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# Social Work Core Competencies in Disaster Management Practice: An integrative review

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## Abstract

**Purpose:** Though social workers are increasingly engaged in the disaster management, there has been a lack of professional guidelines for social work practice and training in this emerging field. This study aims to develop a rudimentary social work competence framework to plug this gap. **Method:** We conducted an integrative review of 183 international empirical studies and practice reflections, comprising a systematic search, selection, review and content analysis, guided by ecological systems theory. **Results:** This rudimentary framework consists of 73 competencies, including 33 micro-level competencies, 18 meso-level ones and 22 macro-level ones, covering knowledge, values and skills in four disaster management phases. **Conclusion:** Compared to other competence frameworks, this framework further elucidated and classified the salient knowledge, values, and skills in disaster management training and practice for social work.

**Social Work Core Competencies in Disaster Management Practice: An integrative review**

A hazard refers to a process, phenomenon or human activity that may cause a disaster, leading to a serious disruption of community functions and a huge life, economic and environmental loss and impact, according to United Nations Office for Disaster Risk Reduction (UNDRR, 2017). Disaster management, which refers to the "organization, planning and application of measures preparing for, responding to and recovering from disasters" (UNDRR, 2017), has been gaining heightened attention worldwide in view of climate change and crisis including COVID-19. Social workers have contributed to disaster management as educators to provide vital disaster relief information and raise consciousness on hazards; therapists to offer metal health support; advocates for human rights, and equality of technologies and resources in social-ecological disasters; connectors of stakeholders on policy transformation and developing disaster-related training during pre-disaster phases and long-term development (Dominelli, 2012). However, social workers have been challenged by a lack of confidence, unclear roles and tasks, and inadequate insights in cultural sensitivity or local resilience, that may have attributed to insufficient systematic professional training in disaster interventions (Sim et al., 2013).

Social workers need to develop specific competencies in corresponding professional training programs (Drolet, 2019) to improve the efficiency of social workers who need to contend with complexities in disaster contexts. Whilst there are current guidelines and practice reflections about social work competencies in disaster management, they are somewhat fragmented about social workers' roles and responsibilities, without a coherent or comprehensive framework (e.g., Gillespie & Danso, 2010). Besides, they have not taken on board the existing critique of competence-based social work, such as the danger of stripping away the socio-economic and political contexts when developing competencies (Dominelli,

2012). Our study seeks to establish a comprehensive competence framework for social work educators and practitioners across all disaster management phases that would duly consider the contexts of disasters. Further, we expect our proposed comprehensive competence framework would develop further social work's professional identity in disaster contexts, increase governmental and public recognition of social workers' roles in disaster management, and facilitate more efficient collaboration with other professionals in disaster contexts.

## Social work competence discourse

Competency refers to an interactive cluster of knowledge, values and skills, which can be utilized in practice, while a set of integrated competencies ensures worthy performance in a certain domain (Mulder, 2014). Competence-based professional practice and education narrows the gap between practice and education, and prepares a more efficient workforce (Winterton, 2017). An integrated competence framework can improve professional identity development as professionals become distinguished from non-professionals by their achievement of standardized knowledge and skills, commitment to specific ethical norms, and professional decision-making (Dominelli, 1996).

In social work, Vass (1996) stated that self-understanding and its impact on practice should integrate three core domains of competencies, comprising knowledge, values, and skills. The Council on Social Work Education (CSWE, 2015) provided a holistic explanation of social work competence: the ability to utilize specific knowledge, values, and skills as well as critical thinking, affective reactions and unique experience to various practice situations. Over the years, there has been further articulation and discussion on "knowledge", "values" and "skills" in social work in social work, with a focus on their interconnectedness (e.g., Barker, 2003; Trevithick, 2011; Vass, 1996). Social work knowledge can be viewed as a synthesis of various theories with in-depth and tentative understanding (Trevithick, 2011).

Meanwhile, social work values are commonly described as attitudes, goals, moral characteristics and ethical principles that guide social work knowledge (Trevithick, 2011), including social justice and a respect for the equality, worth and dignity of human beings (International Federation of Social Workers, 2018). Meanwhile, social work skills can be viewed as proficiency in utilizing knowledge, values and resources (Barker, 2003), and can also be regarded as learnt actions with specific goals (Trevithick, 2011). Thus, social work knowledge, values and skills make up an interrelated system, and the elegant integration of these three domains can help foster competent social work practice.

However, competence models and frameworks have drawn criticism on its inflexibility in vocational assessment and its insufficiency in preparing social work for its autonomous judgment in professional decision-making (Dominelli, 1996; O'Hagan, 2007). Indeed, "reflection-in-action" is one distinctive feature of the social work profession, as social workers often deal with ambiguous and uncertain contexts and issues in practice, which emphasizes the importance of individual reflection, judgement and creativity (Schön, 1987; Parton, 2000). But social work profession contains dual aspects, not only indeterminacy but also technicality. Competence models or frameworks can help enhance its technicality as they are evidence-informed and based in technical rationality, allowing social workers to make conscientious, explicit and judicious use of the best experience and evidence (Lymbery, 2003; Sheldon & Chilvers, 2000). Thus, there should be reconciliation of creativity generated from practical reflections and competence based on evidence-based practice in social work practice and education (Lymbery, 2003).

Competence could be viewed as a minimum standard to ensure the qualification of social workers engaging in a specific practice, which can help social workers to be appropriately skilled in certain contexts, facilitating the continuous professional development from competence to expertise (Eraut, 1994; Lymbery, 2003). To equip social workers as

qualified helpers in disaster management, characterized by complexities and uncertainty, we therefore target at developing a rudimentary competence framework containing knowledge, values and skills, to guide, train and supervise social workers in relevant disaster contexts. The framework is also expected to improve transdisciplinary collaborations between social workers and other stakeholders in disaster contexts, serving as an important reference on the possible contributions social workers can make to disaster management.

