The Great Shakes: Disasters, Simulations and Learning

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ABSTRACT

The Asia Pacific region is one of the most disaster-prone areas in the world. Despite this, there is limited development of either curriculum or pedagogical strategies for learning about disasters and associated social work responses. This article argues that simulations are powerful pedagogical tools that social work educators can use to prepare students and practitioners when responding to real and complex post-disaster practice scenarios. This article provides background material on social work practice in disasters, the policy context and information used in development of the proposed scenario, *The Great Shakes*. Simulations and their educational foundations and values are discussed with links to the scenario. A planned scenario is offered to illustrate the way knowledge of disasters can be linked to teaching social work practice. Simulations require consideration of student preparation, the roles of facilitator and students and assessment of practice.

Keywords: *Disasters; Disaster management; Simulations; Social work education; Facilitation; Assessment*

INTRODUCTION

Simulations are learning tools designed to replicate the practice environment. They provide an opportunity for social work students to engage in complex practice situations where they are able to learn skills, communicate effectively, collaborate with others, and work in teams without fear of harming clients, agencies or communities. Despite a widespread view that simulations use sophisticated technology that will enable students to engage with virtual reality games, simulations also encompass a broad range of interactive face-to-face teaching approaches.

Social work educators have used simulations in their teaching for many years (Lonne, Daniels, & King, 2010). They can be used for routine learning such as interviewing skills, understanding the impact of poverty, team work or the rehearsal of serious, infrequent or crisis situations (Ker & Bradley, 2010). The value of simulations in social work education is highlighted in the work of Pack (2014). Whilst simulations provide interesting opportunities for learning, they also provide challenges for designer and facilitator. These challenges include preparing for the simulation, managing roles, assessment tasks and provision of feedback to participants. These preparatory considerations are outlined in this article using *The Great Shakes,* a hypothetical scenario.

The rationale for designing simulations on disasters comes as a result of the authors' personal experiences in responding to actual disasters and participating in exercises preparing for disasters in Australia, Aotearoa New Zealand and Canada. Research from Australian and Aotearoa New Zealand has noted inadequate disaster preparation by social service agencies (Milner, 2013; Winkworth, Healy, Woodward, & Camilleri, 2009). There is further acknowledgement in Asia Pacific, American and Caribbean countries of non-existent and inadequate preparation for practice in disaster situations (Rowlands, 2013; Guat Tin Ng, 2012). Together with this minimal preparation, there is little attention to curriculum issues (e.g., Javadian, 2007).

Following the Christchurch disaster in Aotearoa New Zealand, both Adamson (2014) and Marlowe (2014) argued for a disaster-informed curriculum giving consideration to curriculum structure and content. Responding to disasters requires complex decision making under challenging circumstances, community engagement, preparing institutions and communities for disasters, assessing hazards and active assistance in providing day-to-day necessities and psychosocial support for individuals and families post-disaster. It is advantageous for social work students and practitioners, when preparing for disaster situations, to experience simulated practice situations where they can begin to appreciate the holistic practice, the complexities of inter-disciplinary work, legal constraints, and to develop communication skills, self-awareness and critical thinking skills (Pack, 2014).

This article outlines the background literature on disasters and discusses the value and importance of simulations in preparing students for unexpected events in practice. The scenario outlined below is one potential simulation that could be elaborated on for teaching purposes. The goal of the simulation is to prepare students and practitioners to respond to individual, agency and community needs in the rescue and recovery phases of disasters and to plan for management of future disasters. This scenario is based on a real situation that faced managers and practitioners working in Christchurch. As yet, it has not been used in teaching students or colleagues and has not been evaluated. It is presented to illustrate the management of learning in running simulations with students and practitioners.

Disasters

It is challenging for students and colleagues to participate in disaster simulations without some background knowledge of disasters and their management. This background knowledge is intended to inform practice. This section elaborates on the importance of disaster management in our region, policy and practice frameworks, the critical values of social work in disaster practice and practice challenges. This material is linked to the actual simulation provided.

The World Bank reports that the Asia Pacific region, including both Australia and Aotearoa New Zealand, is the most disaster-prone area of the world where "disasters disproportionately affect the poor, vulnerable, and marginalized – including women, children, the elderly and people with disabilities" (Jha & Stanton-Geddes, 2013, p. xxix). They note that women are more likely than men to die from disasters, especially when of low socioeconomic status. In recent years there have been floods, typhoons, earthquakes, fires and tsunamis ranging from Japan and China, through to the Philippines, Vietnam, Cambodia, Indonesia, Thailand, Pacific Islands, Australia and Aotearoa New Zealand. All events involved significant loss of life, substantial financial losses and disrupted communities.

