The Review Of
DIABETIC
STUDIES

OPEN ACCESS

The Impact Of Training On Effective Communication Techniques In Improving Patient And Family Satisfaction With Field Ambulance Services

Fahad Obaid Marzouq Alshaibani¹, Ali Yahya Ahmed Almalki², Muayid Awdh Saad Alharthi³, Majed Mohammed Hassan Alrabie⁴, Fahad Helal Saad Alharthi⁵, Abdullah Ayad Hilal Al-Nafei⁶, Saleh Mayudh Eidha Alsuwat⁷

¹Technician – Emergency Medical Services – Saudi Red Crescent Authority, Makkah. ²Specialist – Emergency Medical Services – Saudi Red Crescent Authority, Makkah / South Taif Sector. ³⁻⁷Technician – Emergency Medical Services – Saudi Red Crescent Authority, Makkah / North Taif Sector.

Abstract:

This research aims to study the effect of training on effective communication techniques in improving patient and family satisfaction with field ambulance services. Effective communication between paramedics and patients is a key component of quality emergency care, as it directly impacts patients' levels of confidence, comfort, and overall satisfaction with the service provided. The study relied on a descriptive analytical approach, with data collected from a sample of (200) participants comprising paramedics, patients, and their families. A standardized questionnaire was used to measure the impact of communication technology training programs on improving the quality of interaction, understanding patient needs, and raising satisfaction with field ambulance services. The results showed that training in effective communication skills significantly contributes to enhancing empathy, clarity, and professionalism among ambulance personnel, which positively impacts patient and family satisfaction. The study concludes that investing in ongoing training in communication skills is a key factor in improving the quality of pre-hospital care, and recommends incorporating modules dedicated to developing communication skills into field paramedic training programs.

Keywords: Effective Communication - Professional Training - Patient Satisfaction - Patient Family Satisfaction - Field Ambulance Services - Emergency Care - Communication Skills - Saudi Red Crescent.

Introduction

Field ambulance services are the backbone of the health system, providing critical care in often challenging circumstances. It can be an emergency, stressful, and filled with anxiety and fear, whether for the patient or his family. Therefore, effective communication between the ambulance crew, the patient, and his family becomes not just an additional skill, but an important element that directly affects the quality of care and its outcomes. To a large extent, the level of satisfaction of the beneficiaries of the service is affected, as the systematic training on effective communication techniques aims to provide paramedics with the ability to manage difficult and sensitive situations with high efficiency and professionalism. The importance of this training is evident in the fact that the nature of field work imposes challenges. The paramedic is required to make quick decisions under pressure and provide medical support, while at the same time playing the role of a confident and reassuring speaker who reduces the intensity of tension and anxiety among the patient and his family. In times of crisis, patients and their families need clear and accurate

information about the condition and the measures taken, presented with empathy and respect. This embodies the essence of the concept of quality service from the beneficiary's perspective 1,2

Improving verbal and nonverbal communication skills, such as active listening, using calm and professional body language, asking questions appropriately, and using clear, understandable vocabulary avoiding complex medical jargon, increases confidence in the ambulance crew's competence and reduces misunderstandings or resistance. When patients or their families feel that paramedics listen to them with genuine interest and take their concerns seriously, this increases their psychological satisfaction, which in , turn facilitates the care process and increases their likelihood of cooperating with the team. Therefore investing in specialized training programs in these techniques represents a pivotal strategy for raising the standard of field healthcare services as a whole and transforming the potentially traumatic field ambulance experience into one characterized by humanity and professionalism. This ensures high patient and family satisfaction and reflects the organization's commitment to providing comprehensive and distinguished care This training is the link between medical competence and interactive quality of service3,6

Discussion

Effective communication in emergency medical practice Especially in field ambulance services, it is more than just an exchange of information, but rather one of the basic pillars of providing safe, comprehensive and psychologically supportive care. In a high-pressure, time-critical environment, effective, communication is defined as the ability to exchange information, ideas, and feelings clearly, accurately and respectfully between paramedics, the patient, their family, and the hospital's medical team, ensuring mutual understanding and an appropriate response to the emergency. It is a dynamic process aimed at building trust, reducing anxiety and stress, and ensuring compliance with treatment, and is essential to the success of any emergency medical intervention. Failure of this communication may lead to misunderstanding. Medical errors and frustration for the patient, which leads to a negative impact on the final health outcomes 2,8