## Competence frameworks in disaster management

There are four interactive phases in disaster management cycle: mitigation, preparedness, response and recovery (UNDRR, 2017; Wisner & Adams, 2002). Mitigation refers to the strategies and actions to moderate and limit a disaster's effects; preparedness involves the specific knowledge and the capacity for hazard preparation of the government, professional groups or individuals; response involves the emergency services or assistance required for immediate needs during or immediately after disasters; and recovery is the offering of professional support to restore or improve the living conditions of victims (UNDRR, 2017). These phases often overlap, and the severity of the disaster can determine the length of each phase (Wisner & Adams, 2002). There are over 370 academic research centers around the world focusing on hazards and disasters, covering Africa, Americas, Asia, Europe and Oceania (Hines, et al., 2020). Some of them have provided competence-based training, such as the convergence training program on cultural competence for researchers by the Natural Hazards Center (Natural Hazards Center, 2020), and the Centers for Disease Control and Prevention (CDC, 2018) have developed 15 capabilities as national standards for public health preparedness planning.

There are disaster competence-based training frameworks for emergency workers such as firemen and paramedics (e.g., Walsh et al., 2012) and nurses (International Council of Nurses, 2019). Take the training for nurses as an example. In 2008, the World Health

Organization (WHO, 2008) presented some detailed knowledge contents, values categories and practice suggestions on protective equipment and communicable diseases in an emergency, when integrating emergency preparedness and response into the undergraduate nursing curricula. In 2019, the International Council of Nurses (ICN) published the Core Competencies in Disaster Nursing Version 2.0 (ICN, 2019). The list of core competencies covers eight dimensions including preparation and planning, communication, incident management, safety and security, assessment, intervention, recovery, and law and ethics, guiding proficient work of general, advanced or specialized nurses. Notably, primarily the "preparation" or "planning" phases of disasters have been highlighted in competence-based frameworks for medical professionals training in an emergency (Walsh et al., 2012).

However, the core competence specific to social work is still underdeveloped, though there have been some efforts in appraising relevant competencies or competence-based training (Ng, 2012; Sim et al., 2013). Dominelli (2012) emphasized cultural competence in response stage, without introducing specific disaster types and country contexts. Rowlands (2013) focused primarily on psychological support during the recovery phase when reviewing relevant curriculums. Alston (2019) emphasized cultural appropriate and gender-sensitive theories related to social work practice in disaster contexts.

Having considered both the strengths and weakness of the aforementioned competence frameworks and training related documents, our study provides a comprehensive competence framework for social workers' education and practice, which will specify key training domains of knowledge, values and skills for social workers to practice at different disaster phases for different types of disasters. It is an evidence-informed framework, as its elements are retrieved, analyzed, and concluded from 183 pieces of the international social work literature.

## Integrative review

An integrative review provides a review and synthesis on both quantitative or qualitative empirical research, methodological or theoretical studies of a specific topic, with a use of broad approach and diverse sampling (Toronto & Remington, 2020; Whittemore et al. 2014). As the integrative review method draws conclusions from diverse sources, it enables a more holistic understanding of a specific phenomenon, which indicates that the review questions can be broadly defined ones instead of a single clinical question in systematic review approach (Toronto & Remington, 2020). Based on the knowledge synthesized from diverse studies, an integrative review provides a more comprehensive overview of the literature and a fuller understanding of a complex issue, and it is one of the most popular knowledge synthesis methods that fulfill research purposes in developing theories or frameworks, or establishing the implications of policy decisions, based on the integration of both qualitative and quantitative studies (Kastner et al., 2016; Tricco et al., 2016).

Compared to other review methods such as systematic reviews which mainly focus on clinical questions, scoping reviews that merely identify the size and nature of the current evidence without adequate synthesis, or realist reviews that help to understand the working mechanisms of an intervention (Grant & Booth, 2009; Noble & Smith, 2018), we chose to use an integrative review to meet our research purpose, which is to examine the knowledge, values and skills that are salient in social work training and practice in disaster management.

Integrative reviews are sophisticated, which include a systematic selection, categorization and synthesis of both qualitative and quantitative studies (Noble & Smith, 2018). However, they are not without barriers. There has been an absence of formal guidelines for integrative review approaches until recently, which may be attributed to the complexity of searching and synthesizing diverse methodologies and research (Toronto & Remington, 2020; Whittemore & Knafl, 2005). Such a complexity may add to the cost of

time and human resource, compared to the narrative review method, which often do not have a predetermined research question or specified search strategies (Toronto & Remington, 2020). Meanwhile, the data interpretation or synthesis in integrative reviews can be relatively subjective, and the lack of the quality appraisal may affect the data quality (Tricco et al., 2016). To tackle the problems, our team developed a manual to guide us in conducting this integrative review and invested around one and a half year to finish the whole process of systematic search, selection, review and content analysis to ensure its rigor.

## Method

There were two stages in this integrative review, including a systematic literature search and selection (Stage 1), followed by a manifest content analysis (Stage 2). The whole process took about one and a half years, from 2019 to 2020. We restricted our review to English-language literature. In April 2019, we applied a systematically developed search strategy to titles, abstracts, and keywords of seven salient academic databases: Scopus, Academic Search Premier, Social Science Citation Index, CINAHL, Sociological Abstract, PsycInfo and PubMed, which are important academic databases for social sciences and recommended by an experienced librarian in the university library, who specializes in the social sciences field. The specific search strategy was as follows:

*('social work' OR 'social work intervention' OR 'social worker' OR 'humanitarian aid' OR 'social work practice' OR 'vulnerable group' OR 'disaster intervention' OR 'social work program*' OR 'disaster social work') AND ('disaster mitigation' OR 'disaster response' OR 'disaster recovery' OR 'disaster prevention' OR 'disaster management' OR 'disaster risk reduction' OR 'post-disaster' OR hazard OR 'natural disaster' OR disaster* OR 'disaster plan') AND ('core competenc*' OR capacit* OR competenc* OR role* OR task* OR knowledg* OR skill* OR value* OR ethic* OR educat* OR train* OR attitud* OR abilit* OR*

*curriculum* OR communicat* OR psycholig* OR facilitat* OR coordinat* OR counsel* OR organiz*)*

2519 references were found, and 1390 references were retained after removing duplicated materials. Next, we screened all the potential literature, and included 41 journal articles, 29 book chapters, 6 editorials and 1 dissertation against the specific inclusion and exclusion criteria which were mainly based on the literature direct relevance (see Table 1).

