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Clinical Supervisor training: using critical incidents to identify learning outcomes

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Clinical Supervisor Training: using critical incidents to identify learning outcomes

Background: Student supervision training varies by design and mode and is typically evaluated via satisfaction and confidence rating surveys which consider participants' subjective perceptions and attitudes. This study investigated the effectiveness of a two-day interprofessional student supervision training workshop by identifying participants' confidence and their learning outcomes, through their responses to a clinical supervision scenario.

Methods: Four workshops were held with 112 of the 142 workshop participants responding to a pre and post questionnaire investigating confidence ratings and responding to a critical clinical supervision scenario to identify key features, actions and subsequent intended outcomes. Critical incident theory was used in the study design and data analysis.

Results: Confidence in supervision knowledge and skills improved post-workshop. Participants identified similar key features of the scenario pre and post workshop, however there were qualitative differences in their planned actions and intended outcomes. Pre-workshop, participants focused on feedback and communication strategies to identify and resolve challenges using a didactic approach. Comparatively, post-workshop, participants' response to the scenario suggested they would collaborate with the student to explore the situation and plan strategies in partnership and to mutually understand the issues.

Participants' pre-workshop learning goals related to their post-workshop learning attainment, but findings suggested a deeper understanding and application of the learning after the workshop.

Discussion: Utilising a critical incident scenario in conjunction with confidence ratings in the evaluation of a student supervision workshop suggested that participants acquired an integrated understanding of students' learning in clinical placement, and provided a framework to guide future training.

Keywords: Faculty development; Clinical supervisor; Professional placement; workplace learning

Introduction

Successful health professional student placements are critical for competency development, but depend on the skills of clinical supervisors, who oversee students' learning in placement settings (1). However, many supervisors are clinicians with poor access to training and resources to develop their education expertise (2). Where this training does exist, there is limited evidence of robust evaluation.

Supervision training varies in design (3) but content is relatively consistent (4). Training effectiveness is often measured using self-reported satisfaction or confidence ratings (4). This low level evaluation provides perspectives about the learners' experience or attitudinal changes that correspond to level 1 of Kirkpatrick's four level evaluation framework (5). As a commonly applied appraisal tool (5) Kirkpatrick's levels also facilitate evaluation of how educative interventions modify the knowledge and skills of learners (level 2) as an antecedent to evaluating changes in behaviour (level 3), organisational practice (level 4a) and benefits for service recipients including students and patients (level 4b).

Quality supervision training is critical to facilitate positive competency development for students in placements, however, learning outcomes from training (level 2) are not commonly reported (3). In addition to measuring participants' confidence outcomes, this study also applied a critical incident approach to identify their salient learning outcomes following supervision training. The research questions were:

1. How do confidence ratings about supervision knowledge and skills change after training?
2. How do participants' written responses to a supervision scenario change after completing training?

Methods

Context

Nursing and allied health practitioners from health, disability and education services that host student placements participated in a free two-day placement supervision workshop. This aimed to develop participants' knowledge and skills for effective supervision in their workplaces. Three university educators from differing health backgrounds, who were experienced in curriculum design and placement supervision developed the content and learning approach iteratively over five years. Content was derived from theory and themes reported in the literature as critical for supervision training (4, 6), including planning and effective communication for workplace supervision; goal setting and assessment to facilitate learning; and using reflective practice and other learning theories as educative tools. The workshop design facilitated participants to construct learning through working in interprofessional groups to respond to common supervision scenarios.

Participants

Practitioners who attended one of four identical workshops conducted during 2016 and 2017 were invited to participate in this study that was approved by Flinders University Social and Behavioural Ethics Committee. Three workshops were conducted in the same Australian metropolitan location, and one conducted in a rural location. Participation was not restricted to practitioners who were experienced supervisors or those affiliated with the host university. This enabled a rich mix of participants with varied knowledge and experience of student learning and supervision. Of the 142 total workshop attendees, 112 provided written consent to participate (78.9%).

