Review

Risk Narrative of Emergency and Disaster Management, Preparedness, and Planning (EDMPP): The Importance of the 'Social'

Brielle Lillywhite [1] and Gregor Wolbring [2,*]

[1] Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, Calgary, AB T2N 1N4, Canada

[2] Community Rehabilitation and Disability Studies, Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, AB T2N 4N1, Canada

* Correspondence: gwolbrin@ucalgary.ca

Abstract: Risk perception, literacy, communication, narrative, governance, and education are important aspects of emergency and disaster management, preparedness, and planning (EDMPP) as they for example influence and direct EDMPP policies and actions. A thorough understanding of the 'social aspects of risk is important for EDMPP, especially in relation to marginalized populations who are often overlooked. Technologies are increasingly employed for EDMPP. How these technology applications identify and engage with the 'social' of risk in general and the 'social' of risk experienced by marginalized populations is important for EDMPP. Equity, diversity, and inclusion (EDI) and similar phrases are employed as policy concepts to improve research, education, and participation in the workplace for marginalized groups such as women, Indigenous peoples, visible/racialized minorities, disabled people, and LGBTQ2S including in workplaces engaging with EDMPP which includes universities. The aim of this scoping review was to generate data that allows for a detailed understanding of the risk related discussions within the EDMPP academic literature as these discussions shape EDMPP policies and actions. The objective of this scoping review study was to map out the engagement with risk, specifically the social aspects of risk, in the EDMPP-focused academic literature with a focus on (a) EDMPP in general, (b) COVID-19, (c) EDMPP and marginalized groups, (d) EDMPP and patients, and (e) EDMPP and technologies (artificial intelligence, machine learning, machine reasoning, algorithm design approaches such as Bayesian belief networks, e-coaching, decision support systems, virtual coaching, automated decision support, e-mentoring, automated dialogue and conversational agents). Using the academic databases SCOPUS, Web of Sciences, and databases accessible under Compendex and EBSCO-HOST and performing hit count frequency searches of online and downloaded abstracts and thematic analysis of downloaded abstracts the study reveals a lack of coverage on the social aspects of risk and engagement with risk concepts such as risk perception, risk governance, risk literacy, risk communication, risk education and risk narrative especially in conjunction with marginalized groups and technologies employed in EDMPP decision support. Our findings suggest many opportunities to further the EDMPP academic inquiry by filling the gaps.

Keywords: emergency management; disaster management; social; marginalized groups; technology; COVID-19; artificial intelligence; risk; machine reasoning; machine learning; decision support systems; "equity, diversity and inclusion"; EDI; disabled people; people with disabilities

1. Introduction

Emergency and disaster management, preparedness, and planning (EDMPP) including COVID-19 is becoming ever more important [1–6]. Discussions around risk influence and direct EDMPP policies and actions [7–14]. Risk narratives are present in emergency

and disaster policy documents [4,15] and marginalized groups are known to be at a higher risk of experiencing negative consequences of emergencies and disasters [4,15]. With that, it is important to understand the risk narrative within the EDMPP academic literature including how risk focused EDMPP academic literature understands and engages with the 'social' of risks, specifically in relation to marginalized groups. A recent scoping review looked at the general engagement with the 'social' in the EDMPP academic literature using a hit count approach [16]. The aim of this scoping review was to generate data on the EDMPP risk narrative and the 'social' using a hit count approach of online and downloaded abstracts and thematic analysis of downloaded abstracts allowing for a detailed understanding of the risk discussions within the EDMPP academic literature, which is a topic not covered in current academic literature [16]. Given the study's aim, the first objective of this study was to generate frequencies for the terms "risk" and "social risk" mentioned in the EDMPP and e-coaching, decision support system, virtual coaching, automated decision support, e-mentoring, automated dialogue, and conversational agent focused academic literature in general and in relation to marginalized groups.

Risk discourses use many risk concepts in discussing emergencies and disasters such as risk perception [17–20], risk governance [21–23], risk literacy [24–26], risk communication [27–35], risk education [36–38] and risk narrative [39]. The "purpose of risk governance is to provide an understanding of how to with uncertain, complex, and/or unclear risks within a conceptual and normative basis" [40] (p. 431). Risk literacy has to improve in order to improve risk governance [41] and with that, risk education is seen as needed to increase risk literacy [42]. Risk narratives, and whether one uses the term risk are influenced by many factors [43,44]. Perception of risk is a social and cultural construct and is impacted by many factors [45]. Further, understanding "how risk perception becomes various depending on each position, value, and society" [41] (p. 1260) is important for developing risk literacy. How these concepts are employed in the EDMPP literature including technologies used in EDMPP impacts EDMPP actions and policies. Therefore, the second objective was to investigate using hit count searches of online and downloaded abstracts and a thematic analysis of downloaded abstracts the presence of the risk related concepts "risk governance", "risk communication", "risk education", "risk narrative" and "risk perception" in the literature covered and to investigate using a thematic analysis of downloaded abstracts what is said especially in relation to marginalized groups in conjunction with the risk concepts of "risk governance", "risk communication", "risk education", "risk narrative" and "risk perception".

Many technologies are envisioned to be employed in EDMPP. At the same time, it is recognized that technologies contain risks including social risks and risk is a topic discussed within science and technology governance and ethics fields. Therefore, the third objective was to investigate the frequency of mentions in the literature we covered of science and technology governance terms and ethics fields in conjunction with the term risk.

Equity, diversity, and inclusion (EDI), other EDI phrases and EDI frameworks [46] are employed as policy concepts to improve research, education, and participation in the workplace for marginalized groups such as women, Indigenous peoples, visible/racialized minorities, disabled people, and LGBTQ2S which includes EDMPP linked research, education and workplaces. At the same time it is reported that marginalized people experience higher risks [4,15] and greater impact in relation to emergencies and disasters [47–50]. Therefore, the fourth objective was to investigate using hit count searches of online and downloaded abstracts and a thematic analysis of downloaded abstracts whether EDI concepts and frameworks as well as marginalized groups covered in EDI discourses are present in the risk narrative of the literature covered and how they are covered.

The study asked three questions: (1) How often are the terms "risk" and "social risk" mentioned in the literature covered (2) How often and how are the terms risk perception, risk governance, risk literacy, risk communication, risk education and risk narrative mentioned in the literature covered (3) How often and how is the term risk and the risk related concepts risk perception, risk governance, risk literacy, risk communication, risk

education and risk narrative engaged with in the EDMPP literature in conjunction with EDI groups.

1.1. Risk Narratives and the COVID-19 Research Road Map

The COVID-19 research roadmap mentions risk many times such as "these knowledge needs are diverse, but they all illustrate a reality re-emphasized by the COVID-19 pandemic: that all people, systems, and generations are intrinsically interdependent and that all societies face shared risks and responsibilities. Interdependence among people emphasizes the need for equity; interdependence among systems points to the need for resilience; and interdependence across generations highlights the need for sustainability. The most important knowledge need at this time is an understanding of how to better address and harness these interdependencies" [4] (p. 8). It highlights the risk of repeating past mistakes by ignoring existing research data or not performing needed research on socio-economic recovery [4]. It is noted that socio-economic recovery needs an understanding of the interconnectedness of "health, the environment, politics, economics and societal well-being" [4] (p. 30) and it highlights the need to provide data that enables shared risk and does not unequally burden marginalized groups [4]. Many research priorities are linked to the concept of risks often in conjunction with marginalized groups such as women, workers, disabled people, poor households, etc. Some of the research priorities include

- "determining the best strategies for ensuring safe workplaces and decent work, in particular for those workers who face greater risks? [RP3.1.2]" [4] (p. 11),
- using information technologies to detect risks [RP1.1.3],
- research on the reality of global interconnectedness [RP1.4.1] and [RP1.4.2],
- generating research data to influence risk perception by involving social groups who are impacted the most by socio-economic realities [RP1.5.3], [4],
- determining how to decrease "barriers and risks associated with digital technologies while also maintaining any digital inclusion gains that occurred during the COVID-19 pandemic, such as increased opportunities for working from home, virtual healthcare visits and remote learning" [RP2.4] [4] (p. 42).

Some sub-research priorities cover

- equitable access to digital technologies [RP2.4.1],
- achieving digital and media literacy [RP2.4.4]
- high-quality education [RP2.4.3],
- how to protect children and to address gender-based and domestic violence [RP2.4.2],
- focusing on women's realities [RP3.5.1] [RP2.5.2],
- research on new global governance structures that takes into account local realities, exhibits long term thinking and ensures the so far rare reality of the meaningful participation of marginalized groups [4],
- "to build fit-for-purpose global governance structures that enable effective responses to transnational risks while also encouraging everyone to act in solidarity in the face of shared responsibilities [RP1.4.3]" [4] (p. 30),
- how to promote mental health before during and after a disaster, especially of the ones in the greatest risk of a decrease in mental health such as marginalized groups [RP2.5],
- various sectors of the workforce at risk [RP3.1].

1.2. Risk Narrative and the UN Office for Disaster Risk Reduction (UNDRR) Strategic Framework 2022–2025

The UNDRR as the very name indicates focuses on risk [15]. In the UNDRR strategic framework 2022–2025, it is flagged that risk-informed "evidence, innovation, and good practices on risk" that also includes systemic risk has to be used to inform decision-making processes as needed [15] (p. 4). The report flags the importance of evidence-based advocacy to mobilize citizens, risk knowledge and information, and monitoring of action results [15].

"UNDRR will work with Member States and other stakeholders in development, fragile, and humanitarian contexts to improve access to enhanced products, tools, and capacity development, applicable at global, national, local, sectoral, and thematic levels responding directly to Member States expressed needs for better quality and relevant risk information. In line with Priority for Action 1 of the Sendai Framework, UNDRR, together with UN system partner agencies, will emphasize technology and data as amplifiers, including for capacity development across sectors. Faced with an increasingly complex and uncertain risk landscape, where climate change and systemic risks threaten our social, economic, and financial systems, a greater understanding of the interconnected nature of hazards, exposure, and vulnerability will be critical for effective disaster risk reduction and for achieving the Sustainable Development Goals (SDGs). Comprehensive climate and disaster risk information, innovation, and strengthening of the science-policy practice interface will be essential to achieve better risk-informed public and private decision-making and investment in building resilience" [15] (p. 10).

"Integrating human rights, gender equality and the rights of persons with disabilities into disaster risk reduction" [15] (p. 16) is a section by itself. The report lists various strategic objectives including

- the generation of quality risk information and analysis which includes systemic and cascading risk (deliverable 1.1.3),
- risk-informed and preventing future risks focused UN system policies, guidelines and inter-agency initiatives related to the Sendai Framework, and the 2030 Agenda for Sustainable Development, scientific research agenda on disaster risk reduction (Deliverable 1.1.4),
- applying to action of disaster risk reduction practices, knowledge, and methodologies (deliverable 1.2.1),
- monitoring based on data disaggregation by sex age and disability (deliverable 1.3.1),
- to develop and implement multi-stakeholder, and gender-responsive, inclusive risk governance (result 2.2 and deliverable 2.2.1) [15].

The fourth strategic objective is to "make disaster risk reduction central to sustainable development" by emphasizing advocacy and the sharing of knowledge of governments and key stakeholders [15] (p. 24).

1.3. Science and Technology Governance and Risk Narratives

Perception of risk is a social and cultural construct and is impacted by many factors [45]. Risk perception and an understanding of risk narratives of scientific and technological advancements is a critical aspect of scientific literacy [51–56]. However, risk perceptions are shaped by the values of individuals and groups [57–60]. Various studies describe the utility of artificial intelligence, machine learning, machine reasoning in relation to EDMPP, decision support systems, virtual coaches, conversational agents and robots (many cited in [16]). However, problems are noted including problems in relation to marginalized groups such as disabled people (many cited in [16]). At the same time are technologies such as artificial intelligence, machine learning, machine reasoning, Bayesian network approaches, decision support systems, virtual coaches, and conversational agents used to engage with risk narratives [61–81]. Risk narratives are mentioned extensively in conjunction with science and technology governance and various ethics discourses including environmental ethics [82–97]. A recent addition to technology governance is the effort of the National Academy of Medicine's Committee on Emerging Science, Technology, and Innovation in health and medicine (CESTI) to generate a technology impact and governance framework [97]. In the CESTI framework it is noted that technology governance efforts have to cross sectors and disciplines and have to involve stakeholders reflecting many different groups and how benefit and risk are defined [97]. It is argued that "policies, norms, standards, and incentives of [a] particular sector" impact how a technology is developed and used, which further impacts the degree to which the benefits

and risks of a technology can be maximized and mitigated, respectively [97] (p. 41). It is furthermore argued that governance efforts need to include the generation of plausible future scenarios that address potential conflicts [97] and specifically include social conflicts between individuals and groups.

1.4. Equity/Equality, Diversity, and Inclusion and Risk Narratives

Equity, diversity, and inclusion (EDI) and other EDI phrases and frameworks [46] are employed as policy concepts to improve research, education, and participation in the workplace for marginalized groups such as women, Indigenous peoples, visible/racialized minorities, disabled people, and LGBTQ2S [46] including policies in relation to environment-focused disciplines and programs [98]. Terms such as equity, equality, inclusion, and diversity are also mentioned in relation to risk narratives [99–112]. Some of the most overlooked groups in "disaster risk reduction and adaptation strategies are marginalized populations and [they] lack empowerment to utilize and take action against early warning signs (or information) of risks" [47] (p. 1). People with disabilities and their organizations are recognized by the Sendai Framework for Disaster Risk Reduction as key contributing stakeholders in disaster resilience-building at the community level [48]. Disasters and emergencies have historically had a greater impact on "racially and ethnically diverse and socioeconomically disadvantaged communities" [49,50].

Many equity, diversity, and inclusion issues were evident in the COVID-19 responses to date [113] (see for example a recent article related to disabled people and COVID-19 [114]). The UN Research Roadmap for the COVID-19 Recovery notes the following population groups as experiencing highest degree of marginalization:

"Women, older persons, adolescents, children and youth, especially girls and young women, persons with disabilities, persons with mental health conditions, Indigenous peoples, migrants, refugees, stateless and internally displaced persons, conflict-affected populations, minorities, persons in detention or in institutionalized settings (e.g., persons in psychiatric care, drug rehabilitation centres, old age homes), slum dwellers, people in informal settlements, homeless persons, persons living with HIV/AIDS and other people with pre-existing medical conditions, small farmers, fishers, pastoralists, rural workers in informal and formal markets, and other people living in remote rural areas as well as urban informal sector and self-employed who depend on market for food, the food insecure, particularly in countries affected by prolonged conflict and crisis, people in extreme poverty or facing insecure and informal work and incomes, groups that are particularly vulnerable and marginalized because laws, policies and practices do not protect them from discrimination and exclusion (e.g., LGBTI people)" [4] (p. 48).

EDI frameworks are seen to be useful tools to deal with various risks such as justice, equity, diversity, and inclusion linked to climate change risks [115]. Risks for groups covered under EDI are

- suicide of black people using Justice, Equity, Diversity, and Inclusion (JEDI) [116];
- gender and race inequalities that become conflated mentioning Athena Swan [117];
- increasing students ability to take intellectual risk using diversity, equity, and inclusion [118];
- racism against Black, Indigenous, and people of color and risk of overdose using diversity, equity, and inclusion [119];
- how transfer students have been at higher risk of attrition due to known academic and social barriers using equity, diversity and inclusion [120];
- how climate service development is relatively well resourced in places, there is a risk that the landscape becomes fragmented, duplicative, confusing, and inefficient using equality, diversity and inclusion, for example for gender, under-represented regions, and under-represented stakeholder groups [121];
- mitigating culture risk through diversity, equity, and inclusion efforts[122];

- how diversity, equity and inclusion efforts within their institutions will drive innovation and reduce risks [123];
- how diversity, equity and inclusion can improve risk related issues mentioned in the Global Assessment Report on Disaster Risk Reduction [124];
- how medical trainees encounter risks of stigma are seen as a vulnerable group and equity, diversity, and inclusion is needed [125];
- diversity, equity, and inclusion in medical regulation [126];
- diversity, equity, and inclusion for undergraduate students and risks associated with ecological fieldwork [127].

It is also noted that decreasing EDI efforts carries risks [128]. For example, there are many problems that have come in the aftermath of COVID-19 for disabled people [129] and other marginalized groups. These problems might hinder diversity, equity, and inclusion with a specific risk that the recent gains in equity and advancement for women may be lost [130]. Similarly, there is a risk of simply learning to exercise cognitive-emotional skills, such as perspective-taking with those who are similar to oneself without diversity, equity, and inclusion [131]. By not employing equality, diversity and inclusion in geomorphology is creates danger of reputational risk for geomorphological groups and organizations "like the British Society for Geomorphology, and ensure[s] that the many potential benefits of geomorphology for science and society remain underutilized at best" [132] (p. 5). Championing for diversity, equity, and inclusion comes with a personal and professional risk [133] (see also [134,135]), and risk related organizations such as the Risk Management Association have EDI statements [136].