[TABLE 1 ABOUT HERE]

As the research pertaining to competence for social workers in disaster management was under-developed, we then conducted a citation search (Aveyard, 2019) based on references lists of selected literature in the previous key-word search to obtain the most relevant and comprehensive results. Eventually, we managed to retrieve an additional 36 journal articles, 68 book chapters and 2 editorials by the end of 2019. During this process, the first and second author read the full texts of relevant literature and discussed specific literature selection, which they were uncertain about. The agreement rate on literature selection between the two authors was over 91%. Finally, 183 references were included in the final content analysis, comprising 77 journal articles, 97 book chapters, 8 editorials and 1 dissertation (see Figure 1, and please contact us if you are interested in the whole list of the selected literature). Most of them were published between 1990 to 2019, including 68 reflections and 77 literature reviews. All types of hazards were discussed among the selected literature, including natural, anthropogenic or socio-natural hazards (UNDRR, 2017).

[FIGURE 1 ABOUT HERE]

In Stage Two, content analysis was conducted, a research method which could make valid and reliable inferences from text and is widely used in social work education research (Drisko & Maschi, 2015). We analyzed the manifest content of the selected literature to stay faithful to the opinion of various social work academics and practitioners. This method is

commonly used in social work literature, and the content features can be categorized with little or no interpretation by the coder (Drisko & Maschi, 2015), reducing interpreter bias. It fits our integrative review objective as we intended to include the perceived social work competencies in disaster management of social work scholars and practitioners, based on their own research, reflective practice and observations, instead of judging their views. A set of careful and precise coding criteria has been developed based on the definition and explanation of the four disaster management phases (i.e., mitigation, preparedness, response and recovery), and three domains of competencies (i.e., knowledge, values and skills). The whole content analysis involved two specific steps.

The first step was the coding of the manifest contents available in selected references. According to the terminology of disaster management created by United Nations Office for Disaster Risk Reduction (UNDRR, 2017), and definitions that covered the three core domains of knowledge, values and skills in social work (Gordon, 1965; Barker, 2003; Trevithick, 2011; International Federation of Social Workers, 2018), we established a set of criteria for coding (see Table 2). Referring to this set of criteria, the units of analysis included phrases or sentences with key words listed in the Table 2 were coded into 15 main categories according to the four phases and three core competencies, e.g., mitigation knowledge, mitigation values, mitigation skills, and so on. Notably, some selected literature focused on more than one disaster management phase.

[TABLE 2 ABOUT HERE]

When the contexts mentioned in the references were “pre-disaster”, we repeatedly coded into “mitigation” and “preparedness”. Likewise, for “post-disaster” to “response” and “recovery”. In addition, when the selected literature mentioned “all stages” or “across disaster management process”, the relevant contents were coded in the “All-phases” category. When different intentions, ideas or meanings were combined in one section, paragraph or even

sentence in selected contents, we broke them down into independent units for further analysis. For example, when Rowlands (2013) reviewed social work training on disaster recovery management, four different aspects were included in one sentence: crisis, loss and trauma, strengths approaches, and the range of intervention, which were coded as separated units in our analysis. A total of 1228 themes (i.e., phrases or sentences) were coded via NVivo 12 by the second author (H), and carefully checked by the first author (S), and the final framework was reviewed by the third author (D). Both the first and third authors are known internationally for their social work practice and scholarship in disaster management.

In the second step of content analysis, all coded themes were further analyzed and classified into more sub-categories under 15 main categories. Sub-categories were generated according to manifest meanings of the coded contents through an inductive analytic strategy (Drisko & Maschi, 2015). Specifically, the second author (H) began by coding contents with similar meanings in the same sub-category. The first author (S) then adjusted the sub-categories by splitting (i.e., subdividing and assigning categories) and splicing (i.e., joining categories by interweaving different strands) in adjusting categories iteratively to achieve a balance between resolution and integration, between detail and scope (Dey, 2003). Subsequently, we deliberated on the adjustments made and further revised them where appropriate, according to the criteria in Table 3. The adjustments did not stop until it reached a high level of comprehensiveness, precision, parsimony, heuristic value, and applied value, which was the standard for terminating content analysis (Cramer, 2013). The final version of sub-categories was regarded as a detailed configuration of the competencies in the framework.

[TABLE 3 ABOUT HERE]

However, this competence framework is based on 183 pieces of literature, and we have plans to scrutinize its trustworthiness through using in-depth interviews and a Delphi approach to gain experts' comments on it, to be reported in another study.

## Results

Our rudimentary competence framework for social work in disaster management based on the integrative review, includes 73 competencies in three domains (i.e., knowledge, values, and skills) for the four respective phases of disaster management (i.e., mitigation, preparedness, response and recovery See Table 4). The competencies was arranged according to the ecological system theory at the macrosystem, to mesosystem or microsystem levels. Specifically, we classified competencies into various levels according to Dominelli (2002; 2012) and Alston et al (2019) conceptualization. These suggest that: macro-level social work practice is related to structural or societal levels related to policies, education, management, culture and research; meso-level social work practice that emphasizes the linkages between clients and broader groups or communities, including assisting vulnerable groups, mediating conflicts between residents and governments and improving community resilience; and micro-level practice which usually involves individual casework, communication, negotiation and advocacy. Three important patterns emerged from this evidence-based competence framework based on the integrative review.

[TABLE 4 ABOUT HERE]

**Result 1: More competencies in the post-disaster phases are documented.**

Table 4 shows that there is more literature focusing on knowledge, values, and skills for social workers during the disaster response and recovery phase. For example, in these interventions, there are 10 competencies on response knowledge and 9 competencies on recovery knowledge, compared to 1 on mitigation knowledge and 4 on preparedness knowledge. This implies that social workers' contributions in disaster response and recovery

have been better documented. Social workers apparently paid more attention to theories, models, and techniques related to post-disaster interventions.

