Enhancing Inclusive Crisis Planning: Insights From a Disability-Inclusive Scenario Workshop

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ABSTRACT

In response to escalating disasters, inclusive crisis planning is crucial. This study examines a specialized workshop that engaged people with disabilities in crisis planning, focusing on a simulated flood scenario. Stakeholders from disability organizations and the local municipality collaborated, including eight crisis communicators and thirteen individuals with disabilities. The workshop facilitated knowledge exchange and surfaced disability-specific issues. While successful in raising awareness, challenges arose in relaying detailed perspectives, emphasizing the need for nuanced communication. Locally relevant scenarios strengthened the workshop's impact. The findings stress the importance of early involvement of individuals with disabilities in crisis planning and offer insights for researchers and policymakers. This research contributes to enhancing inclusivity in crisis planning and informs future disaster risk reduction.

Keywords: Crisis management, Universal design, Participatory research, Disability-inclusive disaster risk reduction

INTRODUCTION

In the realm of crisis and disaster management, the terms crisis and disaster embody events that threaten communities, demanding urgent attention and strategic response. A crisis denotes a situation of peril or danger, while a disaster signifies a severe, widespread disruption causing significant harm and overwhelming local capacities.

In these challenges, a critical aspect often overlooked is the exclusion of certain demographics in crisis planning and contingency work. This exclusion of specific groups from decision-making processes, notably individuals with disabilities, brings marginalization.

Eisenmann's (2011) study on Hurricane Katrina evacuees revealed instrumental, cognitive, and sociocultural factors influencing evacuation decisions, including transportation and social connections as critical elements. Distrust of authorities further hindered effective communication and cooperation. White (2014) highlighted fragmented services for the deaf, resulting in communication breakdowns and missed vital announcements during evacuations. The government's failure to address these unique challenges exemplifies the

disproportionate impact on the Deaf African American community in New Orleans' Lower Ninth Ward. Eisenmann's study emphasized that natural helping networks within disabled communities proved more effective than organized relief agencies. To effectively mitigate crisis risks for people with disabilities, comprehensive and inclusive crisis planning must account for the specific needs of disabled individuals, leveraging existing community structures and addressing distrust in authorities. A failure to do so perpetuates vulnerabilities and exacerbates the impact of disasters on marginalized populations.

Excluding individuals with disabilities from disaster risk reduction initiatives poses a significant problem, leading to inaccurate and fragmented information and knowledge. Guesswork and assumptions are ineffective in addressing the unique needs and challenges faced by this demographic. The positive impacts of user-involvement is highlighted by Fischer et al. (2020). By integrating diverse experiences and perspectives, researchers can foster a sense of empowerment and ownership through active participation. User-involvement can contribute to the design-process by the user gaining and sharing valuable insights and challenging stereotypes.

Referencing the Convention on the Rights of Persons with Disabilities (CRPD), it is imperative to highlight that individuals with disabilities have a fundamental right to security. The CRPD underscores the need for inclusivity in all aspects of life, emphasizing the importance of involving this community in decision-making processes related to disaster risk reduction.

The Sendai Framework for Disaster Risk Reduction (SFDRR) was created as an agreement between UN member states to serve as a guide for how states can make progress in disaster risk reduction work (Stough & Kang, 2015). It outlines seven global targets and four priorities to be achieved in the years 2015 to 2030. The framework underscores the critical role of inclusivity, highlights concepts like accessibility and inclusion, and recognizes individuals with disabilities and their organizations as crucial stakeholders. The framework emphasizes the critical role of persons with disabilities in both assessing and implementing plans, strengthening government responsibility to engage with this community for more resilient and equitable disaster risk reduction. Inclusive disaster risk reduction ensures that information, plans, and resources are tailored to diverse needs, fostering a safer and more resilient community. It is through these inclusive efforts that a more accurate, comprehensive, and rights-based approach to disaster preparedness and response can be realized.

It is well established that thorough societal crisis management should address the phases before, during and after crises, and integrate activities related to these to strengthen preparedness (McLoughlin, 1985). With an integrated approach to crisis management that encompasses before, during, and after, most individuals can serve as resources and actively contribute at least in certain phases. Even if one person may not be able to contribute much during the acute phase of crisis management in a specific scenario, they might still contribute to preventive and preparatory work that enhances the degree of "universality" in societal know-how and capability. This strengthens the society's ability to address and overcome challenges comprehensively.

In crisis management, there are various types of exercises, such as theoretical discussions, tabletop exercises involving scenarios, and practical drills of different scales (Alexander, 2000). Scenario-based tabletop exercises are a common method in societal crisis work wherein participants typically discuss and evolve a crisis scenario, developing individual and collective knowledge and competence (Borell & Eriksson, 2013). Since the method utilizes verbal communication and dynamic interaction within a group of participants, one might wonder how it functions when individuals with disabilities participate. Are there any specific challenges that need to be considered and addressed? How can the implementation be designed to work effectively and deliver relevant results?