Social workers in the Asia Pacific region have actively assisted with rescue and recovery phases and this first-hand practice experience informs the simulation's design (Busaspathumrong, 2007; Javadian, 2007; Manning, Miller, Newton, & Webb, 2006). Practitioners have argued for social work involvement in risk mitigation and policy initiatives aimed at social development and for inclusion of specific education about disasters in professional programs (Tan, 2007). To this end, the following components are included in the scenario: legal, operational and policy contexts; principles of social justice, rights and respect for others; the work of first responders; providing crisis support and mental health assessments in the recovery phases; working with at-risk communities and people; longer-term work in risk assessment and preparedness; the responsibilities and complexities in working with and across human service organizations to assist both victims and helpers; and working with the media. Skilled communication at all levels is fundamental, along with awareness of purpose, audience, key information to be provided and ways of communicating in challenging situations. Social workers may disseminate and receive information, build consensus, resolve conflict and encourage appropriate action.

Definition

The term *disaster,* as commonly used in social work literature, refers to events that cause destruction, injury, loss of life, economic damage and disruption to the community (National Association of Social Workers (NASW), 2000; Rowlands, 2013). Disasters are described in terms of the financial losses incurred by a community, the extent of social and economic disruption and the loss of life.

In Australia, disaster refers to "a condition or situation of significant destruction, disruption and/or distress to a community" (Emergency Management Australia (EMA), 2004, p. ix). The term *disaster* has been replaced in Australian nomenclature by *event* or *situation*. An event, with its social and community consequences, is located in a specific context. EMA argues that focusing solely on the disaster often concentrates primary attention on the immediate crisis resulting in neglect of policy, in engaging with the community in assessing and appreciating risks and hazards and the long-term evaluation of suitability of existing policy frameworks.

This view resonates with social work literature. Zakour (2005) maintains that social workers are particularly concerned about social disruption, collective stress, and vulnerability, particularly of those structural and economic factors that disadvantage some populations (for example, the poor), and management of the disaster service delivery system to enable reallocation of resources to the most needy. Post-disaster, social workers follow through with support, counselling and coordinating resources to individuals, families and various groups.

Disaster Management

Disaster management takes place in a legal, operational and policy context that provides significant, strong and specific powers to key leaders. Understanding this framework, policy, and delegated powers is essential for practitioners working in rescue and recovery. Each nation has its own history and system of civil defence with associated emergency management and operational approaches. Resulting from the authors' practice experience, command and control is a core principle that does not fit comfortably with a consultative and participatory approach.

When a disaster is imminent or has occurred, a Declaration of a State of Emergency is brought into effect. In Aotearoa New Zealand, the framework is the Civil Defence Emergency Management Act 2002 but each jurisdiction will have similar legislation. This statutory power means that designated emergency personnel have significant authority to protect property, people and the environment and to direct activities. These powers may include closure of roads and places, shutting off water, gas and electricity supplies and the evacuation of people from danger zones. Working in this context demands understanding of the roles of others, the extent of statutory powers and responsibilities, and the skills to work with these leaders whilst simultaneously working in a respectful way with victims and with other organizations.

Many provincial and national jurisdictions have a comprehensive policy approach to emergency management broken into four distinct phases called Prevention, Preparedness, Response and Recovery (PPRR). In an Australasian context, PPRR includes:

- Prevention and mitigation (identification and reductions of hazards to people, environment and property);
- Preparedness (a planned approach that includes education, public information, and engaging community to build resiliency);

- Response (activated mandated actions to reduce threats to people, property and the environment); and
- Recovery (restoration and returning the community to a sustainable level of functioning). (EMA, 2004, p. 4)
- These phases also parallel social work activities in disaster management. PPRR frames the simulation's design and structure.

Social Work Activities
Social justice, a commitment to human rights and strength based approaches underpin social work practice in disaster management. This foundation buttresses interventions described below addressing structural inequalities, concerns for vulnerable populations and support for the strength of individuals and communities in recovery. Similarly, social workers are committed to respectful social relationships irrespective of stresses and barriers with all people at all times.

Helping citizens with basic needs immediately post-disaster comes first as addressing safety, shelter, food, water alongside health issues is critical. Social and emotional support is an essential part of this process using respectful human interactions, to reduce distress, ensure comfort and provide practical assistance (James & Gilliland, 2013, p. 676). This support could be described as *creative passivity* or actively being there with a sense of calmness and readiness to listen and respond as appropriate.