However, response and recovery phases may overlap significantly when social workers give instant and constant attention or support to affected individuals, groups, or communities. In fact, these two post-disaster phases are not always clearly differentiated in the literature and in real life practice, as some initial response strategies may continue to the subsequent recovery phase, a consideration particularly relevant to temporary housing (UNDRR, 2017). This is apparent in our framework, where similar competencies under the response and recovery phases such as knowledge related to psychosocial support appear in both "Response knowledge" and "Recovery knowledge" (See K4.7 and K5.6 in Table 4).

**Result 2: More competencies at the micro-levels.**

There are 33 competencies (about 45.2%) that focus on micro-level knowledge, values and skills (See K1.13, K1.14, K2.1, K3.3, K3.4, K4.6 to K4.10, K5.5 to K5.9; V1.7, V4.2, V4.3, V5.2, V5.3; S1.4, S2.2, S3.2, S4.3 to S4.7; S5.3 to S5.7 in Table 4) across the various disaster phases and domains. Micro-level knowledge and skills relate to casework and mental health support for affected individuals, were prominently documented especially in the response and recovery phases. Notably, since there were many coded themes related to knowledge or skills in psychosocial support, mental health intervention, counselling, stress and trauma management, and grief and loss assistance, we administered a more detailed classification. In some selected literature, these terms were highly interconnected and were often used interchangeably. For example, "Crisis and trauma intervention-definition, theories, intervention, loss and grief, PTSD" in Rowlands (2013) included different concepts in the same dimension. We deconstructed them to three categories: "crisis and trauma intervention-definition, theories and intervention", "loss and grief" and "PTSD", and coded them according to these corresponding categories.

There are fewer competencies at meso-level in comparison, which are mainly related to coordination and collaboration, cross-agency partnerships, and community social work and assistance for the vulnerable groups (See K1.9 to K1.12, K4.5, K5.4; V1.6, V4.1, V5.1; S1.1 to S1.3, S2.1, S3.1, S4.1, S4.2, S5.1, S5.2 in Table 4**,** 15 competencies less than the micro-level ones). In contrast, competencies at macro-levels mainly focused on environmental sustainability, cultural sensitivity, political or policy issues, and social justice (See K1.1 to K1.8, K3.1, K3.2, K4.1 to K4.4; K5.1 to K5.3; V1.1 to V1.5 in Table 4**,** four competencies more than the meso-level ones**).** Notably, the terms "ecological" and "environmental" in the framework have different foci. Coded contents related to "person-in-environment", "ecology" and "ecological approaches" refer to social and economic contexts. However, the coded contents related to "green social work", "environmental sustainability", "energy use" and "climate change" highlighted people's interaction with natural environments and long-term sustainability (Dominelli, 2018), which reflect the omission of the natural environment in the social work discipline (Gray & Coates, 2015). Most of these categories were coded under the "All-phases" category.

**Result 3: Call for transdisciplinary collaborations.**

As the impact and influence of a disaster are usually localized, widespread and lasting in various aspects (UNDRR, 2017), tasks and missions in disaster management phases can be complex and dynamic. In **Table 4**, many of the competencies are interconnected within or across the four disaster management phases or three domains, emphasizing four outstanding and interconnected aspects: environmental sustainability, cultural sensitivity, collaborations with other stakeholders and community resilience building, which also implies the awareness of the disaster complexity by social workers.

Within the knowledge domain, three competencies (see K1.2, K1.3 and K1.4 in Table 4**)** are interrelated as they all emphasize the awareness of environmental sustainability, which

align with two values (see V1.1 and V1.2 in Table 4). Similarly, five competencies across three domains (see K1.6, K1.7, V1.5, S4.3 and S5.3 in Table 4) are interrelated with a common focus on cultural sensitivity. However, disaster management interventions that are related to environmental sustainability and indigenization go beyond the conventional social work focus to include geography knowledge and local contexts. Considering the widespread disaster impacts on communities, transdisciplinary and cross-sectors collaborations have been highlighted. In the proposed competence framework, seven competencies across three domains (see K1.9, K3.3, K4.3, V1.6, S1.1, S4.1 and S5.2 in Table 4) imply that social workers have potential to collaborate with other professionals from various disciplines or workers in the national or local disaster management systems, coordinate manpower and physical resources and establish collaborative networks. Based the above-mentioned foci, it is not difficult to find the fourth focus to be community resilience building in the proposed competence framework (see K1.10, K1.11, K4.5, K5.4, V4.1, V5.1, S1.3, S3.1, S4.2 and S5.2 in Table 4). These competencies highlight the need for social workers to motivate, collaborate and integrate all sectors, communities, groups and individuals to build capacities against possible disaster risks. Social workers could play an important role in promoting bottom-up community-based disaster management system in the context of China (Sim, et al., 2017).

## Discussion and Applications to Practice

Though social workers are playing increasingly important roles in disaster contexts, the term “disaster social work” is not formally recognized, compared to other advanced social work practice such as gerontological social work (CSWE, 2015). Moreover, the field of disaster interventions lacks a comprehensive framework for developing its practice. This creates a gap in the literature which this study attempts to plug.