The National Academy of Medicine's Committee on Emerging Science, Technology, and Innovation in health and medicine (CESTI) proposed technology impact and governance framework [97] includes principles that are also used within EDI discussions such as justice. In the CESTI framework justice is described as "equity between groups faced with structural and systemic inequalities, a fair distribution of risks and benefits of technologies" [97] (p. 44). The CESTI framework uses other principles relevant to EDI and risk narratives such as fairness, autonomy/individual and group self-determination, and collective good with concepts such as solidarity, civic responsibility and stewardship, and individual good whereby risk benefit is linked to the principle of justice, collective, and individual goods [97] (figure page 45).

2. Materials and Methods

2.1. Study Design and Research Questions

Scoping studies are useful in identifying the extent of research that has been conducted on a given topic [137,138]. The study asked three questions: (1) How often are the terms "risk" and "social risk" mentioned in the literature covered (2) How often and how are the terms risk perception, risk governance, risk literacy, risk communication, risk education and risk narrative mentioned in the literature covered (3) How often and how is the term risk and the risk related concepts risk perception, risk governance, risk literacy, risk communication, risk education and risk narrative engaged with in the EDMPP literature in conjunction with EDI groups. The study employed a modified version of a scoping review outlined by Arksey and O'Malley [139] as described in [140].

2.2. Data Sources, Data Collection (Search Strategies) and Inclusion Criteria

On 14 April 2022, the academic databases EBSCO-HOST (an umbrella database that includes over seventy other databases itself), SCOPUS (which incorporates the full Medline database collection), the databases accessible through Compendex, which include IEEE sources and the Web of Science database were searched with no time restriction. These databases were chosen as they contain relevant content covering risk including in relation to EDMPP and technologies and governance of both. Inclusion criteria were as described before in [140]. The following search terms and strategies were used (Table 1).

Table 1. Search strategies used to obtain abstracts (first search term) for online manifest coding of terms related to risk and abstracts downloaded with specific topics (second search term) for desktop hitcounts manifest coding and qualitative thematic analysis of the term risk used in conjunction with EDI groups.

Strategy	Sources Used	First Search Term (Abstract)	Second Search Term (Abstract)
	Search strategies for manifest coding of online databases		
Strategy 1	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness")	
Strategy 2	SCOPUS/EBSCO-HOST/Compendex/Web of Science	COVID	-
Strategy 3	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Emergency	
Strategy 4	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Disaster	
Strategy 5	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("e-coaching") OR ("decision support system")	-
Strategy 6	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Bayesian network	-
Strategy 7	SCOPUS/EBSCO-HOST/Compendex//Web of Science	Conversational agent	
	Search strategies for obtaining abstracts for desktop manifest and thematic coding		
Strategy 8	SCOPUS/EBSCO-HOST/Compendex/Web of Science	"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness"	"artificial intelligence" OR "machine learning" OR "robot*" OR "quantum*" OR "machine reasoning"
Strategy 9	SCOPUS/EBSCO-HOST/Compendex/Web of Science	"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"	"disabl*" OR "disabili*" OR "impairm*" OR "deaf" OR "neurodiver*" OR "autism" OR "adhd" OR "impair*"
Strategy 10	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"}	"patients"
Strategy 11	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness"}	COVID
Strategy 12	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Bayesian network*	COVID

Strategy 13	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Bayesian network*	emergency OR disaster
Strategy 14	SCOPUS/EBSCO-HOST/Compendex/Web of Science	"conversational agent*"	(emergency OR disaster OR COVID)
Strategy 15	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("e-coaching") OR ("decision support system")	(equality OR diversity OR inclusion OR equity)
Strategy 16	SCOPUS/EBSCO-HOST/Compendex/Web of Science	("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness" OR "emergency	(equality OR diversity OR inclusion or equity)
Strategy 17	SCOPUS/EBSCO-HOST/Compendex/Web of Science	COVID	Social Risk
Strategy 18	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Disaster*	Social risk
Strategy 19	SCOPUS/EBSCO-HOST/Compendex/Web of Science	Emergenc*	Social risk

2.3. Data Analysis

To answer the research questions, we performed two types of analysis. We performed a descriptive quantitative analysis approach [141,142] (manifest coding [143,144]) providing frequencies of search terms using (a) online search engines of the databases for the keyword search strategies 1–7 (Table 1, Figure 1) and (b) 11,675 downloaded abstracts obtained through strategies 8–19 (Table 1 and Figure 2). The manifest coding of the abstracts was performed as described in [140]. In short duplicates of abstracts were eliminated using the software Endnote and the abstracts obtained with each of the strategies 8–19 were made into PDF's and the abstracts in the various PDF documents were searched with the 'CTRL F' function of Adobe Acrobat software. We also performed a thematic analysis for the abstracts downloaded from strategies 8–19 using the qualitative software analysis tool NVIVO 12 to identify how risk and "social risk" were mentioned in relation to EDI groups including disabled people, LGBTQ2S+, Indigenous people, ethnic groups, and women. Manifest coding and qualitative thematic analysis were performed by both authors and differences were resolved through peer debriefing and the audit trail for the thematic analysis was present in the use of codes and comments and memos in the NVIVO 12 software.
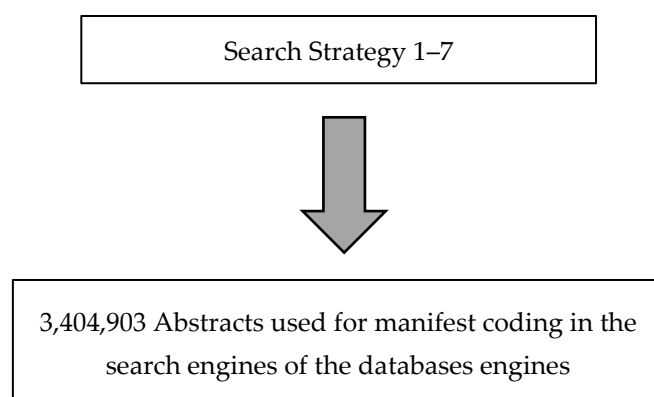

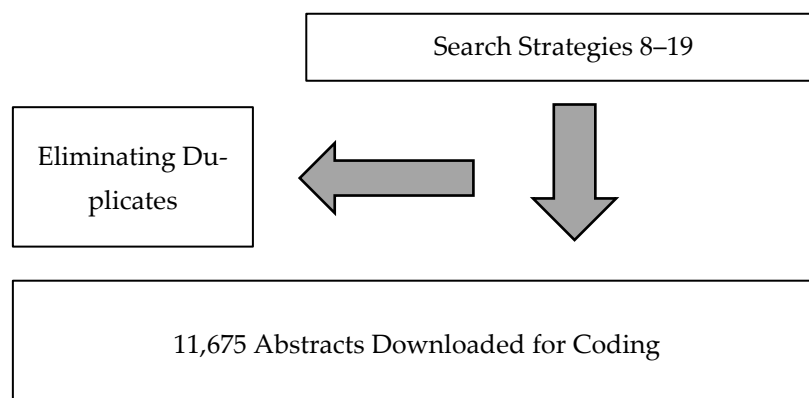**Figure 1.** Abstracts for manifest coding for strategies 1–7.

Search Strategies 8–19

Eliminating Duplicates

11,675 Abstracts Downloaded for Coding

Figure 2. Abstracts downloaded for manifest coding and thematic analysis for strategies 8–19.

3. Results

3.1. Quantitative Hit Count Results

3.1.1. Manifest Coding for the Terms "Risk*" and "Social Risk*"

Table 2 shows that "social risk" is rarely mentioned especially in conjunction with files that focused on technologies.

Table 2. Manifest coding for the terms "risk*" and "social risk*".

Mentioning in the 3,404,903 Online Abstracts			
Term 1	Abstracts in Online Databases	Risk	Social Risk
COVID Online search	847,850	162,382	96 abstracts in NVivo
Emergency Online search	1,847,895	270,882	447 abstracts in NVivo
Disaster Online search	457,339	92,816	388 in NVivo
"Bayesian network*" Online search	69,987	12,002	14
("e-coaching") OR ("decision support system") Online search	100,036	10,962	10
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness") Online search	75,243	29,121	33
"Conversational agent*" Online search	6553	182	0
Mentioning in the 11,675 abstracts downloaded to desktop			
Term 1	Abstracts on computer	Risk	Social risk
(ABS ("risk*") AND ABS ("emergency" OR "COVID" OR "disaster") AND ABS ("people with disabilities" OR "disabled people"))	506 abstracts in NVivo	2492 hits, not abstracts	657 hits, not abstracts
e-coaching alone	228 abstracts on computer in NVivo	17	0

"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness"	"artificial intelligence" OR "machine learning" OR "robot*" OR "quantum*" OR "machine reasoning" 656 abstracts in NVivo	20	0
"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"	"disabl*" OR "disabili*" OR "impairm*" OR "deaf" OR "neurodiver*" OR "autism" OR "adhd" OR "impair*" 529 abstracts in NVivo	352 hits, not abstracts mostly medical risk	0
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"}	"patients" 2486 abstracts in NVivo	738 hits, not abstracts mostly medical risk	0
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness"}	COVID 885 abstracts in NVivo	607 hits, not abstract	1
"Bayesian belief network*"	2091 in NVivo	555/681/365/288	0
"Bayesian network*" AND COVID	74abstracts in NVivo	145 hits, not abstract	0
"Bayesian network*" AND (emergency OR disaster)	755 abstracts in NVivo	1156 hits, not abstracts	1
("e-coaching") OR ("decision support system") AND (equality OR diversity OR inclusion OR equity)	800 abstracts in NVivo	307 hits, not abstracts	1
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness" OR "emergency AND (equality OR diversity OR inclusion or equity)	797 abstracts in NVivo	700 hits, not abstract	1
"Automated decision support"	420 abstracts in NVivo	195 hits, not abstract	0
e-mentoring	355 abstracts in NVivo	8	0
("virtual coaching" OR "virtual coach*")	319 abstracts in NVivo	14	0
"Automated Dialogue"	141 abstracts in NVivo	7	0
"conversational agent*" AND (emergency OR disaster OR COVID)	231 abstracts in NVivo	9	0

3.1.2. Manifest Coding for the Terms "Risk Governance", "Risk Education", "Risk Narrative" and "Risk Perception"

Table 3 shows very little to no engagement with most risk concepts we covered.

Table 3. Manifest coding for the terms "risk governance", "risk education", "risk narrative*", "risk literac*", and "risk perception*".

Mentioning in the 3,404,903 Online Abstracts							
Term 1	**Abstracts in Online Databases**	**"Risk Narrative*"**	**"Risk Perception*"**	**"Risk Governance"**	**"Risk Education"**	**"Risk Literac*"**	**"Risk Communication*"**
COVID Online search	847,850	3	3572	57	6	5	1843
Emergenc * Online search	1,847,895	1	1461	112	49	7	2351
Disaster * Online search	457,339	3	2110	584	85	16	1688
"Bayesian network *" Online search	69,987	0	29	1	0	0	17
("e-coaching") OR ("decision support system") Online search	100,036	0	27	3	0	0	22
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness") Online search	75,243	1	595	101	14	8	859
"Conversational agent *" Online search	6553	0	1	0	0	0	7
Mentioning in the 11,675 abstracts downloaded to desktop							
Term 1	**Abstracts on computer**	**"Risk narrative*"**	**"Risk perception*"**	**"Risk Governance"**	**"Risk Education"**	**"Risk Literac*"**	**"Risk communication*"**
COVID+ "social risk"	96 abstracts in NVivo	0	24	1	0	0	2
Emergency + "social risk"	447 abstracts in NVivo	0	44	6	0	0	10
Disaster + "social risk"	388 abstracts in NVivo	0	49	9	0	0	15
(ABS ("risk*") AND ABS ("emergency" OR	506 abstracts in NVivo	0	41	4	0	0	13

"COVID" OR "disaster") AND ABS ("people with disabilities" OR "disabled people"))							
e-coaching alone	228 abstracts on computer in NVivo	0	-	0	0	0	0
"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness"	"artificial intelligence" OR "machine learning" OR "robot*" OR "quantum*" OR "machine reasoning" 656 abstracts in NVivo	0	1	0	0	0	0
"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"	"disabl*" OR "disabili*" OR "impairm*" OR "deaf" OR "neurodiver*" OR "autism" OR "adhd" OR "impair*" 529 abstracts in NVivo	0	5	0	0	0	0
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness"}	"patients" 2486 abstracts in NVivo	0	6	0	0	0	4
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster	COVID 885 abstracts in NVivo	0	19	3	0	0	24

preparedness" OR "emergency preparedness"}							
"Bayesian belief network*"	2091 in NVivo	0	6	0	0	0	1
"Bayesian network*" AND COVID	74abstracts in NVivo	0	1	0	0	0	0
"Bayesian network*" AND (emergency OR disaster)	755 abstracts in NVivo	0	0	0	0	0	0
("e-coaching") OR ("decision support system") AND (equality OR diversity OR inclusion OR equity)	800 abstracts in NVivo	0	1	2	0	0	0
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness" OR "emergency AND (equality OR diversity OR inclusion or equity)	797 abstracts in NVivo	0	7	14	0	0	7
"Automated decision support"	420 abstracts in NVivo	0	1	0	0	0	0
"e-mentoring"	355 abstracts in NVivo	0	0	0	0	0	0
("virtual coaching" OR "virtual coach*")	319 abstracts in NVivo	0	0	0	0	0	0
"Automated Dialogue"	141 abstracts in NVivo	0	0	0	0	0	0
"conversational agent*" AND (emergency OR disaster OR COVID)	231 abstracts in NVivo	0	0	0	0	0	1

3.1.3. Risk and EDI Groups

Table 4 shows a very low to no engagement with risk in conjunction with EDI groups.

Table 4. Frequency of EDI groups mentioned in conjunction with the term "risk*" in the 11675 abstracts (not number of abstracts).

Term 1	Term 2	Disabled or Disabili*	Deaf	"Mental Health"	Autism or ADHD or "Attention Deficit" or Neurodiverse	Impair*	Women or Gender or Girls	"Indigenous Peoples" or Aboriginal or "First Nations" or Metis or Inuit	LGB*	"Visible Minorit*" or "Racialized Minorit*" or Ethnic* or Black
COVID+ "social risk" 96 abstracts in NVivo	-	0	0	17	0	1	12	2	0	10
Emergency + "social risk" 447 abstracts in NVivo	-	4	1	7	0	3	27	1	0	7
Disaster + "social risk" 388 in NVivo	-	4	1	3	0	3	10	1	0	1
(ABS ("risk*") AND ABS ("emergency" OR "COVID" OR "disaster") AND ABS ("people with disabilities" OR "disabled people") 506 abstracts in NVivo	Risk*	174	5	6	0	7	21	2	0	1
e-coaching alone228 abstracts on computer in NVivo	Risk*	0	0	1	0	1	2	0	0	0
"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness" "artificial intelligence" OR "machine learning" OR "robot*" OR "quantum*" OR "machine reasoning" 656 abstracts in NVivo	Risk*	1	0	0	0	0	0	0	0	0
"disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness" "disable*" OR "disabili*" OR "impairm*" OR "deaf" OR	Risk*	101	3	8	0	26	10	1	0	1

"neurodiver*" OR "autism" OR "adhd" OR "impair*" 529 abstracts in NVivo										
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" "disaster preparedness" OR "emergency preparedness") AND "patients" 2486 abstracts in NVivo	Risk*	3	0	13	0	7	15	0	0	0
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness") And COVID 885 abstracts in NVivo	Risk*	10	0	15	0	1	3	0	1	2
"Bayesian belief network*" 2091 in NVivo	Risk*	0	0	0	0	3	4	0	0	0
"Bayesian network*" AND COVID 74 abstracts in NVivo	Risk*	0	0	1	0	0	0	0	0	0
"Bayesian network*" AND (emergency OR disaster) 755 abstracts in NVivo	Risk*	0	0	0	4	0	1	0	0	0
("e-coaching") OR ("decision support system") AND (equality OR diversity OR inclusion OR equity) 800 abstracts in NVivo	Risk*	1	0	0	0	3	2	0	0	2
("disaster management" OR "emergency management" OR "emergency planning" OR "disaster planning" OR "disaster preparedness" OR "emergency preparedness" OR "emergency AND	Risk*	13	0	6	0	1	31	0	0	2

(equality OR diversity OR inclusion or equity) 797 abstracts in NVivo										
"Automated decision support" 420 abstracts in NVivo	Risk*	0	0	0	0	0	0	0	0	0
"e-mentoring" 355 abstracts in NVivo	Risk*	1	0	0	0	0	0	0	0	0
("virtual coaching" OR "virtual coach*") 319 abstracts in NVivo	Risk*	0	0	0	0	1	0	0	0	0
"Automated Dialogue" 141 abstracts in NVivo	Risk*	0	0	0	0	0	0	0	0	0
"conversational agent*" AND (emergency OR disaster OR COVID) 231 abstracts in NVivo	Risk*	0	0	0	0	0	0	0	0	1

3.1.4. Risk and Science and Technology Governance Terms and Ethics Fields

We found no hits for "democratizing science and technology" OR "participatory technology assessment" OR "technology assessment" OR "parliamentary technology assessment" OR "anticipatory governance" OR "upstream engagement" OR "responsible innovation" OR "responsible research and innovation" OR "transformative vision assessment" OR "AI-ethics" OR "bioethics" OR "computer science ethics" OR "information technology ethics" OR "nanoethics" OR "neuroethics" OR "robo-ethics" in the 11,675 abstracts in conjunction with the term "risk*".

