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**The effectiveness of communication skills training interventions in end-of-life non-cancer care in acute hospital based services: a systematic review**

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**The effectiveness of communication skills training interventions in end-of-life non-cancer care in acute hospital based services: a systematic review**

**Abstract**

*Objectives*

A systematic review was conducted to explore the effectiveness of communication skills training interventions in end-of-life care with non-cancer, acute-based, healthcare staff.

*Methods*

Articles were included if they focused on communication skills training in end-of-life/palliative care for non-cancer, acute-based staff, and reported an outcome relating to behaviour change in regards to communication. Sixteen online databases were searched and resulted in 4038 potential articles. Screening of titles left 393 articles meeting the inclusion criteria. Abstracts (n=346) and full text articles (n=47) were reviewed leaving 10 papers meeting the criteria for the review. All articles explored the effect of communication skills training on aspects of staff behaviour; one study measured the effect on self-efficacy, one explored impact on knowledge and competence, and one measured comfort levels of discussing end-of life with patients/families. Seven studies measured a number of outcomes including confidence, attitude, preparedness, and stress and communication skills.

*Results*

Few studies have focused on end-of-life communication skills training in non-cancer acute-based services. Those that have, report positive effects on staff behaviour in regards to communication about end-of-life with patients and families. The studies varied in the population studied and health services and scored only moderately or weakly on quality. It is a challenge to draw a definite conclusion about the effectiveness of training interventions in

end-of-life communication because of this; however the findings from the review demonstrate the potential effectiveness of a range of training interventions with healthcare professionals on confidence, attitude, and self-efficacy and communication skills.

### *Significance of Results*

Further research is needed to fully explore the effectiveness of existing training interventions in this population, and evidence using objective measures in particular is needed. Ideally, randomised controlled trials, or studies using control groups and longer follow ups are needed to test the effectiveness of interventions.

**Key Words:** Communication Skills, End of Life, Palliative Care, Acute Services, Intervention

## Introduction

End of life (EoL) care is support for people who are nearing the end of their life and helps people to live as well as they can until they die, and to die with dignity (NHS Choices, 2012). In England, approximately half a million people die every year, with many deaths following a period of chronic illness. Most of these deaths occur in hospital (58%), at home (18%), and in care homes (17%), with the remaining 4% in hospices and 3% elsewhere (Department of Health (DH), 2008). Whilst some people experience high quality care many people are not treated with respect and dignity, experience unnecessary pain, and do not die in the place of their choice (DH, 2008). There is evidence to suggest that the acute hospital setting exacerbates the poor experiences that many dying patients receive, as the culture of the acute sector is focused on prevention and cure, investigations and invasive procedures, with some treatments being explored at the expense of comfort of the patient (Ellershaw & Ward, 2003). Research also suggests that healthcare professionals can find it challenging to 'diagnose dying', receive insufficient training to provide EoL care and initiate EoL discussions with patients and families, and can themselves feel helpless when faced with the complex demands involved in the delivery of high quality EoL care (Ellershaw & Ward, 2003; Hewison et al., 2014).

In order to try to improve communication about EoL between patients and healthcare professionals, and to ensure healthcare professionals feel adequately trained to discuss EoL issues with patients and families, the National Health Service (NHS) End-of-Life Care Strategy (DH, 2008) was developed. The strategy addresses some of the issues faced by healthcare staff planning and delivering EoL care and promotes the extension of communication models (developed and well established within cancer care) to other life limiting conditions and illnesses (Barnes et al., 2012).

Within the literature, a review which focused on existing interventions of patient-professional communication developed for life-limiting conditions (including cancer care), found that evidence is limited, but highlighted key features that support communication, enhanced patient understanding and promoted discussion of active involvement in decision making (Barnes et al., 2012). The authors highlight a clear need for further research and rigorous evaluation of communication skills interventions. The authors also argue that effective communication skills of healthcare staff should be a priority for both policy and research.

There has been no recent review that has focused on non-cancer services and patients, and with evidence highlighting gaps in effective communication between staff and patients about EoL care in acute hospitals (e.g. Hewison et al., 2014), it is timely to focus on communication skills training in non-cancer acute services. Therefore this review seeks to establish, through the available literature, the effectiveness of communication skills training in non-cancer EoL care in acute hospital based services.

