and information, with this development and progress, rumours, false ideas and intellectual distortions began to appear on many topics, issues and facts. Despite the information revolution that the whole world is witnessing and the massive information flow, it did not contribute significantly to understanding the Covid-19 pandemic as much as it contributed to causing havoc in various societies, from broadcasting false news to spreading panic and fear among individuals, as opinions differ about the Corona virus, and some of them consider it anger. My God, and some of them consider it a conspiracy hatched by the hidden powers that rule the world... and other opinion (Silom & Othman, 2020)

Millions mourned, health systems crumbled, the silent scream that echoed loudly across the continents watched billions and billions being poured. Research centres became fortresses of hope, and sleepless and tireless efforts became so bright in the total darkness of the pandemic when a ray of beam (vaccine) came into existence. But it didn't go smoothly, and it was considered a big achievement to pave the pavement. There was also a negative image being portrayed in societies through media and different conspiracies and rumours coming into existence, which spread like fire and made it completely difficult to handle the pandemic. People become hesitant about getting vaccination. Claims based on no scientific knowledge, such as questioning the safety of it as it was prepared shortly, having side effects, being lethal, causing infertility, and the spread of virus becoming easy by vaccination, or a master plan to kill mass and being used as a biological weapon. It put people's minds in doubt and cast a shadow on vaccination rates. Resulted in loss of lives and finances (Al-Rakhami & Al-Amri, 2020).

The social service profession plays a pivotal role in addressing rumours that threaten national security (Hassan, Huda, 2019). The profession relies on many mechanisms to address rumours by developing community awareness and enlightening it about the dangers of rumours, using community dialogue and mass communication, and establishing community partnerships with community organizations. (Ali, Abeer, 2011AD), and the social worker possesses many tools, roles, professional skills and strategies that allow him to develop citizens' awareness of the danger of rumours and their negative effects on the individual and society, and to fight and eliminate them.

Referring to previous studies, it is clear that some of them were interested in studying the challenges facing social workers in dealing with the Corona virus pandemic, (Abdul Aleem, 2021 AD), and others were interested in identifying the obstacles facing the social worker in the social service to develop awareness to confront the Corona pandemic (Muhammad, 2021), and others were interested in monitoring the level of society's knowledge of the Corona virus and the sources of information about it, and knowledge of social behavior through adherence to preventive measures (Al-Shalaki, 2021), and others were interested in identifying the extent of the Saudi and non-Saudi public's awareness of the health risks of the Corona virus presented in the Saudi media ( Abdel-Zaher, 2021), and others were interested in identifying the psychological and social repercussions of the Corona pandemic crisis (Covid 19) on marital relations in the Saudi family (Al-Qahtani, 2021), and others were interested in identifying the level of psychological and social adaptation for residents of isolation and quarantine facilities (Al-Mansour and Al-Maliki 202).

And through the previous presentation of some of the concerns of previous studies, it is clear that there is a clear dearth of studies and scientific research that were concerned with identifying the roles of the medical social worker in confronting rumours directed against vaccines of corona virus (Covid 19), so the researcher's interest in this research issue came as one of the most important contemporary issues in Saudi Arabia.

To understand how medical social workers combat Covid-19 vaccine misinformation, this study explores their crucial roles, essential skills, and effective communication mechanisms, as well as the therapeutic methods and techniques they employ to counter rumours. The researcher wants to study the crucial roles and skills that medical social worker uses in confronting rumours about vaccines against the emerging coronavirus. Moreover, through the research survey, the researcher rumours for Covid 19 also wants to investigate what therapeutic methods the medical social worker would be using to dispel. This study focuses on the global issue of Covid-19 vaccines and the negative consequences of circulating rumors. It highlights the lack of scientific investigations into the roles of medical social workers in countering rumours, particularly in the Arab world. The findings could enhance social workers' professional practices and guide officials in developing strategic plans to combat rumors and manage the pandemic effectively.

## 2. Literature Review

In the light of several recent studies, addressing the Covid-19 vaccination false myths, particularly on social worker's behavior and practices ( ) highlighted a concerning trend where patients exhibited low adherence to recommended preventive measures underscore the critical need for an improvement in the professional capabilities of social workers to convince clients to adhere to the measures.