3.2. Qualitative Analysis

3.2.1. Risk Related to EDI Groups

Women, Gender, and Girls

Fifteen abstracts mention the terms women, woman, girl* or gender in conjunction with the term risk. Four were on the topic of breast cancer [145–148] engaging with an automated decision support system [145], a Bayesian Classifier [146], a Bayesian belief network [147], and shared decision-coaching, between nurses-led decision coaching, and an evidence-based decision aid [148] for evaluating risk. Another disease covered was osteoporosis where the focus was also on a decision support system using data mining ensemble technology [149]. Women are mentioned in relation to risk perception [150,151] and indicates that there is a gender difference in risk appetite [152].

As to COVID-19, risk is mentioned in relation to preparatory purchasing of safety and health care products [153] and risk factors for adverse outcomes among pregnant and postpartum women with acute respiratory distress syndrome [154].

One abstract mentioned socio-economic impacts in disasters such as the 2011 earthquake and tsunami in Japan covering Thai women [155]. Another explored the psychosocial effects of disaster among pregnant and postpartum women aged 18–45 Post-Hurricane Isaac [156] and in two abstracts it is argued that women experiencing disasters are at higher risk of mental health problems [157,158].

In one abstract it is noted that "women and girls are disproportionately exposed to risk during and in the aftermath of disaster" that there "physical health and sanitation risks unique to girls and women, including a lack of appropriate resources and private facilities" and that "despite great progress toward gender equity in Nepal in recent decades, pre-existing risk factors and embedded gender beliefs intersected with novel disaster-induced

stressors to produce a range of health and security risks for women and girls. Incorporation of existing frameworks for gender-mainstreaming in disaster preparedness and response efforts is thus crucial to improve inclusivity in risk reduction" [159] (p. 102622).

One abstract focused on the role of women in disaster risk governance and outlined "socio-cultural factors, individual characteristics, legal and institutional factors and socio-economical factors as the barriers" [109] (p. 1187). One flagged the lack of coverage of the impact of gender discrimination in disasters including disaster risk management [112].

Risk Narrative and Disabled People

After reading the abstracts containing disabled people using the search terms "disabled" OR "disabili" OR "deaf" OR "mental health" OR "autism" OR "adhd" OR "attention deficit" OR "neurodiv*" OR "impair*" generated and risk (Table 3), seventy-four abstracts were identified as relevant.

COVID-19 is covered in relation to emergency preparedness and response (EPR) and disability-inclusive disaster risk reduction (DiDRR) [160], risk of severe illness [161–167], increased risk of contracting COVID-19 [166–172] and other problems [173,174], increased mortality [175], increased risk of exclusion from treatment [176], risk of residential settings [177], and that disabled people are ignored as a high risk group [165,178]. Disabled people are at an increased risk of poverty and it is likely this risk will be increased further by COVID-19 [179]. Disabled people are also largely absent from risk-related discussions [169] and are at higher risk of lower psychosocial well-being [180,181], increased risk for abuse [182], and risk of being neglected and being subjected to restrictive measures [183]. Various abstracts highlighted that COVID-19 made the existing social problems for disabled people worse.

"While Coronavirus Disease 2019 (COVID-19) does not discriminate against particular groups, our social structures and systems mean some people are more at risk in a pandemic context—from both the disease and the social and policy responses to the pandemic. This is particularly so for people with disability, in part because they often have poorer health outcomes from underlying conditions but also due to discrimination and social exclusion. Here, we draw from a survey about the impacts of the COVID-19 pandemic on Australian children and young people with disability and their families. Respondents faced a range of inequities prior to the pandemic, and COVID-19 has further exposed and often exacerbated them. We conclude that recent developments in the Australian disability context to personalize services have arguably made people with disability and their families less safe within a pandemic context, and we outline some ways in which these issues might be addressed" [184] (p. 1192), see also for Australia [185] and Japan [186].

Covering EDMPP beyond COVID-19, various abstracts mentioned that disabled people are at higher risk [187–199] and that there is a lack of consideration for disabled people [47,192,200–203]. Further, there is a lack of inclusivity in involvement [202,204–208], and disabled people should not be forgotten in risk strategies [209]. Risk factors for disaster and emergency vulnerability among disabled people identified were a "lack of personal disaster preparedness, [and] public information that is not disability accessible and social isolation" [210] (p. 190), see also [193]. There is a lack of community preparedness and insufficient structures to assist disabled people in the disaster response or recovery phases [193,211,212], lack of resources [198], algorithmic health discrimination [213], food insecurity [214], and lack of disability inclusive disaster education [193]. It is mentioned that children with disabilities are at a greater risk of separation from their families in emergencies, unable to escape [215]. In one abstract it was flagged that "15% reported using electrically powered medical devices that might be at risk in a power outage" [216] (p. S621).

The Sendai Framework for Disaster Risk Reduction is mentioned [160,203,217–219] as a positive example if employed [220] and that disaster risk recovery should be used as an opportunity to fix the systemic problems disabled people faced before the disaster, ensuring not to exacerbate the old systemic problem [210]. However, it is noted that "the

state of the art of emergency preparedness and disaster risk reduction for people with disabilities is at a low level" [221] (p. 37), although, it could be improved quickly if existing innovations [221] and technologies [222] such as twitter [223] were to be applied correctly. It is noted "that slight variations on the definitions of disaster or disability may increase marginalization" [217] (p. 155). Currently, Australia has no national standard for disaster risk reduction in relation to disabled people [224]. Disaster risk reduction strategies have to increase the autonomy of disabled people [210] and empower them [225]. It is also argued that "(1) intersectionality of disability with other dimensions of vulnerability warrants focused consideration; (2) enhanced disaster preparedness requires more attention in order to empower people with disabilities; and (3) negative cultural attitudes need to shift to enable purposeful inclusion of people with disabilities" [217] (p. 155). The United Nations (UN) Convention on the Rights of People with Disabilities is recognized as demanding inclusion of disabled people in disaster risk reduction [219]. Two abstracts argued for the used of the capability approach in disaster risk reduction [226,227] and one for the need for social and environmental protection embedded in disaster risk mitigation [189]. Risk communication is discussed [228] and the Washington Group Short Set of Questions on Disability (WGQ) has been promoted to support inclusive practice within Disaster Risk Reduction (DRR), humanitarian action, and more broadly international development [229]. Risk of injury [205,230], disability [188,231], and "architectonical barriers and cultural ones make people with disabilities the most vulnerable population" [230] (p. 355), ee also [201]. One asks "what are the current shortfalls (physical and cultural) that put people with disabilities at risk during emergencies and what can be done to improve these" [222] (p. 1).

In one abstract it is argued "that tales of communities in crisis commonly depoliticize disaster. By inscribing the disabled body with a narrative of "natural" vulnerabilities and inevitable suffering, conventional disaster discourse obscures the political significance of structural inequalities that render people with disabilities more at risk in disaster" [212] (p. 51). It is further argued that "Disability inclusive disaster risk reduction strategies need to focus on strengthening key environmental and personal factors that have a fluctuating influence on each individual's ability to manage their wellbeing at the different time points over the course of a cyclone event" [232] (p. 1). In one abstract it is argued that "disability-related terms and concepts such as accessibility, inclusion, and universal design" are applicable to everyone [233] (p. 140)

One abstract focused on women with disability, stating that "Women with disabilities are disproportionately impacted by disasters. • Exclusionary social processes cause heightened risk exposure and reduce resilience. • Inclusive disaster risk reduction must deliver support to those most at risk. • Disaster risk reduction practices can contribute to greater social equity. Despite increased international commitment to disability-inclusive disaster risk reduction (DiDRR) people with disabilities remain largely unseen, unheard, and unaccounted for in DRR processes and planning. This is most marked amongst women with disabilities who experience specific gender, disability, and poverty-based disadvantages, which disasters exacerbate. Our research found that women with disabilities are disproportionally impacted by disasters and are the least able to access institutional support across the preparedness, response, and recovery phases of disaster events. Furthermore, the increased threat of violence following disasters heightens their risk of additional harm. In the absence of formal supports women with disabilities have few choices but to rely upon the social capital of their households and neighbours for assistance. They 'recover' in whatever ways they can—through short-term loans, reduced food consumption and/or migration—each carry significant costs to their longer-term resilience. This paper unpacks the root causes of women with disabilities' marginalisation in disaster contexts, many of which are extensions of exclusionary processes that play out in their daily lives. We also present steps to position women at the centre of DRR discourse, which will benefit all" [234] (p. 1)

LGBTQ2S+

Covering LGBTQ2S+ using search terms such as "gay" or "lesbian" or "LGB*" one abstract stated "International emergency management and disaster risk reduction policies and planning have rarely included lesbian, gay, bisexual, transgender, intersex, and queer (LGBTIQ) people's specific health and wellbeing concerns, despite increasing research showing that these groups face some specific vulnerabilities and additional challenges" [235] (p. 647).

Indigenous People

Using the search terms "Indigenous People*" OR "Aboriginal" OR "First Nations" OR "Inuit", OR "Metis" one abstract noted that indigenous people were at a higher risk of exposure and susceptibility to infection or complications because of high poverty rates and associated social risks such as "homes without indoor plumbing or access to running water, which precludes effective hand hygiene measures and promotes disease acquisition and spread" [236] (p. 207).

Ethnic

Eight abstracts covered ethnic groups using search terms "ethnic" OR "racialized" OR "minort*".

One abstract flagged the undercounting of ethnic/racial populations to be at risk of floods (by using standard census tools) and that environmental justice impacts of flood risks is hard to evaluate with the tools used, all of which hinders EDMPP [237]. One study found measurable inequity in exposure to flood risk across age groups, education level, and income status but not ethnic/racial groups [238]. One study focused on racial/ethnic and socioeconomic characteristics of populations living flood risk zones [239].

One study covering COVID-19 concluded that "efforts may also be needed to reduce structural racism and address social risk factors to improve quality of care and population health in communities of color" [240] (p. 1345). One study indicated "that people who self identify as mestizo ethnic have clinical risk factors of "arterial Hypertension, Diabetes Mellitus type 2, Bronchial Asthma and immunosuppression status" and social risk factors of "overcrowding and living alone" [241] (p. 159).

Finally in one abstract it is stated "Emerging evidence has indicated a negative and disproportionate impact of COVID-19 on Black, Asian, and minority ethnic (BAME) communities. Previous studies have already reported that biological and social risk factors increase disease susceptibility, particularly in BAME communities. Despite frontline workers in ethnic minority communities, the United Kingdom's National Health Service is attempting to quell the pandemic, disproportionate numbers of BAME physicians and other health care workers have died of COVID-19" [242] (page 1).

3.2.2. Social Risk Related to EDI Groups

Women, Women, Girl*, and Gender

Five abstracts were found. One study found covered the social determinants of health, namely "housing problems, behavioral health issues, disability, and neighborhood-level stress" where the demographics of study subjects were listed as "57% were women, 25% dually diagnosed, 67% White/non-Hispanic, 18% unstably housed, and 37% disabled". This suggests that "to set appropriate benchmarks for comparing health plans, quality measures for emergency department visits should be adjusted for both medical and social risks" [243] (p. 362). In one abstract it is stated that oxytocin increased acceptance of social risk in men and women [244]. In another abstract it is argued that "enhancing the legitimacy of women's compensation requests does not eliminate the social risk of asking, and that eliminating the social risk of asking is not sufficient to legitimize their requests" [245] (p.1). One study looked at the context of the social risk of "the public model of long-term care with cultural values that place migrant women in these activities"

and flagged that "the contradictions that exist in the welfare system: care workers suddenly become essential while they are excluded from access to basic social rights" [246] (p. 1). Lastly, one study stated that "clinical and social risk factors and barriers to access health care are associated with adverse outcomes among maternal cases of COVID-19 ARDS in Brazil" [154] (p. 415).

Disabled People

Using the search terms "disabled" OR "disabili*" OR "deaf" OR "mental health" OR "autism" OR "adhd" OR "attention deficit" OR "neurodiv*" OR "impair*", only abstracts covering mental health were found. Three abstracts indicated social risks in relation to mental health all of which were related to COVID-19 [247–249]. Two of them mentioned women and girls [248,249]. One stated "how the lockdown measures affected the general population's mental health in Colombia and highlight some social risk factors in health" [248] (p.1). One abstract mentioned "social risk factors and pandemic stressors will contribute to negative mental health outcomes, especially among vulnerable populations" [247] (p. 5297). Adolescent girls and young women (AGYW) in South Africa face various psycho-social risk factors which already disproportionally affect the mental health of AGYW in these communities; the COVID-19 pandemic intersects with these pre-existing social and environmental factors [249].

Two were related to mental health but not COVID-19. One highlighted the need "to build a service program and individual client capacity to improve mental health-related quality of life among individuals at risk for depression, with exposure to social risk factors or concerns about environmental hazards in areas of Southern Louisiana at risk for events such as hurricanes and storms" [250] (p. 1683). Another abstract covered "indices of social risk among first attenders of an emergency mental health service in post-conflict East Timor" [251] (p. 929). One stated that sick building syndrome symptoms causes psychosocial risk factors such as anxiety and stress as well as ergonomic risk factors [252].

Indigenous Peoples, Ethnic Groups and LGBTQ2S+

Six abstracts were found for ethnic groups, none of which covered Indigenous people or members of the LGBTQ2S community.

In one abstract it is stated that "social risk factors increase disease susceptibility, particularly in BAME communities" [242] (p. e22381). One study looked at "mental health symptoms and social risks during COVID-19, compared to before the pandemic, for urban, racial and ethnic minority school-age children" [253] (p. 1753). In one abstract it is argued that "accounting for Social Risk Does not Eliminate Race/Ethnic Disparities in COVID-19 Infection" [254] (p. 1183). One study covering COVID-19 concluded that "efforts may also be needed to reduce structural racism and address social risk factors to improve quality of care and population health in communities of color" [240] (p. 1345). In one abstract it is argued that social risks of EDMPP become more problematic and four types of social risk are identified "for the Chinese minority regions". These include "the livelihood risk, the stability risk, the identity risk and the governance risk" [255] (p. 700). It is also argued in the abstract that to "minimize and eliminate the social risk and social crisis in the minority regions, we should take their ethnic and regional features into consideration" [255] (p. 700). In one abstract it is argued that operators from outside have to understand "Latin America's unique administrative framework, property rights, water, infrastructure, Indigenous groups, conflicts, and insecurity and workforce" to better understand "potential social risks and impacts" [256] (p. 1414).

3.2.3. EDMP and "Risk Governance", "Risk Communication"," Risk Education", "Risk Narrative" and "Risk Perception"

Risk education, risk literacy and risk narrative generated no hits in the downloaded abstract.

Risk Governance

In one abstract risk governance is defined as "concept of risk governance pertains to the many ways in which multiple actors, individuals, and institutions, public and private, deal with risks. It includes formal institutions and regimes and informal arrangements" [257] (p. 434) and seven criteria for risk governance are outlined: "(a) life cycle thinking, (b) triple bottom line, (c) inclusion of stakeholders, (d) risk management, (e) benefit–risk assessment, (f) consideration of uncertainty, and (g) adaptive response" [61] (p. 1). Applications for risk governance mentioned were urban challenges [257], nanotechnology and sustainability [61], national disaster [258], big data security [259], landslides [260], public security related to big data [261], communicable diseases and natural disasters [262], disaster management frameworks [263], disaster risk reduction measures [109], GSI adoption [264] and infrastructure [264]. Barriers for risk governance mentioned were "lack of knowledge about risk assessment and emergency planning" and "divergent, sometimes even opposite, stakeholders' views on several issues" [260] (p. 27). One abstract mentioned the vulnerability analysis matrix as a risk governance tool [265]. As to EDI related groups women were mentioned [109] as part of the need for multi stakeholder involvement [109], stakeholders and many different voices [260]. As to "social risk governance" one abstracts made the case for the usefulness of big data technology for social risk governance [266]. Another the use of "framework Adaptive Control Theory" [267] and another "social network analysis based agent-based modeling" [264].