## **Method**

### *Description of searches*

A systematic search was conducted March-April 2014. Sixteen online databases were searched including CINAHL, Cochrane Database, PsycInfo, PsychArticles, PubMed, Medline, DARE, CENTRAL, ASSIA and ProQuest Nursing, ProQuest Dissertation and Theses Database, Web of Science with Conference Proceedings, the Conference Papers Index, COPAC and Sigle (Open Grey).

Three online journals were also searched using keywords: these journals were Palliative & Supportive Care, The Journal of Palliative Care, and Patient Education &

Counseling. Searches were also carried out using Google Scholar and reference lists of relevant articles.

### *Criteria and Search Strategy*

The search key words were chosen to cover terms for communication intervention/training, end-of-life and acute setting. The following key words were used: (“communicat\*”) AND (“train\*” OR “educat\*” OR “program\*” OR “intervention\*” OR “teach\*” OR “module\*” OR “workshop\*”) AND (“end of life\*” OR “terminal\*” OR “palliat\*” OR “dying” OR “death”) AND (“evaluat\*” OR “assess\*” OR “outcome\*” OR “measure\*” OR “effect\*” OR “change\*” OR “result\*”) AND (“hospital\*” OR “acute\*” OR “healthcare service\*” OR “secondary care”). If there were a large number of studies identified the advanced search option was used to select ‘search in title and abstract’. One of the database searches (Medline) generated over 6000 hits and therefore the ‘search in title and abstract’ option was used, which resulted in approximately 1600 potentially relevant articles.

### *Inclusion and Exclusion Criteria*

Inclusion and exclusion criteria were applied to all articles. Articles were included if they investigated staff behaviour change in regards to communication and/or interaction with EoL/palliative care patients and/or families in an acute setting as a result of communication skills training. Articles were excluded if they did not meet the inclusion criteria, were not written in English, or were a review/advice/descriptive article.

The article retrieval process is demonstrated using a PRISMA flow diagram (Figure 1). The searches generated 4038 potentially relevant articles. After duplicates were removed, article titles were screened resulting in 393 articles. Abstracts of these articles were screened resulting in 346 articles being excluded as they did not meet the criteria. If an article abstract

lacked detail the full paper was accessed and reviewed. Full papers were accessed and reviewed for 47 articles by both the main author and an independent reviewer, and reached 100% agreement. This process resulted in 10 articles fulfilling the inclusion criteria.

### **Assessment of Quality**

The quality of the included papers was assessed using the McMaster Quality Assessment for Quantitative Studies (Thomas et al., 2004). This tool was applied to all 10 included papers as every paper contained quantitative data. This tool is composed of six quality ratings, starting with selection bias, design, blinding, data collection methods, and withdrawal and drop outs. The use of weak (1), moderate (2), and strong (3) codes were applied to each of the six quality ratings. The main author and the independent reviewer both checked the quality of the included studies and reached 100% agreement.

Insert Figure 1 here



## Results

Ten articles were identified that met the inclusion criteria for the review. Two of the study authors explored the measures used in each study in-depth to see whether it was possible to conduct a meta-analysis, or a sub meta-analysis. Even though some studies measured the same construct, the measures used differed greatly and measures and outcomes were not comparable. Outcomes were not able to be combined in order to perform a meta-analysis, even one based on a set of sub-studies. After reviewing and discussing the measures the study authors agreed a sub meta-analysis was not feasible. The findings of the review are presented and discussed below.

## *Participants*

A brief summary of included study characteristics is presented in Table 1. All 10 studies used healthcare professionals for participants. Three studies used registered nurses (Betcher, 2010; Krimshstein et al., 2011; Zapka et al., 2006). One study (Bristowe et al., 2014) used a mixture of nurses, healthcare assistants and consultants. The remaining six studies used medical trainees; one utilised nephrology fellows in their first, second and third year of training (Schell et al., 2013); another study used geriatric and palliative care fellows (Kelley et al., 2012); one study used junior doctors (Clayton et al., 2012); another study used third year internal medicine residents (Kerai & Wheeler, 2013); and two studies used internal medicine residents from different years of training (Mulder et al., 2009; Smith et al., 2013).