The literature on the role of medical social workers in addressing rumours directed against Covid-19 vaccines within hospital settings in Makkah Al-Mukarramah reveals a significant gap in current understanding. While various studies have explored the broader responsibilities of medical social workers during the pandemic, limited attention has been given specifically to their role in confronting vaccine-related misinformation. Abdel-Aleem, Iman's (2021) research underscores the importance of enhancing the professional abilities of social workers to persuade clients to adhere to precautionary measures, setting the stage for understanding the crucial role they might play in vaccine-related communication. Muhammad, Muhammad's (2021) study emphasizes the need for continuous monitoring of workers' psychological and health status, but there is a paucity of research on how social workers address concerns and misinformation specifically related to Covid-19 vaccines. In Makkah Al-Mukarramah, where societal knowledge of the virus is high (Al-Shalaki, Turki, 2021), it becomes imperative to investigate the strategies employed by medical social workers to combat rumours and foster public confidence in vaccination. This literature review calls attention to the need for a descriptive study focused on the unique challenges faced by medical social workers in Makkah Al-Mukarramah hospitals, offering insights into their roles, communication strategies, and the impact of their interventions in addressing vaccine-related rumours during the ongoing Covid-19 pandemic.

Al-Sharman's study found that traditional media has more public confidence during the Corona pandemic than social media. Some governments have used the crisis as a pretext to tighten control over media. El-Sherbiny's study found that electronic rumours negatively impact young people's intellectual security due to weak motives for belonging, community participation, and moderation.

In light of the previous presentation of the previous studies, we find that they provided many clear scientific indicators that can be relied upon in the current research in building and designing the questionnaire about the roles of the medical social worker in confronting rumours directed against vaccines against the emerging corona virus (Covid 19), and we also find that some studies are interested in discussing the challenges facing social workers in dealing with the Corona pandemic, identifying the role of the general practitioner in social work in developing awareness of this pandemic, monitoring the level of community knowledge of the Corona virus and sources of information about it, the extent to which the Saudi and non-Saudi public are aware of the health risks of the Corona virus, identifying the level of psychological and social adjustment for residents of isolation and quarantine facilities designated for the infected and suspected of being infected with the Corona virus, identifying the degree of adherence to precautionary measures, determining the psychological and social repercussions of the Corona pandemic crisis (Covid 19) on marital relations in the Saudi family.

Furthermore, identifying the efforts of social workers as members of the work team of Corona virus pandemic, determining the reality of the role of the medical social worker in developing awareness of the culture of social divergence in light of the Corona virus (Covid 19) crisis... and others. On the other hand, we find that some of the previous studies were interested in identifying the rumours that accompanied the emergence of the Corona virus epidemic and knowing their trends, determining the relationship between electronic rumours and achieving intellectual security, identifying mechanisms for building institutional capacities in confronting electronic rumours and raising awareness of the dangers of electronic rumours, but it is also clear from the presentation that there is a clear dearth of scientific studies that focused on the roles, skills, and mechanisms used by the medical social worker in

confronting rumours directed against vaccines against the emerging corona virus (Covid 19), and the obstacles facing the medical social worker in facing these rumours and proposals to confront the negative effects of rumours. The researcher's interest in this research issue, which has become paramount in the face of anti-rumours about vaccines.

### **3. Theoretical framework of the research:**

The current research relies on the Rational-Emotive-Behavioral Therapy model in interpreting and analyzing its results as the most appropriate scientific models in dealing with spreading rumours and misconceptions, which we will address as follows:

#### **3.1.Rational emotive behavioral therapy model:**

The pioneer of rational emotive behavioral therapy is Albert Ellis, who is credited with the emergence of the model in the mid-fifties, and he also developed it and changed its name to rational emotive therapy in 1955, then changed to rational emotive behavioral therapy in 1993, which includes a close interaction between mental thinking Cognitive, emotional feelings, and daily behaviors of the individual. Rational emotional behavioral therapy is based on the concept of emotions and behaviors, and it is one of the forms of treatment that falls under cognitive behavioral therapy (Omar, Maher, 2003: 13-14), (Ellis, A, 2001:29, Jones, (2000: 181, Froggatt, 2005: 12).

It focuses on the individual thinking, feeling, and behaving in succession. Thinking becomes emotion, and emotion becomes thinking, and this thinking and emotion takes the form of self-talk that directs the individual's behavior, either desirable or undesirable (Amin, Suhair, 2010: 60-61, quoting al-Qat, Jihan, 2014:59-3660), and its characteristics are: applied, behavioral, analytical, technical and effective (Hamid, Ahmed, 2014:2873-2874).

