

ORIGINAL RESEARCH ARTICLE

Qualitative evaluation of a knowledge transfer training programme in maternal and child health in Burkina Faso, West Africa

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Abstract

The study evaluated a first session of the knowledge transfer training programme organised for Ministry of Health workers in the area of maternal and child health in Burkina Faso. The objective was to obtain the participant's perspective for improving the training programme. A qualitative study was conducted during and after the first training session, using the four levels of Kirkpatrick training evaluation framework. A group discussion was organised with 17 participants during the training and a few weeks after the first training session, 11 of them were interviewed again. A thematic analysis of the transcribed interviews was done in line with the objectives of the evaluation. We noted that the participants had a good impression of the training, in relation to their expectations, the adequacy and quality of the teaching. The 11 post-training interviewees stated that they had acquired knowledge and skills relevant to their work. Using the learner's behavioural change model, three groups emerged as a result of the training. The first group expressed intent to use the knowledge gained, the second group set conditions for the effective application of the knowledge acquired, including the enabling professional environment. While the third group felt that despite the knowledge and skills they had acquired, they would need assistance with the applying the skills at their jobs. In conclusion, the training improved the capacity and skills of health workers, but an enabling professional environment and support will facilitate the application of knowledge. (*Afr J Reprod Health* 2020; 24[4]: 101-108).

Keywords: Qualitative evaluation, Knowledge Transfer, Maternal and Child Health

Résumé

L'étude a évalué un programme de formation des agents du Ministère de la Santé du Burkina Faso en matière de transfert de connaissances en santé maternelle et infantile afin de générer et de partager des informations pour améliorer le processus de formation des acteurs de la santé. Une étude qualitative a été menée pendant et à la fin de la première formation, sur la base des quatre niveaux d'évaluation du cadre conceptuel de Kirkpatrick. Il a été noté que les participants ont eu une bonne réaction à la formation. Cette réaction était liée à l'adéquation entre leurs attentes et la qualité de l'enseignement. Presque tous les participants ont déclaré avoir acquis des connaissances et des compétences grâce à la formation. La formation au transfert de connaissances a été bien perçue et acceptée par les agents de santé du Burkina Faso qui ont apprécié sa contribution à leurs connaissances et compétences. Cependant, pour faciliter l'application de ces compétences et connaissances, il semble important d'améliorer l'environnement professionnel afin de créer toutes les conditions favorables à une telle pratique. (*Afr J Reprod Health* 2020; 24[4]:101-108).

Mots-clés: Évaluation qualitative, Application des connaissances, Santé maternelle et infantile

Introduction

Knowledge transfer is a process by which knowledge from research or experience is received, adopted and put into practice through various activities¹. It is regularly presented in economic studies and public policies as a lever of

competitiveness². In the health sector, it is recognised that evidence-based decision-making is appropriate and an effective intervention to reduce morbidity and mortality³. Thus, maternal and child health programmes should incorporate the use of evidence in decision-making. Unfortunately, poor capacity among health workers limit the application

of this evidence⁴ hence the need for capacity-building activities in knowledge transfer for all actors in the decision-making sphere within public entities responsible for health issues.

As part of the Innovating for Maternal and Child Health in Africa (IMCHA) initiative⁵, the West African Health Organisation (WAHO), implements the *"Moving Maternal, Newborn and Child Health Evidence into Policy in West Africa (MEP)"*⁶ project to promote the use of evidence for maternal and child health decision-making in West Africa. In Burkina Faso, a situational analysis was conducted to provide an overview of the situation for knowledge transfer and the use of evidence on maternal and child health. It noted a weak application of knowledge transfer with low capacity of stakeholders⁷. To meet this need, a series of knowledge transfer programmes had been initiated for the benefit of these actors.

Knowledge transfer initiatives and programmes do not sufficiently take account of evaluation, which has been less considered⁸, despite the significant financial, material and human resources invested. Indeed, in terms of knowledge transfer, international⁸⁻¹³, African^{14,15} and West African¹⁶⁻¹⁸ literature has focused more on general issues, notably on approaches and practices^{9,10}, processes¹⁸, the promotion of use¹⁷ and mechanisms for dissemination and sharing of knowledge. Few studies have looked at the evaluation of knowledge transfer processes²⁰⁻²², while evaluation is useful in understanding the factors influencing the impact of knowledge transfer interventions⁴ to address the inefficiency and inadequacy of resources and even the methods used. To fulfil this gap, this study was conducted with the objective of obtaining the participant's perspectives for improving the training programme. This work focuses on the first session of knowledge transfer training in Burkina Faso's health system. The training focused on basic concepts, tools and the organisation of knowledge transfer.