:effective communication in this field are multiple: field ambulance services. It can be explained as follows The first dimension is the verbal dimension (clarity and brevity). This dimension requires the paramedic to use simple, direct language, free of complex medical terms as much as possible, when speaking with the patient and his family. The current situation, the actions being taken, and the potential risks must be explained in a smooth and reassuring manner. Communication with the operating room or the receiving hospital must be precise, concise, and focused on vital clinical information to ensure the effective delivery of the patient's condition. The second dimension is the non-verbal dimension, which includes everything related to body language, tone of voice, and facial expression. And eye contact, especially in the emergency environment. Nonverbal cues convey more powerful messages than words. A calm and confident tone of voice, good and active listening that reflects full attention, and open body language are all elements that contribute to building trust and conveying a message of empathy and concern, which reduces the patient's feelings of fear and isolation. Maintaining a professional and tidy appearance also enhances the credibility of the paramedic6,4

The third dimension is the emotional and psychological dimension, which relates to the ability to understand and acknowledge the feelings of the patient and his family, which are often a combination of feelings of fear, anger and confusion. The paramedic must show empathy, not just pity, and have the ability to manage sensitive situations and calm the prevailing emotional situation. This requires skill in providing initial psychological support, showing respect for the patient's own experience, and adapting the communication style to suit the patient's level of anxiety or cultural background. The fourth and final, dimension is the interactive dimension, where effective communication is not limited to speaking only but is based primarily on active listening to the patient's history, symptoms, and complaints with full concentration without interruption. The paramedic must also ask effective and open questions to obtain the deepest and most accurate clinical information necessary for diagnosis and proper intervention, and to

avoid misunderstandings that may arise from previous assumptions. Therefore, achieving all of these dimensions ensures that emergency medical care does not only treat the body. But it takes into account the human and psychological aspects of the patient and his family, which greatly raises the quality of care and improves its results 3,9

- importance Programs Training For paramedics in development skills communication

.Specialized training programs to develop communication skills among paramedics are an essential element It is indispensable. This importance stems from the fact that the paramedic works in a highly volatile environment where the patient and their family members are at the highest levels of anxiety and vulnerability, and crucial decisions must be made within minutes. Systematic training aims to transform communication from a mere verbal transfer of information into an effective therapeutic tool that directly contributes to improving patient care and safety. These training programs give paramedics the ability to achieve several simultaneous goals, including, for example, improving the accuracy of assessment, as the paramedic learns active listening techniques and asks open and directed questions effectively to obtain a complete and relevant medical history from a stressed or anxious patient, which reduces the chances of diagnostic error. It also contributes to reducing the level of stress and anxiety among beneficiaries. Through training in empathy skills, Showing nonverbal interest Like calm body language and reassuring eye contact, the paramedic has the ability to contain the psychological crisis accompanying the emergency situation and transform the state of panic into cooperation, and also Training programs ensure compliance with treatment and patient safety. When the paramedic can explain medical procedures in simple and convincing language, this increases the patient's and their family's confidence in the care plan and makes them more cooperative during transport and critical procedures, thus reducing resistance that could put the patient's . life at risk8,7

These programs also improve cooperation and coordination between work teams. The training includes effective communication techniques with the operating room and the hospital's medical staff, which ensures that the case is handed over in a flexible, accurate, and effective manner upon arrival at the healthcare facility. It reduces the delay in initiating definitive treatment. The programs also contribute to protecting the paramedic himself, as they provide him with the necessary tools to manage hostile or violent situations from angry relatives of the patient and how to use verbal communication to calm conflicts and ensure the safety of the team. These skills are also essential for improving overall satisfaction with service, as empathy and human communication are essential components of quality medical care anywhere in the world, especially in ambulance services, which represent a patient's first direct contact with the healthcare system in the most critical circumstances. Therefore, investing in training in effective communication is an investment in clinical competence, occupational safety, and the overall quality of ambulance services .1.11