Referring to the rudimentary evidence-based competence framework in this study, it is easy to find the imbalance of competencies across the four disaster management phases, as reflected in Result 1. Many social workers have not adequately integrated theory and practice in the disaster management field and have not paid adequate attention to disaster mitigation and preparedness (Shaw, 2013). Such an omission may exacerbate the lack of recognition for "disaster social work". Other stakeholders in disaster contexts may not understand social workers' roles in disaster mitigation and preparedness. Instead, they regard social workers as the 'second responders' who would support the first responders such as firefighters, police, and medical helpers in emergencies (Bragin, 2014). Conversely, other professionals' contributions, their roles and tasks on disaster preparedness have been well articulated and recognized, such as public health preparedness and emergency legal preparedness (e.g., Walsh et al., 2012). Social work's underdeveloped competencies in disaster mitigation and preparedness as reflected in Result 1, may hamper their role in disaster governance and policy making. In disaster mitigation and preparedness, governments usually play a leading role in hazard-resistant construction and policies or improving public awareness (UNDRR, 2017). In China, social work training and practice in disaster mitigation and preparedness are underdeveloped and emerging, while the government tends to implement top-down disaster management strategies and guides social workers in the whole process (Ng, 2012; Sim et al., 2017). Hence, unless social work clearly articulates its competencies, it is unlikely their work would be recognized adequately as it ought to be.

Low recognition for "disaster social work" may also be related to the over-emphasis on competencies related to psychosocial support, mental health intervention, counselling, stress and trauma management, and grief and loss assistance, especially in disaster response and recovery, as reflected in Result 2. In other words, social workers tend to be more committed to using therapeutic modalities in casework to help affected individuals. Particularly in

disaster response, the boundaries between social workers and counselors or clinical therapists have become vague, while the differences between social workers and other first responders such as firefighters, the police or medical helpers are more obvious. In view of this focus on individual and therapeutic oriented social work practice, Kam (2012) called for a return to social orientation with a focus on promotion of social justice, which is highly salient in disaster contexts as well. Instead of centering clinical theory or techniques focused on an individual or micro-level, social workers should demonstrate their specialty with groups, community and macro-level work and regard themselves as a force of social reform across the various disaster management phases. Thus, social workers should focus on the needs of vulnerable groups, community, social changes, policies, and environments affecting individuals in disaster contexts. With a more "social" orientation, social workers can serve as policy advocates, educators, collaboration facilitators and researchers in disaster management (Boodram & Johnson, 2016). This can help social workers to differentiate themselves from counselors or therapists, and find their own unique positions in disaster management. The focus on "social" or more "macro" competencies may facilitate social workers to contribute more to community resilience building and disaster planning in disaster mitigation and preparedness (Mathbor & Bourassa, 2012). This would correspond to the call on the integration of micro-level, meso-level and macro-level interventions for anti-oppressive social work practice and training (Dominelli, 2002).

Given the complexity of disaster management, a long-term, multi-faced, across sectors and interdisciplinary collaboration should be advocated (Noran, 2014), as Result 3 highlighted. Social work has a potential to work effectively in transdisciplinary collaboration across disaster management phases, particularly in facilitating the collaboration among various disciplines or sectors that deal with local contexts and uncertainty (Sim, et al., 2019). Alston et al (2019) regarded social workers as critical members of multidisciplinary teams

during rapid response in disaster sites, especially working with hospitals, governments, non-government organizations and psychologists. This may be related to social work's traditional emphasis on being sensitive to the contexts and needs of communities (Dominelli, 2012). For instance, Yu et al., (2021) documented an interdisciplinary remote networking approach developed by Chinese social workers who successfully linked communities with psychological and medical resources during the Covid-19 response. However, a clearer articulation of collaboration competencies for social work is necessary, be they multidisciplinary, interdisciplinary or transdisciplinary collaboration in disaster contexts. For example, social workers can be involved in interdisciplinary disaster related research such as the convergence research related hazards engineering (Peek et al., 2020), which should be also emphasized in the competence framework.

Moreover, there are several meaningful interconnections among the competencies identified in this rudimentary evidence-based integrated competence framework for social work in disaster management, as mentioned in Result 3. These connections pertain to important values, knowledge and skills related to coordination, collaboration, environmental sustainability, cultural sensitivity, social justice and so on, across the different phases of disaster management for social work practice. There needs a more sophisticated and in-depth examination of specific processes and practice in each phase and between phases, as well as the trajectory of the way these interconnections take place that may be different, for example, the consideration of promoting environmental sustainability may be different in mitigation and response phases.

The proposed competence framework could be an importance resource for professional social work training in disaster management. When this framework is further validated for social work practice and training in disaster management in China, social workers could have a more comprehensive understanding on what kind of knowledge, values and skills they

should possess in disaster management. Moreover, this could help the Chinese government at both national and local levels to understand and work with social workers in promoting the resilience of individuals and communities affected by disasters.

## References


Alston, M., Hazeleger, T., & Hargreaves, D. (2019). *Social work and disasters: A handbook for practice*. Routledge.

Aveyard, H. (2019) *Doing A Literature Review in Health and Social Care: A Practical Guide (Fourth ed.)*. Open University Press, McGraw-Hill Education, pp.88-91.

Barker, R. (2003). *The social work dictionary* (5th ed.). Washington, D.C.: NASW Press.

Boodram, C. A. S., & Johnson, E. J. (2016). Environmental health hazards on industrial disasters: a study on how to achieve community-level social support. *Natural Hazards, 84*(1), 109-120.

Bragin, M. (2014). Clinical social work with survivors of disaster and terrorism: A social ecological approach. In J. R. Brandel (Ed.), *Essentials of clinical social work,* (pp.366-401). Sage.

Centers for Disease Control and Prevention. (CDC). (2018). *Public Health Emergency Preparedness and Response Capabilities: National Standards for State, Local, Tribal, and Territorial Public Health*, Retrieved from https://www.cdc.gov/cpr/readiness/capabilities.htm.

Council on Social Work Education. (CSWE). (2015). *2015 Educational Policy and Accreditation Standards*. Council on Social Work Education.

Cramer, K. M. (2013). Six criteria of a viable theory: Putting reversal theory to the test. *Journal of Motivation, Emotion, and Personality, 1*(1), 9-16.

Dey, I. (2003). *Qualitative data analysis: A user friendly guide for social scientists*. Routledge.

Dominelli, L. (1996). Deprofessionalizing social work: Anti-oppressive practice, competencies and postmodernism. *The British Journal of Social Work, 26*(2), 153-175.

Dominelli, L. (2002). *Anti-oppressive social work theory and practice*. Palgrave Macmillan.