Design

The research team designed and piloted a pre and post workshop questionnaire. This captured confidence ratings in supervision skills related to the training objectives, and written responses to a clinical supervision scenario. The scenario, shown in Figure 1, and prompt

questions, shown in Table 1, were developed using critical incident theory (CIT) as a framework to collect and synthesise the salient scenario features identified by participants, connections between their actions and strategies in response and anticipated outcomes prior to and following training (7, 8). Participants' cognitive and affective responses were also gathered to develop context-rich, practical strategies that were grounded in an authentic event (7, 8), and which were converted to a taxonomy to direct future training (8). Table 1 shows the critical incident plan that identified the key elements for data analysis. Additionally, participants provided open-ended responses to identify their learning goals and attainment to guide future training development.

Analysis

Descriptive participant data are shown in Table 2. As is usual for the allied health professions, participants were typically younger female, less experienced practitioners with limited supervision experience.

Participants rated their confidence in supervision skills using a five-point Likert scale that was analysed using Wilcoxon signed rank test for repeated measures as shown in Table 3 (9). Written pre and post workshop scenario responses were transcribed verbatim, inductively coded, categorised and ordered by prominence in the data as specified by the critical incident plan. Table 4 shows these categories according to the scenario features, actions and outcomes. Categories were developed iteratively and were constantly compared to ensure they remained grounded in the data. More than 100 responses to the critical scenario were gathered, and data saturation was achieved (7). Coding and categories were completed by two members of the research team and were independently checked, with minor discrepancies resolved through consensus.

Results

The findings will be reported in order of prominence according to pre and post-workshop features, actions and outcomes identified from the scenario and participants' learning goals

and attainment (Table 4). The *features* provided the frame of reference to describe the actions and expected outcomes (8).

Features

Similar student or contextual features were identified pre to post workshop from which participants referenced their actions to modify the student's outcomes. This similarity was expected, as the scenario was unchanged and related to the workshop objectives.

Actions

Pre-workshop, participants identified discussing their concerns with the student and university through feedback and general communication strategies, as priorities. Some participants also discussed student goal setting and reflection as learning strategies. Conversely, their post-workshop actions were comparatively specific, outcomes based, and suggested greater collaboration with the student to explore the situation and co-construct learning strategies.

Outcomes

Pre-workshop outcomes suggested that a positive placement results from the student's own agency and actions. Whilst the student's ownership of their learning was also present in post-workshop outcomes, shared actions of the supervisor and student working together were also prominent. Post-workshop outcomes were more directly connected with planned antecedent actions that fostered the student's learning, compared with the ad-hoc nature of the pre-workshop outcomes.

Confidence and Learning Attainment

Participants' confidence in supervision knowledge and skills increased from pre to post workshop, with a medium to large effect size identified for each item (see Table 3). Learning attainment was captured through comparing participants' learning goals and outcomes. These goals and outcomes were linked with participants' prior knowledge about the workshop content, but outcomes also reflected participants' understanding and application of the

learning materials, and positioned students as recipients of educative strategies that participants conceived. Learning attainment related to the scenario actions and outcomes that participants identified that provided a taxonomy to guide future training (see Table 4).

Discussion

A critical incident scenario that captured information about participants' knowledge and skills from a placement supervision workshop was developed to robustly examine participants' learning. This produced a taxonomy of salient learning outcomes for use as a thematic framework to guide future supervision training (8).

Participants identified scenario features that provided a frame of reference to understand and demonstrate their learning through qualitative differences between their pre and post workshop actions and outcomes (7, 8). Categories identified from these actions and outcomes suggested that this training facilitated participants to conceptualise supervision in partnership with students, where learning expectations and strategies are co-constructed in alignment with the experiential learning theories that underpinned the workshop content (6). Partnering with students in workplace learning is a key supervision skill, grounded in existing research (1, 4) that should be included in future supervision training.