Methods

A qualitative study was conducted in Ouagadougou, Burkina Faso from July 9 to 13 2018, with a sample of 17 training participants who were staff of the Knowledge Transfer Unit, the Mother and Child Health Directorate, other Directorates of the Ministry of Health and two other projects funded under the same initiative.

Data collection occurred in two phases. The first was an assessment of participants' expectations. A group discussion was organised before the start of the training (the first phase), which involved 17 participants. This discussion allowed participants to express their knowledge transfer needs, which was recorded and transcribed into verbatim. Then there were also discussions with the trainer and heads of the Knowledge Transfer Management Unit (UGTC) and the Directorate of Family Health (DSF). These discussions led to a better understanding of the needs of the different services and a link to the various modules of the session.

The second phase of the data collection occurred a few weeks after the first training session. The first author conducted individual interviews with 11 of the 17 participants in the training, out of these 11 interviewees, 4 were female. The profiles of the 11 participants interviewed are described in Table 1. There were more medical doctors and men. The interview guide was based on the four levels of Kirkpatrick training evaluation framework. The model can be implemented before, throughout, and following training to show the value of training²³. Level 1 of the guide provided an insight into participants' satisfaction with the training programme and their perception. It was a question of assessing whether the participants liked and whether their expectations were met through training. In level 2, the learning assessment level, assessed learning, i.e., skills, knowledge, or behaviours following the training. Level 3 was the assessment of the transfer level. It focused on assessing the learner's behavioural changes as a result of the training and the implementation of newly acquired skills. The objective was to determine if the participant used or intended to use the knowledge gained during the training. Finally, level 4, the evaluation of the results, made it possible to appreciate the benefit that the training brought to the work of the participants, each in his field of intervention. However, according to the time of the interview, this level 4 was not included in this study. All interviews were recorded with the permission of the participants and transcribed into verbatim. Interviews ranged from 30 to 45 min. The selection of these respondents was continued until the information sought reached saturation. Participants also agreed that the data collected should be used in this study.

A thematic analysis of the transcribed interviews was done in line with the objectives of the evaluation. The thematic analysis technique was by a simple categorisation of participants according to the modalities of the four levels of Kirkpatrick training evaluation framework²⁴. The data from this first phase allowed us to analyse the adequacy between the expectations of the different actors and the content of the training. Data from the second phase were used to assess the response, learning, knowledge transfer and evaluation of training outcomes.

Results

Participants' reaction

The participants' reaction was analyzed by two elements, the adequacy of the content of the training course with the participants' expectations and the quality of the teaching. The adequacy of the training content with the expectations was assessed by looking at the coherence between the expectations and the training content. The group discussion at the beginning of the training helped to better identify participants' expectations. For many participants, the topic of knowledge transfer was new to them. Thus, for the majority of participants, the expectations of the training were to have enough knowledge about the concept of knowledge transfer, the tools and how develop a policy brief. Participants used several terminologies to express these expectations including *"Mastering the concept"*; *"Improving basic knowledge"*; *"Acquiring knowledge about tools, understanding the role of knowledge brokers"*; *"Developing skills, mastering tools"*; *"Produce a policy note"*; *"Allowing the foundation to be laid between producers and users"*, *"Mastering the tools for good planning, research techniques"*.

The content of the first session included four complementary blocks as follows: Block 1 was titled "Knowledge Transfer, Principles and Examples," Block 2 was related to the Policy Note, Block 3 was knowledge brokering, and Block 4 focused on developing a Knowledge Transfer plan. Considering this content, it must be said that the training met the expectations expressed by the participants during the group discussion. Indeed,

each of the four proposed blocks agreed with the expectations of the beneficiaries.

The second reaction of the participants, the quality of the training was appreciated during the participant's interview after the first training session. All the 11 participants found the more practical than theoretical in approach. Also, there was group work with "very constructive exchanges", coupled with the experience of the trainer. This good appreciation of the training was expressed in the following terms:

"Our skills have been strengthened through the group work that placed us in similar situations in the practical sessions as in real-life situations" (**Male participant**).

"At the end of the training, we have a trainer, a facilitator who was up to the task; one could see in him experience in the field, which he had due to practice for a long time; we were very satisfied; and with the other participants as well" (**Male participant**).

"It is a training that was different from the usual training, very theoretical; This training is more dedicated to practice; and with the group work we had, I admit it was very good," (**Male participant**).

It thus indicates that the training, perceived as an innovation, was adapted to meet the needs expressed by the respondents who had also expressed appreciation for the way it was organized.

Appreciation of learning

All interviewees stated that at the end of the training they had acquired knowledge and skills. This knowledge and skills included the PowerPoint presentation, the development of the Policy Note, and the development of a knowledge transfer plan, as evidenced by the following quotes from participants who also showed their satisfaction with the training.