Seven studies were conducted in the United States of America (Betcher, 2010; Kelley et al., 2012; Kerai & Wheeler, 2013; Krimshstein et al., 2011; Schell et al., 2013; Smith et al., 2013; Zapka et al., 2006); one study in the Netherlands (Mulder et al., 2009); one study in Australia (Clayton et al., 2012); and one study in the United Kingdom (Bristowe et al., 2014).

Only four studies reported sex of participants (Clayton et al., 2012; Mulder et al., 2009; Schell et al., 2013; Smith et al., 2013). All four of these studies reported a greater female proportion of participants (>50% female participants). For the remaining studies sex of participants was unable to be determined. Only one study reported ethnicity of participants (Schell et al., 2013) with the majority (36%) reported as East Indian/Pakistani, 23% African American, 18% Asian/Pacific Islander, 14% White, and 9% Other. Only four of the studies reported participant age (Clayton et al., 2012; Kelley et al., 2012; Mulder et al., 2009; Smith et al., 2013) with the mean age range from 29.1 to 30.3 years.

Some of the studies included in the demographic data the number of years staff had trained for, previous communication/palliative care skills training, and the number of patients with life limiting illnesses that had been cared for by the participants. Five studies reported how many of the participants were in either their first, second, third or beyond, year of training (for medical trainees) (Bristowe et al., 2014; Clayton et al., 2012; Kelley et al., 2012; Kerai & Wheeler, 2013; Schell et al., 2013). For these studies the majority of participants were in their first year (ranging from 38% to 100% of participants). One study (Zapka et al., 2006) that used nurses as participants, reported the number of years in clinical practice with the majority of participants in their first year (34%), closely followed by those who had been in practice for 11 years or more (28%).

Only three studies reported whether participants had previously participated in any formal communication skills training (Clayton et al., 2012; Kerai & Wheeler, 2013; Schell et al., 2013). In one of the studies (Kerai & Wheeler, 2013) participants in the intervention group reported being taught communication skills in EoL care an average of five times, whereas participants in the comparison group had been taught an average of two times. In another of the studies (Schell et al., 2013) participants had reported receiving structured training in how to discuss starting renal dialysis or withdrawal (36% and 38% respectively).

In one of the studies (Clayton et al., 2012) the majority of participants reported no previous formal communication skills training in EoL care (21 out of 22 participants).

Two studies reported the number of participants who had previously cared for patients who had died (Clayton et al., 2012; Zapka et al., 2006). In one of these studies the majority of participants had cared for 20+ patients during their last days of life and had also discussed no-Cardiopulmonary Resuscitation (no-CPR) orders with up to 10 patients (Clayton et al., 2012). In the other study, the majority of participants reported caring for one patient who had died in the previous six months (pre-intervention), and at post-intervention the majority reported caring for three or more patients who had died in the past six months (Zapka et al., 2006).

### *Study design*

Total sample size for each of the studies ranged from eight to 110 at baseline. Four studies had relatively small sample sizes (<30; Betcher et al., 2010; Bristowe et al., 2014; Clayton et al., 2012; Kelley et al., 2012), and the remaining six studies had moderate sample sizes (>30 to <200; Kerai & Wheeler, 2013; Krimshstein et al., 2011; Mulder et al., 2009; Schell et al., 2013; Smith et al., 2013; Zapka et al., 2006). It is not clear whether any of the studies were adequately planned to detect for differences as no priori estimate for sample size was described.

Nine studies used a pre- and post-intervention design with no randomisation or control group (Betcher, 2010; Bristowe et al., 2014; Clayton et al., 2012; Kelley et al., 2012; Krimshstein et al., 2011; Mulder et al., 2009; Schell et al., 2013; Smith et al., 2013; Zapka et al., 2006). One of the studies (Kerai & Wheeler, 2013) made use of a comparison group; however this study did not have a pre- and post-intervention design, as the study only collected data after the intervention.