Risk Perception

Risk perception was mentioned in conjunction with water scarcity [268], COVID-19 related health [269], fire [270,271], hurricane storm tide [272],terrorism [273], disaster [187,274–276], environmental problems [277], online shopping [278], water security [279], genetically modified food [280], volcanic risk [281], crimes, economic risks, uncontrollable risks, accidents, environmental risks, natural disasters, and future risks [282], public emergencies [283], flood [284] check-in services [285], public safety [286] social security and financial security [287], petition [288], radioactive waste [151], nuclear power [151], flash flood [289], urban context [187] natural hazard [275], severe weather [290], abrupt geological hazards in coastal rural area [291], emergence and spread of COVID [292], natural disaster [293] disease [270], public health emergencies [294] green stormwater infrastructure [295] earthquake [275] and typhoon [275].

As to making visible and improve risk perceptions including social risk perception, the following technologies were mentioned: visualization tools [272,281,296], social media [292,297], agent-based simulation [298], cross-modal semantic fusion, temporal knowledge graph and analysis, complex social network intelligent decision-making methods [287], autoregressive integrated moving average (ARIMAbased time-series prediction model [299], structural equation (SEM) model [300], fuzzy cognitive maps [301], unsupervised and supervised machine learning algorithms, Bayesian Belief Networks [295] and decision support system [271]. Technological risk perception is defined in one abstract as the "processing of physical signals and/or information about a potentially harmful impact of using technology and the formation of a judgment about seriousness, likelihood, and acceptability of the respective technology" [302] (p. 293).

Groups mentioned in conjunction with risk perception were: farmers [268,303], immigrants [293], Canadian born adults [293] the public [150,270,294,295,299], citizens [277,283,289,304], locals [284], Koreans [282], community [281], household with disabled people[275], people with disabilities [187], consumers [278,280,305], water professionals[279] undergraduate college students [290], mobility-disadvantage group [291], public agencies [292], hospital authorities [276], people engaged in nuclear business [150,151], women [151] and gender [280].

As to EDI related groups from the group mentioned, household with disabled people [275], people with disabilities [187], mobility-disadvantage group [291], women [151] and gender [280].

One abstract found that "households with disabled members are less likely to prepare emergency kits and to plan evacuation. However, with the adjustment of risk perception (probability, consequence, worrisome) and other factors experience of earthquake and typhoon hazards, home ownership status, whether there are children in the home, perceived social status, family income, gender, age, education attainment, and religious status the differences in adopting all 6 preparedness activities between households with disabled members and households without disabled members become nonsignificant" [275] (p. 575). One stated "Some of consumer characteristics including gender, education background, personal annual income, and with at least one child under 18, significantly influenced their risk perception of GMF [genetically modified food]" [280] (p. 30).

Risk Communication

Risk communication was linked to health risk related to public health [292], "individual hurricane evacuation intentions during the COVID-19 pandemic [306] (p. 507), disaster risk reduction [307], prevention and control of coronavirus disease (COVID-19) [308], COVID-19 [308–317], emergency planning and response [318], cyclone Amphan [319], health communication [312], for sustainable society [320], terrorism [273], public health information [321], household flooding [322], climate change [323], Sustainable Disaster Risk Reduction [324], volcanic crisis [281], earthquake [325], nuclear issues [150], 2008 earthquake in Sichuan province in China [227] and radioactive waste [326]. To give a few quotes: "risk communication for shaping responses and policies in an efficient and coordinating way" [261] (p. 1), "prevention and mitigatory role of risk communication" [309] (p. 1), "vital to creating the required awareness and preparation" [273] (p. 1), "risk communication should emphasize the importance of both resource- and action-based preparedness" [327] (p. e206881) and "utility of risk communication techniques designed to reduce psychological distance" [323] (p. 957).

"Risk communication is necessary to solve complicated social problem between stakeholder with different knowledge and different standard about risk" [328] (p. 310) and "The need for fair risk communication has emerged as a result of a more global and more flexible economy as well as of a media dominated world" [329] (p. 1007)

For and with whom the following groups are mentioned: stakeholders [307,310,328,330,331], African American Churches [332], community [314,333], public health organizations [318], acute hospitals [318], vulnerable populations [319], many different groups of society taking into account cultural, social, political and economic factors [312], medical residents [316,322], differing segments of the population [334], nuclear experts [150], women in metropolitan areas [150], people with disabilities [228], the public [326,329], businesses [329], Bangladeshi adults [317], tourists [324], public health authorities [331], local governments [331], media [331], risk informed communities [281] and local communities [325].

Finally, in one abstract it is stated: "Research on risk communication audiences advanced on risk perception and multiway engagement with notable interest in personal factors such as gender, race, age, and political orientation" [335] (p. 2240).

As to risk communication problems, the following are mentioned: constantly challenged and complex and difficult [307], media framing [319] "low preparedness [273] and it is recognized that help with risk communication is needed [334,336]. It is noted that "efforts to settle on a single, generic version of what constitutes risk communication will be less productive than an open-minded exploration of the multiple forms that comprise today's vibrant interdisciplinary field" [335] (p. 2240), "Bayesian networks in promoting integrated, inter-disciplinary evaluation of uncertainty in IRBM, as well as the apparent advantages for risk communication with stakeholders, are offset in our case by the cost of obtaining reliable probabilistic data and meta-model validation procedures" [330] (p. 91).

It is also noted that adaptive resilience can be achieved even without risk communication if there is a "collective understanding of the system situation" [308] (p. 113).

4. Discussion

A recent scoping review looking at the general engagement with the 'social' in the EDMPP academic literature found various problems such as underrepresentation of EDI groups [16]. Our data showed four main findings (a) few to no hits with the term "social risk" were found in the data obtained from most of the search strategies in particular search strategies involving technologies (Tables 2 and 3), (b) EDI related groups were rarely to not at all mentioned in conjunction with risk in the data investigated (Table 4 and Sections 3.2.1–3.2.2), (c) science and technology governance and ethics fields were not mentioned in relation to EDMPPP and risk (Section 3.1.3) and (d) the qualitative analysis (Section 3.2) revealed gaps, for example, technology was only mentioned in a techno-optimistic sentiment and not as a source of risk for EDI groups and EDI covered groups were rarely to not at all engaged with in conjunction with "risk governance", "risk communication", "risk education", "risk narrative" and "risk perception". Our data is problematic if looked at through the lens of the risk narrative of the COVID-19 research road map [4], the risk narrative of the UN Office for disaster risk reduction (UNDRR) strategic framework 2022–2025 [15], the discussions around science and technology governance, and the risk narrative through the lens of EDI. We discuss our findings through these four areas below.

4.1. Equity/Equality, Diversity, and Inclusion and Risk Narratives

Equity, diversity, and inclusion (EDI) and other EDI phrases and frameworks [46] are employed as policy concepts to improve research, education, and participation in the workplace for marginalized groups such as women, Indigenous peoples, visible/racialized minorities, disabled people, and LGBTQ2S [46] including those related to environment-focused disciplines and programs [98]. Terms such as equity, equality, inclusion, and diversity are also mentioned in relation to risk narratives [99–112] as are marginalized populations [47–50]. Many equity, diversity, and inclusion issues were evident in the COVID-19 responses to date [113].

The "UN Research Roadmap for the COVID-19 Recovery" notes over 30 population groups as experiencing highest degree of marginalization [4] (p. 48). EDI frameworks are seen to be useful as tools to deal with various risks such as justice, equity, diversity, and inclusion and to deal with climate change-linked risks [115,124,127] and risk related organizations such as the Risk Management Association have EDI statements [136]. Risk is covered for groups covered under EDI [116–120,122,123,125,126]. At the same time, it is also noted that decreasing EDI efforts carries risks [128,130–135].

However, our quantitative and qualitative data suggests a lack of engagement with EDI including the groups covered in the EDI discourses at the nexus of risk and EDMPP. In general, the EDI frameworks seen as useful tools to deal with various risks such as justice, equity, diversity, and inclusion linked to climate change risks [115] and risks for groups covered under [116–127] are not engaged with through the lens of EDMPP.

4.2. Risk Narratives and the COVID Research Road Map

The COVID-19 research roadmap [4] mentions risk many times. It highlights the risk of repeating past mistakes by ignoring existing research data or not performing needed research on socio-economic recovery [4]. It is noted that socio-economic recoveries need an understanding of the interconnectiveness of "health, the environment, politics, economics and societal well-being" [4] (p. 30) and the report highlighted the need to provide data that enables shared risk and does not burden marginalized groups the most [4]. Our data suggest that the research reality around the literature we looked at fits the category of "not performing needed research" [4]. Many research priorities are linked to

the concept of risks often in conjunction with marginalized groups {RP3.1.2], [RP1.1.3], [RP1.4.1], [RP1.4.2], [RP1.5.3], [RP2.4], [RP2.4.1], [RP2.4.4], [RP2.4.3], [RP2.4.2], [RP3.5.1] and [RP2.5.2]. Our study provides empirical data that research on new global governance structures that takes into account local realities, exhibits long term thinking and ensures the so far rare reality of the meaningful participation of marginalized groups [4] is missing. If one would use the list of marginalized groups identified in the UN Research Roadmap for the COVID-19 Recovery document [4] (p. 48) the neglect of the groups in the list we did not cover would very likely also be found in the literature we covered. Similarly, the data identifies that "to build fit-for-purpose global governance structures that enable effective responses to transnational risks while also encouraging everyone to act in solidarity in the face of shared responsibilities [RP1.4.3]" [4] (p. 30) is still missing.

4.3. Risk Narrative and the UN Office for Disaster Risk Reduction (UNDRR) Strategic Framework 2022–2025

The UNDRR as the very name indicates, focuses on risk [15]. In the UNDRR strategic framework 2022–2025 it is flagged that risk informed "evidence, innovation, and good practices on risk" that also includes systemic risk has to be used to inform decision-making processes is needed [15] (p. 4). The report flags the importance of evidence-based advocacy to mobilize citizens, risk knowledge and information, monitoring of action results [15]. Our data suggests that these goals are not met, and that the "science-policy practice interface" [15] (p. 10) highlighted as essential is very weak in relation to risk and marginalized groups as is the goal of "integrating human rights, gender equality and the rights of persons with disabilities into disaster risk reduction" [15] (p. 16). Our data suggests that all strategic objectives are so far not supported by the risk and EDMPP research as it pertains to marginalized groups (strategic objectives 1: the generation of quality risk information and analysis which includes systemic and cascading risk (deliverable 1.1.3), scientific research agenda on disaster risk reduction (deliverable 1.1.4), applying to action of disaster risk reduction practices, knowledge and methodologies (deliverable 1.2.1), monitoring based on data disaggregation by sex age and disability (deliverable 1.3.1), to develop and implement multi-stakeholder, gender responsive, inclusive risk governance (result 2.2 and deliverable 2.2.1) and strategic objective 4: "Mobilize governments and other stakeholders through advocacy and knowledge sharing to make disaster risk reduction central to sustainable development" [15] (p. 24). Our study suggests that data is still not generated in the academic literature for the deliverables mentioned and problems flagged.

4.4. Science and Technology and Risk Narratives

Perception of risk is a social and cultural construct and is impacted by many factors [45]. Risk perception and an understanding of risk narratives of scientific and technological advancements is a critical aspect of scientific literacy [51–56]. However, risk perceptions are shaped by the values of individuals and groups [57–60] and are influenced by motivated reasoning [57–60]. Risk narratives are mentioned extensively in conjunction with science and technology governance and various ethics discourses including environmental ethics [82–96]. Various studies describe the problems of risk narratives in relation to technologies such as artificial intelligence, machine learning, machine reasoning, decision support systems, virtual coaches, conversational agents, Bayesian network approaches [61–81]. Risk narratives are mentioned extensively in conjunction with science and technology governance and various ethics discourses including environmental ethics [82–97]. None of the science and technology governance terms and ethics field are present (Section 3.1.3). Furthermore, EDI groups are rarely mentioned in conjunction with risk narratives (Table 4), and within the abstracts used for qualitative analysis technologies were only mentioned with a positive angle in relation to EDI if mentioned (Section 3.2). Our findings pose problem for performing high-quality risk governance in relation to technologies used in EDMPP. This is of specific importance in relation to marginalized groups if the purpose of risk governance is to provide "a

conceptual as well as normative basis for how to deal responsibly with uncertain, complex, and/or ambiguous risks in particular" [40] (p. 431) and to inform policy [337]. Our data also suggests that risk literacy and risk education around marginalized groups has not improved if indeed they are a topic of investigation to start with. However, high risk literacy and risk education leading to risk literacy [42] is seen as needed to improve risk governance [41]. Our data suggest that all three components of risk literacy "(1) understanding of the state of risk, (2) understanding of risk perception, and (3) understanding and practicing the risk coping (including both of risk management and risk communication)" [41] (p. 1260) are missing in the academic literature around EDMPP and risk in relation to technologies and marginalized groups. This area is also neglected in the science and technology governance literature. The National Academy of Medicine's Committee on Emerging Science, Technology, and Innovation in health and medicine (CESTI) proposed a technology impact and governance framework [97] which includes principles of relevance to EDI and risk narratives in relation to EDMPP and the generation of technologies and algorithms for use in EDMPP. These examples of the principles include fairness, autonomy/individual and group self-determination, collective good with concept such as solidarity, civic responsibility and stewardship and individual good whereby risk benefit is linked to the principle of justice, collective and individual goods [97] (p. figure page 45). The lack of risk narrative data in the literature we covered in relation to marginalized groups is problematic to fulfill the principles of the CESTI framework. Our data also shows problems for the expected cross sectors and cross discipline efforts and the efforts to involve stakeholders reflecting many different groups expected for technology governance [97] given that technology is an important part of EDMPP. It is argued that "The extent to which a technology's benefits are maximized and risks mitigated (and how benefits and risks are defined) often depends less on explicit ethical principles and values guiding the work itself, and more on the policies, norms, standards, and incentives of the particular sector that shapes a technology's development and deployment" [97] (p. 41). Our data suggests that there might be problems with how benefits and risks are defined and that there is a lack of information generated for "the policies, norms, standards, and incentives of the particular sector that shapes a technology's development and deployment" [97] (p. 41). There is a lack of engagement with risk and marginalized groups and EDMPP, especially in conjunction with technologies. Our study suggests also that data is not generated that could be used to generate the plausible future scenarios seen as needed [97] and the unearthing of potential conflicts [97] including social conflicts between individuals and groups.

4.5. Limitations

The search was limited to abstracts in selected databases and English language literature. As such, the findings are not to be generalized, which was also not the purpose of the study, to the whole academic literature, non-academic literature, or non-English literature. The hit counts produced are based on the co-occurrence of terms and do not indicate whether the content is relevant to risk narratives of EDMPP and are a maximum and do not account for duplicates between databases and within abstract. We also chose to search the data obtained with the search strategies for certain terms for example depicting 'the social' and EDI groups but our terms used are not exhaustive. Although this study has various limitations, the findings allow for conclusions to be made within the parameters of the searches and the character of the analysis.

5. Conclusions and Future Direction

Our data showed four main findings (a) few to no hits with the term "social risk" were found in the data obtained from most of the search strategies in particular search strategies involving technologies (Tables 2 and 3), (b) EDI related groups were rarely to not at all mentioned in conjunction with risk in the data investigated (Table 4 and Sections 3.2.1–3.2.2), (c) science and technology governance and ethics fields were not mentioned

in relation to EDMPPP and risk (Section 3.1.3) and (d) the qualitative analysis (Section 3.2) revealed gaps, for example, technology was only mentioned in a techno-optimistic sentiment and not as a source of risk for EDI groups and EDI covered groups were rarely to not at all engaged with in conjunction with "risk governance", "risk communication", "risk education", "risk narrative" and "risk perception".