Rational emotive behavioral therapy is based on a set of foundations and assumptions: that irrational mental thoughts towards oneself and others are the cornerstone of neurotic disorders, and that a change in thinking contributes to changing behavior and emotions, given that thinking is responsible for behavior and feelings, most of the emotions and behaviors are caused by What the individual believes about the situations he faces, and that these situations determine what we feel and how he behaves. Irrational thinking patterns and turbulent behavior contribute greatly to emotional and behavioral disorder and the individual's social and self-conflict. (Walen, R, & Dryden, 1992:15-17, Jan, R. 2005:2, Ellis, A, 1996:200).

This therapy help clients to identify and eliminate irrational thoughts, reduce anxiety and self-blame, and encourages them to object and doubt these thoughts, reduce anxiety and self-blame, and encouragfes them to object and doubt these thoughts.The social worker plays various roles, including teacher, advocate, helper, mediator, enabler, behavior changer, planner, observer and corrector, aiming to reduce self-suffering, increase self-suffering, increase self acceptance, and reduce self- suffering, increase self acceptance, and reduce self defeat.

There are many therapeutic methods used in the Rational-Emotive-Behavioral Therapy model, which are represented in cognitive methods: (refuting irrational thoughts, cognitive duties, changing language vocabulary, fun, logical discussion, clarification and persuasion), and emotional methods: (rational emotional imagination, Role play, the use of giving strength and encouragement) and finally behavioral

methods: (positive and negative reinforcement, gradual dulling, stimulus intensification, modeling ... and others. (Al-Qarni, Muhammad and Rashwan, Abdel-Monsef, 2004:116-121, Al-Sherbiny, Muhammad, 2011:1213-1215).

Marlen, G. & Cooper and Jan, Ridgway also present the affective and emotional methods as follows: (1) Rational emotive imagination, whereby the client is asked to imagine himself in situations that cause him turmoil, in order to identify the extent to which irrational beliefs are replaced by rational ones (2) Facing the fear of shyness, (3) role-playing to train and teach the client to perform aspects of the behavior (4) relaxation and exercise (5) coping style and resilience training (Marlen, G. & Cooper, J, 2005: 155, Jan, Ridgway, 2005:9).

Rational emotive behavioral therapy relies on several therapeutic strategies, including: discovering irrational thoughts and separating them from rational thoughts, keeping a measure of emotional disturbances to push the individual towards thinking that irrational thoughts are responsible for emotional disorders, modifying irrational thoughts that make him blame himself and others, and a coping strategy Irrational thoughts and the adoption of rational thoughts as a continuous way of life (Al-Qat, Jihan, 2014: 3660).

The topic of the current research is closely related to the Rational-Emotional-Behavioral Therapy model, as the current research relies on the premises of this model, whether with regard to the therapeutic methods used (cognitive, affective and behavioral methods) or the therapeutic strategies and tactics used in the model in dealing with rumours directed against vaccines against the emerging corona virus. (Covid 19), many indicators emanating from the theoretical frameworks associated with this model have been extracted in building a data collection tool, whether in relation to the roles, skills, methods, therapeutic techniques and mechanisms used by the medical social worker in confronting rumours directed against vaccines against the emerging corona virus (Covid 19). Covid 19), and the researcher relied, in interpreting his results, on the theoretical premises of the Rational-Emotive-Behavioral Therapy model.

#### **4. Research methodological framework:**

The research is based on the social survey method through a comprehensive enumeration of all social workers and specialists working in hospitals in the city of Makkah Al-Mukarramah, who numbered (94) distributed as follows: King Faisal Hospital (18) female and social workers, King Abdulaziz Hospital (15) female and social workers, Al Noor Hospital (20) female specialist and social worker, Hira General Hospital (15) female specialist and social worker, Security Forces Hospital (4) female specialist and social worker, Children's Hospital, Obstetrics and Gynecology (11) female specialist and social worker, King Abdullah Medical City Hospital (11) Specialist and social worker. Data was collected from (90) social workers only due to the absence and attendance of some of them in training courses outside the workplace. The current research also relies on the questionnaire form as a tool for data collection, which was applied to female and social workers working in government hospitals in Makkah Al-Mukarramah, to verify the validity and reliability procedures of the data collection tool. Professors of Social Work at the Department of Social Work at Umm Al-Qura University in Makkah Al-Mukarramah, and King Abdulaziz University in Jeddah, and their number is (6) professors. Their agreement was 91%, which is an acceptable percentage.