### *Intervention Characteristics*

Two studies developed and incorporated an intervention as part of existing training or curriculum. Smith et al. (2013) piloted training to be part of the existing curriculum for internal medicine trainees. The authors sought to assess the feasibility and impact of a novel curriculum in EoL education taught to all internal trainees across three sites. The intervention consisted of two one-hour teaching sessions, along with six one-hour morning reports, which were integrated into scheduled teaching sessions. Sessions were led by one of the study authors, and included didactic presentations followed by group participation and role play. Topics covered included a review of the evidence for EoL communication, and a framework for conflict resolution to be used to guide discussions. Participants were encouraged to explore challenging patient interactions and discuss as a group their responses and emotional reactions. Morning reports involved discussions of real-life patient cases and trainees were encouraged to address the emotions evoked in a real-life setting with their peers.

Mulder et al. (2009) developed a problem-based intervention, from the results of the pre-intervention questionnaire and a literature review, which was incorporated into existing training. The course involved a two-hour weekly meeting based on a patient case where problems were discussed with a professional working in the field of palliative care. Participants were supplied with questions and literature references one week prior to the meeting and in every session different aspects of EoL care or palliative care were raised.

Two studies used simulated patients/family members as part of the training. Betcher (2010) focused on one cohort of nursing staff at one site and developed an educational session aimed to improve how nurses perceived themselves as more caring with palliative care patients and their families. The intervention included a 45 minute didactic lecture on communication techniques, role plays, simulation and discussion. Simulated conversations

between patients/families and pairs of nurses were video-recorded, and took place in unoccupied patient rooms. Simulated patients/families were played by students from a collaborating university who were provided with scenarios one month prior in order to prepare. Simulated scenarios were developed by the study author and were intentionally general to enable the students to use their own experience and knowledge in developing the scenarios further. The recorded interactions were watched one at a time to allow 'debriefing' and were discussed within the group. As part of the debriefing the simulated patient/families also attended and provided feedback to the nurses.

Clayton et al. (2012) developed a training programme about EoL care that included simulated patient/caregiver scenarios, which were developed by a multidisciplinary team to ensure relevance to discussions around EoL and the overall goals of the intervention. The simulated intervention took part over two individual sessions. At the start of the sessions the participants set learning goals with the assistance of the facilitator, and interacted with the simulated patient/caregiver. Participants were encouraged to self-appraise their communication and were provided with feedback based on the objectives set at the start.

Nine studies delivered the intervention in a healthcare setting; the remaining one study was a two-day retreat for participants away from the healthcare environment (Kelley et al., 2012). All 10 studies were based on training interventions that were delivered face-to-face with two studies including pre-intervention material to be studied at home (Clayton et al., 2012; Mulder et al., 2009). Eight studies used didactic style teaching incorporating role play and group discussions (Betcher, 2010; Bristowe et al., 2014; Clayton et al., 2012; Kelley et al., 2012; Kerai & Wheeler, 2013; Krimshstein et al., 2011; Schell et al., 2013; Smith et al., 2013). Two studies involved the training focusing on real-life patient cases and took the form of a meeting or a seminar (Mulder et al., 2009; Zapka et al., 2006).

Insert Table 1 here

### **Outcome measures**

Two studies measured participants' self-efficacy. Betcher (2010) looked at the effect of the training on self-efficacy and used the Caring Efficacy Scale (developed by Coates, 1996). Smith et al. (2013) measured self-efficacy by developing a questionnaire based on the Self-Efficacy Scale in Palliative Care (Mason & Ellershaw, 2004), and the Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). This study also measured attitude (comfort with topics related to EoL care and behaviours during family meetings to discuss EoL care).