Our data is problematic if looked at through the lens of the risk narratives of the COVID-19 research road map [4], the risk narrative of the UN Office for disaster risk reduction (UNDRR) strategic framework 2022–2025 [15] and the discussions around science and technology governance. It is also suggesting that existing EDI strategies so far did not lead to research questions of relevance to groups covered under EDI and to tackle the problems EDI groups face within EDMPP. As to future research, numerous studies can be performed with various stakeholders to better understand and fix the gaps we found. To name two avenues of research: given that EDI is increasingly employed as a prerequisite for grant proposals one can investigate whether the wordings really trigger research related to EDI groups or only lead to what we call "bureaucratical EDI" the accessibility to do research. Another research avenue could be to develop self assessment tools for people involved in EDMPP and risk especially the ones employing technologies such as machine reasoning to increase their awareness of their level of knowledge around EDMPP and social risks especially of marginalized groups so they can consciously avoid designing or deploying biased algorithms and other products.

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References

1. UNESCAP. Rehabilitation International (RI); Nippon Foundation. Sendai Statement to Promote Disability-Inclusive Disaster Risk Reduction for Resilient, Inclusive and Equitable Societies in Asia and the Pacific. Available online: http://www.ri-global.org/sendai-statement-to-promote-disability-inclusive-disaster-risk-reduction-for-resilient-inclusive-and-equitable-societies-in-asia-and-the-pacific/ (accessed on 10 November 2022).
2. United Nations General Assembly. Sendai Framework for Disaster Risk Reduction 2015–2030. Available online: http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf (accessed on 10 November 2022).
3. United Nations Office for Disaster Risk Reduction (UNDRR). The Science and Technology Roadmap to Support the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030. Available online: http://www.preventionweb.net/files/45270_unisdrscienceandtechnologyroadmap.pdf (accessed on 10 November 2022).
4. United Nations. UN Research Roadmap for the COVID-19 Recovery. Available online: https://www.un.org/en/coronavirus/communication-resources/un-research-roadmap-covid-19-recovery (accessed on 10 November 2022).
5. United Nations. Policy Brief: A Disability-Inclusive Response to COVID-19. Available online: https://www.un.org/sites/un2.un.org/files/sg_policy_brief_on_persons_with_disabilities_final.pdf (accessed on 10 November 2022).
6. United Nations. Joint Statement on the Disability-Inclusive Response to COVID-19—Towards a Better Future for All. Available online: https://usun.usmission.gov/joint-statement-on-the-disability-inclusive-response-to-covid-19-towards-a-better-future-for-all/ (accessed on 10 November 2022).
7. Smith, K. *Environmental Hazards: Assessing Risk and Reducing Disaster*; Routledge: Milton Park, UK, 1992.

8. Field, C.B.; Barros, V.; Stocker, T.F.; Dahe, Q.; Jon Dokken, D.; Ebi, K.L.; Mastrandrea, M.D.; Mach, K.J.; Plattner, G.K.; Allen, S.K.; et al. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change. Available online: https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/ (accessed on 10 November 2022).

9. Alexander, D.E. Resilience and disaster risk reduction: An etymological journey. *NHESS* **2013**, *13*, 2707–2716. https://doi.org/10.5194/nhess-13-2707-2013.

10. Veronica, M.; Rhamec, D.; Mark, M.M.; Rungano, M.; Nyasha, M. Enhancing disaster risk reduction through adoption of climate smart initiatives in marginal communities of southern Zimbabwe. *Environ. Chall.* **2022**, *9*, 100637. https://doi.org/10.1016/j.envc.2022.100637.

11. O'Brien, G.; O'Keefe, P.; Rose, J.; Wisner, B. Climate change and disaster management. *Disasters* **2006**, *30*, 64–80. https://doi.org/10.1111/j.1467-9523.2006.00307.x.

12. Jarraud, M.; Steiner, A. Summary for policymakers. In *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*; Special Report of the Intergovernmental Panel on Climate Change; Cambridge University Press: Cambridge, UK, 2012; pp. 3–22. https://doi.org/10.1017/CBO9781139177245.003.

13. Birkmann, J.; Cardona, O.D.; Carreño, M.L.; Barbat, A.H.; Pelling, M.; Schneiderbauer, S.; Kienberger, S.; Keiler, M.; Alexander, D.; Zeil, P.; et al. Framing vulnerability, risk and societal responses: The MOVE framework. *Nat. Hazards* **2013**, *67*, 193–211. https://doi.org/10.1007/s11069-013-0558-5.

14. Fakhruddin, B.; Kirsch-Wood, J.; Niyogi, D.; Guoqing, L.; Murray, V.; Frolova, N. Harnessing risk-informed data for disaster and climate resilience. *Prog. Disaster Sci.* **2022**, *16*, 100254. https://doi.org/10.1016/j.pdisas.2022.100254.

15. United Nations Office for Disaster Risk Reduction. UNDRR Strategic Framework 2022–2025. Available online: https://www.undrr.org/publication/undrr-strategic-framework-2022-2025 (accessed on 10 November 2022).

16. Lillywhite, B.; Wolbring, G. Emergency and Disaster Management, Preparedness, and Planning (EDMPP) and the 'Social': A Scoping Review. *Sustainability* **2022**, *14*, 13519. https://doi.org/10.3390/su142013519.

17. Riad, J.K.; Norris, F.H.; Ruback, R.B. Predicting evacuation in two major disasters: Risk perception, social influence, and access to resources. *J. Appl. Soc. Psychol.* **1999**, *29*, 918–934. https://doi.org/10.1111/j.1559-1816.1999.tb00132.x.

18. Ho, M.C.; Shaw, D.; Lin, S.; Chiu, Y.C. How do disaster characteristics influence risk perception? *Risk Anal.* **2008**, *28*, 635–643. https://doi.org/10.1111/j.1539-6924.2008.01040.x.

19. Gierlach, E.; Belsher, B.E.; Beutler, L.E. Cross-Cultural Differences in Risk Perceptions of Disasters. *Risk Anal.* **2010**, *30*, 1539–1549. https://doi.org/10.1111/j.1539-6924.2010.01451.x.

20. Motta Zanin, G.; Gentile, E.; Parisi, A.; Spasiano, D. A preliminary evaluation of the public risk perception related to the COVID-19 health emergency in Italy. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3024. https://doi.org/10.3390/ijerph17093024.

21. Pal, I.; Ghosh, T.; Ghosh, C. Institutional framework and administrative systems for effective disaster risk governance—Perspectives of 2013 Cyclone Phailin in India. *Int. J. Disaster Risk Reduct.* **2017**, *21*, 350–359. https://doi.org/10.1016/j.ijdrr.2017.01.002.

22. Lidskog, R.; Sjödin, D. Risk governance through professional expertise. Forestry consultants' handling of uncertainties after a storm disaster. *J. Risk Res.* **2016**, *19*, 1275–1290. https://doi.org/10.1080/13669877.2015.1043570.

23. Bustillos Ardaya, A.; Evers, M.; Ribbe, L. Participatory approaches for disaster risk governance? Exploring participatory mechanisms and mapping to close the communication gap between population living in flood risk areas and authorities in Nova Friburgo Municipality, RJ, Brazil. *Land Use Policy* **2019**, *88*, 104103. https://doi.org/10.1016/j.landusepol.2019.104103.

24. Guo, C.; Sim, T.; Ho, H.C. Evaluation of risk perception, knowledge, and preparedness of extreme storm events for the improvement of coastal resilience among migrants: A lesson from Hong Kong. *Popul. Space Place* **2020**, *26*, e2318. https://doi.org/10.1002/psp.2318.

25. Inaoka, M.; Takeya, K.; Akiyama, S. JICA's policies, experiences and lessons learned on impacts of urban floods in Asia. *Int. J. Water Resour. Dev.* **2019**, *35*, 343–363. https://doi.org/10.1080/07900627.2018.1444980.

26. Nara, Y. Action reSearch for improving the risk literacy of university students: Focusing on the effectiveness of risk communication using Crossroad game. *Procedia Comput. Sci.* **2018**, *126*, 2219–2227.

27. Frech, E.R. How can we deal with NIMBY in nuclear waste management? In Proceedings of the High Level Radioactive Waste Management, Las Vegas, NV, USA, 28 April–3 May 1991; pp. 442–446.

28. Dunwoody, S.; Peters, H.P. Mass media coverage of technological and environmental risks: A survey of research in the United States and Germany. *PUS* **1992**, *1*, 199–230. https://doi.org/10.1088/0963-6625/1/2/004.

29. Liang, L.; Luyun, L. Exploratory research on the patterns of individual emergency behaviors during earthquakes. *J. Ind. Eng. Eng. Manag.* **2022**, *36*, 148–158. https://doi.org/10.13587/j.cnki.jieem.2022.02.013.

30. Casigliani, V.; Menicagli, D.; Fornili, M.; Lippi, V.; Chinelli, A.; Stacchini, L.; Arzilli, G.; Scardina, G.; Baglietto, L.; Lopalco, P.; et al. Vaccine hesitancy and cognitive biases: Evidence for tailored communication with parents. *Vaccine X* **2022**, *11*, 100191. https://doi.org/10.1016/j.jvacx.2022.100191.

31. Dal, A.; Tokdemir, E. Social-Psychology of Vaccine Intentions: The Mediating Role of Institutional Trust in the Fight Against Covid-19. *Political Behav.* **2022**, *44*, 1459–1481. https://doi.org/10.1007/s11109-022-09793-3.

32. Paton, D. Risk communication and natural hazard mitigation: How trust influences its effectiveness. *Int. J. Glob. Environ. Issues* **2008**, *8*, 2–16. https://doi.org/10.1504/IJGENVI.2008.017256.

33. Eisenman, D.P.; Cordasco, K.M.; Asch, S.; Golden, J.F.; Glik, D. Disaster planning and risk communication with vulnerable communities: Lessons from Hurricane Katrina. *Am. J. Public Health* **2007**, *97* (Suppl. 1), S109–S115. https://doi.org/10.2105/AJPH.2005.084335.

34. Crouse Quinn, S. Crisis and emergency risk communication in a pandemic: A model for building capacity and resilience of minority communities. *Health Promot. Pract.* **2008**, *9*, 18S–25S. https://doi.org/10.1177/1524839908324022.

35. Mayhorn, C.B.; McLaughlin, A.C. Warning the world of extreme events: A global perspective on risk communication for natural and technological disaster. *Saf. Sci.* **2014**, *61*, 43–50. https://doi.org/10.1016/j.ssci.2012.04.014.

36. Coates, R. Educational hazards? The politics of disaster risk education in Rio de Janeiro. *Disasters* **2021**, *45*, 86–106. https://doi.org/10.1111/disa.12399.

37. Luetz, J.M.; Sultana, N. Disaster Risk Reduction Begins at School: Research in Bangladesh Highlights Education as a Key Success Factor for Building Disaster Ready and Resilient Communities—A Manifesto for Mainstreaming Disaster Risk Education. In *Climate Change Management*; Springer: Cham, Switzerland, 2019. https://doi.org/10.1007/978-3-319-98294-6_37pp 617-646.

38. Baytiyeh, H. Can Disaster Risk Education Reduce the Impacts of Recurring Disasters on Developing Societies? *Educ. Urban Soc.* **2018**, *50*, 230–245. https://doi.org/10.1177/0013124517713111.

39. Nakasu, T.; Nonaka, S.; Duangkaew, S.; Prathumchai, K.; Kodaka, A.; Miyamoto, M. Risk Narratives for Enhancing Regional Resilience: Constructing Evidence-Based Flood Disaster Response Scenarios. *J. Disaster Res.* **2022**, *17*, 561–572. https://doi.org/10.20965/jdr.2022.p0561.

40. Van Asselt, M.B.; Renn, O. Risk governance. *J. Risk Res.* **2011**, *14*, 431–449.

41. Nara, Y.; Sata, T. Construction of the practical model and learning program for risk literacy of everyday life: Based on students' awareness. *Procedia Comput. Sci.* **2016**, *96*, 1258–1266.

42. Covitt, B.A.; Gomez-Schmidt, C.; Zint, M.T. *J. Environ. Educ.* **2005**, *36*, 3.

43. Schmidt, M. Investigating Risk Perception: A Short Introduction. Available online: http://www.markusschmidt.eu/pdf/Intro_risk_perception_Schmidt.pdf (accessed on 10 November 2022).

44. Mañez, M.; Carmona, M.; Haro, D.; Hange, S. Risk Perception. Available online: http://pure.iiasa.ac.at/id/eprint/13903/1/Chapter3-ENHANCE.pdf (accessed on 10 November 2022).

45. Aerts, J.; Mysiak, J. Novel Multi-Sector-Partnerships in Disaster Risk Management. Available online: https://www.technopolis-group.com/wp-content/uploads/2020/04/Enhance-Layout-WEB-low.pdf (accessed on 10 November 2022).

46. Wolbring, G.; Lillywhite, A. Equity/Equality, Diversity, and Inclusion (EDI) in Universities: The Case of Disabled People. *Societies* **2021**, *11*, 49. https://doi.org/10.3390/soc11020049.

47. Sneddon, A.; Brown, S.; Budimir, M.; Lau, D.; Shakya, P. Gender in EWS and CIS: Implications for knowledge, education, communication, research and practice. *Geophys. Res. Abstr.* **2019**, *21*, 1.

48. Pertiwi, P.; Llewellyn, G.; Villeneuve, M. People with disabilities as key actors in community-based disaster risk reduction. *Disabil. Soc.* **2019**, *34*, 1419–1444. https://doi.org/10.1080/09687599.2019.1584092.

49. Golden, S.H.; Galiatsatos, P.; Wilson, C.; Page, K.R.; Jones, V.; Tolson, T.; Lugo, A.; McCann, N.; Wilson, A.; Hill-Briggs, F. Approaching the COVID-19 pandemic response with a health equity lens: A framework for academic health systems. *Acad. Med.* **2021**, *96*, 1546–1552. https://doi.org/10.1097/ACM.0000000000003999.

50. Phillips Ii, G.; Felt, D.; Ruprecht, M.M.; Wang, X.; Xu, J.; Pérez-Bill, E.; Bagnarol, R.M.; Roth, J.; Curry, C.W.; Beach, L.B. Addressing the Disproportionate Impacts of the COVID-19 Pandemic on Sexual and Gender Minority Populations in the United States: Actions Toward Equity. *LGBT Health* **2020**, *7*, 279–282. https://doi.org/10.1089/lgbt.2020.0187.

51. Gardner, G.; Jones, G. Science instructors' perceptions of the risks of biotechnology: Implications for science education. *RScEd* **2011**, *41*, 711–738.

52. Schenk, L.; Hamza, K.M.; Enghag, M.; Lundegård, I.; Arvanitis, L.; Haglund, K.; Wojcik, A. Teaching and discussing about risk: Seven elements of potential significance for science education. *IJSEd* **2019**, *41*, 1271–1286.

53. Ratcliffe, M.; Grace, M. *Science Education for Citizenship. Teaching Socio-Scientific Issues*; Open University Press: Maidenhead, UK, 2003.

54. Gardner, G.; Jones, G.; Taylor, A.; Forrester, J.; Robertson, L. Students' risk perceptions of nanotechnology applications: Implications for science education. *IJSEd* **2010**, *32*, 1951–1969.

55. Cross, R. The risk of risks: A challenge and a dilemma for science and technological education. *Res. Sci. Technol. Educ.* **1993**, *11*, 171–183.

56. Lange, J.M. Education in Sustainable Development: How Can Science Education Contribute to the Vulnerability Perception? *RScEd* **2012**, *42*, 109–127.

57. Stecula, D.A.; Merkley, E. Framing Climate Change: Economics, Ideology, and Uncertainty in American News Media Content from 1988 to 2014. *Front. Commun.* **2019**, *4*, 6. https://doi.org/10.3389/fcomm.2019.00006.

58. Kahan, D.M.; Braman, D.; Gastil, J.; Slovic, P.; Mertz, C. Culture and identity-protective cognition: Explaining the white-male effect in risk perception. *J. Empir. Leg. Stud.* **2007**, *4*, 465–505.

59. Demeritt, D.; Nobert, S. Models of best practice in flood risk communication and management. *Environ. Hazards* **2014**, *13*, 313–328.

60. Webler, T.; Tuler, S. Four Decades of Public Participation in Risk Decision Making. *Risk Anal.* **2021**, *41*, 503–518. https://doi.org/10.1111/risa.13250.

61. Subramanian, V.; Semenzin, E.; Hristozov, D.; Zabeo, A.; Malsch, I.; McAlea, E.; Murphy, F.; Mullins, M.; van Harmelen, T.; Ligthart, T.; et al. Sustainable nanotechnology decision support system: Bridging risk management, sustainable innovation and risk governance. *J. Nanoparticle Res.* **2016**, *18*, 89. https://doi.org/10.1007/s11051-016-3375-4.