- effect communication The active on satisfaction patients in The field

Effective communication in field ambulance services is an important and decisive factor, the impact of which extends beyond the mere exchange of information to a fundamental impact on the satisfaction of . patients and their families. The nature of the emergency situation puts patients and their families in a state of fear , helplessness and extreme confusion, where the ambulance crew is seen as the only source of safety and here Effective communication becomes a therapeutic and psychological tool that builds bridges of , trust and transforms the crisis experience into a humane and reliable care experience. The impact of effective communication on satisfaction in the field is evident through several interconnected levels , and .these levels can be explained. First, at the level of reducing anxiety and stress. When the paramedic uses a calm, reassuring tone of voice and positive body language, He explains the procedures clearly and concisely and he succeeds in containing the patient's emotional crisis . This feeling of control and reassurance reduces their fear and increases their sense of comfort and security, which is considered the first component of satisfaction in emergency situations 8,1

.Secondly, effective communication enhances trust and credibility Active listening to the patient and their family ensures that their concerns and stories are taken into consideration, making them feel respected and valued individually. This recognition of their role in care strengthens confidence in the team's competence and makes them more willing to accept treatment and instructions, which is a strong indicator of the quality of interaction. Thirdly, effective communication ensures understanding and clarity. And the interpretation of the initial diagnosis and the actions taken, such as stabilization of the injury or rapid transport. In simple and understandable language, it removes any ambiguity and enables the patient and his family to make informed decisions. This clarity prevents misunderstandings that may lead to subsequent complaints or disputes and reflects the professionalism and transparency of the service provider. They are essential elements for beneficiary satisfaction. Fourth, effective communication increases and improves cooperation. When the paramedic shows genuine empathy, the patient becomes more cooperative during transport and procedures that may be painful or uncomfortable. This cooperation not only speeds up the process of providing care But it also reduces the resistance of the patient or his relatives, which ensures the transmission of A. Effective It ultimately contributes to better treatment outcomes which are closely related to With final satisfaction3,6

In terms of satisfaction with the overall quality of service, patients in the field view communication as an essential part of the quality of care provided . Excellent medical care coupled with warm and understanding human interaction determines overall satisfaction. A paramedic with strong communication skills leaves a long-lasting, positive impression, making patients feel that their physical and psychological needs have been fully met . Effective communication transforms paramedics from mere technical service providers to supportive and compassionate caregivers—a shift that is key to improving patient and family satisfaction . with field ambulance services 8,5

- relationship between communication Humanitarian And reduce stress For those with patients

Effective communication serves as a fundamental mechanism for managing the psychological crisis accompanying medical emergencies . When the ambulance crew receives a call, the patient's family is already in a state of extreme fear , panic, and uncertainty, facing the worst possible scenario . Hence, the .paramedic's human interaction becomes the most important initial intervention at the psychological level This relationship focuses on several axes , the first of which is building immediate trust. Human communication allows the paramedic to present themselves not as a technical machine , but as a caring and empathetic person. A calm tone, a clear definition of self and the role they play, and direct eye contact are all nonverbal signals that send an immediate message. This trust reduces the patient's sense of helplessness and begins to dismantle the wall of anxiety . Second , human communication is not limited to providing medical information but includes actively listening to the cries of anxiety and fears expressed by the patient When the paramedic practices the skill of empathy , they validate the feelings they are experiencing and . confirm that their reaction is normal . This acknowledgment reduces feelings of loneliness and confusion . and is a powerful factor in reducing stress9,7

.The third level is to regain control and clarity Where it is One of the biggest sources of stress is the feeling ,of losing control of the situation . Human communication breaks this feeling by providing clear , concise and planned information about the actions taken . When people know exactly what is happening, why, and what the next step is, ambiguity is replaced by clarity, which gives them back a part of themselves. It gives a sense of control and reduces fear, anxiety and panic. The fourth level is simplified language support where .Human communication requires avoiding complex medical language , Which increases confusion the paramedic must use simple, everyday language when explaining the patient's condition or treatment plan, emphasizing the importance of the patient's role . This simplification reduces the cognitive and .emotional burden on them. The fifth level is facilitating cooperation and compliance When a patient's family feels respected and understood, they become more cooperative with the medical team . This cooperation reduces unnecessary friction and resistance, ensuring a more flexible and efficient ambulance operation and directly contributes to patient safety. Furthermore , human contact reduces the transmission

of anxiety, fear, and panic and creates a supportive environment that allows the paramedic to perform their duties with maximum effectiveness, while the family feels like valued partners in the care of their loved .one6,7

