Original Article :

How Training Needs are Assessed in Health Organizations: An Exploratory Study

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Abstract

Background and Aims:

Health care organizations seek a qualified and competent workforce to achieve their goals. Implementing effective training programs will improve or maintain desired outcomes. Training is valuable in fulfilling many goals in healthcare, with patient safety being a central purpose. Ideally, training serves relevant needs, and assessment to fetch such needs is a crucial initial step. Training need assessment (TNA) is a systematic process that utilizes data from different sources to develop and evaluate training activities related to skill and Knowledge, aiming to provide adequate training to target individuals with reasonable costs.

Methods:

This study aims to explore the status of TNA practice applied by trainers in health-related institutions in Saudi Arabia. The cross-sectional study was conducted in the training departments in Health institutions in Saudi Arabia. The sample size was (103 subjects). In addition, the research team developed an online survey as a data collection tool based on a literature review.

Results:

The result shows that most trainers have more than ten years of experience in training, and 52% of them (23 out of 44 expert trainers) apply scientific or professional TNA upon exploring the Knowledge of trainers on TNA structure. The majority agrees with "TNA aligns training with" organizational goals (88%), organizational needs (87%), performance gaps (82%), and target population needs (82%).

Conclusions:

Follow-up studies are required with a larger heterogeneous study population and more detailed data acquisition tools. Also, we recommend establishing a healthcare training committee of expert trainers to create a harmonized framework for TNA tools development using the best available evidence and expert consensus. This should serve as a guide for healthcare trainers in Saudi Arabia and a ground for collaborative work with international committees.

Keywords:

Training need assessment, Gap analysis, trainers.

Introduction

Health care organizations seek a qualified and competent workforce to achieve their goals. Implementing effective training programs will improve or maintain desired outcomes. Training is valuable in fulfilling many goals in healthcare, with patient safety being a central purpose.

Investing in training reflects on the healthcare workers' satisfaction, employee retention and recruiting, and improves patient care [1]. Furthermore, training of healthcare teams is practical regardless of the delivery method, professional stage of trainees, at a fair cost, and is designed based on needs [1]. In one example, a group of primary health care physicians was trained to better recognize psychiatric illnesses [2]. Another study aimed to improve hand hygiene within Intensive care units [3]. Also, simulation-based training was conducted for healthcare workers to acquire the competency in Ebola Personal Protective Equipment [4]. These studies were based on specific needs, and training was effective across different settings.

Ideally, training serves relevant needs, and assessment to fetch such needs is a crucial initial step. Training need assessment (TNA) is a systematic process that utilizes data from different sources to develop and evaluate training activities related to skill, and knowledge, aiming to provide effective training to target individuals with reasonable costs [5, 10,11,19]. The training needs could be delineated through analyses of performance, organizational goals, job tasks, and individuals [5, 6, 7, 10, 11, 17, 18] . The organizational analysis considers Goals, future skills, Labor pool and regulations, and how they could be achieved through training [10, 11, 18]. At the task level, the analysis recognizes job knowledge and competencies mandated to perform effectively [10, 11, 18] . Finally, in individual analysis, employees are interviewed or tested to determine their skill or knowledge and determine which employee should engage in training [10, 12,18] .

Effective TNA is based on systematic models and elements that enable effective training activities planning [23] . There are multiple steps to perform an effective training needs assessment. The process starts by setting assessment goals, determining the target group, availability of resources, and management support [13] . Then, review and select assessment methods and instruments, consider time frames and implement [13,14] . Finally, the process ends by collecting and analyzing feedback, presenting inferences and recommendations [14] .

There are many instruments for training need assessment. Interviews can give valuable feedback, and surveying examines

competencies and knowledge essential to the performer [10,12,13,21]. Meetings with focus groups from various departments and at multiple levels within the organizations elicit particular needs [12,21]. Document examination and performance appraisal determine if problems exist and how they can be solved by training [12]. Also, Training Advisory committees have a role in identifying training needs and guiding the TNA process [21].

Well-designed training programs will enhance the commitment to the training and development activities, increase the visibility of the training activities, tackle main organizational issues, and use the resources appropriately [11].

In Saudi Arabia, TNA practice in health care seems variable and usually addressed by individual efforts utilizing available literature [8,9]. Therefore, this study aims to explore the status of TNA practice applied by trainers in health-related institutions in Riyadh, Saudi Arabia. The ultimate goal is providing the ground upon which more research is conducted, and guidelines are formulated.

Methods

The quantitative cross-sectional study aimed at exploring the current situation regarding the training need assessment conducted in the training departments in Health institutions under the authority of the ministry of health in Riyadh, Saudi Arabia. An eligible 10 out of 20 training departments were selected randomly. However, the individual trainers within the department were selected purposively. The sample size was (178), and the response rate was (58%, 103 subjects). The study included participants working in training and education departments, developing training plans, participating as trainers in training activities, and conducting training need assessments.