"...in record time, we got a handle on how to write a policy note; that I enjoyed" (**Male participant**).

"My expectations were completely satisfied: the first point was the knowledge brokerage, there is also the policy note, I heard about it without knowing how it should be written, presented, but without knowing that everything was part of the transfer of knowledge; I had no notion. Therefore, it is a satisfaction for me. I really learnt."

Table 1: Profile of 11 participants interviewed

Structure of the participants	Profession		Demographer	Health Adviser	Sociologist	sex		Total
	Medical Doctor	Communicator specialist				Male	Female	
Directorate of family Health	4					1	3	4
Directorate of sectorial statistics	1					1		1
Directorate General for Sectoral Studies and Statistics			1			1		1
Project and Results Management Unit	1					1		1
Department of Monitoring, Evaluation and Capitalization				1		1		1
Private Research Institute		1			1	1	1	2
University	1					1		1
TOTAL	7	1	1	1	1	7	4	11

As a data producer myself, I believe this is one most important element for me, because when I made my restitution, I have felt that we are not going all the way, that is, the information is not going as far as it should. People come for restitution, they have numbers that interest them and then they left. I see that what I have learned is the deliberative process of the results of research involving all the actors, the actors are even stakeholders in the preparation of this presentation, so there is an appropriation of the data of the results of the study. I think in this way that we can better share the results of research regardless of the target audience," (Male participant).

"Through this training, we saw the presentation techniques, the preparation software, I did not know that; the very process for the transfer of knowledge, again I did not know it; The training came at the right time; I am totally satisfied with the training," (Male participant)

"The Policy Note, I had a vague idea, now I know how to develop it, and what are the elements to consider in order for this policy note to be very effective, and we were even equipped to appreciate and evaluate a policy note; we saw a checklist in relation to the evaluation of a policy note, a checklist to evaluate the different parts of a policy note," (Male participant).

"At the end of this training, I can say that I am satisfied. I can say that I am a pioneer when we talk about knowledge transfer in the office, many people will come to me. At this training, I learned what is

called a Policy Note, that's already critical, how I can convince decision makers in the office, how I can allow providers to adhere to an idea, really, I am satisfied on this point", (Male participant)

"We learned a lot since we are of different cadres, we also come from several departments of the Ministry of Health. Therefore, we welcome that. With the exchanges, it made it possible to set the theoretical knowledge that we were taught and especially what I liked" (Male participant).

Change in behaviour at the professional level for participants and perspectives on the application of acquired knowledge

According to the statements of the interviewees, three groups of participants emerged in terms of changes in behaviour following the training. The first group was those who expressed intent to use the knowledge as evidenced by these quotes:

"Training has brought a lot of change; this morning I was at restitution, and in my presentation elements, I already had a ready-made presentation, but with what I learnt in these past 4 days I tried making changes, which people appreciated; I think, that now we are going to change the way we do things to achieve the targets we had set,"(Male participant).

"It's not an intention; I must implement what I have learnt" (Male participant)

"I intend to improve PowerPoint presentations" (Female participant)

"These skills will be used in the context of restitution of research results, we will no longer limit ourselves to simple renditions, but we must now think and go to other colleagues without this notion, so that they understand the brokerage of knowledge to play the role of bridging between decision makers or users" **(Male participant)**

The second group set conditions for the effective application of the knowledge acquired, including the needs of their professional environment, as this participant said the following:

"I will use this knowledge if there is an explicit demand and real need. I am a researcher, but it must be said that we do not have the reflex to make automatic policy notes; the first reflex is to advance in the career. This activity is to some extent, for the moment, I can say secondary. Usually, for someone who starts in the career, the reflex is to focus on what matters more; now, as I move forward in my career, when the elements of research enhancements are implemented, surely, I will apply much more systematically. So, at the moment, I cannot say I will do it systematically, but there has to be an express request," **(Male participant)**.

Finally, the third group were participants who felt that despite the knowledge and skills they had acquired, they would need assistance with the application, as shown in the quote below:

"I can practice this knowledge, even if it's still perfectible. I can implement but with assistance. As the trainer allowed us to contact him, there was no problem. It is also a question of will, if there is will, we can overcome all the difficulties," **(Female participant)**.

Discussion

This evaluation showed that the training was tailored to the needs expressed by the participants. It was also found that participants appreciated the organisation of the training and said they had acquired knowledge and skills. Finally, for behaviour change, the three groups were noted as: those who intended or committed to apply the acquired knowledge and skills, those who would apply it if opportunities existed at the level of their professional environment, and those who want to apply this knowledge and skills if the support was available.