Pre and post-workshop confidence ratings improved for each supervision item, although the ratings were subject to a response-shift bias that can contaminate the interpretation (10). However, it was the participants' responses to the scenario that enabled evaluation of their knowledge and skills according to Kirkpatrick's level 2. Post-workshop actions suggested that participants could apply the learning concepts in a more expansive, integrated fashion to inform a range of outcomes compared with pre-workshop. However, the pre and post survey design was also subject to salience and self-serving biases that may have influenced participants' motivations to demonstrate improved understanding. Similarly, the discrete workshop content and context limits the generalisability of the study learning outcomes. Notwithstanding these confounding factors, participants were able to demonstrate

a conceptual application of the supervision knowledge and skills targeted during the training that they did not demonstrate in response to the pre-workshop scenario. In this study, a critical incident approach was enacted through using a standard, written supervision scenario. Whilst this enabled a cohort-level comparison across the CIT elements, different learning outcomes may have been identified if participants had constructed individual critical scenarios in response to their learning that related to their own workplace supervision experiences. However, as the training also included practitioners with no student supervision experience, the standard scenario enabled all participants to draw on previous personal or supervision experiences to participate.

This evaluation demonstrated positive changes in participants' confidence, knowledge and skills to enact student supervision in their workplaces, corresponding to Kirkpatrick's Levels 1 and 2. Whilst the workshop format and content was consistent with programs in previous literature, other interventions that provide in time support for supervisors, including peer mentoring, role modelling and communities of practice require investigation (3). Further research that examines whether training results in positive supervision practices in workplaces (Level 3) or how accessing this training affects the learning experience of students on placement (Level 4) is also needed to establish efficacy (5).

Conclusion

Evaluation of a training workshop for practitioners who supervise students in clinical placements identified positive changes to participants' confidence in supervision skills, and evidence that their learning transferred to a supervision scenario. This scenario provided a mechanism to robustly evaluate participants' knowledge and skills, and to identify a set of critical learning outcomes. These can be converted to a taxonomy to guide future supervisor training.

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Figure 1. Critical Incident Scenario

“You have been supervising a **final year student** on placement **in your workplace**. The student has just finished **the fourth week of a ten week** placement, and next week you will be completing their **formative assessment mid placement**.

You have noticed that the student is often **late arriving** at placement and doesn't seem to be **motivated or enthusiastic** about the work they're doing or the client group.

Although the student had been prepared for sessions in the first two weeks, you've noticed that they have been more **frequently unprepared** for sessions in the last two weeks they have attended. This has meant their most recent sessions haven't gone well.

The student also seems to find it **difficult to put information together** with clinical observations from sessions with clients to come up with a plan or recommendations. Although you've **given some feedback** about your concerns, things **haven't really changed much**, and the student is not demonstrating the progress you were hoping for.”

NB. Bold text and paragraph spacing has been added to illustrate key concepts. The participant survey was presented as plain text, with none of this signposting applied.

Table 1. Critical Incident plan (adapted from Hughes Williamson K, Lloyd A 2007 (8))

Element of the CIT plan	Description
Activity aims	<ol style="list-style-type: none"> 1. To identify differences in the features, actions, and outcomes that participants identify in response to a written supervision scenario, pre and post a placement supervision training workshop. 2. To organise these critical incident elements into a taxonomy to direct future learning activities.
The Situation	<ul style="list-style-type: none"> • Where? A two-day Placement Supervision Workshop. • Who? Practitioners from a range of health professional backgrounds who participated in the workshop. • What? Responses to a written placement supervision scenario conducted pre and post workshop.
Scenario prompt questions	<p>Reflecting about this scenario, answer the following questions:</p> <ul style="list-style-type: none"> • <i>What do you feel are the important features of this scenario?</i> • <i>As the student's clinical educator, what steps or actions would you take next?</i> • <i>What is your reasoning for taking these steps or actions?</i> • <i>What do you feel would be the outcome of these steps or actions?</i>

Table 2: Descriptive participant information

	Category	Number of participants	% participants
Gender	Female	102	91.1
	Male	10	8.9
Age (years)	20-29	67	59.8
	30-39	22	19.6
	40-49	12	10.7
	50-59	6	5.4
	60-69	4	3.6
	Missing data	1	0.9
Health Profession	Dietitian	34	30.4
	Speech Pathologist	28	25.0
	Occupational Therapist	27	24.1
	Physiotherapist	7	6.3
	Nurse	5	4.5
	Podiatrist	1	0.9
	Other	10	8.9
Number of years of practice (years)	0-4	66	58.9
	5-9	26	23.2
	10-14	5	4.5
	15-19	3	2.7
	20+	12	10.7
Number of students supervised	0	24	21.4
	1-4	51	45.5
	5-9	13	11.6
	10+	24	21.4

