Learning in context: Identifying gaps in research on the transfer of medical communication skills to the clinical workplace

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ABSTRACT

Objective: In order to reduce the inconsistencies of findings and the apparent low transfer of communication skills from training to medical practice, this narrative review identifies some main gaps in research on medical communication skills training and presents insights from theories on learning and transfer to broaden the view for future research.
Methods: Relevant literature was identified using Pubmed, GoogleScholar, Cochrane database, and Web of Science; and analyzed using an iterative procedure.
Results: Research findings on the effectiveness of medical communication training still show inconsistencies and variability. Contemporary theories on learning based on a constructivist paradigm offer the following insights: acquisition of knowledge and skills should be viewed as an ongoing process of exchange between the learner and his environment, so called lifelong learning. This process can neither be atomized nor separated from the context in which it occurs. Four contemporary approaches are presented as examples.
Conclusion: The following shift in focus for future research is proposed: beyond isolated single factor effectiveness studies toward constructivist, non-reductionistic studies integrating the context.
Practice implications: Future research should investigate how constructivist approaches can be used in the medical context to increase effective learning and transition of communication skills.
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1. Introduction

There is compelling evidence that communication affects numerous important and meaningful health outcomes, such as adherence to drug regimens and diets, pain control, and improvements in physical, functional, and psychological well-being [1–5]. Despite the importance of communication, there are frequent reports of low satisfaction with the communication between practicing doctors and their patients [6,7]. Medical education has recognized the importance of communication skills, as evident from the fact that dedicated training programs have become an integral component of the undergraduate medical curriculum. Paradoxically, however, systematic communication skills training is quite rare during postgraduate training where residents learn in the clinical workplace with day-to-day contacts with patients [8–11]. This contrasts sharply with research reporting a strong need for communication training at postgraduate level [12]. Rider et al. [13] for instance showed that less than half of all residents were confident about their more advanced communication skills, such as breaking bad news, dealing with end-of-life issues and communicating with difficult patients and seriously ill children. O'Neill et al. [14] confirmed that residents feel unprepared for the required extent of emotional involvement with patients. There is an unfortunate discrepancy between this obvious need for training

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and the absence of communication training programs reaching out to high numbers of residents [10,11]. General practice may be an exception to this situation, since its residency program does pay attention to communication skills on a more regular basis.

Studies on the effectiveness of postgraduate communication training have reported contradictory and variable findings [15–21]. This suggests that this research area might benefit from a new approach, moving beyond single effectiveness studies to a broader, non-reductionistic view on the issue at hand [18,22]. This paper is an attempt to develop such a broader view.

The broader view on communication skills training we propose in this review is driven by a main problem in the field: absence of consensus on how to define and capture effectiveness. In fact, effectiveness has been defined in numerous ways by many different theorists and researchers. Well-known in this regard are the four levels of evaluation developed by Kirkpatrick (Fig. 1) [23].

In recent years however the suitability of Kirkpatrick's levels to evaluate the effectiveness of interventions has been questioned [24–26,27]. The main critique is that it involves many implicit assumptions [26], masking underlying mechanisms and causal relationships between the intervention and its outcomes [25]. Besides, organizations prefer to measure the first two levels rather than the last two, which are harder to measure [24]. Levels three and four are however most interesting to know, since they measure whether real change has occurred due to the intervention. Looking at effectiveness of communication skills, what we are striving for is an observable change in the communication behavior of clinicians in their daily practice. Hawken [28] defines this as transfer of communication skills from training to daily practice, equaling level three of Kirkpatrick.

If we want to increase this transfer or transition in communication skills, much is to be gained by more clarity about the underlying assumptions of what makes learning and transfer effective.

The objective of this article therefore is to identify gaps in the literature on effectiveness of postgraduate communication skills training and discuss relevant theories and insights in the literature on transfer and learning, to gain more clarity about underlying principles and to guide future research. In order to do so, relevant literature will be reviewed.

More specifically, the following research questions will guide and structure this article:

1. Which gaps can be identified in the research on effectiveness of postgraduate communication skills training?
2. Which relevant insights can be identified in the research on transfer of training and theories on learning, to guide future research in the field of postgraduate communication skills training?

We present the results in a narrative review as this format seems particularly suited to comparing and interpreting complex, multi-faceted concepts and findings [29].

2. Methods

2.1. Literature search

In this narrative review we present and interpret general findings on medical communication skills training and transfer of training and learning, combining different perspectives. We searched for literature studies, systematic reviews, and empirical studies on the subjects "medical communication skills (training)" and "transfer of training and learning". The following keywords were used to search Pubmed, GoogleScholar, Cochrane database, and Web of Science: "medical communication skills", "medical communication skills training (programs)", "transfer of training", "transfer of learning" and "transfer of medical communication skills". Manual searches of other relevant journals were also conducted. In executing our search we used an open to closed inclusion strategy. We started by including articles on medical communication skills training in general to look which gaps in the literature they revealed. The titles and abstracts of the retrieved articles were screened, after which the full text of included articles was read. Next, a more closed reference search of the already included articles was performed. This process of snowballing was done until saturation was reached, ending up with five main topics as emerging problems or gaps in the literature. A total of 250 articles written in English and published before November 2011 were included (available from the first author upon request). We conducted a narrative review, to underline the iterative process of literature selection.

2.2. Mind maps and iterative validation

During our literature search, the first author composed mind maps to visualize, structure, and classify the findings from the articles. We used this mind mapping as a starting point technique to categorize the data, because it is an effective way to classify chunks of information and show interrelations between the information from the articles included [30]. In this way, we identified five main categories in 250 articles: intervention studies with significant training effects, Intervention studies with no significant training effects, Assessment of communication skills, research needs, and current needs in systematic communication skills training implementation at post graduate level. From these five categories or groups of papers, five main gaps were formulated. To increase the reliability of the main gaps identified by the first author, we applied an iterative approach. This included
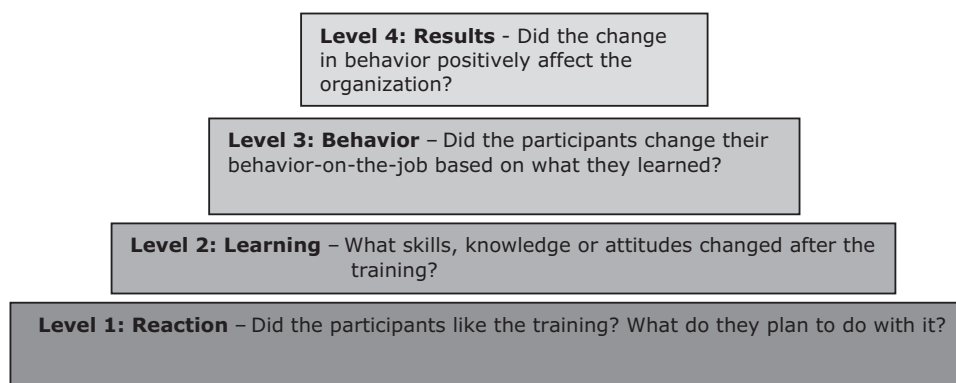

Fig. 1. Kirkpatrick's four levels of evaluation (Kirkpatrick [23]).