62. Linkov, I.; Trump, B.D.; Anklam, E.; Berube, D.; Boisseasu, P.; Cummings, C.; Ferson, S.; Florin, M.V.; Goldstein, B.; Hristozov, D.; et al. Comparative, collaborative, and integrative risk governance for emerging technologies. *Environ. Syst. Decis.* **2018**, *38*, 170–176. https://doi.org/10.1007/s10669-018-9686-5.

63. Lehto, X.Y.; Park, S.; Mohamed, M.E.; Lehto, M.R. Traveler Attitudes Toward Biometric Data-Enabled Hotel Services: Can Risk Education Play a Role? *Cornell Hosp. Q.* **2021**, 1. https://doi.org/10.1177/19389655211063204.

64. Kane, I.O.; Vanderlinden, J.P.; Baztan, J.; Touili, N.; Claus, S. Communicating risk through a DSS: A coastal risk centred empirical analysis. *Coast. Eng.* **2014**, *87*, 240–248. https://doi.org/10.1016/j.coastaleng.2014.01.007.

65. De Vries, M.; Jansen, J.; Van Weert, J.; Holland, R. Fostering Shared Decision Making with Health Informatics Interventions Based on the Boosting Framework. In *Applied Interdisciplinary Theory in Health Informatics*; IOS Press: Amsterdam, The Netherlands, 2019; Volume 263, pp. 109–121.

66. Cunneen, M.; Mullins, M.; Murphy, F. Artificial intelligence assistants and risk: Framing a connectivity risk narrative. *AI Soc.* **2020**, *35*, 625–634. https://doi.org/10.1007/s00146-019-00916-9.

67. Bennett, D.E. Governance and organizational requirements for effective model risk management. *J. Risk Model Valid.* **2017**, *11*, 97–116. https://doi.org/10.21314/JRMV.2017.188.

68. Mendes, N.; Geraldo Vidal Vieira, J.; Patrícia Mano, A. Risk management in aviation maintenance: A systematic literature review. *Saf. Sci.* **2022**, *153*, 105810. https://doi.org/10.1016/j.ssci.2022.105810.

69. Thompson, M.P.; Wei, Y.; Calkin, D.E.; O'Connor, C.D.; Dunn, C.J.; Anderson, N.M.; Hogland, J.S. Risk Management and Analytics in Wildfire Response. *Curr. For. Rep.* **2019**, *5*, 226–239. https://doi.org/10.1007/s40725-019-00101-7.

70. Shah, H.M.; Gardas, B.B.; Narwane, V.S.; Mehta, H.S. The contemporary state of big data analytics and artificial intelligence towards intelligent supply chain risk management: A comprehensive review. *Kybernetes* **2021**. https://doi.org/10.1108/K-05-2021-0423.

71. Qian, Q.; Lin, P. Safety risk management of underground engineering in China: Progress, challenges and strategies. *J. Rock Mech. Geotech. Eng.* **2016**, *8*, 423–442. https://doi.org/10.1016/j.jrmge.2016.04.001.

72. Mudashiru, R.B.; Sabtu, N.; Abustan, I. Quantitative and semi-quantitative methods in flood hazard/susceptibility mapping: A review. *Arab. J. Geosci.* **2021**, *14*, 941.

73. Moss, E.; Metcalf, J. High Tech, High Risk: Tech Ethics Lessons for the COVID-19 Pandemic Response. *Patterns* **2020**, *1*, 100102. https://doi.org/10.1016/j.patter.2020.100102.

74. Marcot, B.G.; Penman, T.D. Advances in Bayesian network modelling: Integration of modelling technologies. *Environ. Model. Softw.* **2019**, *111*, 386–393. https://doi.org/10.1016/j.envsoft.2018.09.016.

75. Liu, Y.; Zhao, S.; Yue, X.; Muthu, B.; Kumar, R.L. AI-based framework for risk estimation in workplace. *Aggr. Violent Behav.* **2021**, 101616. https://doi.org/10.1016/j.avb.2021.101616.

76. Heinzlef, C.; Barroca, B.; Leone, M.; Serre, D. Urban resilience operationalization issues in climate risk management: A review. *Int. J. Disaster Risk Reduct.* **2022**, *75*, 102974. https://doi.org/10.1016/j.ijdrr.2022.102974.

77. Ghaffarian, S.; van der Voort, M.; Valente, J.; Tekinerdogan, B.; de Mey, Y. Machine learning-based farm risk management: A systematic mapping review. *Comput. Electron. Agric.* **2022**, *192*, 106631. https://doi.org/10.1016/j.compag.2021.106631.

78. Chinzei, K.; Shimizu, A.; Mori, K.; Harada, K.; Takeda, H.; Hashizume, M.; Ishizuka, M.; Kato, N.; Kawamori, R.; Kyo, S.; et al. Regulatory science on AI-based medical devices and systems. *Adv. Biomed. Eng.* **2018**, *7*, 118–123. https://doi.org/10.14326/abe.7.118.

79. Chen, K.; Blong, R.; Jacobson, C. Towards an integrated approach to natural hazards risk assessment using GIS: With reference to bushfires. *Environ. Manag.* **2003**, *31*, 546–560. https://doi.org/10.1007/s00267-002-2747-y.

80. Borunda, M.; Jaramillo, O.A.; Reyes, A.; Ibargüengoytia, P.H. Bayesian networks in renewable energy systems: A bibliographical survey. *Renew. Sustain. Energy Rev.* **2016**, *62*, 32–45. https://doi.org/10.1016/j.rser.2016.04.030.

81. Afzal, F.; Yunfei, S.; Nazir, M.; Bhatti, S.M. A review of artificial intelligence based risk assessment methods for capturing complexity-risk interdependencies: Cost overrun in construction projects. *Int. J. Manag. Proj. Bus.* **2021**, *14*, 300–328. https://doi.org/10.1108/IJMPB-02-2019-0047.

82. Van Est, R.; Walhout, B.; Brom, F. Risk and technology assessment. In *Handbook of Risk Theory: Epistemology, Decision Theory, Ethics, and Social Implications of Risk*; Springer: Dordrecht, The Netherlands, 2012; pp. 1067–1091. https://doi.org/10.1007/978-94-007-1433-5_43.

83. Read, S.A.; Kass, G.S.; Sutcliffe, H.R.; Hankin, S.M. Foresight study on the risk governance of new technologies: The case of nanotechnology. *Risk Anal.* **2015**, *36*, 1006–1024.

84. O'Connor, M.; Van den Hove, S. Prospects for public participation on nuclear risks and policy options: Innovations in governance practices for sustainable development in the European Union. *J. Hazard. Mater.* **2001**, *86*, 77–99. https://doi.org/10.1016/S0304-3894(01)00256-4.

85. Florin, M.V. Risk governance and 'responsible research and innovation' can be mutually supportive. *J. Risk Res.* **2019**, *25*, 976–990. https://doi.org/10.1080/13669877.2019.1646311.

86. Cummings, C.L.; Kuzma, J. Societal Risk Evaluation Scheme (SRES): Scenario-based multi-criteria evaluation of synthetic biology applications. *PLoS ONE* **2017**, *12*, e0168564. https://doi.org/10.1371/journal.pone.0168564.

87. Chatfield, K.; Borsella, E.; Mantovani, E.; Porcari, A.; Stahl, B.C. An investigation into risk perception in the ICT industry as a core component of responsible research and innovation. *Sustainability* **2017**, *9*, 1424. https://doi.org/10.3390/su9081424.

88. Agapito-Tenfen, S.Z.; Okoli, A.S.; Bernstein, M.J.; Wikmark, O.G.; Myhr, A.I. Revisiting risk governance of GM plants: The need to consider new and emerging gene-editing techniques. *Front. Plant Sci.* **2018**, *871*, 1874. https://doi.org/10.3389/fpls.2018.01874.

89. Isenhour, C. The politics of climate knowledge: Sir Giddens, Sweden and the paradox of climate (in)justice. *Local Environ.* **2013**, *18*, 201–216. https://doi.org/10.1080/13549839.2012.729570.

90. Vakleva, Z.; Georgieva, T. Competence in environmental ethics in the risk management in agroecosystems. *Bulg. J. Agric. Sci.* **2021**, *27*, 55–60.

91. Thompson, P.B. Environmental Impact and Environmental Values. In *International Library of Environmental, Agricultural and Food Ethics*; Springer: Cham, Switzerland, 2020; Volume 32, pp. 167–192.

92. Keith, D.W. Geoengineering the climate: History and prospect. *Annu. Rev. Energy Env.* **2000**, *25*, 245–284. https://doi.org/10.1146/annurev.energy.25.1.245.

93. Clarke, S. Future technologies, dystopic futures and the precautionary principle. *Ethics Info. Tech.* **2005**, *7*, 121–126. https://doi.org/10.1007/s10676-006-0007-1.

94. Lodge, D.M.; Shrader-Frechette, K. Nonindigenous species: Ecological explanation, environmental ethics, and public policy. *Conserv. Biol.* **2003**, *17*, 31–37. https://doi.org/10.1046/j.1523-1739.2003.02366.x.

95. Levidow, L.; Carr, S. How biotechnology regulation sets a risk/ethics boundary. *Agric. Hum. Values* **1997**, *14*, 29–43. https://doi.org/10.1023/A:1007394812312.

96. Casareale, C.; Gioia, E.; Colocci, A.; Marchetti, N.; Carone, M.T.; Marincioni, F. Fostering Geoethics in Flood Risk Reduction: Lessons Learned from the EU Project LIFE PRIMES. *Geosciences* **2022**, *12*, 131. https://doi.org/10.3390/geosciences12030131.

97. Mathews, D.J.H.; Fabi, R.; Offodile II, A. Imagining Governance for Emerging Technologies. *Issues Sci. Technol.* **2022**, *38*, 40–46.

98. Rivera, C.J.; Savage, C. Campuses as living labs for sustainability problem-solving: Trends, triumphs, and traps. *J. Environ. Stud. Sci.* **2020**, *10*, 334–340.

99. Delicado, A.; Rowland, J.; Fonseca, S.; de Almeida, A.N.; Schmidt, L.; Ribeiro, A.S. Children in disaster risk reduction in Portugal: Policies, education, and (non) participation. *Int. J. Disaster Risk Sci.* **2017**, *8*, 246–257.

100. Akerkar, S. Disaster mitigation and furthering women's rights: Learning from the tsunami. *Gend. Technol. Dev.* **2007**, *11*, 357–388. https://doi.org/10.1177/097185240701100304.

101. Akerkar, S.; Fordham, M. Gender, place and mental health recovery in disasters: Addressing issues of equality and difference. *Int. J. Disaster Risk Reduct.* **2017**, *23*, 218–230. https://doi.org/10.1016/j.ijdrr.2017.03.014.

102. Akerkar, S. Affirming Radical Equality in the Context of COVID-19: Human Rights of Older People and People with Disabilities. *J. Hum. Rights Pract.* **2020**, *12*, 276–283. https://doi.org/10.1093/jhuman/huaa032.

103. Al Thobaity, A.; Alamri, S.; Plummer, V.; Williams, B. Exploring the necessary disaster plan components in Saudi Arabian hospitals. *Int. J. Disaster Risk Reduct.* **2019**, *41*, 101316. https://doi.org/10.1016/j.ijdrr.2019.101316.

104. Bhadra, S. Women in Disasters and Conflicts in India: Interventions in View of the Millennium Development Goals. *Int. J. Disaster Risk Sci.* **2017**, *8*, 196–207. https://doi.org/10.1007/s13753-017-0124-y.

105. Bhadra, S. Exploring dimensions of sexual issues in disasters and conflicts: Need to bridge the gaps between policy and practice. *Sexologies* **2021**, *31*, 277–290.

106. Clark-Ginsberg, A.; Easton-Calabria, L.C.; Patel, S.S.; Balagna, J.; Payne, L.A. When disaster management agencies create disaster risk: A case study of the US's Federal Emergency Management Agency. *Disaster Prev. Manag. Int. J.* **2021**, *30*, 447–461. https://doi.org/10.1108/DPM-03-2021-0067.

107. Dania, M.; Inpin, W. Gender vulnerability and par model assessment in the post-disaster period: A case study from the 2014 Chiang Rai earthquake, Thailand. *J. Mekong Soc.* **2021**, *17*, 68–88.

108. Parkinson, D.; Kaur, A.D.J.; Archer, F.; Spencer, C. Gendered aspects of long-term disaster resilience in Victoria, Australia. *Aust. J. Emerg. Manag.* **2022**, *37*, 59–64. https://doi.org/10.47389/37.1.59.

109. Hemachandra, K.; Amaratunga, D.; Haigh, R. Role of women in disaster risk governance. *Procedia Eng.* **2018**, *212*, 1187–1194.

110. Johnson, C.; Penning-Rowsell, E.; Parker, D. Natural and imposed injustices: The challenges in implementing 'fair' flood risk management policy in England. *Geogr. J.* **2007**, *173*, 374–390.

111. Khan, Y.; Fazli, G.; Henry, B.; De Villa, E.; Tsamis, C.; Grant, M.; Schwartz, B. The evidence base of primary research in public health emergency preparedness: A scoping review and stakeholder consultation Health policies, systems and management. *BMC Public Health* **2015**, *15*, 432. https://doi.org/10.1186/s12889-015-1750-1.

112. Lucus, V. Review of women, gender and disaster: Global issues and initiatives. *J. Homel. Secur. Emerg. Manag.* **2010**, *7*. https://doi.org/10.2202/1547-7355.1734.

113. Ndumbe-Eyoh, S.; Muzumdar, P.; Betker, C.; Oickle, D. 'Back to better': Amplifying health equity, and determinants of health perspectives during the COVID-19 pandemic. *Glob. Health Promot.* **2021**, *28*, 7–16. https://doi.org/10.1177/17579759211000975.

114. Kubenz, V.; Kiwan, D. "Vulnerable" or Systematically Excluded? The Impact of Covid-19 on Disabled People in Low-and Middle-Income Countries. *Soc. Incl.* **2022**, *11*. https://doi.org/10.17645/si.v11i1.5671.

115. Runkle, B.R. biological engineering for nature-based climate solutions. *J. Biol. Eng.* **2022**, *16*, 7.

116. Marraccini, M.E.; Lindsay, C.A.; Griffin, D.; Greene, M.J.; Simmons, K.T.; Ingram, K.M. A Trauma-and Justice, Equity, Diversity, and Inclusion (JEDI)-Informed Approach to Suicide Prevention in School: Black Boys' Lives Matter. *Sch. Psych. Rev.* **2021**, 1–24. https://doi.org/10.1080/2372966X.2021.2010502.

117. Bhopal, K.; Henderson, H. Competing inequalities: Gender versus race in higher education institutions in the UK. *Educ. Rev.* **2021**, *73*, 153–169.

118. Fong, K.D.; Ciston, S. Modifications to a graduate pedagogy course to promote active learning and inclusive teaching. In Proceedings of the 2020 ASEE Virtual Annual Conference Content Access, Virtual, 22–26 June 2020.

119. Hagle, H.N.; Martin, M.; Winograd, R.; Merlin, J.; Finnell, D.S.; Bratberg, J.P.; Gordon, A.J.; Johnson, C.; Levy, S.; MacLane-Baeder, D. Dismantling racism against Black, Indigenous, and people of color across the substance use continuum: A position statement of the association for multidisciplinary education and research in substance use and addiction. *Subst. Abus.* **2021**, *42*, 5–12.

120. Harris, B.J.; Porter, M.D.; McDonald, G.H.; Wu, W.; Silver, C.F.; Fomunung, I. ASSETS: Fostering a community of engineering transfer students-best practices and beyond. In Proceedings of the 2021 IEEE Frontiers in Education Conference (FIE), Lincoln, NE, USA, 13–16 October 2021; pp. 1–9.

121. Hewitt, C.; Bessembinder, J.; Buonocore, M.; Dunbar, T.; Garrett, N.; Kotova, L.; New, S.; Newton, P.; Parfitt, R.; Buontempo, C. Coordination of Europe's climate-related knowledge base: Networking and collaborating through interactive events, social media and focussed groups. *Clim. Serv.* **2021**, *24*, 100264.

122. Jackson, T. Diversity Champions. *Intern. Audit.* **2021**, *78*, 18–19.

123. Jane, F.; Harvey, R. The case for diversity, equality and inclusion. *J. Financ. Compliance* **2022**, *5*, 218–227.

124. Jenkins, M.R.; McBride, S.K.; Morgoch, M.; Smith, H. Considerations for creating equitable and inclusive communication campaigns associated with ShakeAlert, the earthquake early warning system for the West Coast of the USA. *Disaster Prev. Manag. Int. J.* **2022**, *31*, 79–91.