At the responsive level, Rouse *et al*²⁵ listed four elements of analysis following training:

material or content, quality of teaching, the location of training (physical setting) and learning activities. During our work, three of these four elements emerged in the participants' response, which were the content, the quality of the teaching and learning activities that were all well appreciated. The satisfaction of the learners of these three elements noted in our study can help generate motivation to take the training, even if it is recognised that this motivation does not guarantee learning^{25,26}. Indeed, according to Rouse *et al*²⁵, when the content of training met the participants' support and they are satisfied with the learning methods and activities, they are motivated to continue the rest of the course and new participants are attracted and come forward. This analysis is supported by the results of the work of Alvarez *et al*²⁷, which also identified the motivation of participants and the consideration of their expectations as one of the elements underpinning the effectiveness of a knowledge transfer process. Some authors thought that poor motivation decreases the likelihood of learning. Motivation can also be financial. For example, as part of this training, each participant was awarded a travel bonus and the restoration of the entire group was provided during the days of training. The location of the training, which was not reflected in our evaluation remains an essential element that can also contribute to the motivation of learners. The collection sheet did not consider questions to assess the location of the training. During this training, a room of approximately 40 seats, air-conditioned and equipped with a double-screen projector video where participants, regardless of their position had the ease of following through the screen of their choice. Finally, this evaluation approach has also been used elsewhere^{28,29} and the authors felt that prior identification of needs made it possible to prepare the content of the training and to have a good reaction of the beneficiaries. However, note that for this training, the content was designed before the start of the teaching and the prior discussion with the participants allowed the facilitator to adapt it to the needs of the participants and to emphasize certain aspects that emerged through the discussion.

At the learning level, participants reported learning without any real assessment of knowledge and recommendation³⁰. Nevertheless, the fact that participants gave examples in the areas of knowledge and skill acquired demonstrated an

improvement in an individual self-assessment approach. This result also reflects the effect of good responses noted in participants because there is a positive interrelationship between the different levels of the Kirkpatrick evaluation model^{23,31}. Nevertheless, for some authors, an acquisition of knowledge and skills does not necessarily reflect the idea that they will be applied^{26,30,32}.

In terms of changing behaviour, the literature lists two assumptions. The first assumption is that the application of knowledge by the beneficiaries of training is conditioned by their reactivity and learning. Both of these conditions should be verified, i.e., participants reacted well and learnt³³. The second assumption is that if the evaluation of the first two levels is satisfactory, participants may not necessarily change behaviours for the application of acquired knowledge^{25,34}. According to Kirkpatrick²³, four conditions are essential for a change in a person's behaviour for the application of acquired knowledge and skills. The person must: (a) have the desire to change, b) knows what to do and how to do it; c) work in an appropriate environment and finally d) be rewarded or motivated to change. In our first group of participants who expressed a desire to use or who used the knowledge and skills, it can be noted in their statements that the first two conditions were met, while in the other groups the issue of the work environment and the motivational problem emerged. Studies have noted similar results as those of our study and have shown that barriers to the application of knowledge may be related to a lack of opportunity to use knowledge^{32,34}, or lack of personal ability to apply this knowledge²⁵. Similarly, Budd showed that the lack of time and workload were barriers to the application of knowledge³⁵. This statement conforms to the theory of Sibley³⁶ who believed that barriers to the use of evidence were individual, logistical, systemic or organisational as noted in West Africa^{7,16,18}. An enabling environment professional environment and support will facilitate the application of the acquired knowledge by the trainees.

Some limitations to our work need to be noted. First, it is a quick study. Data collection occurred in 5 days. Rapid qualitative studies have the weakness of not being able to observe the facts, the behaviours to confirm or disprove certain statements. Similarly, the study is essentially based on the statements of the respondents. Studies that

are essentially based on statements have the weakness that the respondent can tell coherent things to the investigator without these statements reflecting reality. Authors' participation in the whole training allowed us to observe the interaction and reaction of the actors that reduce the study type limits. This observation tended to show sincerity in the words of those surveyed.

Conclusion

This rapid qualitative study with the use of the four levels of evaluation of Kirkpatrick training evaluation framework helped obtained participants' perception on the training adequacy, their expectations and training contents, on acquisition of learning and on their change in their behaviour. The results show that the participants were satisfied with the content of the training and contribution in terms of knowledge acquisition. But the first results on the change in the learner behaviour showed that the enabling professional environment and support could help all the participants to use the knowledge acquired. Information obtained will help to improve and adapt future training session and the programme to be sure that at the final evaluation, evidence use by the trainees was a reality.

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Contribution of Authors

MA, EJ, GT and IS designed the study, MA collected and analysed data, interpreted and discussed the findings under the supervision of AB and IS. MA prepared and revised the manuscript and EJ, AB and IS provided inputs in finalising the manuscripts. All authors read and approved the manuscript.

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