Three studies measured perceived preparedness (Kelley et al., 2012; Schell et al., 2013; Zapka et al., 2006). Each study used a Likert scale to measure preparedness; however development of the measure and validity and reliability were not described in any of the studies. Three studies measured perceived confidence (Bristowe et al., 2014; Clayton et al., 2012; Krimshstein et al., 2011) and each study adapted existing measures to develop a confidence measure. Two of these studies (Bristowe et al., 2014 and Clayton et al., 2012) adapted measures from existing questionnaires that had been used in oncology research (Fallowfield et al., 2001; Lenzi et al., 2005) whereas Krimshstein et al. (2011) adapted the measure from an existing tool focused on intensive care clinicians' communication skills (Arnold et al., 2010). Two studies measured comfort with discussing EoL issues/topics (Kerai & Wheeler, 2013; Smith et al., 2013) and both of these studies used Likert scales (5-point scale and 7-point scale respectively). One study (Smith et al., 2013) reported that all of the measures used were developed according to expert opinion, society guidelines and a literature review for EoL communication (Buckley et al., 2009; Curtis et al., 2002; Lautrette et al., 2006; Lautrette et al., 2007; McDonagh et al., 2004; NIH, 2004; White et al., 2007). However

the other study did not report development, reliability or validity of the measure (Kerai & Wheeler, 2013).

Two studies measured communication skills; Clayton et al. (2012) measured communication skills pre- and post-intervention via the use of video-recorded consultations about EoL with standardised care givers of terminally ill patients. The recorded consultations were transcribed and coded by a blinded coder (blind to participant identify and time point) using a specially developed manual. The coder rated the presence or absence of 21 specific skills and rated the strength of three global behaviours on a 4-point scale. Clayton et al. (2012) was also the only study to measure stress and burnout, and used the 22-item Maslach Burnout Inventory (as used by Ramirez et al., 1996). Krimshstein et al. (2011) measured communication skills pre- and post-intervention by asking participants to rate their skills using a 5-point scale on 10 tasks relating to communication between clinicians and families of patients. In addition, this measure also asked participants how frequently in practice they were confronted with questions from patients/families about care that they felt unable to answer, or felt uncomfortable answering.

One study measured perceived competence and knowledge at two different time points. Mulder et al. (2009) administered a pre-intervention questionnaire developed with a psychologist and derived from existing reported questionnaires (Blank, 1995; Goldberg et al., 1987; Herzler et al., 2000; Ury et al., 2000). The measure incorporated 18 questions about competence that started with a situation followed by four questions. This questionnaire was first administered to participants in 2001, and again in 2008. The questionnaire was sent in 2008 to determine whether the level of perceived competence in internal medicine residents had changed since 2001. The pre-intervention knowledge test was designed to measure participants' knowledge about palliative care. The test was developed from each teacher who participated in the course preparing multiple-choice questions and comprised 39 questions.

The post-intervention competence measure was the same as the pre-intervention measure, but with additional questions to evaluate the training. The post-intervention knowledge test asked the same 39 questions but in an alternate sequence.

Two studies measured attitude. One study (Clayton et al., 2012) measured attitude towards psychosocial aspects of care using a 20-item questionnaire adapted from existing measures (Ashworth et al., 1984; Jenkins & Fallowfield, 2002). The other study (Zapka et al., 2006) measured attitude towards EoL care and used a 22-item measure (adapted from Block & Billings, 2001) at pre-intervention, and a 23-item measure at post-intervention (the additional item was added in view of discussions that took place during the intervention seminars).

All studies collected data on learner satisfaction. Only one of the studies (Clayton et al., 2012) provided details of the development of a satisfaction scale which had been adapted from previous studies (Back, et al., 2003; Butow et al., 2008). All of the studies collected participants' views and experiences of training either using both qualitative feedback and quantitative data, or just qualitative feedback alone.

### ***Quality assessments***

Table 2 provides an overview of the quality ratings for each study. Overall quality was rated as moderate for four studies (Clayton et al., 2012; Krimshtein et al., 2011; Smith et al., 2013; Zapka et al., 2006) and weak for six studies (Betcher, 2010; Bristowe et al., 2014; Kelley et al., 2012; Kerai & Wheeler, 2013; Mulder et al., 2009; Schell et al., 2013). Quality indicators for blinding were rated as poor for the majority (80%) of studies, with only two studies being rated as moderate (Clayton et al., 2012; Zapka et al., 2006). The quality indicator for selection bias produced a range of ratings with three studies rated as strong (Clayton et al., 2012; Kelley et al., 2012; Mulder et al., 2009); five rated as moderate



(Bristowe et al., 2014; Kerai & Wheeler, 2013; Krimshstein et al., 2011; Schell et al., 2013; Smith et al., 2013); and one rated as weak (Betcher, 2010).