Dominelli, L. (2012). Social work education for disaster relief work, in M. Grey, J. Coates & T. Hetherington (Eds.), *Environmental Social Work* (pp. 280-297). Routledge.

Dominelli, L. (ed.) (2018). *The Routledge Handbook of Green Social Work*. Routledge.

Drisko, J. W., & Maschi, T. (2015). Basic content analysis. *Content Analysis*, pp. 21-56.

Drolet, J. L. (Ed.). (2019). *Rebuilding lives post-disaster*. Oxford University Press.

Eraut, M. (1994). *Developing professional knowledge and competence*. Falmer Press.

Gillespie, D.F., & Danso, K. (2010). *Disaster Concepts and Issues: A Guide for Social Work Education and Practice*. Council on Social Work Education.

Gordon, W. E. (1965). Knowledge and value: Their distinction and relationship in clarifying social work practice. *Social Work*, *10*(3), 32-39.

Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, *26*(2), 91–108.

Gray, M., & Coates, J. (2015). Changing gears: Shifting to an environmental perspective in social work education. *Social Work Education*, *34*(5), 502–512.

Hines, E., Mathews, M., & Peek, L. (2020). Global List and Interactive Web Map of University-Based Hazards and Disaster Research Centers. *Natural Hazards Review*, *21*(2), 06020001.

Noble, H., & Smith, J. (2018). Reviewing the literature: choosing a review design. *Evidence-Based Nursing*, *21*(2), 39–41.

International Council of Nurses (ICN) (2019). *Core Competencies in Disaster Nursing Version 2.0.* Retrieved from https://www.icn.ch/sites/default/files/inline-files/ICN_Disaster-Comp-Report_WEB_final.pdf.

International Federation of Social Workers. (2018). *Global Social Work Statement of Ethical Principles*. Available online at: https://www.ifsw.org/global-social-work-statement-of-ethical-principles/.

Kam, P. K. (2014). Back to the 'social' of social work: Reviving the social work profession's contribution to the promotion of social justice. *International Social Work*, *57*(6), 723-740.

Kastner, M., Antony, J., Soobiah, C., Straus, S. E., & Tricco, A. C. (2016). Conceptual recommendations for selecting the most appropriate knowledge synthesis method to answer research questions related to complex evidence. *Journal of Clinical Epidemiology*, *73*, 43–49.

Lymbery, M. E. (2003). Negotiating the contradictions between competence and creativity in social work education. *Journal of Social Work*, *3*(1), 99-117.

Mulder, M. (2014). Conceptions of Professional Competence. In *International Handbook of Research in Professional and Practice-based Learning* (pp. 107–137). Springer Netherlands.

Natural Hazards Center. (2020). *CONVERGE Training Modules.* https://converge.colorado.edu/resources/training-modules

Ng, G. T. (2012). Disaster work in China: Tasks and competences for social workers. *Social work education*, *31*(5), 538-556.

Noran, O. (2014). Collaborative disaster management: An interdisciplinary approach. *Computers in Industry*, *65*(6), 1032-1040.

O'Hagan, K. (2007). *Competence in social work practice: A practical guide for students and professionals*. London, Jessica Kingsley Publishers.

Poulin, J. E., & Matis, S. (2021). *Social work practice: a competency-based approach*. Springer Publishing Company.

Parton, N. (2000). Some thoughts on the relationship between theory and practice in and for social work. *British journal of social work*, *30*(4), 449-463.

Peek, L., Tobin, J., Adams, R. M., Wu, H., & Mathews, M. C. (2020). A framework for convergence research in the hazards and disaster field: The natural hazards engineering research infrastructure CONVERGE facility. *Frontiers in Built Environment*, *6*, 110.

Rowlands, A. (2013). Social work training curriculum in disaster management. *Journal of Social Work in Disability & Rehabilitation*, *12*(1-2), 130-144.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.

Shaw, T. V. (2013). Is social work a green profession? An examination of environmental beliefs. *Journal of Social Work*, *13*(1), 3-29.

Sheldon, B., & Chilvers, R. (2000). *Evidence-based social care: A study of prospects and problems*. Russell House Publishing.

Sim, T., Dominelli, L., & Lau, J. (2017). A pathway to initiate bottom-up community-based disaster risk reduction within a top-down system: The case of China. *International Journal of Safety and Security Engineering*, *7*(3), 283–293.

Sim, T., Lau, J., Young, J., & Cui, K. (2019). Initiating transdisciplinary research in China: A Case Study. *International Journal of Environmental Sciences & Natural Resources*, *22*(1), 34-44.

Sim, T., Yuen-Tsang, W. K. A., Quen, C. H., & Dong, Q. H. (2013). Rising to the occasion: Disaster social work in China. *International social work*, *56*(4), 544-562.

Trevithick, P. (2011). *Social Work Skills and Knowledge: A Practice Handbook*. McGraw-Hill Education.

Tricco, A. C., Antony, J., Soobiah, C., Kastner, M., MacDonald, H., Cogo, E., Lillie, E., Tran, J., & Straus, S. E. (2016). Knowledge synthesis methods for integrating qualitative and quantitative data: a scoping review reveals poor operationalization of the methodological steps. *Journal of Clinical Epidemiology*, *73*, 29–35.

Toronto, C. E., & Remington, R. (2020). *A step-by-step guide to conducting an integrative review*. Springer.

United Nations Office for Disaster Risk Reduction. (UNDRR). (2017). *Terminology*. Retrieved from: www.undrr.org/terminology.

Vass, A. A. (1996). *Social work competences: core knowledge, values and skills*. Sage.

Walsh, L., Subbarao, I., Gebbie, K., Schor, K., Lyznicki, J., Strauss-Riggs, K., . . . James, J. (2012). Core Competencies for Disaster Medicine and Public Health. *Disaster Medicine and Public Health Preparedness, 6*(1), 44-52.

Whittemore, R., Chao, A., Jang, M., Minges, K.E. & Park, C. (2014). Methods for research synthesis: An overview. *Heart Lung 43*(5):453–461.