Table 3. Median confidence ratings for supervision knowledge and skills pre and post workshop

Median confidence ratings (5-point Likert scale from 'Not confident at all' to 'Very confident')			
Variable	Median pre-workshop rating	Median post-workshop rating	Statistics
Your knowledge about how students develop competencies in placement?	Neutral	Confident	$z = -7.35$; $p < .0001$; $r = 0.49$
Preparing for and planning to supervise a student in your workplace?	Neutral	Confident	$z = -7.15$; $p < .0001$; $r = 0.48$
Facilitating students' competency development during placement in your workplace?	Neutral	Confident	$z = -7.46$; $p < .0001$; $r = 0.5$
Assessing students' competency development during placement in your workplace?	Neutral	Confident	$z = -6.17$; $p < .0001$; $r = 0.41$
Supervising a student in your workplace who is not developing competencies in the way you expect?	Somewhat confident	Confident	$z = -7.68$; $p < .0001$; $r = 0.51$

Cohen's 1988 effect size criteria: $r = 0.54$ (large effect); 0.3 (medium effect); 0.1 (small effect).

Table 4. Scenario features, actions, outcomes, and learning goals identified by participants (Kirkpatrick's level 2).

CIT element	Pre-workshop	Post-workshop
Features (Student)	1. Motivation	1. Unprofessional behaviours
	2. Unprofessional behaviours	2. Motivation
	3. Poor response to feedback	3. Poor response to feedback and lacks reflective practice skills
	4. Difficulty putting information together	4. Difficulty putting information together, integration and clinical reasoning
	5. Outside issues (stress and wellbeing) affecting performance	5. Change in behaviour impacting performance
	6. Decline in progress	6. Outside issues (stress and wellbeing) affecting performance
Actions (Supervisor)	1. Provide specific feedback, discuss concerns with student	1. Explore student's interpretation of learning, progress and behaviours; discuss concerns and competency.
	2. Contact university to discuss concerns	2. Set and connect micro and macro goals with learning, and revisit these regularly with student.
	3. Discuss change of behaviour and lack of progress with student	3. Facilitate, prioritise and model reflection.
	4. Set goals or develop a learning plan	4. Collaborative support structures, scaffolding; identify learning opportunities together.
	5. Identify if external or non-placement issues are affecting performance	5. Provide regular, specific constructive feedback. Adjust feedback for student's preference.
	6. Ask student to reflect about performance	6. Contact university to discuss concerns.
Outcomes	1. Improved student engagement, and ownership of learning	1. Improved student confidence, awareness and ownership of learning
	2. Improved student performance and skills	2. Shared understanding of student competency and support needs
	3. Shared understanding of student's learning issues, needs and goals	3. Improved student performance and competency progress
	4. Open communication, and improved relationship between student and supervisor	4. Student re-engages through improved communication and relationship with supervisor
	5. A learning plan about competencies will be developed	5. Shared learning expectations that are clear and understood
	6. The student will feel supported.	6. Learning plan reflects micro and macro goals and regular review
Goals and Attainment (Participant)	Pre-workshop Learning Goals	Post workshop Learning outcomes
	1. Working with challenging students; having difficult conversations	1. Facilitate and model reflective practice skills
	2. Ideas and strategies for providing feedback	2. Micro and macro goal setting; goal review and resetting strategies
	3. Assessing students; evaluation of competency outcomes	3. Structures and scaffolding to support learners
	4. Facilitating rich, self-directed learning	4. Adjusting feedback for the learner
	5. Supervisor skills and roles	5. Learning preferences in workplace settings
	6. Goal setting and goal attainment	6. Clear, shared expectations: role, competency, assessment