### *Analysis*

All studies were of a quantitative nature and conducted statistical analyses on data. Five studies did not report what statistical analyses were conducted (Betcher, 2010; Bristowe et al., 2014; Kelley et al., 2012; Kerai & Wheeler, 2013; Schell et al., 2013). The remaining studies conducted a mixture of repeated measures analyses such as paired t-tests (Mulder et al., 2009; Smith et al., 2013), and random effects repeated measures regression model (Zapka et al., 2006). One study also conducted correlations (Mulder et al., 2009) using Pearson's or Spearman's Rank, and one conducted non-parametric analyses (Clayton et al., 2012) using the Wilcoxon Signed Ranks Test for ordinal items, and the McNemar Test for dichotomous items. Krimshstein et al. (2011) reported conducting a chi-square test on the data.

Insert Table 2 here

### *Findings and limitations of studies*

#### *Effect on Self-Efficacy*

Betcher (2010) showed an increase in average scores by 11% at post-intervention. The largest increase between pre- and post- intervention scores was the ability to be self-confident and relate to patients (increased by 37% post-intervention), and the smallest increases were the use of creative ways to express caring to patients (18%), to use what is learned to provide more individualised care (18%), and confidence in ability to express a sense of caring to patients (18%). Another study (Smith et al., 2013) found at post-intervention participants were more likely to report feeling confident to answer patient and family questions about death (78%) compared to pre-intervention (65%), and to also respond when families became emotional during a family meeting (91%), compared to pre-intervention (73%). Paired response data was available for 38 of the participants and showed an improvement in self-efficacy scores at post-intervention ( $p=.03$ ).

#### *Effect on Confidence*

Clayton et al. (2012) found overall confidence significantly increased from a baseline mean of 42.1 to 56.1 ( $p<0.01$ ). Two other studies that measured confidence also reported an increase from baseline to post-intervention; however these findings were not significant for one study (Bristowe et al., 2014 ( $p=.56$ )). For the other study (Krimshstein et al., 2011) only post-intervention scores were reported even though pre- and post-intervention data were collected; therefore the significance values cannot be calculated.

#### *Effect on Comfort*

Kerai and Wheeler (2013) assessed participants' comfort with discussing EoL issues and found a small but non-significant difference in average scores between the intervention

and the comparison group (data not reported by authors). Smith et al. (2013) also measured participant comfort and found the majority of participants at both pre- and post-intervention were comfortable with specific EoL care topics; however this number was greater in the post-intervention group (91% and 95% respectively). Post-intervention participants were less likely to report doing most of the talking during a family meeting to discuss EoL care (20%), in comparison to pre-intervention (33%). Paired response data was available for 38 of the participants and showed that post-intervention participants had significant improvement in comfort with discussion of code status ( $p=.002$ ), and advanced care planning ( $p=.04$ ), as well as significant improvement in confidence to deal with unexpected events during a family meeting ( $p=.0006$ ), and responding to patient and family questions about death ( $p=.02$ ).

#### *Effect on Communication Skills*

Clayton et al. (2012) found significant improvements on all three global items and for seven out of the 21 specific skills (global =  $p<.002$ ; specific =  $p<.05$ ). Krimshstein et al. (2011) found an increase from 41% at baseline to 73.7% post-intervention ( $p<.01$ ) in regards to participants rating themselves as 'good or excellent' on each of the core communication skills tasks.

#### *Effect on Preparedness*

Kelley et al. (2012) reported a significant improvement in participants' overall self-rated preparedness ( $p<.001$ ). Zapka et al. (2006) reported a significant improvement in overall self-assessed skill preparation ( $p<.0001$ ). Schell et al. (2013) also reported a significant increase in perceived-preparedness for all communication challenges ( $p<.01$ ).

*Effect on Knowledge and Competence*

Only one study measured intervention effects on participant knowledge and perceived competence in EoL communication (Mulder et al., 2009). At post-intervention perceived competence increased ( $p < .01$ ), along with an increase in knowledge ( $p < .01$ ); however no significant correlation was found between change in knowledge and change in perceived competence ( $r = -.28$ ,  $p = .16$ ). This study also reported similar pre- and post-intervention results from the 2008 cohort.