Whittemore, R. & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of advanced nursing*, *52*(5), 546-553.

Winterton, J. (2017). *Competence-based vocational and professional education*. M. Mulder (Ed.). Springer.

Wisner, B., Adams, J., & Adams, J. (Eds.). (2002). *Environmental health in emergencies and disasters: a practical guide*. World Health Organization.

World Health Organization. (WHO). (2008). *Integrating emergency preparedness and response into undergraduate nursing curricula*. World Health Organization.

Yu, Z., Chen, Q., Zheng, G., & Zhu, Y. (2021). Social work involvement in the COVID-19 response in China: Interdisciplinary remote networking. *Journal of Social Work, 21*(2), 246-256.

Table 1 Criteria for inclusion and exclusion

| Inclusion Criteria | Exclusion Criteria |
|---|---|
| Studies or documents that are directly related to the research topic, concepts and questions | Studies or documents that are not directly related to the research topic, concepts and questions |
| Highly related to social work reflective practice in disaster contexts | Merely related to technology or engineering in disaster, politics or military help |
| Discussing models or reviews of social work practice in disaster management | Merely discussing climate change, harm of disaster, or reflections by vulnerable groups, prediction model for disaster management |
| Highly related to social workers, social work helpers and social work students | Merely related to surgeon, nurses, psychologists, teachers or unspecified, instead of social workers |
| Original findings or reflections | Merely repeating others' opinions |
| In English | Not in English |

Table 2 Concepts used in the content analysis and related terms found in selected literature

| Concepts | Definitions | Related terms found in selected literature |
|---|---|---|
| Mitigation | Strategies and actions needed to moderate and limit a disaster's effects (UNDRR, 2017) | "Engineering", "construction", "environmental policies", or "public awareness". |
| Preparedness | Developing the specific knowledge and capacity that government officials, professional groups or individuals will need to be ready before disasters strike (UNDRR, 2017) | "Early warning systems", "planning", "evacuation", "development of public information", "ensuring equipment and supplies", or "associated training". |
| Response | Emergency services or assistance required to meet immediate needs during or immediately after disasters occur (UNDRR, 2017) | "Disaster relief", "short-term", or "temporary". |
| Recovery | Offering of professional support and practical aid to restore or improve the victims' living conditions (UNDRR, 2017) | "Rehabilitation", "reconstruction", or "long-term" |
| Knowledge | Facts or information obtained from education or experience, and theoretical or practical understanding, and it may involve selecting and synthesizing theories in order to generate a more in-depth or tentative | "Understand", "know", "knowledge", "apprehension", "perspective", "theory", |

| | | |
|---|---|---|
| | understanding of a situation (Trevithick, 2008). | "model", "paradigm", or "expertise". |
| Values | Preference which ones will sacrifice what they can to achieve and show loyalty or devotion to (Gordon, 1965); Nine international primary principles (IFSW, 2018). | "Commitments", "goals", "values", "respect", "principles", "willingness", "beliefs", or "ethics". |
| Skills | Proficiency in the utilization of one's own knowledge, values and resources (Barker, 2003) | "skills", "proficiency", "ability", and "capability". |

Table 3 Standards for stopping content analysis

| Standards | Explanation |
|---|---|
| Comprehensiveness | Encompassing a good scope or range of explanation |
| Precision | Consisting of constructs that are clearly defined, tightly interrelated, and easily checked for accuracy and reliability |
| Parsimony | Trimming of excess concepts and needless explanation |
| Heuristic value | Generating thoughts and perspectives and directions for other fields |
| Applied value | Offering effective solutions to problems |

Adapted from Six Criteria of a Viable Theory: Putting Reversal Theory to The Test (Cramer, 2013)

Table 4 The proposed competence framework for social work in disaster management

| DM Phase | Competencies under three dimensions |
|---|---|
| | **Knowledge (K)** |
| 1.All-phases | K1.1-Ecological approach |
| | K1.2-Environmental and sustainable concepts and consciousness |
| | K1.3-Global climate change and DRR frameworks and policies |
| | K1.4-Relevant disaster management perspectives and knowledge |
| | K1.5-Dynamics of political and economic power differentials |
| | K1.6-Contextual information and knowledge |
| | K1.7-Indigenous theories and methods |
| | K1.8-Research |
| | K1.9- Coordination |
| | K1.10-Community-based disaster management theories, methods and interventions |
| | K1.11-Strength-based and resilience perspectives and models |
| | K1.12-Vulnerability, vulnerable groups knowledge and interventions |
| | K1.13-Stress and trauma related theories and methods |
| | K1.14-The generic social work theories and methods |
| 2.Mitigation | K2.1-Knowledge of the means for citizen participation |
| 3.Preparedness | K3.1-Social approaches of disaster preparedness and resilience |
| | K3.2-Legislation and emergency action plans for local area |
| | K3.3-Transdisciplinary strategies for DDR first aid training |
| | K3.4- Knowledge of human responses to disasters |
| 4.Response | K4.1-Geographic, bio-socio and demographic post-disaster information |

| | |
|---|---|
| | K4.2-Legislation and policies on compensation and immigration in local area |
| | K4.3-Knowledge of systems, institutions and networks |
| | K4.4-Management of systems and networks |
| | K4.5-Community resources and capacity |
| | K4.6-Casework theories and techniques |
| | K4.7-Psychosocial support |
| | K4.8-Counselling and mental health support |
| | K4.9-Grief and loss |
| | K4.10-Awareness of role boundaries and self-care |
| 5.Recovery | K5.1-Legislative and policy guidelines for institutional assistance |
| | K5.2-Social conflict and resolution models |
| | K5.3-Recovery principles, literature and other related aspects |
| | K5.4-Community loss, resources and capacities that related to community recovery |
| | K5.5-Case management |
| | K5.6-Disaster psychosocial approaches |
| | K5.7-Counselling and mental health models |
| | K5.8-Grief and loss |
| | K5.9-Professional self-care and supervision |
| | **Values (V)** |
| 1.All-phases | V1.1-Environmental sustainability |
| | V1.2-Environmental justice |
| | V1.3-Social inclusion |
| | V1.4-Social justice, equity and human rights |