The value of this work is widely acknowledged in the literature, as illustrated by Javadian (2007). She described caseworker responsibilities after the Iran earthquakes as providing situational support, conveying hope, consoling the distressed, assisting clients to rise above despair and working to nourish strengths during the crisis situation. In doing this, she describes crisis intervention where social workers assist in helping victims talk about their experiences, feelings and emotions, putting these into perspective and then addressing how best to deal with their immediate problems using short-term, achievable goals. This form of helping takes place in the field rather than in the comfort of an office. Depending on the availability of services, people may be triaged and referred for mental health assessments and other targeted interventions.

Internationally, social workers have demonstrated remarkable leadership in disaster work with vulnerable groups including Thai children subjected to the impact of a tsunami (Busaspathumrong, 2007; Tan, 2013). In Victoria and South Australia, Rosenbaum, Goodman, and Rhodes (2008) identified that those most at risk in bushfires were the elderly, women, and the disabled, resulting in education programs for women responding to bushfires, for example, 'Firey Women' workshops (South Australia Country Fire Services, 2016).

Communities, like individuals, need help to recover from disasters. This assistance means rebuilding social networks, enlisting local leadership and subsequent planned engagement with other community groups to re-establish social infrastructure essential for service delivery. Community recovery includes assisting locals to plan and participate in community consultations about future arrangements. One consequence of the devastation of inner Christchurch was damage to boarding houses, the primary residences of people with long-term mental health concerns. Post-earthquake, Kane and Smith (2013) found many homeless living in decrepit and unsafe housing in the inner city of Christchurch and provided them with food, support and, where possible, alternate accommodation. Kane and Smith (2013) worked closely with this homeless population in the inner city to ensure that sustainable, affordable housing was a goal of the restoration process. Similarly, longer-term community recovery plans in Thailand included grassroots credit schemes, income generating projects, participation in local decision-making and multi-stakeholder consultations (Busaspathumrong, 2007). Recovery work is further extended to assess future hazards and risk and build strategies to prepare for future events.

The Response of Christchurch Social Workers

The experience of Christchurch social workers points to the need for human service organizations to have their own specific organizational disaster plans and to be prepared to work deliberately and closely with local disaster organizations (Milner, 2013). The agency managed by Milner (2013) was "red zoned", making access illegal. In simultaneously managing ongoing services and providing support to rescue and recovery efforts across the city, he noted the importance of connectedness between local organizations, national bodies and agencies, supporters and the local neighbourhood. It was this local, national and international connectedness that provided support and strength for recovery.

This inter-organizational connectedness was also mentioned by Tan (2013) as an essential, but overlooked, aspect of recovery. In providing services to clients and communities, social workers operate within complex inter-organizational arrangements to enable clients to access appropriate services. At the macro level, this will include complex public and private partnerships (Srinivasan & Nagaraj, 2007).

There are many victims in disasters, including front-line workers and professional helpers. It is important for social workers and all other front-line workers to take care of themselves emotionally and physically. In the immediate post-disaster phase, workers become exhausted. Manning et al. (2007), for example, suggests that front-line workers be replaced after three weeks of intensive work (in the Bali bombings) such were the emotional demands. Van Heugten (2013) noted that Christchurch social workers were increasingly exhausted and recommended that managers protect them from overload. As a result of their experiences in this earthquake, many social workers, who were both victims and helpers, were forced to review their personal and work priorities, such was the impact of the disaster. Some left the city never to return.

In the Aotearoa New Zealand earthquake and Thai tsunami, academic writers discussed the breakdown of telephone systems and talked of the importance of text messaging as the only reliable means of communication (Manning et al., 2007; Milner, 2013). Effective use of this medium depends on the capacity to rapidly access mobile numbers of key people and capacity to recharge phones at both ends. Little mention has been made of the use of other social media in these situations. Similarly, Manning et al. (2007) noted the impact of international media requests for human-interest stories, addressed the importance of privacy for individuals and families and outlined strategies to deal with these requests.

SIMULATIONS

Disasters and the specific challenges posed by an earthquake provide educators with opportunities to use such experiences to prepare social work students and current practitioners with the knowledge, skills and values to manage such events. The simulation is not intended for a particular subject or year level. It can be adapted to fit with upper-level work and for continuing professional education.

There is considerable conceptual confusion about the term *simulation*. Ker and Bradley (2010) challenge the popularised view, one where simulations are based on virtual reality. Simulations take a variety of forms, from the technological to those based on face-to-face interactions. Simulations present a purposeful form of experiential learning where learners are placed in a situation where a structured, learning experience resembles the actual experience. They encompass a variety of methods, incorporating interdisciplinary and interprofessional knowledge, and practice such as teamwork and forms of communication and interaction and theories. Role plays, case studies, a day-in-the-life, in-basket exercises, standardized patients/clients, computer simulations are general examples (Crookall, 2010; Hofstede, de Caluwé, & Peters, 2010).