*Effect on Attitude*

Clayton et al. (2012) measured attitude towards psychosocial aspects of care, and found that mean scores significantly improved from baseline following the intervention ( $p = .031$ ). Zapka et al. (2006) measured the impact of the intervention on participant attitude towards EoL care and found small, but non-significant, increases in the mean value on all 23-items (e.g. item 1  $p = .816$ ).

*Effect on Stress and Burnout*

The only study that measured intervention effect on stress and burnout was Clayton et al. (2012). This study found a significant improvement on the mean score following the training ( $p = .043$ ); however there was no significant difference on individual items of emotional exhaustion ( $p = .115$ ) and depersonalisation ( $p = .48$ ).

*Effect of Skills Practice*

Kelley et al. (2012) measured skills practice two months post-intervention and found that participants reported frequent practice of communication skills with patients and families (avoiding jargon; expressing empathy; exploring with open ended questions; and asking family members what the patient would have wanted). Kerai and Wheeler (2013) also

reported that 55% of participants in the intervention group reported using at least one communication technique they had been taught after the intervention. Clayton et al. (2012) reported that two weeks post-intervention 86% of participants reported they had implemented skills taught during the intervention with patients/caregivers.

### *Learner Satisfaction*

All studies included measures (quantitative and qualitative) to collect data on participants' satisfaction and perceptions of the training interventions. One study (Mulder et al., 2009) reported inclusion of questions in the post-intervention questionnaire to evaluate the training; however no results for this are reported in the paper. All studies that presented results highlighted how participants valued communication skills training, and would recommend it to colleagues. Only three studies provided information on the measures used (Clayton et al., 2012; Kelley et al., 2012; Schell et al., 2013). All studies provided some quotations or comments from participants that highlighted the usefulness and value of the training; however for the majority of the studies the data presented were brief.

### **Discussion**

This review aimed to identify and evaluate existing research related to the effectiveness of EoL communication skills training interventions in non-cancer acute-based care. Ten papers were identified as meeting the review criteria and illustrated a range of communication skills training interventions targeted at a range of healthcare professionals working in acute-based hospital services and interacting with EoL or palliative care patients.

Intervention effectiveness varied amongst the studies and it can be difficult to compare studies directly with one another due to different target populations, sample size, content of training, as well as design and measures used. All of the studies reported

improved scores on outcome measures post-intervention, suggesting that communication skills training is effective. However, the extent of the effectiveness of training varies and can also depend on what construct of behaviour the training is targeting.

For those studies that explored the effect of training on self-efficacy (Betcher, 2010; Smith et al., 2013), the latter provides the more robust evidence with a higher overall quality rating and a larger sample size. This study also reported a statistically significant improvement in self-efficacy scores post-intervention. These findings offer some evidence that communication skills training can have a beneficial effect on self-efficacy of healthcare staff.

There is evidence to suggest that training also has an effect on confidence; however of the three studies that measured confidence, only one reported a significant increase in confidence post-intervention (Clayton et al., 2012). The other two studies did report an increase in post-intervention confidence scores; however the findings were non-significant (Bristowe et al., 2014; Krimshstein et al., 2011). These findings suggest that communication skills training does have some effect on participants' confidence; however effectiveness can be varied, and therefore we cannot conclusively argue that training will significantly improve health professionals' confidence in communicating about EoL issues with patients and families.

The effect of training on participant comfort in having EoL discussions is less clear. Of the two studies that measured comfort, Smith et al. (2013) provides the most robust evidence and has a better overall quality score. The study reported a significant improvement in participant comfort levels on several EoL topics. The other study (Kerai & Wheeler, 2013) provides limited evidence and reported a non-significant finding; therefore we cannot

definitively say that communication skills training has an effect on comfort of healthcare staff with EoL discussions; however it may be beneficial to participants.

The studies also provide evidence that communication skills training can improve how prepared healthcare professionals feel for having EoL conversations with patients, families and colleagues. Of the three studies that reported significant findings, only two provide more convincing data due to higher quality in regards to selection bias and attrition rates (Kelley et al., 2012 and Zapka et al., 2006).