The research team developed an online survey as a data collection tool based on a literature review. The reliability study of the tool revealed a Cronbach alpha of (0.79) and validity was assessed by two academic experts for each survey item. The questionnaire contained four parts: part I, about general information related to participants' experience in training. Part II assesses the knowledge related to TNA characteristics. Part III asks about the trainer's application of TNA, and part IV asks about the trainer's attitude toward TNA. The Likert scale was primarily used in this survey, and data were analyzed using SPSS version 24. In addition, the frequency and percentage were used to present the participant's knowledge and skill, and Chi-Square was used to look for the association between survey items.

This research project was conducted following ethical research principles and the ministry of health's policies and guidelines. IRB (Institutional Review Board) approval log # is (20-173M), and the study was only initiated after receiving the approval. The consent was explained using clear language and emphasized voluntary participation. Trainers were given primary investigator contact information to communicate as needed. The study ensured the anonymity of information collected through data de-identification as they are not required to mention their identity in the survey. The primary investigator collected, stored, and accessed the data exclusively. There is no funding received for this project, and a conflict of interest does not exist.

Result

The number of respondents in this study is 103 trainers, the result shows that majority of trainers have more than 10 years of experience in training, and 52% of them (23 out of 44 expert trainers) apply scientific or professional TNA (Figure 1).

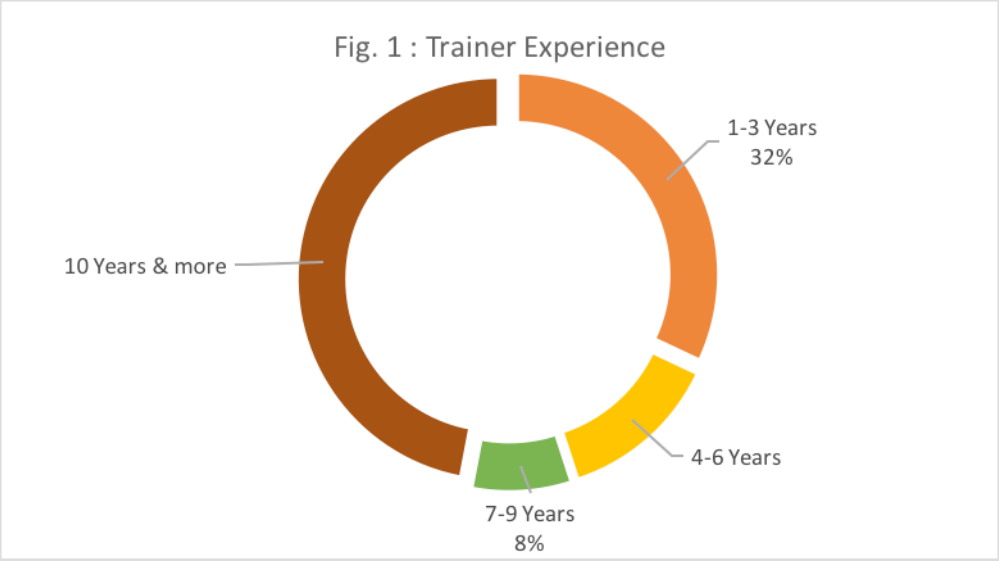


Figure 1: the participants' years of experience in training.

Regarding the scope of training (38 %) of trainers conduct whole organizational training activities and (62 %) of trainers perform departmental training activities The study found that (55.7%) of trainers reported applying scientific or professional TNA tool, and (46 %) consider MOH (Ministry of health) the source of such tool. Other trainers (21 %) are using tools based on their experience and literature (see table .1.1).

Table 1.1: the participants general information (scope of training, apply TNA and source of TNA).

Table (1.1): General Information			
Items		N	%
Scope of training	intra departmental	37	37.0
	inter departmental	25	25.0
	whole organization	38	38.0
scientific or professional system for TNA	Applying TNA	54	55.7
Source of TNA system	Ministry of health	46	46.0
	Literature review	14	14.0
	Personal tool	7	7.0
	All above	2	2.0
	Other	1	1.0

Upon exploring the Knowledge of trainers on TNA structure. The majority agrees with the statements "TNA aligns training with" organizational goals (88%), organizational needs (87%), performance gaps (82%), and target population needs (82%) (see table.1.2).

Table 1.2: Assess the participant Knowledge toward training needs assessment.

Table (1.2): Training need assessment knowledge						
Characteristic of effective TNA	Agree		Not Sure		Disagree	
	F	%	F	%	f	%
TNA aligns training with organizational goals	88	88	10	10	2	2
TNA aligns training with resources effectively	81	81	16	16	3	3
TNA aligns training with target population perspective	82	82	18	18	0	0
TNA establishes a benchmark for job success	81	81	11	11	7	7
TNA aligns training with context necessity	75	75	18	18	0	0
TNA aligns training with organizational needs	87	87	10	10	3	3
TNA aligns training with Identified performance gaps	82	82	13	13	5	5

When prioritizing training needs, many trainers look at the effect on individual needs (86%), quality practice (85%), and career development (82%). When performing TNA, most trainers base the TNA on how it fulfills a required competency (78%), how it relates to the target audience (73%), and the institute goals (72 %). Around (65 %) would base TNA on the institute's needs, and (57%) on cost-effectiveness (see table .1.3).