To ensure the stability of the questionnaire, the technique of re-testing was used to calculate the stability coefficient, where the first test was applied to (8) social workers working in government hospitals in Makkah Al-Mukarramah, and the test was re-tested after two weeks, and the difference between the first and second tests was determined for each question separately, and it became clear That there are no significant differences between the first and second tests, and by calculating the stability coefficient according to the following equation: The stability coefficient = the number of different responses between the two applications / the number of total responses, and the result was 0.90, and this percentage is acceptable and expresses the stability of the questionnaire. The data were analyzed and processed through the SPSS statistical program, where frequencies, percentages, arithmetic mean, standard deviation and ranking were used.

## 5. Results and Discussion

The age group with the largest percentage (66.6%) was between 51 and 60 years old, whereas the majority (50%) was between 31 and 40 years old. The bulk of people (64.4%) were married, followed by widows (2.2%), divorced people (14.4%), and single people (18.9%). When it came to their educational backgrounds, the majority of the respondents (61.1%) had a bachelor's degree, followed by a master's degree (26.7%), a Ph.D. holder (3.3%), and comparatively fewer respondents (8.9%) had higher diplomas. When it came to working experience, the smallest group (13.3%) represented 20+ years of experience, while a comparatively larger group (23.3%) had experience spanning 10-19 years, and the majority (63.4%) had been in their roles for 1-9 years, during which time they were regarded as junior and new employees. The personal and professional traits of ninety respondents who work as social workers in Makkah Al-Mukarramah hospitals are displayed in **Table 1**.

**Table 1: Personal and professional characteristics of the respondents**

Variable	Frequency N=90	Ratio
Gender		
Males	41	45.6
Females	49	54.4
Total	90	100.0
Age		
21 To 30 Years	16	17.8
31 To 40 Years	45	50.0
41 To 50 Years	23	25.6
51 To 60 Years	6	6.6
Total	90	100.0
Marital Status		
Single	17	18.9
Married	58	64.4
Absolute	13	14.4
Widow	2	2.2
Total	90	100.0

Degree		
Bachelor's	55	61.1
Higher Diploma	8	8.9
MA	24	26.7
Ph.D	3	3.3
Company Work Experience		
1-9 Years	57	63.4
10-19 Years	21	23.3
20 Years And More	12	13.3

In general, the data indicates that workers in Makkah Al Mukarrammah, who are highly educated and youthful professionals, are dedicated to their professional development.

The frequency of rumours about various vaccination types in the Kingdom of Saudi Arabia is seen in **Table 2**. The AstraZeneca vaccine was cited by most respondents (100%) as the most rumoured vaccination in the Kingdom. On the other hand, a considerable proportion of participants (40%) recognised the Chinese Sinopharm vaccine as the second most popular, with Pfizer being listed as the least popular vaccine (12.2%).

**Table 2: Rumored vaccines in the Kingdom of Saudi Arabia\***

Vaccine type	Frequency	Percentage
Sinopharm vaccine (Chinese origin)	36	40.0
Sinovac vaccine of Chinese origin -	-	-
Pfizer-BioNTech vaccine (American-German origin)	11	12.2
Moderna vaccine of American origin -	-	-
Johnson & Johnson vaccine of American origin-	-	-
Oxford-AstraZeneca vaccine (British origin) 90 100%	90	100%
Sputnik V vaccine of Russian origin- -	-	-

It is possible to infer a connection between the large percentage of AstraZeneca vaccines named as the most rumoured ones and the higher attention spans of female and social worker responders. This is consistent with research by Al-Shalaki and Turki (2021 AD) showing social media is a major channel for the dissemination of news about vaccines. Consequently, this underscores the necessity of focused interventions and precise information dissemination to dispel misunderstandings and enhance public comprehension.

**Table 3** examines the various rumours that are frequently spread regarding COVID-19 vaccinations and shows the public's varying perspectives. Remarkably, the majority of responders (67.8%) believed that vaccinations cause blood clots, whilst 57.8% expressed worry about infertility. The third most important fear raised by 42.2% of respondents is the possibility that immunisations could cause mortality. Finally, according to 30.0% of respondents, the fourth most often accepted rumour was that it has long-term impacts.