Simulations combine knowledge, practice, emotional involvement and social interactions (Hofstede et al., 2010). Examples in the literature include the use of standardized patients (Barrett & Hodgson, 2011; Linsk & Tunney, 1997; Nel, 2010); simulated family therapy interviews (Mooradian, 2007); simulated group work (Romano & Sullivan, 2012); interviewing skills in a web environment (Ouellette, Westhuis, Marshall, & Chang, 2012); interdisciplinary difficult conversations in health care teams (Marken, Zimmerman, Kennedy, Schremmer, & Smith, 2010; poverty simulations (Vandsburger, Duncan-Daston, Akerson, & Dillon, 2010).

Lonne et al. (2010), in a specific review for Health Workforce Australia, provide an overview of various types of simulations used in social work, offering suggestions on potential uses. What these examples have in common is that practice is central to simulations, allowing for development of integrated and practical skills, which are, by their nature, interdisciplinary and interprofessional (Hofstede et al., 2010).

Simulations, like other forms of experiential learning, have strengths and weaknesses. Simulations, if well designed, allow integration of cognition, emotion, action, social interactions and provide opportunity to reflect on those elements, all of which are expected in professional practice. Linsk and Tunney (1997) outlined the way their simulation provided students with theoretical knowledge of social work frameworks, interactions in working with unfamiliar clients and situations, making critical decisions and accepting feedback, and the emotional component of anxiety about performing their role in a very stressful situation together with the opportunity to provide and receive peer support. Simulations allow discussion of the multiplicity of professional rules and conventions in day-to-day interactions, in interagency discussion and within teams all contributing to deeper appreciation of organizational matters.

Students generally value simulations, although anecdotally they may claim they are unsafe especially when they play the role of client or social worker. Hofstede et al. (2010) noted that emotional issues experienced by students include refusing to engage, refusing to give up, hurting one another and frustration. These issues need to be managed. Nonetheless, simulations can be of great value. They raise student interest, require participation and enable students to experience activities that might not otherwise be possible. Students are able to learn from each other and discover what is personally important for their learning. Some students may be challenged to accept and adopt specific behavioural challenges, for example, taking the role of a person who is seeking to find common ground or an advocate arguing strongly for a person, policy or change.

Simulations can lead to disappointments, particularly because of anticipated and unanticipated emotional factors and social interactions. It is important for the facilitator to see such disappointments as a learning situation and convey this to the students at the outset. Lack of success from one perspective or for one person may not be lack of success from another perspective or for another person. Furthermore, disappointment is an inevitable part of doing something new and applies to both students and facilitator.

Educational Foundations

Simulations are grounded in experiential learning. In this form of learning, students learn to make sense of experience through the processes of doing and reflecting on the learning. Learning therefore becomes "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experiences" (Kolb, 1984, p. 41). Experiential learning has a rich tradition in the scholarship of Dewey (1938); Kolb (1984); Boud, Walker, and Keogh (1985); and Mezirow (1991).

Beard and Wilson (2006, pp. 6–9) have attempted to simplify the complexity of experiential learning using the metaphor of tumblers in a combination lock. They argue experiential learning involves the whole person and takes place in a learning environment, a location that is different from a traditional classroom. Learning involves "real" activities where learners are involved in actions that require problem solving that challenge the intellect, involve the senses and create social interactions. Emotions and their manifestation are core to learning. Our emotional baggage comes with us into learning activities. Feelings also arise through the learning process and are part of what learners experience.

The challenge for educators is how best to use emotions as part of the learning process and for the purposes of change. Intellectual and emotional intelligence are both core in simulations. Verbal abilities and logical reasoning are important intellectual aspects while interpersonal, communicative, creative and moral dimensions are present. Learning involves change, often through an action learning cycle similar to that proposed by Kolb (1984), a disorienting dilemma (Mezirow, 1991), a process of reflection-on-action and in-action (Schön, 1995) and reflective practice (Boud et al., 1985).

The role of facilitator often replaces the role of the teacher; in this role the facilitator questions, guides, supports and creates an environment enabling learning. This active learning approach differs from a teacher-driven approach focused on specific subject matter, didactic lecturing and highly structured learning environments.

The Great Shakes

The scenario described below is an example of how a case study may be presented for students to resolve in a simulated activity. It was deliberately written in the present tense as it is intended to be a situation actually confronting participants. It is based on the experiences of social workers in the aftermath of the earthquakes in Christchurch although this can be changed to suit the context of the students. It is written "as it happened" to convey the urgency of a situation that students or practitioners may confront. In the next section, the learner information is presented.