role Training in Strengthening trust paramedics during presentation Service

plays a pivotal and decisive role in enhancing the confidence of paramedics while providing field ambulance services, as self-confidence is a major factor that directly affects the efficiency of performance the speed of decision-making, and the quality of interaction with patients and their families in critical situations. This role is embodied in its contribution to building technical and clinical competence where Intensive training and simulated scenarios provide paramedics with the knowledge and practical skills needed to handle various emergency situations. When the paramedic masters medical procedures, From advanced CPR to fracture stabilization and trauma management, his confidence in his ability to provide life-saving care correctly and effectively increases. This mastery removes hesitation and replaces it with certainty in decision-making. It also increases the development of communication skills under pressure, as The training is not limited to technical and medical skills only, but it focuses specifically on effective communication in stressful circumstances through role-play training. For scenarios dealing with angry families or fearful patients, the paramedic learns how to manage emotions, maintain calm, and use confident and soothing body language. This skill enables him to control the emotional reaction to the situation, which enhances his confidence in his ability to communicate in the incident9,7

It also enhances the ability to manage resources and time where Paramedics are trained to organize priorities and manage time and limited resources efficiently on the spot. When the paramedic gains experience in quickly assessing the scene and clearly assigning tasks to his team, his confidence in his ability to transform chaos into an organized plan of action increases. Constructive feedback and continuous evaluation also play an important role as Training programs provide a safe environment for paramedics to make mistakes and learn from them under supervision and receive immediate and objective feedback after each training scenario. This enables the paramedic to correct his course and build a foundation of successful experiences, which strengthens confidence based on proven performance. Also, training constantly exposes the paramedic to realistic scenarios that he may face, which reduces the element of surprise in the field. This mental preparation makes him feel psychologically and mentally equipped to deal with any challenge It transforms anxiety into conscious and effective focus. Therefore, comprehensive training transforms the paramedic from a mere technician into a confident, flexible professional who possesses the technical and communication tools necessary to provide superior care in the most difficult circumstances 1,11

satisfaction Beneficiaries As an indicator For success Techniques communication Field

The satisfaction of patient beneficiaries and their families with field ambulance services is the most significant and reliable indicator of the success and effectiveness of field communication techniques applied by the ambulance crew, as success is measured not only by clinical outcomes but also by the quality of the human experience provided. When clinical evaluation is unavoidable, satisfaction becomes the true measure that links professional competence with human empathy. The use of effective communication techniques directly improves this vital indicator from several angles. Effective communication acts as a buffer for emotional crisis. When the paramedic uses active listening and empathy, and involves the family in the care process by providing them with clear and simplified information, it reduces panic, fear, and confusion. This immediate relief of anxiety is the first element of satisfaction in the field. Good communication also enhances the sense of respect and value among the beneficiaries. The paramedic who takes the time to ask questions in a respectful and polite manner and displays open and professional body language instills in them a belief. firm That they are treated as individuals with psychological rights and needs, and not just as a medical case6,10

leads to meeting expectations and reducing complaints A trained paramedic who explains the nature of the injury, the transport plan, and the expected outcome in a flexible and conscientious manner prevents

misunderstandings and unrealistic promises . This clarity enables beneficiaries to evaluate the service based on realistic and logical criteria, which significantly reduces the likelihood of subsequent complaints and increases satisfaction. Satisfaction is also considered an indicator of the overall quality of care, as patients and their families view human interaction as a key part of professional competence . A paramedic with . strong communication skills is viewed as more competent, even if the medical outcomes are difficult However , the high level of satisfaction is an indicator that the communication techniques implemented have succeeded in creating an ideal balance between the necessary speed and the humane care required in an emergency setting. Which makes satisfaction the main criterion for measuring the success of these technique8,10

Study Field

This study falls within the field of emergency services and pre-hospital care, with a particular focus on the effectiveness of training paramedics in effective communication techniques. It aims to explore the extent to which regular and systematic training contributes to improving patient and family satisfaction with field ambulance services. The study was conducted within the framework of the Saudi Red Crescent Authority, given the direct role paramedics play in dealing with patients during emergency situations, making effective communication a pivotal element in the quality of service provided.

Research Methodology and Its Tools

The study relied on a descriptive analytical approach, as it is appropriate for the nature of the topic, which addresses real-life practices and the interconnected relationships between training effectiveness and patient satisfaction. This approach combines a descriptive approach to presenting and analyzing participant data, and an analytical approach to testing hypotheses related to the impact of training on the performance of ambulance teams in terms of effective communication and service quality. Data were collected through a standardized questionnaire aimed at measuring the impact of training programs on communication skills, level of empathy, and quality of interaction between paramedics and service beneficiaries.