**Table 3: Most common types of rumours about vaccines\*:**

RUMOR TYPE	FREQUENCY N=90	PERCENTAGE
Vaccines cause death	38	42.2
Cause infertility	52	57.8
Lead to clots	61	67.8
Lead to cancer	4	4.5
The vaccine changes a person's genetics (the third sex),	18	20.0
It leads to inflammation of the heart muscle	7	7.8
Lead to corona virus infection	15	16.7
It has long term effects	27	30.0
It contains chemicals that are harmful to humans and affect health	22	24.4
Anyone who has previously been infected with the emerging corona virus does not take the vaccine	19	21.1

These prominent rumours underscore the necessity for public health campaigns and direct communication techniques. Therefore, it is essential to dispel myths and provide clear facts in order to increase public confidence and promote a more accurate knowledge of the safety and effectiveness of vaccines.

**Table 4** outlines the roles of social workers in countering Covid-19 vaccination rumors. The primary roles include introducing clients about the importance of the vaccine, countering misconceptions, and providing moral and psychological support. The second position involves elucidating the positive effects of vaccination and educating clients to use verified news platforms to avoid rumors. The third position encourages clients and families to view vaccination as a moral and national duty to combat the pandemic. The fourth position emphasizes the importance of obtaining information from official authorities and not succumbing to rumors. The arithmetic mean for these roles is 2.96, with a standard deviation of 0.207.

**Table 4: Roles of the medical social worker in countering Covid 19 vaccine rumours**

Number	Roles	means	Standard deviation	Rank
1	Introducing customers to the importance of vaccines against the emerging corona virus	2.96	.207	1
2	Familiarizing customers and their families with the different types of vaccines against the emerging corona virus	2.69	.466	14
3	Developing customer awareness of knowledge related to vaccines and developments related to them	2.79	.410	10
4	Encouraging clients and their families to take the	2.91	.286	3

	vaccine as a national and moral duty to end the Corona crisis			
5	Clarify the positive effects of taking the vaccine to prevent the emerging corona virus and reduce the chances of its spread in society	2.92	.269	2
6	Using flyers and posters to educate citizens about the importance of vaccinations	2.70	.570	13
7	Introducing customers to the danger of not taking the vaccine, the possibility of infection and spreading the virus among others, and the threat to the health security of the community as a whole	2.88	.362	5
8	Providing advice to clients and their families on the importance of taking responsibility and following the measures taken by the state to complete the vaccination process	2.87	.342	6
9	Correcting misconceptions and misconceptions related to vaccines and their impact on health	2.96	.207	1
10	Informing customers and their families of rumours about vaccines against the emerging coronavirus (COVID-19).	2.84	.472	7
11	Educating customers not to submit to rumours that promote vaccines and to take their information from official authorities only	2.89	.350	4
12	Educate customers about the correct use of social networking sites and avoid unfounded news and rumours	2.92	.269	2
13	Encouraging customers to combat and combat rumours through the correct use of social networking sites	2.82	.439	8
14	Developing the values of loyalty and national belonging to customers with the importance of combating rumours because they threaten health and community security	2.76	.504	11
15	Modifying the negative behaviors of customers who contribute to spreading false ideas about vaccines and transforming them into positive behaviors	2.82	.439	8
16	Disseminate the necessary information about the vaccination centers spread in the community	2.87	.402	6
17	Facilitate clients to make an appointment for	2.84	.364	7

	vaccination			
18	Providing moral and psychological support to clients who fear taking the vaccine	2.96	.207	1
19	Cooperate with the treatment team to exchange information about vaccines, their nature and effects	2.80	.402	9
20	Encouraging volunteering to combat rumours about vaccines and using volunteers to motivate and convince citizens of the importance of expediting vaccination so that life can return to normal.	2.72	.561	12

Overall, the table's results demonstrate that both male and female respondents offered high ratings, highlighting social workers' great desire to actively fulfil their professional obligations by dispelling vaccine-related myths. The results are in line with previous studies, bolstering the notion that the public trusts official media more than social media, particularly in the wake of the COVID-19 pandemic. The report also highlights the moral and national need to address and resolve electronic rumours, as well as the understanding of their detrimental consequences on social stability.