The Scenario

Major earthquakes and numerous aftershocks have hit Christchurch. The Family Care Network (FCN) has been totally destroyed along with many other social work agencies. The agency has been left without access to work material and the agency is in a red zoned and restricted area. The agency has no business continuity or disaster plan, no training for this type of situation, no computers, financial records, client records or resources of any kind. Communication is limited to text messages with reliability dependent on the electricity grid being re-established and consistently delivered. Local emergency planning protocols require that FCN personnel contribute to rescue and recovery efforts.

Background information

An earthquake measuring 7.1 occurred near Christchurch on 4 September at 4.45a.m. There was no loss of life and very few injuries. Over the following months there were continuing after-shocks, which caused further structural damage to buildings. Liquefaction, a situation where sandy soils become water- filled and liquid -like occurred in the lower areas of the city. The land lost its strength to take the weight of roads, homes, apartments, buildings, bridges, and sewerage. Large liquid-filled holes appeared in roads. Homes, apartments and infrastructure built on areas near the coast and inlets were severely damaged. Resulting public health issues necessitated relocation of people.

Current situation

Another earthquake has just occurred. Although smaller in magnitude at 6.3, its shallow location on a fault line close to the city caused severe structural damage and loss of life. Over 100 people are thought to be killed and thousands more have been injured. Several multi-story buildings collapsed in the city. There is extensive liquefaction, damage to homes in coastal and low-lying areas and extensive damage to infrastructure including water, sewerage, roads and bridges and electricity. This earthquake has destroyed the FCN and other similar inner-city social welfare agencies. A state of emergency has been declared and the inner city closed.

As a result of the severe housing damage, many people are homeless. People have left the city for locations outside Christchurch; some are staying with friends and relatives and others are relocating. The telephone network is overloaded and delays exist. Mobile homes are being brought in to accommodate some of those who are homeless. Over 10,000 homes, offices and apartment blocks are thought to require demolition and 100,000 buildings are severely damaged and uninhabitable until assessed and repaired. Many will remain un-inhabitable. Large parts of the city are "red zoned" and entry to the city is blocked. In areas where housing is not severely wrecked, the damage to water, electricity and sewerage means relocation of families. Many local social workers are homeless or have suffered major damage to their homes.

Aim of Simulation:

a. to assist with the rescue and recovery in the community with crisis services and mobilization of resources;

b. to work to reinstate the basic agency services and operations for staff and clients at the FCN;

c. to contribute to coordination of rescue and recovery services in human services and the community in provision of assessment, psychosocial support and referral to specialist health services;

d. to contribute to advice on longer-term community recovery.

e. Each student will take one of the following roles: CEO of the agency, director of finance, intake social worker, long-term social worker, volunteer coordinator, head of emergency services, health and mental health social workers and city council emergency services coordinator.

Managing the Learning

Writing and preparing simulations is a critical activity but enabling learning in simulations can be challenging, requiring thoughtful preparation. In a review of why role-plays and games are effective as learning tools, Hofstede et al. (2010) noted that simulations bring together cognition, emotion, social interaction and practice. Therefore, in managing these multiple learning outcomes, some fundamental questions need to be addressed and these include preparation of students, the roles of students and facilitator, assessment of learning and debriefing.

Preparing for Learning

Preparing learners through a transparent process is essential for the success of the simulation. Each person should be provided with an overview of the simulation as described above, the names and roles of participants, the overall aims and rules of the game. There are clearly some core roles but, in some simulations, learners are also given characters with associated personality traits. With a variety of roles in this scenario learners have the scope to put themselves in the shoes of another and act from the standpoint of that person.

Learners approach role-plays and simulations with a mixture of feelings as many social work academics can attest. This includes anxiety about performance and prior negative experiences with role-plays where they have been either a "client" divulging personal information or a “worker”, feeling exposed to a critical audience. Facilitators need to consider ahead of time how to address learner refusal to participate or warn students ahead of time of the class requirements.

Learners inevitably bring their culture, race, knowledge and prior experiences to the simulation. Many students will have a deep understanding of anti-oppressive practice, marginalization and oppression as a result of their own experiences but this knowledge does not necessarily translate to successful conversations in the simulation and may inhibit full discussion. Students will be immersed in unfamiliar roles, engaged in a broad range of social interactions that may include specific directives about safety and wellbeing from emergency management staff.

Diversity issues, the exercise of power and their management will inevitably arise. Facilitators can allow these to arise in the course of the simulation, design the simulation to provoke cross-cultural issues through specific situations, roles or characters or actively intervene. Incoming messages from the external environment can be used to enable difficult discussions. For example, there may be a media inquiry about the agency’s treatment of a local refugee.