125. Klitzman, R. Understanding Ethical Challenges in Medical Education Research. *Acad. Med.* **2022**, *97*, 18–21.

126. Koenig, H. Diversity, Equity and Inclusion in Medical Regulation. *J. Med. Regul.* **2021**, *107*, 32–32.

127. McGill, B.M.; Foster, M.J.; Pruitt, A.N.; Thomas, S.G.; Arsenault, E.R.; Hanschu, J.; Wahwahsuck, K.; Cortez, E.; Zarek, K.; Loecke, T.D.; et al. You are welcome here: A practical guide to diversity, equity, and inclusion for undergraduates embarking on an ecological research experience. *Ecol. Evol.* **2021**, *11*, 3636–3645. https://doi.org/10.1002/ece3.7321.

128. Editorial. Equality and diversity efforts do not 'burden' research—No matter what the UK government says. *Nature* **2020**, *586*, 643. https://doi.org/10.1038/d41586-020-03027-4.

129. Wolbring, G. COVID-19, Its Aftermath and Disabled People: What Is the Connection to Ethics? Available online: http://www.ijdcr.ca/VOL18_01/articles/wolbring.shtml (accessed on 10 November 2022).

130. Jones, Y.; Durand, V.; Morton, K.; Ottolini, M.; Shaughnessy, E.; Spector, N.D.; O'Toole, J. Collateral damage: How COVID-19 is adversely impacting women physicians. *J. Hosp. Med.* **2020**, *15*, 507–509. https://doi.org/10.12788/jhm.3470.

131. Read, H. Cognitive-emotional skills and democratic education. *Theory. Res. Educ.* **2021**, *19*, 168–184.

132. Tooth, S.; Viles, H.A. Equality, diversity, inclusion: Ensuring a resilient future for geomorphology. *ESPL* **2021**, *46*, 5–11.

133. Johnson-Mallard, V. The Robert Wood Johnson Nurse Faculty Scholars Diversity and Inclusion Research. *Health Equity* **2019**, *3*, 297–303.

134. Nash, M.; Grant, R.; Lee, L.-M.; Martinez-Marrades, A.; Winzenberg, T. An exploration of perceptions of gender equity among SAGE Athena SWAN self-assessment team members in a regional Australian university. *High. Educ. Res. Dev.* **2021**, *40*, 356–369.

135. Nash, M.; Grant, R.; Moore, R.; Winzenberg, T. Male allyship in institutional STEMM gender equity initiatives. *PLoS ONE* **2021**, *16*, e0248373.

136. Garritt, F. Advancing DEI in the Workplace and the Industry: A Discussion with Leaders in Securities Lending. *RMA J.* **2021**, 40–43. Available online: https://www.rmahq.org/resources-content?query=Garritt&category=Journal%20Articles (accessed on 10 November 2022).

137. Grant, M.J.; Booth, A. A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Inf. Libr. J.* **2009**, *26*, 91–108. https://doi.org/10.1111/j.1471-1842.2009.00848.x.

138. Davis, K.; Drey, N.; Gould, D. What are scoping studies? A review of the nursing literature. *Int. J. Nurs. Stud.* **2009**, *46*, 1386–1400. https://doi.org/10.1016/j.ijnurstu.2009.02.010.

139. Arksey, H.; O'Malley, L. Scoping studies: Towards a methodological framework. *Int. J. Soc. Res. Methodol.* **2005**, *8*, 19–32. https://doi.org/10.1080/1364557032000119616.

140. Wolbring, G. Auditing the 'Social' of Quantum Technologies: A Scoping Review. *Societies* **2022**, *12*, 41. https://doi.org/10.3390/soc12020041.

141. Hsieh, H.-F.; Shannon, S.E. Three approaches to qualitative content analysis. *Qual. Health Res.* **2005**, *15*, 1277–1288.

142. Edling, S.; Mooney Simmie, G. Democracy and emancipation in teacher education: A summative content analysis of teacher educators' democratic assignment expressed in policies for Teacher Education in Sweden and Ireland between 2000–2010. *Citizsh. Soc. Econ. Educ.* **2017**, *17*, 20–34.

143. Downe-Wamboldt, B. Content analysis: Method, applications, and issues. *Health Care Women Int.* **1992**, *13*, 313–321. https://doi.org/10.1080/07399339209516006.

144. Cullinane, K.; Toy, N. Identifying influential attributes in freight route/mode choice decisions: A content analysis. *Transp. Res. Part E* **2000**, *36*, 41–53. https://doi.org/10.1016/S1366-5545(99)00016-2.

145. Das, A.K.; Biswas, S.K.; Mandal, A. Transparent Decision Support System for Breast Cancer (TDSSBC) to Determine the Risk Factor. In *Machine Vision and Augmented Intelligence—Theory and Applications*, Springer: Berlin/Heidelberg, Germany, 2021; pp. 265–274.

146. Stojadinovic, A.; Eberhardt, C.; Henry, L.; Eberhardt, J.; Elster, E.A.; Peoples, G.E.; Nissan, A.; Shriver, C.D. Development of a Bayesian classifier for breast cancer risk stratification: A feasibility study. *Eplasty* **2010**, *10*, e25.

147. Zheng, B.; Ramalingam, P.; Hariharan, H.; Leader, J.K.; Gur, D. Prediction of near-term breast cancer risk using a Bayesian belief network. In Proceedings of the Medical Imaging 2013: Image Perception, Observer Performance, and Technology Assessment, Lake Buena Vista, FL, USA, 10–11 February 2013; pp. 375–381.

148. Berger-Höger, B.; Vitinius, F.; Fischer, H.; Beifus, K.; Köberlein-Neu, J.; Isselhard, A.; Töpper, M.; Wiedemann, R.; Rhiem, K.; Schmutzler, R. Nurse-led decision coaching by specialized nurses for healthy BRCA1/2 gene mutation carriers-adaptation and pilot testing of a curriculum for nurses: A qualitative study. *BMC Nurs.* **2022**, *21*, 42.

149. Wang, W.; Rea, S. Intelligent ensemble system aids osteoporosis early detection. *WSEAS Trans. Syst.* **2005**, *4*, 455–460.

150. Terado, M.; Yoshikawa, H.; Sugiman, T.; Hibino, A.; Akimoto, M. Analysis on difference of risk perception between people engaged in nuclear business and general public—From social survey for nuclear power plant. In Proceedings of the 12th International Conference on Nuclear Engineering (ICONE12), Arlington, VA, USA, 25–29 April 2004; pp. 887–896.

151. Yoshikawa, H.; Sugiman, T.; Wakabayashi, Y.; Shimoda, H.; Terado, M.; Akimoto, M.; Nagasato, Y. Study on communication system of social risk information on nuclear energy. In Proceedings of the 2004 International Congress on Advances in Nuclear Power Plants, ICAPP'04, Pittsburgh, PA, USA, 13–17 June 2004; pp. 1274–1283.

152. De Vericourt, F.; Jain, K.; Bearden, J.N.; Filipowicz, A. Sex, risk and the newsvendor. *J. Oper. Manag.* **2013**, *31*, 86–92. https://doi.org/10.1016/j.jom.2012.11.001.

153. Clemens, K.S.; Matkovic, J.; Faasse, K.; Geers, A.L. Determinants of safety-focused product purchasing in the United States at the beginning of the global COVID-19 pandemic. *Saf. Sci.* **2020**, *130*, 104894.

154. Menezes, M.O.; Takemoto, M.L.; Nakamura-Pereira, M.; Katz, L.; Amorim, M.M.; Salgado, H.O.; Melo, A.; Diniz, C.S.; de Sousa, L.A.; Magalhaes, C.G. Risk factors for adverse outcomes among pregnant and postpartum women with acute respiratory distress syndrome due to COVID-19 in Brazil. *Int. J. Gynecol. Obstet.* **2020**, *151*, 415–423.

155. Pongponrat, K.; Ishii, K. Social vulnerability of marginalized people in times of disaster: Case of Thai women in Japan Tsunami 2011. *Int. J. Disaster Risk Reduct.* **2018**, *27*, 133–141.

156. Arosemena, F.A.; Fox, L.; Lichtveld, M.Y. Reproductive health assessment after disasters: Embedding a toolkit within the disaster management workforce to address health inequalities among gulf-coast women. *J. Health Care Poor Underserved* **2013**, *24*, 17–28.

157. Khatri, G.K.; Tran, T.D.; Fisher, J. Prevalence and determinants of symptoms of antenatal common mental disorders among women who had recently experienced an earthquake: A systematic review. *BMC Psychiatry* **2019**, *19*, 47.

158. Mamun, M.A.; Huq, N.; Papia, Z.F.; Tasfina, S.; Gozal, D. Prevalence of depression among Bangladeshi village women subsequent to a natural disaster: A pilot study. *Psychiatry Res.* **2019**, *276*, 124–128.

159. Tearne, J.E.; Guragain, B.; Ghimire, L.; Leaning, J.; Newnham, E.A. The health and security of women and girls following disaster: A qualitative investigation in post-earthquake Nepal. *Int. J. Disaster Risk Reduct.* **2021**, *66*, 102622.

160. Engelman, A.; Guzzardo, M.T.; Muñiz, M.A.; Arenas, L.; Gomez, A. Assessing the Emergency Response Role of Community-Based Organizations (CBOs) Serving People with Disabilities and Older Adults in Puerto Rico Post-Hurricane María and during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2022**, *19*, 2156. https://doi.org/10.3390/ijerph19042156.

161. Hollis, N.D.; Thierry, J.M.; Garcia-Williams, A.G. Self-reported handwashing and surface disinfection behaviors by US adults with disabilities to prevent COVID-19, Spring 2020. *Disabil. Health J.* **2021**, *14*, 101096. https://doi.org/10.1016/j.dhjo.2021.101096.

162. Ipsen, C.; Myers, A.; Sage, R. A cross-sectional analysis of trust of information and COVID-19 preventative practices among people with disabilities. *Disabil. Health J.* **2021**, *14*, 101062. https://doi.org/10.1016/j.dhjo.2021.101062.

163. Myers, A.; Ipsen, C.; Lissau, A. COVID-19 vaccination hesitancy among Americans with disabilities aged 18-65: An exploratory analysis. *Disabil. Health J.* **2022**, *15*, 101223. https://doi.org/10.1016/j.dhjo.2021.101223.

164. Scherer, N.; Mactaggart, I.; Huggett, C.; Pheng, P.; Rahman, M.U.; Wilbur, J. Are the rights of people with disabilities included in international guidance on WASH during the COVID-19 pandemic? Content analysis using EquiFrame. *BMJ Open* **2021**, *11*, e046112. https://doi.org/10.1136/bmjopen-2020-046112.

165. Zhang, S.; Chen, Z. China's prevention policy for people with disabilities during the COVID-19 epidemic. *Disabil. Soc.* **2021**, *36*, 1368–1372. https://doi.org/10.1080/09687599.2021.1933913.

166. Perry, M.A.; Ingham, T.; Jones, B.; Mirfin-Veitch, B. "At Risk" and "Vulnerable"! Reflections on Inequities and the Impact of COVID-19 on Disabled People. *N. Z. J. Physiother.* **2020**, *48*, 107–116. https://doi.org/10.15619/NZJP/48.3.02.

167. Vladimirova, O.N.; Afonina, K.P.; Sevastianov, M.A.; Ponomarenko, G.N.; Raduto, V.I.; Chernyakina, T.S.; Shoshmin, A.V.; Malakhovsky, V.V.; Aliev, A.K.; Minkova, N.K. Persons with disabilities in terms of the spread of the new coronavirus infection COVID-19. *Probl. Sotsial'noi Gig. Zdr. I Istor. Meditsiny* **2021**, *29*, 774–778. https://doi.org/10.32687/0869-866X-2021-29-s1-774-778.

168. Jumreornvong, O.; Tabacof, L.; Cortes, M.; Tosto, J.; Kellner, C.P.; Herrera, J.E.; Putrino, D. Ensuring equity for people living with disabilities in the age of COVID-19. *Disabil. Soc.* **2020**, *35*, 1682–1687. https://doi.org/10.1080/09687599.2020.1809350.

169. Brown, H.K.; Saha, S.; Chan, T.C.Y.; Cheung, A.M.; Fralick, M.; Ghassemi, M.; Herridge, M.; Kwan, J.; Rawal, S.; Rosella, L.; et al. Outcomes in patients with and without disability admitted to hospital with COVID-19: A retrospective cohort study. *Can. Med. Assoc. J.* **2022**, *194*, E112–E121. https://doi.org/10.1503/cmaj.211277.

170. Seth, A.; Edwards, M.; Milaney, K.; Zwicker, J. How governments could best engage community organizations to co-design covid-19 pandemic policies for persons with disabilities. *Sch. Public Policy Publ.* **2022**, *15*, 1–21. https://doi.org/10.11575/sppp.v15i1.73020.

171. Kendall, E.; Ehrlich, C.; Chapman, K.; Shirota, C.; Allen, G.; Gall, A.; Kek-Pamenter, J.A.; Cocks, K.; Palipana, D. Immediate and Long-Term Implications of the COVID-19 Pandemic for People With Disabilities. *Am. J. Public Health* **2020**, *110*, 1774–1779. https://doi.org/10.2105/ajph.2020.305890.

172. McKinney, E.L.; McKinney, V.; Swartz, L. Access to healthcare for people with disabilities in south africa: Bad at any time, worse during covid-19? *South Afr. Fam. Pract.* **2021**, *63*, 5. https://doi.org/10.4102/safp.v63i1.5226.

173. Bennett Gayle, D.; Yuan, X.; Knight, T. The coronavirus pandemic: Accessible technology for education, employment, and livelihoods. *Assist. Technol.* **2021**, 1–8. https://doi.org/10.1080/10400435.2021.1980836.

174. Choi, J.W.; Han, E.N.; Lee, S.G.; Shin, J.; Kim, T.H. Risk of COVID-19 and major adverse clinical outcomes among people with disabilities in South Korea. *Disabil. Health J.* **2021**, *14*, 101127. https://doi.org/10.1016/j.dhjo.2021.101127.

175. Bosworth, M.L.; Ayoubkhani, D.; Nafilyan, V.; Foubert, J.; Glickman, M.; Davey, C.; Kuper, H. Deaths involving COVID-19 by self-reported disability status during the first two waves of the COVID-19 pandemic in England: A retrospective, population-based cohort study. *Lancet Public Health* **2021**, *6*, E817–E825. https://doi.org/10.1016/s2468-2667(21)00206-1.

176. Panocchia, N.; D'Ambrosio, V.; Corti, S.; Lo Presti, E.; Bertelli, M.; Scattoni, M.L.; Ghelma, F. COVID-19 pandemic, the scarcity of medical resources, community-centred medicine and discrimination against persons with disabilities. *J. Med. Ethics* **2021**, *47*, 362–366. https://doi.org/10.1136/medethics-2020-107198.

177. Safta-Zecheria, L. Challenges posed by COVID-19 to the health of people with disabilities living in residential care facilities in Romania. *Disabil. Soc.* **2020**, *35*, 837–843. https://doi.org/10.1080/09687599.2020.1754766.

178. Kuper, H.; Banks, L.M.; Bright, T.; Davey, C.; Shakespeare, T. Disability-inclusive COVID-19 response: What it is, why it is important and what we can learn from the United Kingdom's response. *Wellcome Open Res.* **2020**, *5*, 79. https://doi.org/10.12688/wellcomeopenres.15833.1.

179. Banks, L.M.; Davey, C.; Shakespeare, T.; Kuper, H. Disability-inclusive responses to COVID-19: Lessons learnt from research on social protection in low- and middle-income countries. *World Devel.* **2021**, *137*, 105178. https://doi.org/10.1016/j.worlddev.2020.105178.

180. Holm, M.E.; Sainio, P.; Parikka, S.; Koskinen, S. The effects of the COVID-19 pandemic on the psychosocial well-being of people with disabilities. *Disabil. Health J.* **2021**, *15*, 101224. https://doi.org/10.1016/j.dhjo.2021.101224.

181. Wang, K.; Manning, R.B.; Bogart, K.R.; Adler, J.M.; Nario-Redmond, M.R.; Ostrove, J.M.; Lowe, S.R. Predicting depression and anxiety among adults with disabilities during the COVID-19 pandemic. *Rehabil. Psychol.* **2022**, *67*, 179–188. https://doi.org/10.1037/rep0000434.

182. Lund, E.M. Interpersonal Violence Against People With Disabilities: Additional Concerns and Considerations in the COVID-19 Pandemic. *Rehabil. Psychol.* **2020**, *65*, 199–205. https://doi.org/10.1037/rep0000347.