In our work we have been inspired by universal design (Steinfeld & Maisel, 2012), and also drawn inspiration from human centred design and participatory design/co-design (Iwarsson & Ståhl, 2003). While such methods typically have been developed more with products and services in mind, it has been our assumption that they have potential also when it comes to developing more inclusive crisis management, something we have seen confirmed by the results obtained so far.

This study has been conducted within a larger research project, titled "From passive recipient to active resource in the crisis management and preparedness system". We explore how individuals can transition from being mere recipients of assistance during crises to actively contributing to the resilience and effectiveness of crisis response efforts. This involves understanding how people with diverse abilities, backgrounds, and experiences can play pivotal roles in various stages of crisis management, thereby enriching the overall resilience of our communities.

In this particular study the aim was to explore stakeholder collaboration and knowledge exchange within a crisis scenario workshop, with a specific focus on people with disabilities. Additionally, the study sought to identify practical preparedness requirements, address accessibility issues, and evaluate the effectiveness of workshops in enhancing participants' readiness for crisis management.

METHOD

In this study, we aimed to explore practical approaches to inclusive crisis planning and mitigation through a participatory design process. Our methodology involved two primary data collection methods: interviews with municipality crisis planners and representatives from disability organizations and a participatory workshop.

We conducted in-depth interviews with key stakeholders, including crisis planners from municipalities across Sweden and representatives from disability organizations. These interviews aimed to gather insights into current crisis planning practices, challenges faced by individuals with disabilities, and their perspectives on relevant scenarios.

The design process for the conducted workshop involved a combination of theoretical frameworks such as human centred design, participatory design/co-design and Universal Design (UD) (Iwarsson & Ståhl, 2003).

Universal design aims at designing a society for everyone, and can be said to be an overall design principle in the current work (Steinfeld & Maisel, 2012). Human centred design adopts an iterative approach, focusing on the potential future users of a product or service (ISO 9241-210:2019, Ergonomics of human-system interaction, Part 210: Human-centred design for interactive systems), which in our case translates to the citizens involved in a crisis. Underlying participatory design/co-design, is the mindset of future users (or citizens) as co-designers in the development process. While participatory design has strong political roots, and originally was developed for design/development within a workplace environment, co-design can be used as a more general term for design activities involving future users or citizens as co-designers (Sanders & Stappers, 2008). A tool often used in this type of approach is workshops together with users/citizens, something which has been found to be useful also when working with co-design together with persons with disabilities (Magnusson et al., 2018). In the current project we have adopted methods for co-design workshops to suit the area of crisis management.

We considered ways of presenting information, stimulating thoughts, foster engagement, support creative thinking and discussion, and document outcomes. Prepared tools, including large prints and tactile maps (although not utilized), were developed to enhance the workshop experience.

As part of the workshop preparations, the research group identified probable needs and challenges of the participant groups in relation to relevant crisis scenarios, which also helped to form hypotheses about potential problems that might arise in crisis situations. This phase of the research was informed by the earlier analyses of interviews and integrated lessons learned from several previous workshops. This became design input to the crisis scenarios and discussion topics to be used in the workshop. A strategic challenge was to ensure that the session should feel relevant and understandable for all participants, despite their diverse backgrounds.

WORKSHOP DESIGN AND PARTICIPANTS

A workshop focusing on crisis planning for individuals with disabilities was planned in collaboration with the Municipality's Division for Disability Support Services. The workshop aimed to explore the impact of potential scenarios on participants, including individuals with disabilities, crisis communicators, representatives from disability organizations, and municipality personnel.

The planning stage involved close coordination with the Municipality's Division for Disability Support Services, which provided a familiar meeting point for the participants. This location served as a central platform conducive to engagement and discussion. Additionally, local disability organizations were engaged to ensure diverse representation from various stakeholders.

The recruitment of participants was taken care of by the two organizers connected to the local municipality disability services. They used the network already in use to inform the disability organisations and stakeholders from

the municipality. A letter was sent out to people within the local community asking for interested parties to contact them and spread the word within their fields. The resulting participants were eight crisis communicators and other officials from the local municipality and thirteen individuals with physical and cognitive disabilities. After the workshop, e-mails were sent to the municipality participants to ask about how useful they felt this kind of activity was for their future work.

PREPARATION AND MATERIALS

Prior to the workshop, materials such as photographs from the local area (Malmö, Sweden), and maps depicting areas affected by potential crises were prepared. As a main crisis scenario for the workshop flooding was chosen. This was identified as a relatable kind of event, with high probability and bringing many challenging consequences. A scenario extension with loss of electrical power was also prepared, to cover even more challenging aspects. Real images of previous floods in the local area were incorporated to facilitate a connection to participants' lived experiences, enhancing their understanding of potential risks and consequences.

Discussion questions, such as "What would be a problem for you immediately? In a few hours? Over a longer period of time?", were formulated based on previous studies within the project and tailored to the specific context of the workshop, fostering meaningful dialogue and exploration of relevant issues.