Roles of Students

The current simulation is designed for 12 to 33 learners comprising the agency team (CEO, social workers, office manager, board chair, community worker and public relations/media specialist/fundraiser); the volunteer coordinator team; the emergency management team (regional controller, fire chief, police, ambulance and local government and Red Cross); and specialist health and mental health and child and family welfare services. Assignment of these roles to students needs thoughtful consideration. When students are known to the instructor, roles could be allocated according to the skills and prior experiences of the learners. Alternatively, roles could be randomly assigned, although this has potential to create problems with students being given inappropriate roles. Students could also select their own particular roles.

If the class is large, roles could be expanded with the participation of observers and advisers to the actual participants. If the observation team is expanded, experienced emergency management personnel, social workers with experience in response to emergencies, agency personnel, service users or community workers could work directly with student observers. Thus students in the observation or advisory group would have the opportunity to work with, and learn from, experienced personnel.

Facilitator’s Role

The role of the facilitator is critical is establishing aims, discussing learning outcomes and outlining expectations for what learners will, and will not, have to do. Explaining the explicit rules of the game, alerting learners to unexpected emotions, the way power is exercised and discussing the possible range of experiences as they progress through the simulation could be provided at the outset. Facilitators would also need to decide if they provide direction on the starting point for the simulation or allow that to happen organically. Direction may include nominating the agency CEO to call as many staff as possible together to review the situation.

Unwritten rules about the conventions of social behaviour and community expectations will also be present to the surprise of learners and facilitators. Discrepancies may arise between the norms of social behaviour and the professional expectations. In one simulation facilitated by the author on health care of two older gay men, all participating explicitly acknowledged that the doctors were the leaders and decision makers despite their egalitarian views and classroom critique of the medical model. In the same simulation, students had great difficulty in discussing sexual preferences and the needs of gay men. These conventions provided insights into professional behaviour and practices and can stimulate rich reflection.

The facilitator's role is to carefully monitor progress with the option of orchestrating the simulation or watching from the sidelines allowing the learning to progress without interruption. Direct involvement in the simulation allows the simulation to pause for discussion and for the group to re-run a segment with a better outcome. It also allows for modelling of practice by an expert and scaffolding of learning. This may not happen with a facilitator who is at the periphery. Other options include using more than one facilitator where there is the opportunity for different styles of teaching, and rich discussions between facilitators who can model thinking and provide diverse perspectives.

Assessment

Simulations provide the opportunities for students to appreciate the real world complexity of practice activities and events. The learning in this simulation allows students to appreciate the challenges in managing disasters and problem-solving strategies for responding to urgent cases and service delivery with limited human and physical resources; and provides challenges in communicating with others and making decisions under pressure. Social interactions and processes for working together will be tested. Disaster management personnel exercise formal and informal power and authority and their approaches might be at variance with the norms of the profession or agency. These approaches will contrast with methods for case coordination and management internally and with external providers. Appreciating the multiple perspectives – cognitive, emotional, social interaction and practice – could be integrated into the assessments.

Simulations are not directly assessed as there are views that the learner's performance will be unfairly assessed. Strategies for assessment may include comprehending a particular role or character as preparation for the scenario, student participation, reflection-on-learning and student evaluation of the simulation. Preparation for roles in simulations is necessary: students should be provided with appropriate content for their role. Understanding this material could form the initial assessment.

Students in advisory roles could submit specific papers or comment on particular issues (e.g., racism, legislative requires and protocols or human rights). A successful simulation depends on the active engagement of students in the learning. Student participation can be assessed with the authors preferring student involvement in designing the criteria for student assessment, self-evaluation with a grade and feedback from the instructor. Where discrepancies exist, individualized discussions are profitable.

Reflection in, and on, learning and the assessment of personal beliefs and assumptions are important tools for learning and assessment. Learners can reflect *during* the experience, exploring their thoughts and feelings, attitudes, interactions, communications and learning and *after* the simulation on the experience thus allowing them to develop meta-cognitive skills. During the simulation students might do a regular blog on their learning. This could be made available to other students. Students may use the Kolb (1984) model where they think of an action, reflect on that action, conceptualize a new approach and then act on their prior actions, reflections and conceptualization.

Alternatively, they could identify a critical incident or a disorienting dilemma (Mezirow, 1991) to reflect on assumptions about theory, interactions, relationships or the manifestation of discrimination, diversity and power.

Overall student evaluation of the simulation provides an opportunity to consider the simulation story and its relevance for real life, the norms and conventions of behaviour and interaction in the simulation and the multiple perspectives on actions, emotions, behaviours and responses, and expected (and unexpected) outcomes.