The medical social worker's strategies for dispelling unfounded rumours about the Covid-19 immunisation are shown in **Table 5**. With an arithmetic mean of 2.89 and a standard deviation of 0.381, the most crucial ability is building a professional rapport with the client. This fosters trust and can affect the client's attitude towards the Covid-19 vaccine. The ability to watch and equip the client and their families with the essential understanding to dispel rumours is the second crucial talent; it has an arithmetic mean of 2.87 and a standard deviation of 0.402. Conducting interviews with clients and their families comes in third place with an arithmetic mean of 2.84 and a standard deviation of 0.422. Verbal and nonverbal communication skills come in fourth place with an arithmetic mean of 2.83 and a standard deviation of 0.431.

**Table 5: medical social worker' skills in countering rumours against Covid-19 vaccination**

Number	Skills	means	Standard deviation	Rank
1	The skill in forming a sound professional relationship with customers to gain their trust and reassure them in order to modify their ideas and attitudes towards vaccines against the emerging corona virus (Covid 19).	2.89	.381	1
2	The skill in providing them with the necessary awareness to confront rumours	2.87	.402	2
3	The skill in persuading the importance of the vaccine to confront and limit the virus	2.81	.447	6
4	Skill in analysis and interpretation of the danger of following rumours and not taking the vaccine	2.74	.552	8

	on the health security of the individual, family and society			
5	The ability to sift through information and compile facts is relevant to vaccines and the rumours that propagate against them	2.82	1.023	5
6	Skill in interviewing clients and their families	2.84	.422	3
7	Verbal and non-verbal communication skills	2.83	.431	4
8	Observational skill	2.87	.373	2
9	The skill in listening and listening carefully to clients and their families to learn about their opinions on vaccines and the rumours spreading around them.	2.81	.472	6
10	The skill in using resources and capabilities is the best possible investment to counter rumours about vaccines and motivate and educate customers about the importance of taking the vaccine	2.71	.525	9
11	Skill in using scientific research to counter rumours against vaccines	2.77	.520	7

Therefore, it can be said that when it comes to addressing Covid-19 rumours, both men and women respondents highly value the skills of medical social workers, which include building relationships, raising awareness, educating, using observation and interviews, effective communication, and dispelling misconceptions related to vaccines.

**Table 6** shows the strategies used by medical social workers to combat misinformation about Covid-19 vaccines. The most effective strategy involved confronting rumors directly, with an arithmetic mean of 2.82. Second-ranked methods included online awareness, educational lectures, and group discussions to clear misconceptions. These methods were effective in convincing individuals to take vaccination as a necessity. Seminars conducted by vaccine specialists and experts in rumor confrontation were third-ranked, aiming to inform clients and their families about the dangers of not getting vaccinated and dispelling rumors. The study agrees with Al-Qahtani's (2021 AD) study that providing psychological counseling and virtual lectures and seminars are crucial mechanisms for educating clients.

**Table 6: Mechanisms used by the medical social worker in countering Covid-19 vaccine rumours**

Number	Mechanisms	means	Standard deviation	Rank
1	Telephone conversations with clients	2.71	.546	4
2	Individual interviews with the patient through video conferencing	2.52	.585	9
3	Individual interviews with patients face to face	2.59	.579	8
4	Group interviews with the patient's family	2.29	.768	12

	through video conferencing and modern means of communication			
5	Counselling sessions to guide clients on how to use social media to spread the right ideas and fight misleading rumours	2.64	.641	5
6	Awareness and educational lectures for customers online	2.78	.514	2
7	Seminars provided by vaccine specialists and specialists in dealing with rumours, in order to inform clients and their families of the danger of not taking the vaccine and following rumours.	2.73	.536	3
8	Using social media (What Sapp, Twitter, Facebook, and Instagram) to counter rumours about vaccines and encourage citizens to take the vaccine.	2.82	.488	1
9	Workshops through the practical application of a rumor and promoting it among the attendees, tracking its path and measuring its negative impact on attendance	2.51	.691	10
10	Brainstorming to design mental maps of rumours and how to spread them through modern means of communication and their negative effects on individuals	2.47	.690	11
11	Group discussions with clients to correct their misconceptions about vaccines and convince them of the need to take the vaccine	2.78	.514	2
12	Awareness campaigns for the community about the importance of vaccination and not succumbing to rumours	2.60	.747	7
13	Popular and popular conferences for the residents of the local community to raise awareness of the need to take the vaccine online	2.62	.680	6