WORKSHOP FACILITATION

The workshop was led by four researchers who organized the sessions. An initial presentation set the tone for the scenario and clarified the objectives of the workshop. This was underpinned by images in the presentation and on the individual tables and a short animation of a similar scenario. The motivation for this was to render the scenario easy to understand for all participants and give all stakeholders a starting point that could engage and foster a discussion. To ensure diverse perspectives, each of the four tables were composed of a mix of municipality representatives, individuals with disabilities, and representatives from disability organizations. Each table was equipped with materials, including printed images of the scenario, questions, paper, pens, and post-it notes, to facilitate discussions. One designated individual at each table took notes, while a voice recorder captured key points discussed.

After approximately 30 minutes of discussion, a break was provided for refreshments, followed by a comprehensive follow-up session that synthesized the discussions from all tables into a larger group dialogue, enabling broader insights and consensus-building. The notes from this session were recorded simultaneously on a big screen for all to see to make it interactive.

ANALYSIS

After the workshop, the analysis of the material involved a systematic approach. Initially, all four participating researchers held two separate

meetings to discuss the findings gathered from the workshop sessions. The recordings of the workshop session were transcribed using Whisperer software, ensuring accuracy and accessibility of the data. Subsequently, a matrix was constructed to organize and highlight the various themes that emerged from the discussions held at the workshop tables. This matrix served as a tool to categorize and analyse the data, allowing for deeper insights into the key topics and insights shared during the workshop. By employing a combination of collaborative discussions and thematic organization, the analysis process ensured a thorough examination of the workshop material.

RESULTS

The workshop generated an active and lively discussion. We observed collaboration between the stakeholders in the workshop, where they collectively addressed the crisis scenario. Participants were expressing experiencing knowledge exchange and saw the activity as a learning opportunity. We saw specific issues relevant to the unique situation of persons with disabilities surface, and, finally, we note that the local connection in the scenario strengthened the link to the lived reality of the participants.

On a more detailed level, the necessity for most people of more tangible experiences and hands-on exercises and drills in order to develop valuable insights and competence repeatedly came up. For example, merely distributing information or brochures to households is not enough. Actual capability development was expressed to gain from practice, exemplified with how one preferably should practice not only getting to important places (e.g., shelters, information points), but also handling equipment you would not normally use. To maintain a home preparedness kit was also found to entail challenges, such as if you depend on medicines, you are typically restricted in how much you are allowed to buy at the same time, which limits the potential for stockpiling. The personnel at daily activity centers was also extremely important, the comment "I will ask the personnel" was heard many times during the workshop. The Malmö municipality already works with accessibility issues to some extent (as an example, they worked with user organizations in producing information during the Covid pandemic), but - as in all organizations - there is a risk of things falling between the cracks and not being done. An as yet unsolved problem is how to reach persons not already in touch with the home care services. There are many people who get by reasonably well when things are as usual, but who may need a lot of extra support in the event of a crisis. In the follow up with the Malmö employees, 6 of 8 answered, all of these felt it had generated new insights, and had been a useful activity for their future work.

DISCUSSION

We note that this kind of activity, where you gather different stakeholders in a room and discuss, and where the only thing you really need to prepare is a good, locally relevant scenario, can produce quite useful insights.

The results from this study shows that our approach facilitated the identification of patterns and significant points raised by participants, contributing to a richer understanding of what can be achieved in a workshop of this kind.

One aspect of the approach involved the use of locally relevant scenarios that strengthened the connection to the geographical area and it's reality. This was achieved by using images and stories from a known crisis scenario in both material on the tables and in the introductory presentation. This in turn served as a discussion starter in the separate groups. From this initial prompt, the conversations flowed guided by the questions supplied in the beginning. However, the recorded sessions at each table had aspects and perspectives that were not picked up in the follow-up session where one note-taker reported on the group's discussions.

Despite the success in raising awareness and uncovering important perspectives, challenges emerged in the potential loss of detail as they were reported in the concluding larger group discussion. This highlighted the importance of preserving nuance in relaying information, particularly concerning individuals with disabilities. The findings underscore the necessity of exploring communication strategies that actively involve individuals with disabilities, ensuring their full inclusion in crisis planning processes.

A critical aspect of the workshop was the collaboration between eight crisis communicators and other officials from the local municipality and thirteen individuals with intellectual, physical, and cognitive disabilities. The participants collectively addressed crisis scenarios, fostering knowledge exchange and surfacing issues relevant to the unique situations of people with disabilities. The study not only aimed to enhance inclusion but also provided a learning opportunity for officials, offering insights into the diverse needs and strengths within the populations they serve. As highlighted by Stough & Kang (2015), input from people with disabilities are grounded in their own experience, enriching our understanding and serving as a compass for more inclusive approaches to crisis management and community support.

One thing we can say, based on this workshop (as well as other work in the project), is that it is quite fruitful when working with crisis planning, to make use of methods from the area of human computer interaction/co-design. In particular, co-design workshops (Sanders & Stappers, 2008), have been seen to be a tool that works well also when aiming for inclusive crisis planning.

CONCLUSION

The study provides valuable insights for researchers, practitioners, and policymakers involved in disaster risk reduction, emphasizing the crucial role of preserving detailed perspectives in the collaborative process between municipality stakeholders and individuals with disabilities. This research contributes to the ongoing discourse on enhancing inclusivity in crisis planning and offers practical implications for future initiatives in disaster risk reduction.

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