Debriefing students and summation of the learning is the final stage. Debriefing is a deliberate conversation between the students and instructors where the focus is on the learning outcomes and the extent to which these outcomes have been achieved. Debriefing can follow a formal agenda with opportunities for small group brainstorming and reporting back or follow a process such as appreciative inquiry. It is in, and through, this process that the instructor may need to address strong emotions such as anger, acts of resistance, cynicism and intergroup relations particularly racism. This process is challenging and instructors may need support from colleagues.

CONCLUSIONS

As Zakour (2005) notes, social work is deeply committed to disaster relief and working with vulnerable populations. Social work practice in disaster recovery, while conducted in clinical, organizational or community contexts, has a focus on ecological approaches, prevention of future suffering and the minimization of stress. Thus, as a profession, social work has an important and unique contribution to make to rescue and recovery efforts following natural disasters.

To date, there is very limited social work education that has as its main focus the management of future disasters. To be innovative and sustainable, social work education needs to include disaster management in its curriculum. Simulations are one way to do this as they are pedagogical tools that enable students and practitioners an opportunity to respond to real and complex practice scenarios. The hypothetical case study presented in this article is an illustration of how knowledge of disasters can be linked to teaching social work practice in the classroom setting. As such, it provides an opportunity for improved theory and practice in situations of collective stress. In this way, simulations provide an opportunity for improved theory and practice in such situations.

References

Adamson, C. (2014). A social work lens for a disaster-informed curriculum. *Advances in Social Work and Welfare Education*, *16*(2), 7–22.

Barrett, J., & Hodgson, J. (2011). Hospital simulated patient programme: A guide. *The Clinical Teacher*, *8*, 217–221. doi:10.1111/j.1743-498X. 2011.00479.x

Beard, C., & Wilson, J. P. (2006). *Experiential learning: A best practice handbook for educators and trainers* (2nd ed.). London, UK: Kogan Page.

Boud, D., Walker, D., & Keogh, R. (1985). *Reflection, turning experience into learning*. London, UK: Kogan Page.

Busaspathumrong, P. (2007). The role of social workers and social service delivery during crisis intervention for tsunami survivors. *Journal of Social Work in Disability and Rehabilitation*, *5*, 127–137. doi:10.1300/J198v05n03_08

Crookall, D. (2010). Serious games, debriefing and simulation/gaming as discipline. *Simulation and Gaming, 41*, 898–920. doi:10.1177/1046878110390784

Dewey, J. (1938). *Experience and learning*. New York, NY: Columbia University.

Emergency Management Australia (EMA). (2004). *Emergency management in Australia: concepts and principles*. Retrieved from http://www.em.gov.au/Documents/Manual01-EmergencyManagementinAustralia-ConceptsandPrinciples.pdf

Hofstede, G. J., de Caluwe, L., & Peters, V. (2010). Why simulation games work – In search of the active substance: A synthesis. *Simulation & Gaming, 41*, 824– 843. doi:10.1177/1046878110375596

Guat Tin Ng. (2011). Disaster work in China: tasks and competences for social workers. *Social Work Education, 31*, 538–556.

James, R. K., & Gilliland, B. E. (2013). *Crisis intervention strategies* (7th ed.). Belmont, CA: Brooks/Cole.

Javadian, R. (2007). Social work responses to earthquake disasters: A social work intervention in Bam, Iran, *International Social Work*, *50*, 334–346. doi:10.1177/0020872807076047

Jha, A. K., & Stanton-Geddes, Z. (Eds.). (2013). *A strategic policy guide for disaster risk management in East Asia and the Pacific*. Washington, DC: The World Bank. Retrieved from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/03/08/000333037_20130308112907/Rendered/PDF/758470PUB0EPI0001300PUBDATE02028013.pdf

Kane, R., & Smith, J. (2013). Inner city east – One Christchurch community's story. *Aotearoa New Zealand Social Work, 25* (2), 90–97.

Ker, J., & Bradley, P. (2010). Simulation in medical education. In T. Swanwick (Ed.), *Understanding medical education: Evidence, theory and practice,* (pp. 164–180). Oxford, UK: Association for the Study of Medical Education.

Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Linsk, N. L., & Tunney, K. (1997). Learning to care: Use of practice simulation to train health social workers. *Journal of Social Work Education, 33*, 473–489.