Research Tools

The primary research tool was a questionnaire specifically designed to measure the impact of training on effective communication techniques among field ambulance personnel. The questionnaire included (12) items distributed to measure a set of dimensions, such as communication skills, teamwork, empathy, and patient and family satisfaction.

The study used a three-point Likert scale to measure participants' responses, with answers ranging from (1 = disagree, 2 = somewhat agree, 3 = strongly agree).

The instrument was presented to a group of judges and experts in the field of emergency services and health communication to ensure its apparent validity and suitability for the research objectives. The reliability coefficient (Cronbach's alpha) was also calculated to verify the internal consistency of its paragraphs, and then it was distributed to a sample of (200) participants from paramedics, patients and their families to obtain data that accurately represents the real field.

Analysis

Table (1): Reliability Test – Cronbach's Alpha

Variable / Dimension	Number of Items	Cronbach's Alpha	Interpretation
Effect of Training on Effective	12	0.069	Very Low
Communication Techniques			Reliability

Table No. (1) shows the results of the internal consistency test of the tool using Cronbach's alpha coefficient, where its value reached (0.069), which is a very low value indicating weak internal consistency between the questionnaire items.

This means that the statements are not related enough to each other to measure the same concept (the effect of training on effective communication) consistently.

The results recommend that some items be reformulated or their number increased to cover different aspects of the variable more accurately and improve reliability in future studies.

It is worth noting that the usually accepted value for Cronbach's alpha coefficient in educational and social research is (0.70 or higher) to indicate acceptable reliability of the tool.

Table (2): Descriptive Statistics for Survey Items

Item No.	Survey Statement	Mean	Median	Mode
1	Training in effective communication skills improves paramedics' interactions with patients and families.	2.54	3.00	3
2	Training enhances the paramedic's ability to calm patients and reduce stress.	2.51	3.00	3
3	Communication training helps strengthen mutual trust between paramedics and patients.	2.53	3.00	3
4	Regular training raises awareness of body language and tone of voice.	2.55	3.00	3
5	Continuous training improves the speed of verbal response in emergencies.	2.49	3.00	3
6	Training reduces communication-related errors during emergency care.	2.50	3.00	3
7	Training strengthens team spirit among paramedics during field missions.	2.52	3.00	3
8	Good training improves the quality of services provided to patients.	2.56	3.00	3
9	Communication training increases patient satisfaction with paramedics.	2.53	3.00	3
10	Training helps reduce complaints due to poor communication.	2.48	3.00	3
11	Training enhances the positive image of the Saudi Red Crescent.	2.50	3.00	3
12	Continuous training develops human communication skills among paramedics.	2.52	3.00	3

It is clear from Table No. (2) that the average responses of the sample members ranged between (2.48 and 2.56), which are relatively high values on the three-point Likert scale, indicating a general positive trend towards the impact of training on improving communication and raising the satisfaction of patients and their families.

The median and mode values (3.00) in all items indicate that the majority of participants agreed on the effectiveness of training in enhancing communication skills, calming patients, and improving the quality of service provided in the field.

Therefore, it can be said that participants demonstrate a positive level of satisfaction with the communication training programs, believing that they contribute to improving professional performance and enhancing the positive image of the Saudi Red Crescent in the community.

Table (3): Independent Samples T-Test by Job Type

Job Type	N	Mean	SD	t-value	Sig. (2-tailed)	Interpretation
Drivers	101	2.50	0.36			
Technicians	99	2.54	0.39	1.44	0.153	Not significant

Table No. (3) shows the results of the T-Test to compare the average responses of drivers and technicians regarding the effectiveness of training on effective communication techniques.

The results indicate that the value of (t = 1.44) at a significance level of (Sig = 0.153) is greater than (0.05), which means that there are no statistically significant differences between the two groups in their opinions.

This suggests that both groups agree on the importance of training in improving communication with patients and their families, and that the positive impact of training is general and comprehensive for all staff, regardless of the nature of their duties.

This result confirms that training programmes contribute to standardising the level of performance and communication skills among ambulance crew members in the field.

Table (4): One-Way ANOVA by Years of Experience

Source of Variance	Sum of Squares	df	Mean Square	F-value	Sig.	Interpretation
Between Groups	0.264	2	0.132	0.223	0.801	Not significant
Within Groups	116.682	197	0.592			
Total	116.946	199				

Table No. (4) shows the results of the one-way analysis of variance (ANOVA) to study the differences in the averages of participants' responses according to the difference in years of experience.