The evidence that training is effective for improving competence and knowledge in EoL care is limited; the one study that measured participant competence and knowledge (Mulder et al., 2009) reported significant findings; however this study does not provide robust evidence due overall poor quality. Therefore it is inconclusive whether communication skills training improves self-assessed competence amongst healthcare staff in having EoL discussions, and if training improves knowledge of EoL care issues.

The findings also demonstrate that training can have an effect on communication skills in practice. However the evidence presented is not robust with only one out of three studies reporting a significant improvement in communication skills post-intervention (Clayton et al., 2012). Therefore it cannot be conclusively argued that training improves the practice of communication skills amongst healthcare staff.

There is also evidence to suggest that communication skills training may be of some benefit on healthcare professional stress and burnout, with one study reporting significant results post-intervention (Clayton et al., 2012). However this study has several limitations; therefore it cannot be conclusively argued that training will be beneficial for healthcare staff on differing aspects of stress and burnout that are related to providing EoL care.

The above findings do offer some evidence that training may be beneficial in improving self-assessed confidence, self-efficacy, competence, and communication skills in practice. However it cannot be said definitively that communication skills training interventions are effective for healthcare staff when communicating about EoL care issues with patients and families.

General strengths of the studies include the comparison of pre- and post-intervention measures and the use of efficient and easily implemented training sessions. However, limitations in the design of all of the studies in the review are evident, which impacts on subsequent reporting of results. None of the studies used a randomized controlled design, and all but one lacked the use of control or comparison groups. The design of the studies could introduce bias into the samples used and contribute to the limitations of each study. Many of the studies also lacked detail about the measures used, including reporting of the reliability and validity of measures, which raises further questions about the reliability of the results. Lack of details about study measures also resulted in the authors of the current review not being able to conduct a meta-analysis.

The setting that many of the studies were conducted in may also influence the results. The majority of studies were conducted in a healthcare setting, meaning colleagues and staff within the organisations may have known that participants took part in the interventions. In some of the studies, participants were identified by team leaders/service managers to attend, which may have resulted in the presence of demand characteristics. A further limitation with the studies was the lack of follow-up; therefore the long-term effect of the training interventions is not known. Only two studies reported asking participants about communication skills they had used in practice post-intervention. None of the studies used objective measures, all measures were subjective self-assessed measures. The studies also focused on different populations, with the majority using medical trainees, whereas some



utilised registered healthcare staff. This makes it even more challenging to compare the results of the interventions. Participants who were early on in their training may naturally feel less confident and less able to converse with patients and their families about EoL care, in comparison to those with more years of experience and who have also cared for EoL patients previously.

Nine studies reported participant satisfaction with the training interventions, or participant feedback on the training. The majority of these studies did not report sufficient data in regards to participant satisfaction, and some studies did not report the measures or methods used to collect data from participants. Despite this the studies reported positive feedback from participants about training content, format and feasibility.

### **Implications**

It is evident from this review that further high quality studies are needed. Studies need to include reliable and valid measures and have more robust methods, such as randomised-controlled studies, to test the effectiveness of training interventions. Studies also need to conduct a priori power analysis in order to justify sample size, and also need to report results more thoroughly. There is also a lack of robust qualitative research in this area, which may be useful to understand further the effectiveness of training interventions for different healthcare professionals, as well as for patients and their families. The findings from this review could be used to guide the development and implementation of EoL communication skills training in the future. Those interventions that resulted in significant improvements could form the basis of such training. Those developing and implementing training could also look at interventions that have been relatively cost effective to deliver, and interventions that have been easily implemented into existing training structures.

## Conclusion

The studies reviewed demonstrate a range of communication skills training interventions in EoL care, with a range of healthcare professionals. The results suggest that training interventions are effective in regards to the outcomes measured; however due to different outcome measures and interventions the results are not comparable and a consensus on the effectiveness of communication skills training cannot be reached. Further robust studies are needed to determine the effectiveness of EoL communication skills training in non-cancer, acute-based services, along with long-term follow ups and objective measures to assess the impact on skills in practice with patients and their families.

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