The study reveals that social workers use various therapeutic methods and tactics to counter rumours about vaccines during the Covid-19 pandemic. The most important method is convincing clients that rumors about vaccines have no scientific basis, which can lead to prejudiced ideas. The second most important method is modifying customer attitudes towards spreading rumors or false news about vaccines without verifying their credibility. The third most important method is helping clients accept themselves. The fourth most important method is helping clients modify irrational ideas about vaccines and their negative effects, modifying negative customer behavior towards related rumors, and providing awareness and religious, psychological, and social guidance. Both male and female respondents were

significantly higher in their responses to these methods and tactics. The study aligns with Al-Asmari and Saeed's (2020 AD) findings, which emphasize the importance of awareness and psychological and social counseling for clients. Overall, the study highlights the importance of social workers in countering rumours about vaccines, as shown in **Table 7**.

**Table 7: The therapeutic methods and tactics used to counter rumours directed against vaccines against the emerging coronavirus (Covid 19):**

Number	Therapeutic methods and tactics used to counter rumours	means	Standard deviation	Rank
1	Amending customer trends regarding spreading rumours or false news about vaccines without verifying their credibility	2.80	.479	2
2	Explain and clarify the negative effects of spreading rumours on the health security of the individual and society	2.72	.541	8
3	Helping customers to express their feelings and thoughts about spreading rumours on social media	2.68	.537	9
4	Discovering irrational thoughts among customers about vaccines against the emerging corona virus, and separating them from rational thoughts	2.63	.644	12
5	Helping customers to think logically about the importance of taking the vaccine	2.76	.504	5
6	Helping the client modify irrational thoughts about vaccines and their negative effects	2.77	.498	4
7	Helping clients accept themselves	2.79	.462	3
8	Convincing clients that rumours about vaccines have no scientific basis, but rather are the product of biased ideas of some individuals	2.90	.337	1
9	Helping clients reduce feelings of anxiety, turmoil, and self-blame and others	2.68	.557	9
10	Modify negative customer behavior towards vaccine-related rumours and modify it into positive behavior	2.77	.520	4
11	Group discussion and reasoned dialogue with clients to replace irrational thoughts, opinions and attitudes with rational opinions and attitudes towards vaccines	2.66	.564	11
12	Maintaining some emotional disturbances to make the client think that irrational thoughts are	2.56	.655	15

	responsible for the disturbances			
13	Religious, psychological and social awareness and guidance by abandoning negative values and replacing them with positive values that encourage the dissemination of correct ideas.	2.77	.520	4
14	Helping clients confront irrational thoughts and adopt rational thoughts	2.67	.540	10
15	Encouraging and supporting customers' positive behaviors on an ongoing basis to help them adopt rational ideas and fight rumours	2.74	.531	6
16	Using the technique of refuting irrational ideas that clients hold	2.68	.537	9
17	Using the clarification method to reach a state of insight into the reality of vaccines and the rumours circulating around them	2.74	.531	6
18	Using the modeling method by showing a video of a rumor circulating among people and its negative effects	2.73	.515	7
19	Using the role-playing method by representing the roles of the publisher of the rumor, the role of the person responsible for confronting it, and anticipating the negative effects of the rumor	2.61	.575	14
20	Self-control method for the ability to control negative emotions	2.62	.572	13
21	cognitive homework method	2.52	.585	16

## 6. Conclusion

In conclusion, the study explores the perceptions of medical professionals and social workers in Makkah Al-Mukarramah hospitals about COVID-19 vaccine rumors. Postgraduate qualifications were a significant factor, with the AstraZeneca vaccine being the most widely discussed. The study highlights the role of social media in spreading vaccine-related information and the need for targeted interventions. Medical social workers play a crucial role in dispelling misconceptions and providing psychological support. The study recommends active awareness campaigns, professional development opportunities, and collaboration between medical institutions and community organizations.

## 7. Recommendations

This study suggests that health workers, particularly social workers, should be emphasized in promoting community health security. It recommends awareness campaigns to educate patients about misinformation and vaccination as a key public health concern. Continuous education and training programs are also crucial. Social workers should develop skills to counter vaccine-related rumors on social media. Collaborative efforts between medical institutes and community organizations can build a united front against skepticism. The power of media can ensure widespread dissemination of accurate

information, emphasizing the importance of immunizations. Health workers can also foster informed decision-making, community resilience, and overall health through a multi-dimensional approach.

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