Lonne, B., Daniels, R., & King, J. A. (2010). *Visioning technology-based simulated learning environments in the social work curriculum*. Retrieved from http://www.hwa.gov.au/sites/default/files/sles-in-social-work-curriculum-201108.pdf

Manning, C., Miller, S., Newton, T., & Webb, S. (2007). After the wave: The Centrelink response off shore. *Journal of Social Work in Disability and Rehabilitation, 5*(3–4), 81–95. **doi:**10.1300/J198v05n03_05

Marlowe, J. (2014). A social justice lens to examine refugee populations affected by disasters. *Advances in Social Work and Welfare Education*, *16*(2), 46–59.

Marken, P. A., Zimmerman, C., Kennedy, C., Schremmer, R., & Smith, K. V. (2010). Human simulators and standardized patients to teach difficult conversations to interprofessional health care teams. *American Journal of Pharmaceutical Education, 74*, 120–128. Retrieved from http://www.ajpe.org/toc/ajpe/74/7

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey Bass.

Milner, V. (2013). In the zone: Keeping hope alive through shaky times. *Aotearoa New Zealand Social Work, 25*(2), 45–57.

Mooradian, J. K. (2007). Simulated family therapy interviews in clinical social work education. *Journal of Teaching in Social Work*, *27*, 89–104. Retrieved from http://www.tandfonline.com.ezproxy.uow.edu.au/toc/wtsw20/27/1-2#.U8iu66ipMZ0

National Association of Social Workers (NASW). (2000). Disasters. Policy statement excerpt from *Social Work Speaks* (5th ed.): *NASW Policy Statements, 2000-2003*. NASW Press (2000). Retrieved from https://www.socialworkers.org/pressroom/events/911/disasters.asp

Nel, P. W. (2010). The use of an advanced simulation training to enhance clinical psychology trainees' learning experiences. *Psychology Learning and Teaching*, 9, 65–72. Retrieved from http://www.wwwords.co.uk/plat/content/pdfs/9/issue9_2.asp

New Zealand Government Civil Defence Emergency Management Act 2002.

Ouellette, P. M., Westhuis, D., Marshall, E., & Chang, V. (2006). The acquisition of social work interviewing skills in a web-based and classroom instructional environment: Results of a study. *Journal of Technology in the Human Services, 24*, 53–75. doi:10.1300/J017v24n04_04

Pack, M. (2014). Northern exposure: Integrating disaster management in a humanitarian and community studies program in the Northern Territory of Australia. *Advances in Social Work and Welfare Education*, *16*(2), 73–85.

Romano, J. L., & Sullivan, B.A. (2008). Simulated group counseling for group work training: A four-year research study of group development. *The Journal for Specialists in Group Work*, 25, 366–375. **doi:**10.1080/01933920008411680

Rosenbaum, H., Goodman, H., & Rhodes, A. (2008). *Research project: Bushfire safety for people with special needs.* Retrieved from http://www.bushfirecrc.com/sites/default/files/managed/resource/helen-goodman-special_needs_report_final_25-june-08.pdf

Rowlands, A. (2013). Social work training curriculum in disaster management. *Journal of Social Work in Disability and Rehabilitation, 12*, 130–144. **doi:**10.1080/1536710X.2013.784602

Schön, D. (1995). *The reflective practitioner: How professionals think in action* Aldershot, UK: Arena.

South Australia Country Fire Services. (2016). *Firey Women.* Retrieved from http://www.cfs.sa.gov.au/site/prepare_for_bushfire/cfs_community_events/firey_women.jsp

Srinivasan, K., & Nagaraj, V. K. (2007). The state and civil society in disaster response: Post tsunami experiences in Tamil Nadu. *Journal of Social Work in Disability and Rehabilitation*, *5*, 57–80. **doi:**10.1300/J198v05n03_04

Tan, N. T. (2013). Policy and collaboration after disaster. *Journal of Social Work in Disability and Rehabilitation, 12*, 145–157. do**i:**10.1080/1536710X.2013.784606

Vandsburger, E., Duncan-Daston, R., Akerson, E., & Dillon, T. (2010). The effects of poverty simulation, an experiential learning modality, on students' understanding of life in poverty. *Journal of Teaching in Social Work*, *30*, 300–316. doi:10.1080/08841233.2010.497129

Van Heugten, K. (2013). Supporting human service workers following the Canterbury Earthquakes. *Aotearoa New Zealand Social Work, 25*(2), 35–44.

Winkworth, G., Healy, C., Woodward, M., & Camilleri, P. (2009). Community capacity building: Learning from the 2003 Canberra bush fires. *Australian Journal of Emergency Management, 24*, 5–12.

Zakour, M. (2005). *Social work and disasters. FEMA training package.* Retrieved from http://usasearch.fema.gov/search?query=zakour&op=Search&affiliate=fema