Regarding evaluation of training success, trainers consider trainee feedback (86%), Knowledge and Skill Mastery (84%), Needs Met (83%), and Performance Change (77%) (see table .1.4). The result in the table (2) presents a significant association between utilizing scientific or professional tools and performing TNA to fulfill the institute goals (92%, $P<0.000$),

Table 1.3: Assess the participant Knowledge about training needs assessment priorities.

Table (1.3): Training need assessment knowledge						
TNA Priorities	Agree		Not Sure		Disagree	
	F	%	F	%	f	%
Effects on productivity	75	75.0	20	20.0	5	5.0
Effects on quality	85	85.0	12	12.0	3	3.0
How it affects interaction and cooperation	76	76.0	23	23.0	1	1.0
Effects on career development	82	82.0	14	14.0	4	4.0
Meets audience perspectives and satisfies their needs	86	86.0	13	13.0	1	1.0

and fulfill a required competency (92%, P<0.000). Also, there is a significant association between the application of scientific or professional tools and TNA addressing individual needs (92%, P < 0.008).

Table 2: the participants application of training needs assessment

Table (2): TNA Application			
Items	Not applying TNA	applying TNA	*P-value
TNA based on a performance gap	17(40.5)	43(82.7)	0.000
TNA fulfills the institute goals	19(44.2)	50(92.6)	0.000
TNA fulfills a required competency	25(58.1)	50(92.6)	0.000
Target audience, and their perspectives	24(57.10)	46(85.2)	0.004

*statistically significant level is P < 0.001

Discussion

TNA is a tool that helps intuitions establish effective training programs. TNA has evolved from a reactive to proactive process with a multifaceted approach. Many models for TNA revolve around competency and performance-related needs. Also, organizational goals and individual perspectives are considered, especially if training is applicable as well.

In this discussion, we will address gaps to be considered for improvement projects in healthcare training. In our study, 47% of trainers had the experience of 10 years or more. However, only 44.3% claimed using a scientific or professional method to assess training needs, and 64% considered MOH the primary source of TNA tools. Instead, most of the trainers rely on personal means to conduct TNA. We believe that Scientific and professional resources should be systematic, comprehensive, and suitable to guide trainers. Also, our study found an association between having a scientific or professional TNA tool and conducting TNA to fulfill Institution, job, and individual goals (P-value .000, .000, and .004 respectively), and is associated with productivity and Quality being training priorities (P-value .016, .015 respectively).

Regarding how trainers base their TNA, 16% reported not considering cost-effectiveness, and 18% were not sure if TNA should be aligned with the target audience perspective. Cost and individual analyses are essential in doing effective training[15-16].

When trainers evaluate the importance of training needs, (20%) are not sure if the effects on productivity or (23%) interaction within the teamwork are the priority basis. Both of these could be considered not strictly training needs, nonetheless highly relevant to overall organization goals.

A study in Saudi Arabia showed that when performing TNA, trainers do not rely on systematic techniques and use their own subjective manners [22]. The study has made recommendations to improve TNA management, which will affect the effectiveness of Training and Development processes [22] . Although this study was not conducted in the healthcare setting, the finding supports our conclusion regarding variable subjective of TNA approach.

Conclusion

Training is valuable in fulfilling many goals in healthcare, with patient safety being a central purpose. Upon exploring the knowledge of trainers on TNA structure, the study shows that TNA should align training with" organizational goals, organizational needs, performance gaps, and target population needs. When trainers evaluate the importance of training needs, (20%) are not sure if the effects on productivity or (23%) interaction within the teamwork are the priority basis. Both of these could be considered not strictly training needs, nonetheless highly relevant to overall organization goals. A study in Saudi Arabia showed that when performing TNA, trainers do not rely on systematic techniques and use their own subjective manners [22]. Follow-up studies are required with a larger heterogeneous study population and more detailed data acquisition tools.

Recommendation

Follow-up studies are required with a larger heterogeneous study population and more detailed data acquisition tools. Also, we recommend establishing a Healthcare training committee of expert trainers to create the harmonized framework for TNA tools development using the best available evidence and expert consensus. This should serve as a guide for healthcare trainers in Saudi Arabia and a ground for collaborative work with international committees.

Limitation

Data did not elaborate on the exact detailed nature of the TNA process utilized by trainers and did not examine the distinction between scientific and profession-

al TNA tools and personal TNA tools. A sampling of individual subjects was convenient, and, therefore, inferences are only applicable to trainers similar to our study population. The study method is exploratory and cannot serve as evidence for intervention purposes.

Ethics approval and consent to participate

The ethical approval from the Ministry of Health Institutional Review Board with log # (20-173M). All methods were carried out in accordance with relevant guidelines and regulations. The consent was explained using clear language and emphasized voluntary participation, and informed consent was obtained from all subjects. Trainers were given primary investigator contact information to communicate as needed. The study ensured the anonymity of information collected through data de-identification as they are not required to mention their identity in the survey. The primary investigator collected, stored, and accessed the data exclusively.

Availability of data and material

Data and data collection tools are available upon request.

Competing interests: conflict of interest does not exist.

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