What is the evidence for the use of simulation training to teach communication skills in psychiatry?

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ABSTRACT
Training in communication skills is a vital part of medical education worldwide and essential for psychiatrists, with poor communication often cited as a key contributing factor in healthcare complaints. Simulation training is a rapidly developing educational modality, and educationalists need to be aware of its possible uses and pitfalls in teaching communications skills in psychiatry. By exploring the advantages and disadvantages of the use of simulation training as a method of teaching communication skills in psychiatry, this article demonstrates a clear consensus in the literature that, while there are a number of difficulties to be overcome in simulation training, these are outweighed by the clear educational gains. In areas where resources are limited, there are suitable variations of simulation training which can be employed. Simulation training can facilitate teaching clinical and non-clinical skills simultaneously, and the use of simulation in mental health is an ideal method for addressing gaps in knowledge and skills relating to communication with patients, which could directly translate to an improvement in patient care.

INTRODUCTION
Individuals working in healthcare will have met Resusci Anne, a manikin developed for mouth-to-mouth and cardiopulmonary resuscitation training, with an estimated 2 million lives saved as a result.[1] Resusci Anne demonstrates the foundations of simulation training: recreating circumstances clinicians may encounter, immersing learners in a realistic environment and proceeding as if in real life. Simulation training is used widely in medical and surgical education but is a relatively new concept as an educational tool in psychiatry, despite it having an established seat at the table of assessment techniques.[2]

Good communication skills are relied on more heavily in psychiatry than in many other specialities, and poor communication is often cited as a key contributing factor in healthcare complaints.[3] Communication breakdown among healthcare providers contributes to a large proportion of medical errors in hospitals.[4]

This review aims to explore the evidence for use of simulation training to teach communication skills in psychiatry to medical students and doctors in training and to provide a summary of the known advantages and disadvantages of this.

METHODS
PubMed, EMBASE, AMED and PsycInfo databases were searched from inception to December 2018 for articles addressing simulation training in psychiatry or mental health, which referred to communication skills. Search strategy varied by database but terms included 'simulation (psychiatry or 'mental health') AND communication'. Results were restricted to medical students or doctors in training, excluding those articles relating solely to nursing students or allied health professionals. Only those articles describing simulation as a method of teaching, rather than assessment, were included. Original articles and narrative or systematic reviews were included, but abstracts without complete publications or not in English were excluded.

PRESENTATION
Among the articles identified, there were a variety of styles of simulation, including high-fidelity emergency simulation training,[5] role-play-based learning[6] and the use of virtual patients.[7] Results are presented by advantages and disadvantages of the use of simulation training as a method of teaching communication skills in psychiatry.

Advantages
There was unanimous positive regard of the impact of simulation on communication skills, and this was broken down, depending on skills focused on and method of simulation. One example of this was an evaluation of a high-fidelity simulation emergency psychiatry training course, which emphasised 'non-technical skills' such as situational awareness, team working and being able to call for help early,[5] abilities 'crucial to the safe management of psychiatric emergencies' and debriefing always covered interpersonal interactions. There were statistically significant increases in confidence (measured on a participants' self-report numerical scale) in both clinical and non-technical skills, with a slightly higher increase in mean confidence level in non-technical skills. A focus group also supported this, with participants citing 'improvements in their abilities to communicate with colleagues and patients'.

Although King et al[6] reported that not all participants had a positive experience, it has been proposed that psychiatrists 'respond more readily to the reflective nature of debriefing',[5] where communication skills are thought about in detail. However, this latter evaluation also provided conflicting evidence in free-text responses, for example, 'there was not any feedback about how you can improve, how you can change, what you should not have done'. In an evaluation of another session, 'there were no comments to suggest that students found this modality stressful or intimidating'[8]; this may reflect individual learning styles.

A plethora of learning objectives can be addressed using simulation training, either within a single session or different sessions tackling different goals. Attoe et al[9] proposed that the ultimate goal of simulation in mental health was to improve quality of patient care, although authors also identified a more tangible objective to 'practise and reflect on the development of a therapeutic alliance'. In addition to gaining clinical knowledge, Thomson et al[5] thought that it is possible to improve teamwork skills, interprofessional practice, attitudes and communication, whereas King et al[6] suggested that simulation could help with more pragmatic communication skills such as conflict resolution.

In a training session at the University of Zimbabwe (during which feedback on communication skills was a key focus),[8] 23 medical students all reported statistically significant increased confidence as a result of simulation training. In particular, confidence in establishing a rapport with a distressed patient improved significantly, relying on sound communication skills. There was no control group, and a lecture was delivered in addition to simulation training, so it is difficult to ascertain what exactly led to this outcome. In contrast to this idea of 'teaching' communication skills through simulation, other skills can be developed on the basis that communication forms the foundation of the technique, for example, Dave[2] identifies the use of simulation training for teaching psychotherapy or transcultural psychiatry.

Simulation allows students to see a range of psychiatric diagnoses, with varying degrees of severity,[2] the 'controlled exposure' of simulation training being an advantage,[5] in comparison with the unpredictable nature of on-call shifts. Simulation can offer access to patient groups difficult to access for students or trainees, such as children with mental health problems.[10]

Comparing different methods of simulation, some students reporting that their experience of face-to-face simulation was enjoyable and useful as a learning tool,[5 8] but medical students in a study using 'virtual worlds' for role play reported less anxiety and more enjoyment than face-to-face simulation.[10] No studies have directly compared one type of simulation with another, so results must be seen in context and with possible response bias in mind.