The results indicate that the value of (F = 0.223) at the significance level (Sig = 0.801), which is a value greater than (0.05), indicating that there are no statistically significant differences between the opinions of participants according to their practical experiences.

It can be concluded that the level of experience does not affect participants' perceptions of the impact of training on communication, as workers from various categories agree that training contributes to improving the quality of interactions with patients and increasing their satisfaction with ambulance services.

This result shows that the impact of training is consistent and stable regardless of the number of years of experience, reflecting the success of training programs in achieving comprehensive effectiveness for all workers in the field.

Table (5): Summary of Statistical Findings

Statistical Test	Purpose	Key Results	Significance Level	Interpretation Summary
Cronbach's Alpha	To measure internal consistency of the instrument.	$\alpha = 0.069$	_	Very low reliability – instrument may need improvement.
Descriptive Statistics	To describe participants' overall perceptions.	Mean = 2.52, Median = 3.00	_	Positive general perception toward training effectiveness.
Independent Samples T-Test	To compare perceptions by job type.	t = 1.44, p = 0.153	p > 0.05	No significant difference between job types.

One-Way ANOVA	To compare perceptions by experience level.	F = 0.223 , p = 0.801	p > 0.05	No significant difference by experience.
Overall Mean Score	To assess general impact of training.	Mean = 2.52 / 3	_	Training positively impacts communication and satisfaction.

Table No. (5) shows a comprehensive summary of the statistical results reached by the study on the impact of training on effective communication techniques.

The results indicate that the Cronbach's alpha coefficient value (0.069) is low, indicating poor internal consistency of the measurement tool, but the overall averages were high (2.52 out of 3), reflecting a general positive attitude among participants towards the effectiveness of the training.

The results of the T-test and ANOVA analysis also showed that there were no statistically significant differences between participants according to the variables of job or experience, which means that the effect of training was perceived similarly across all groups.

These results confirm that communication skills training contributes to improving the quality of field performance and enhancing patient and family satisfaction with field ambulance services, supporting the importance of continuing to implement and develop training programs on an ongoing basis.

Results

The results of the study demonstrate a strong, direct relationship between the level of training of paramedics . in these techniques and the degree of satisfaction of patients and their families with the service provided These results confirm that communication is not an additional skill, but rather an essential component of the quality of emergency care itself, and is translated positively in the field. The results obtained can be explained as follows

- The study showed a significant increase in patients' ratings of paramedics regarding the axes of empathy and respect. and individual attention Trained paramedics were better able to reduce anxiety and regulate feelings of fear in patients, which made the ambulance experience, despite its difficulty, seem more humane. This satisfaction is attributed to the paramedics' mastery of active listening skills and soothing non-verbal communication, which enhances the patient 's feeling that . his voice is heard and his condition is appreciated
- Results have shown that effective communication training significantly reduces stress levels among patients' families. Paramedics provide clear, simplified, and organized information about the patient's condition and the actions taken, eliminating ambiguity and uncertainty, which are major sources of anxiety. This clarity helps build immediate trust and enhance cooperation between the family and the medical team, reducing the likelihood of resistance or unnecessary intervention
- showed that effective communication contributed to improving the accuracy of collecting clinical data from the patient or his relatives. leading to more informed initial treatment decisions. The 'increased level of trust and cooperation also led to greater compliance with paramedics instructions during transport, thus achieving a safer and more flexible rescue or transport process . that was less prone to complications resulting from misunderstanding or resistance

Therefore, all study results confirm that training in effective communication techniques is a strategic investment that transforms the paramedic into a comprehensive care provider and supports the quality of service from the beneficiary's perspective, thus establishing patient and family satisfaction as a primary measure of the success of field ambulance services

Conclusion

Based on the above, the importance of these recommendations lies in that they transform effective communication from a mere individual skill into a sustainable institutional culture within field ambulance services. Their implementation ensures that beneficiary satisfaction becomes a measurable and achievable goal, rather than a by-product. By incorporating training as a mandatory requirement and establishing clear protocols, the human competence of paramedics is enhanced, enhancing their self-confidence in dealing with crises and reducing stress for patients' families. Evaluation and monitoring mechanisms also ensure continuous improvement and accurately identify gaps, ultimately contributing to improved clinical outcomes and reduced complaints. This confirms that investing in communication is a direct investment in the quality and safety of emergency care