| | |
|---|---|
| | V1.5-Cultural, spiritual and local sensitivity |
| | V1.6-Collaboration |
| | V1.7-Empowerment, strengths and dignity |
| 2.Mitigation | No data |
| 3.Preparedness | No data |
| 4.Response | V4.1-Community resilience focused |
| | V4.2-Professional code of ethics |
| | V4.3-Not-knowing and uncertainty |
| 5.Recovery | V5.1-Community development focused |
| | V5.2-Core social work values |
| | V5.3-Not-knowing and uncertainty |
| | **Skills (S)** |
| 1.All-phases | S1.1-Coordinating and networking skills |
| | S1.2-Conflict resolution |
| | S1.3-Community engaging and organizing |
| | S1.4-Advocacy and lobbying skills |
| 2.Mitigation | S2.1-Facilitate knowledge transfer |
| | S2.2-Ability to negotiate for human rights and citizenship participation |
| 3.Preparedness | S3.1-Geographical mapping of community assets |
| | S3.2-Planning of emergency supplies for vulnerable populations |
| 4.Response | S4.1-Collaboration skills |
| | S4.2-Community development skills |
| | S4.3-Skills in providing culturally sensitive for special populations |
| | S4.4-Casework skills |
| | S4.5-Counselling skills |

| | |
|---|---|
| | S4.6-Crisis intervention, stress and trauma management skills |
| | S4.7-Skills in managing risk & uncertainty |
| 5.Recovery | S5.1-Multi-sectoral collaboration skills |
| | S5.2-Community development and group work skills |
| | S5.3-Culturally sensitive intervention skills |
| | S5.4-Casework skills |
| | S5.5-Counselling skills |
| | S5.6-Crisis intervention skills |
| | S5.7-Skills in managing risk and uncertainty |

Note: a. DM refers to Disaster Management; b. DRR refers to Disaster Risk Reduction
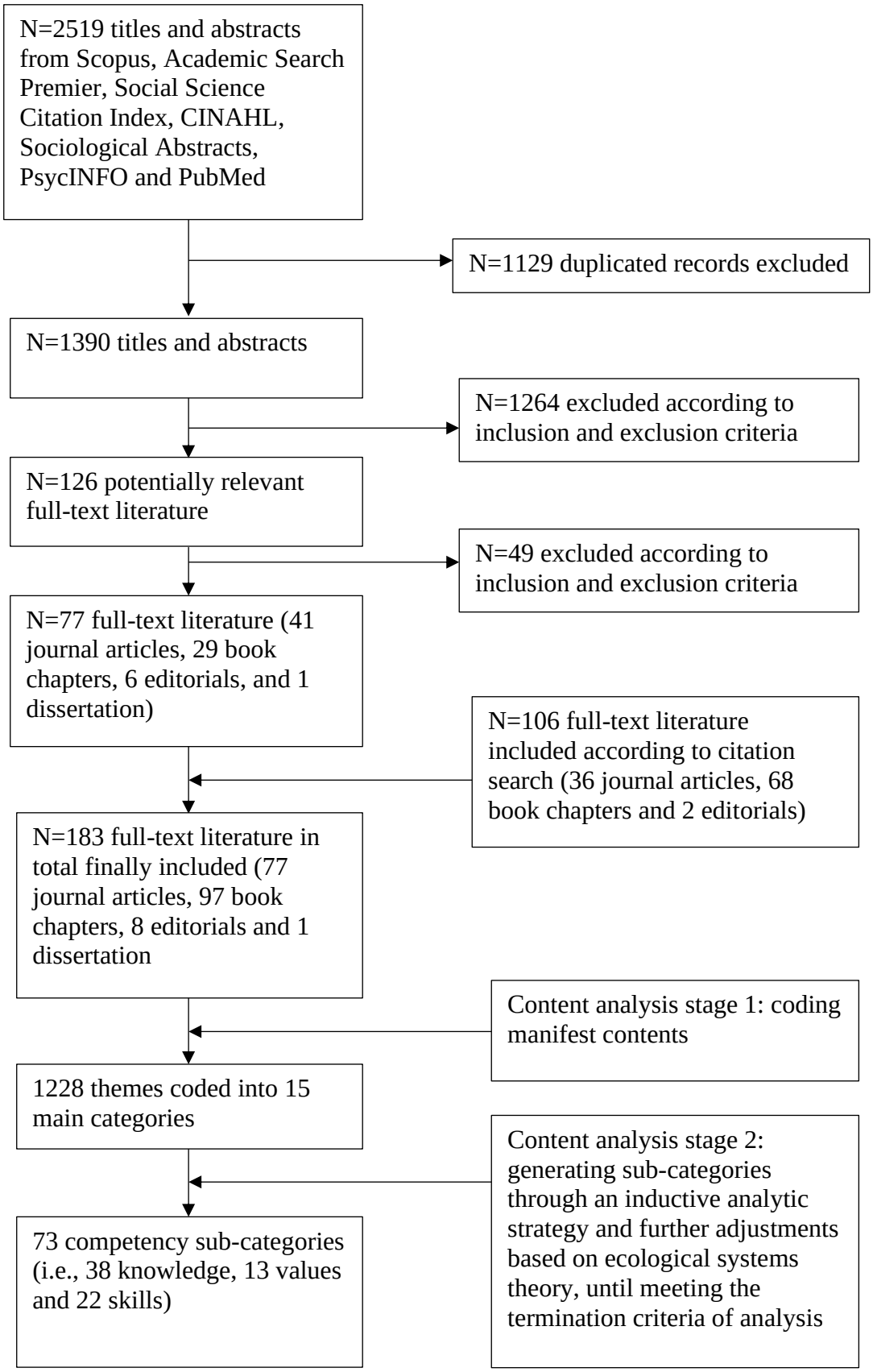
Figure 1 The integrative review process: systematic search, selection and analysis