Disadvantages

It has been questioned whether key aspects of communication such as the use of empathy can be taught or improved using simulation.[2] However, in a study, which evaluated role-play-based learning with data available from 107 medical students, empathy improved as a direct result of role play, with a mean response of 4.2 on a Likert scale of 1 ('strongly disagree') to 5 ('strongly agree') that teaching sessions had increased their understanding of the patient's perspective.[6]

While both Dave[2] and King et al[6] argue that simulated patient scenarios are reproducible, there is also an argument that simulation cannot be extended to the 'real world'. Difficulties were highlighted in adequately training actors to portray complex psychiatric presentations,[2] which will inherently be those that require the most adept communication skills, while participants in University of Zimbabwe study suggested simulated patients were volunteering information too readily.[8]

Attoe et al[9] argue that more traditional non-simulation training methods 'lack human interaction', whereas it was found that with the use of virtual patients, fidelity could be compromised by poor graphics or limited expression of body language and it was harder to maintain concentration.[10] Risk of performance-related stress for simulated patients was also acknowledged.[2]

The more pressing drawback of simulation training is how resource intensive it is.[5] Simulation can require large numbers of people (actors, participants, observers) needing large spaces to work in, long preparation and delivery time and all of this can result in a financial burden to the provider. Dave[2] argues, although it is an expensive method of teaching, the more simulated patients are used and the more evidence produced that supports simulation, the more cost-effective it will become. In contrast, Vallance et al[10] champion use of virtual worlds for role-play simulation to overcome this problem and Piette et al[8] suggest the use of mental health staff to provide a sustainable method of teaching.

In larger groups, not all participants may be able to take a turn in the 'hot seat' as the clinician. Qualitative data from a study of role-playing-based learning suggested that observation of role-playing could be a useful learning tool, but those enacting the scenario may have had 'a deeper learning experience'.[6] Crucially, this assumption was made by anonymous written feedback requesting more or longer teaching sessions. Quantitative data suggested that both observation and participation in sessions were equally helpful for learning. All respondents strongly agreed that discussion of the role-plays was helpful for learning, although 21% of participants did not provide feedback and this may represent a response bias. The authors suggested future work links similar data to examination results.

A study using prerecorded video sequences of a virtual patient with mental health problems led to statistically significant improvements in clinical knowledge and 'theoretical aspects of basic communication skills' of psychiatrists immediately after the interaction.[7] However, this was not sufficient to produce a significant change at a mean time of 79 days afterwards. This may infer that a series of sessions would have better long-term effects on communication skills, although data for this are lacking and the sample size was small (26 participants).

DISCUSSION

Simulation training recreates realistic learning environments which studies to date have described positively for the teaching of communication skills in mental health. It has been proven that not only can simulation training be incorporated into teaching using a variety of styles, but that where resources are limited, there are still opportunities to adapt simulation training to teach communication skills.

Studies have shown that a wide range of skills and attitudes can be taught or targeted through simulation, for example, teamwork skills, communication with both colleagues and patients and conflict resolution. The 'controlled exposure' of simulation training allows access to specific patient types or scenarios which may not be readily available as part of training, for example, young people or acutely distressed patients and those studying or working in mental health are well placed to respond positively to simulation training and the associated reflective debriefing aspect of it.

However, anxiety about participation in simulation training is a key disadvantage for students or trainees, although this was notably reduced when using techniques such as 'virtual worlds'. Individual learning styles need to be catered for and not all will suit simulation training. Complex presentations may not be adequately portrayed, and no two simulation scenarios will be identical, as each participant will perform differently and elicit different reactions from the simulated patient. Performance-related stress for simulated patients has also been identified as a potential pitfall of simulation training. In those studies that did

follow up learners, improvements in communication skills were not maintained long term. Simulation training's most significant disadvantage as an educational modality is how resource intensive it is: people, space and time are at a premium across all educational settings, and presently, this limits the sustainability of simulation training.

The body of literature in this area is small, but this review summarises what is known on the use of simulation training as a teaching technique for communication skills in psychiatry. There has been a limited exploration of the role of simulation training in psychiatry specifically for medical students or doctors in training, and most of the studies included in this review were of low quality in the hierarchy of evidence-based medicine. While there were some statistically significant results in many of the studies, many were of small sample size. Having said this, the styles of simulation training available are heterogeneous and so it is a challenge to evaluate 'simulation' as a single entity. It also appears challenging to design studies that can objectively identify an improvement in communication skills and an additional difficulty is to eliminate confounding factors. The literature discussed is relevant to medical students and psychiatrists, but principles could be adapted to anyone working in mental health. Of course, communication skills are essential in any healthcare specialty, so results from research in this area should be considered applicable to all specialties.

Future research in this field should include a direct comparison of different types of simulation to determine the effectiveness of teaching communication skills with consideration given to the level of anxiety or enjoyment for each. Cost benefit of each type should be analysed, to explore sustainable training methods. Larger participant numbers would provide more meaningful results. Long-term data are needed on follow-up of participants and their learning, and support should be given to the idea already proposed that future research links simulation outcomes to performance data such as examination results.

It is important to bear in mind that simulation training should continue to be used as an adjunct to clinical experience for students and clinicians to develop a foundation on which to build their own clinical experience on or as a method to hone skills already used in clinical practice.

CONCLUSION

While there are a number of difficulties to be overcome in simulation training, these are primarily logistical and are outweighed by the clear educational gains. Simulation training in mental health is an ideal method for addressing gaps in knowledge and skills relating to communication with patients, which could directly translate to an improvement in patient care, and therefore should be adopted into undergraduate and postgraduate teaching programmes in psychiatry.

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