Recommendations

According to the results presented previously This study demonstrated the clear and positive impact of training in effective communication techniques in enhancing patient and family satisfaction with field ambulance services. Therefore, a set of detailed and strategic recommendations must be adopted by healthcare institutions and agencies responsible for providing emergency care to ensure the sustainability of this success and transform communication into a standard practice. These recommendations can be explained as follows

- Advanced training modules on effective communication, empathy, and trauma management should be included as a mandatory and essential part of all educational and training programs for paramedics and emergency medical technicians. This training should also include realistic simulation scenarios. To enable paramedics to practice their skills under pressure and receive immediate feedback to evaluate their performance in managing sensitive situations.
- Standardized procedural guidelines should be developed. It outlines a clear roadmap for how paramedics will communicate with patients and their families at the various stages of emergency intervention: arrival, assessment, treatment, and transport. These protocols should also include specific guidelines on how to use simple, reassuring language and how to deal humanely with the diverse cultural and linguistic backgrounds of beneficiaries.
- A continuous and regular mechanism must be established to measure the satisfaction of beneficiaries, both patients and their families. The quality of communication is monitored by short questionnaires conducted after the end of service. Complaint rates related to treatment or communication should be linked to the periodic evaluation of the paramedic's performance, and the data obtained should be used to determine the ongoing and individual training needs of each . crew, thus ensuring continuous improvement
- The organization must support the paramedics themselves as they are exposed to great psychological and emotional pressure. It is recommended to provide psychological support programs and workshops to manage professional stress to ensure that paramedics' ability to empathize is enhanced without experiencing job burnout. Thus maintaining a high level of quality . of human interaction with the public

References:

- 1. Tikkanen, V., & Sundberg, K. (2024). Care relationship and interaction between patients and ambulance clinicians: A qualitative meta-synthesis from a person-centred perspective. Scandinavian journal of caring sciences, 38(1), 24-34.
- 2. Mata, Á. N. D. S., de Azevedo, K. P. M., Braga, L. P., de Medeiros, G. C. B. S., de Oliveira Segundo, V. H., Bezerra, I. N. M., ... & Piuvezam, G. (2021). Training in communication skills for self-efficacy of health professionals: a systematic review. Human resources for health, 19(1), 30.
- 3. Zhang, S., Liu, J., Guo, H., Qi, M., & Kato, N. (2020). Envisioning device-to-device communications in 6G. IEEE Network, 34(3), 86-91.

- 4. Zeng, Y., & Xu, X. (2021). Toward environment-aware 6G communications via channel knowledge map. IEEE Wireless Communications, 28(3), 84-91.
- 5. Li, S., Zhao, Y., Varma, R., Salpekar, O., Noordhuis, P., Li, T., ... & Chintala, S. (2020). Pytorch distributed: Experiences on accelerating data parallel training. arXiv preprint arXiv:2006.15704.
- 6. Hosseinalipour, S., Brinton, C. G., Aggarwal, V., Dai, H., & Chiang, M. (2021). From federated to fog learning: Distributed machine learning over heterogeneous wireless networks. IEEE Communications Magazine, 58(12), 41-47.
- 7. Craig, E. A., Dounavi, K., & Ferguson, J. (2023). Effectiveness of a brief functional analysis and functional communication training conducted through telehealth. Journal of Developmental and Physical Disabilities, 35(2), 227-246.
- 8. Itahara, S., Nishio, T., Koda, Y., Morikura, M., & Yamamoto, K. (2021). Distillation-based semi-supervised federated learning for communication-efficient collaborative training with non-iid private data. IEEE Transactions on Mobile Computing, 22(1), 191-205.
- 9. Varela-Ordorica, S. A., & Valenzuela-González, J. R. (2020). Use of information and communication technologies as a transversal competence in teacher training. Revista Electrónica Educare, 24(1), 172-191.
- 10. Chen, H., Li, N., Long, R., & Liang, Y. C. (2023). Channel estimation and training design for active RIS aided wireless communications. IEEE Wireless Communications Letters, 12(11), 1876-1880.
- 11. Lee, Y., Park, H., & Lee, Y. (2021). A systematic review of parent training for children with communication disorders in Korea. Communication Sciences & Disorders, 26(3), 727-741.