183. Nankervis, K.; Chan, J. Applying the CRPD to People With Intellectual and Developmental Disability With Behaviors of Concern During COVID-19. *J. Policy Pract. Intellect. Disabil.* **2021**, *18*, 197–202. https://doi.org/10.1111/jppi.12374.

184. Yates, S.; Dickinson, H. Navigating Complexity in a Global Pandemic: The Effects of COVID-19 on Children and Young People with Disability and Their Families in Australia. *Public Adm. Rev.* **2021**, *81*, 1192–1196. https://doi.org/10.1111/puar.13352.

185. Colon-Cabrera, D.; Sharma, S.; Warren, N.; Sakellariou, D. Examining the role of governmsent in shaping disability inclusiveness around COVID-19: A framework analysis of Australian guidelines. *Int. J. Equity Health* **2021**, *20*, 170. https://doi.org/10.1186/s12939-021-01506-2.

186. Bookman, M. The Coronavirus Crisis: Disability Politics and Activism in Contemporary Japan. *Asia-Pac. J. Jpn. Focus* **2020**, *18*, 5465.

187. Castro, C.P.; Sarmiento, J.P.; Edwards, R.; Hoberman, G.; Wyndham, K. Disaster risk perception in urban contexts and for people with disabilities: Case study on the city of Iquique (Chile). *Nat. Hazards* **2017**, *86*, 411–436. https://doi.org/10.1007/s11069-016-2698-x.

188. Craig, L.; Craig, N.; Calgaro, E.; Dominey-Howes, D.; Johnson, K. People with disabilities: Becoming agents of change in disaster risk reduction. In *Emerging Voices in Natural Hazards Research*; Butterworth-Heinemann: Oxford, UK, 2019; pp. 327–356. https://doi.org/10.1016/B978-0-12-815821-0.00020-5.

189. Morris, Z.A.; Hayward, R.A.; Otero, Y. The Political Determinants of Disaster Risk: Assessing the Unfolding Aftermath of Hurricane Maria for People With Disabilities in Puerto Rico. *Environ. Justice* **2018**, *11*, 89–94. https://doi.org/10.1089/env.2017.0043.

190. Sujata, S. Disability Focused Disaster Recovery Planning in India: Development Perspective and Other Implications for making the Actual Mainstreaming Happen. *Disaster Adv.* **2009**, *2*, 41–48.

191. Burkholder-Allen, K. Populations with vulnerabilities and special needs. In *International Disaster Nursing*; Cambridge University Press: Cambridge, UK, 2010; pp. 289–306. https://doi.org/10.1017/CBO9780511841415.019.

192. Islam, M.S. Deficiency of disability issue in disaster risk reduction strategy: Implications on human security and social cohesion. In *Land and Disaster Management Strategies in Asia*; Springer: New Delhi, India, 2015; pp. 111–119. https://doi.org/10.1007/978-81-322-1976-7_8.

193. Park, E.S.; Yoon, D.K.; Choi, Y.W. Leave no one behind: Experiences of persons with disability after the 2017 Pohang earthquake in South Korea. *Int. J. Disaster Risk Reduct.* **2019**, *40*, 101076. https://doi.org/10.1016/j.ijdrr.2019.101261.

194. Benigno, M.R.; Kleinitz, P.; Calina, L.; Alcido, M.R.; Gohy, B.; Hall, J.L. Responding to the health and rehabilitation needs of people with disabilities post-Haiyan. *West. Pac. Surveill. Response J. WPSAR* **2015**, *6*, 53–59. https://doi.org/10.5365/WPSAR.2015.6.2.HYN_010.

195. Sullivan, H.T.; Häkkinen, M.T. Preparedness and Warning Systems for Populations with Special Needs: Ensuring Everyone Gets the Message (and Knows What To Do). *Geotech. Geol. Eng.* **2011**, *29*, 225–236. https://doi.org/10.1007/s10706-010-9363-z.

196. Bethel, J.W.; Foreman, A.N.; Burke, S.C. Disaster Preparedness Among Medically Vulnerable Populations. *Am. J. Prev. Med.* **2011**, *40*, 139–143. https://doi.org/10.1016/j.amepre.2010.10.020.

197. Pyke, C.; Wilton, R. Planning for inclusion? An assessment of Ontario's emergency preparedness guide for people with disabilities. *Int. J. Disaster Risk Reduct.* **2020**, *51*, 101888. https://doi.org/10.1016/j.ijdrr.2020.101888.

198. Simpson, N.; Pérez, R.; Goldberg, M. Semi-structured interviews on disaster and emergency preparedness for people with disabilities in two states in Mexico. *Nat. Hazards* **2021**, *106*, 1037–1064. https://doi.org/10.1007/s11069-021-04508-z.

199. Thompson, K.; Every, D.; Rainbird, S.; Cornell, V.; Smith, B.; Trigg, J. No pet or their person left behind: Increasing the disaster resilience of vulnerable groups through animal attachment, activities and networks. *Animals* **2014**, *4*, 214–240. https://doi.org/10.3390/ani4020214.

200. Boon, H.J.; Brown, L.H.; Pagliano, P.J. Emergency planning for students with disabilities: A survey of Australian Schools. *Aust. J. Emerg. Manag.* **2014**, *29*, 45–49.

201. Winarno, E.; Rusmiyati, C.; Probosiwi, R. The involvement of persons with disabilities in disaster risk management. In Proceedings of the IOP Conference Series: Earth and Environmental Science, Bogor, Indonesia, 11–12 August 2021.

202. Vanmala, H. Where is disability in disaster management in India? In *Strategic Disaster Risk Management in Asia*; Springer: New Delhi, India, 2015; pp. 39–48. https://doi.org/10.1007/978-81-322-2373-3_4.

203. Crawford, T.; Villeneuve, M.; Yen, I.; Hinitt, J.; Millington, M.; Dignam, M.; Gardiner, E. Disability inclusive disaster risk reduction with culturally and linguistically diverse (CALD) communities in the Hawkesbury-Nepean region: A co-production approach. *Int. J. Disaster Risk Reduct.* **2021**, *63*, 102430. https://doi.org/10.1016/j.ijdrr.2021.102430.

204. Chisty, M.A.; Nazim, A.; Rahman, M.M.; Dola, S.E.A.; Khan, N.A. Disability inclusiveness of early warning system: A study on flood-prone areas of Bangladesh. *Disaster Prev. Manag.* **2021**, *30*, 494–509. https://doi.org/10.1108/dpm-05-2021-0177.

205. Malpass, A.; West, C.; Quaill, J.; Barker, R. Experiences of individuals with disabilities sheltering during natural disasters: An integrative review. *Aust. J. Emerg. Manag.* **2019**, *34*, 60–65.

206. Adams, C.; Neef, A. Intersections of Community Responses and Humanitarian Interventions in the Aftermath of the 2014 Floods in Solomon Islands. In *Climate-Induced Disasters in the Asia-Pacific Region: Response, Recovery, Adaptation*; Emerald Publishing Limited: Bingley, UK, 2020.

207. Ronoh, S.; Gaillard, J.C.; Marlowe, J. Children with Disabilities and Disaster Risk Reduction: A Review. *Int. J. Disaster Risk Sci.* **2015**, *6*, 38–48. https://doi.org/10.1007/s13753-015-0042-9.

208. Smith, D.L.; Notaro, S.J. Personal emergency preparedness for people with disabilities from the 2006-2007 Behavioral Risk Factor Surveillance System. *Disabil. Health J.* **2009**, *2*, 86–94. https://doi.org/10.1016/j.dhjo.2009.01.001.

209. Kharade, K.; Ha, H.; Ubale, A. Empowering Students with Visual Impairment to Prepare for Disasters via Differentiated Instruction Technique: A Case Study in India. *Int. J. Spec. Educ.* **2017**, *32*, 567–585.

210. Phibbs, S.; Good, G.; Severinsen, C.; Woodbury, E.; Williamson, K. What about us? Reported experiences of disabled people related to the Christchurch earthquakes. In Proceedings of the 4th International Conference on Building Resilience, Salford, UK, 8–11 September 2014; pp. 190–197.

211. Phibbs, S.; Good, G.; Severinsen, C.; Woodbury, E.; Williamson, K. Emergency preparedness and perceptions of vulnerability among disabled people following the Christchurch earthquakes: Applying lessons learnt to the Hyogo Framework for Action. *Australas. J. Disaster Trauma Stud.* **2015**, *19*, 37–46.

212. Belser, J.W. Disability and the social politics of "natural" disaster: Toward a jewish feminist ethics of disaster tales. *Worldviews: Environ. Cult. Relig.* **2015**, *19*, 51–68. https://doi.org/10.1163/15685357-01901004.

213. Harpur, P.; Hyseni, F.; Blanck, P. Workplace health surveillance and COVID-19: Algorithmic health discrimination and cancer survivors. *J. Cancer Surviv.* **2022**, *16*, 200–212. https://doi.org/10.1007/s11764-021-01144-1.

214. Quarmby, C.A.; Pillay, M. The intersection of disability and food security: Perspectives of health and humanitarian aid workers. *Afr. J. Disabil.* **2018**, *7*, a322. https://doi.org/10.4102/ajod.v7i0.322. https://ajod.org/index.php/ajod/article/view/322/790.

215. Pinnock, H.; Hodgkin, M. Education access for all. *Migr. Rev.* **2010**, *1*, 35–36.

216. Al-rousan, T.M.; Rubenstein, L.M.; Wallace, R.B. Preparedness for Natural Disasters Among Older US Adults: A Nationwide Survey. *Am. J. Public Health* **2015**, *105*, S621–S626. https://doi.org/10.2105/AJPH.2013.301559r.

217. Bennett, D. Five Years Later: Assessing the Implementation of the Four Priorities of the Sendai Framework for Inclusion of People with Disabilities. *Int. J. Disaster Risk Sci.* **2020**, *11*, 155–166. https://doi.org/10.1007/s13753-020-00267-w.

218. Ito, A. Disasters, international law, and persons with disabilities. In *The International Law of Disaster Relief*; Cambridge University Press: Cambridge, UK, 2014; pp. 208–214. https://doi.org/10.1007/CBO9781107447844.017.

219. Calgaro, E.; Villeneuve, M.; Roberts, G. Inclusion: Moving beyond resilience in the pursuit of transformative and just DRR practices for persons with disabilities. In *Natural Hazards and Disaster Justice: Challenges for Australia and Its Neighbours*; Palgrave Macmillan: London, UK, 2020; pp. 319–348. https://doi.org/10.1007/978-981-15-0466-2_17.

220. Pertiwi, P.; Llewellyn, G.; Villeneuve, M. Disability representation in Indonesian disaster risk reduction regulatory frameworks. *Int. J. Disaster Risk Reduct.* **2020**, *45*, 101454. https://doi.org/10.1016/j.ijdrr.2019.101454.

221. Alexander, D.E. Improving assistance to people with disabilities in disasters and crises in Europe. In Proceedings of the 5th International Disaster and Risk Conference: Integrative Risk Management—The Role of Science, Technology and Practice, IDRC, Davos, Switzerland, 24–28 August 2014; pp. 37–39.

222. Mitchell, D.; Karr, V. *Crises, Conflict and Disability: Ensuring Equality*; Routledge: London, UK, 2014; pp. 1–239. https://doi.org/10.4324/9780203069943.

223. Thelwall, M.; Levitt, J.M. Retweeting COVID-19 disability issues: Risks, support and outrage. *Prof. De La Inf.* **2020**, *29*, 2. https://doi.org/10.3145/epi.2020.mar.16.

224. Villeneuve, M.; Abson, L.; Pertiwi, P.; Moss, M. Applying a person-centred capability framework to inform targeted action on Disability Inclusive Disaster Risk Reduction. *Int. J. Disaster Risk Reduct.* **2021**, *52*, 101979. https://doi.org/10.1016/j.ijdrr.2020.101979.

225. Stough, L.M.; Kelman, I. People with Disabilities and Disasters. In *Handbooks of Sociology and Social Research*; Springer: Cham, Switzerland, 2018; pp. 225–242. https://doi.org/10.1007/978-3-319-63254-4_12.

226. Ton, K.T.; Gaillard, J.C.; Adamson, C.E.; Akgungor, C.; Ho, H.T. Expanding the capabilities of people with disabilities in disaster risk reduction. *Int. J. Disaster Risk Reduct.* **2019**, *34*, 11–17. https://doi.org/10.1016/j.ijdrr.2018.11.002.

227. Ton, K.T.; Gaillard, J.C.; Adamson, C.E.; Akgungor, C.; Ho, H.T. Human agency in disaster risk reduction: Theoretical foundations and empirical evidence from people with disabilities. *Environ. Hazards-Hum. Policy Dimens.* **2021**, *20*, 514–532. https://doi.org/10.1080/17477891.2021.1887798.

228. Fu, K.W.; White, J.; Chan, Y.Y.; Zhou, L.; Zhang, Q.; Lu, Q. Enabling the disabled: Media use and communication needs of people with disabilities during and after the Sichuan earthquake in China. *Int. J. Emerg. Manag.* **2010**, *7*, 75–87. https://doi.org/10.1504/IJEM.2010.032046.

229. Sloman, A.; Margaretha, M. The Washington Group Short Set of Questions on Disability in Disaster Risk Reduction and humanitarian action: Lessons from practice. *Int. J. Disaster Risk Reduct.* **2018**, *31*, 995–1003. https://doi.org/10.1016/j.ijdrr.2018.08.011.

230. Kaiser, C.; Vasquez, A.; Elkouss, E. Vulnerable populations: Disabilities and inclusion indicators based ICF for inclusive emergency management. In Proceedings of the 5th International Disaster and Risk Conference: Integrative Risk Management—The Role of Science, Technology and Practice, IDRC, Davos, Switzerland, 24–28 August 2014; pp. 355–358.

231. Munasinghe, N.L.; O'Reilly, G.; Cameron, P. Examining the experience and lessons learnt for disaster-preparedness in Sri Lankan hospitals: A scoping review. *Int. J. Disaster Risk Reduct.* **2021**, *64*, 102494. https://doi.org/10.1016/j.ijdrr.2021.102494.

232. Quaill, J.; Barker, R.N.; West, C. Experiences of people with physical disabilities before, during, and after tropical cyclones in Queensland, Australia. *Int. J. Disaster Risk Reduct.* **2019**, *39*, 101122. https://doi.org/10.1016/j.ijdrr.2019.101122.

233. Stough, L.M.; Kang, D. The Sendai Framework for Disaster Risk Reduction and Persons with Disabilities. *Int. J. Disaster Risk Sci.* **2015**, *6*, 140–149. https://doi.org/10.1007/s13753-015-0051-8.

234. Gartrell, A.; Calgaro, E.; Goddard, G.; Saorath, N. Disaster experiences of women with disabilities: Barriers and opportunities for disability inclusive disaster risk reduction in Cambodia. *Glob. Environ. Chang. Part A Hum. Policy Dimens.* **2020**, *64*, 102134. https://doi.org/10.1016/j.gloenvcha.2020.102134.

235. Grant, R.; Gorman-Murray, A.; Briohny Walker, B. The spatial impacts of COVID-19 restrictions on lgbtiq wellbeing, visibility, and belonging in tasmania, australia. *J. Homosex.* **2021**, *68*, 647–662.

236. Goha, A.; Mezue, K.; Edwards, P.; Madu, K.; Baugh, D.; Tulloch-Reid, E.E.; Nunura, F.; Doubeni, C.A.; Madu, E. Indigenous people and the COVID-19 pandemic: The tip of an iceberg of social and economic inequities. *J. Epidemiol. Community Health* **2021**, *75*, 207–208.

237. Maantay, J.; Maroko, A. Mapping urban risk: Flood hazards, race, & environmental justice in New York. *Appl. Geogr.* **2009**, *29*, 111–124. https://doi.org/10.1016/j.apgeog.2008.08.002.

238. Mazumder, L.T.; Landry, S.; Alsharif, K. Coastal cities in the Southern US floodplains: An evaluation of environmental equity of flood hazards and social vulnerabilities. *Appl. Geogr.* **2022**, *138*, 102627.

239. Montgomery, M.C.; Chakraborty, J. Assessing the environmental justice consequences of flood risk: A case study in Miami, Florida. *Environ. Res. Lett.* **2015**, *10*, 095010.

240. Cai, S.; Yan, D.; Intrator, O. COVID-19 cases and death in nursing homes: The role of racial and ethnic composition of facilities and their communities. *J. Am. Med. Dir. Assoc.* **2021**, *22*, 1345–1351.

241. Jurado-Cobo, A.; Thyupanta, J.; Leiva-Suero, L.; Proano-Alulema, R.; Quishpe-Jara, G. Characterization of epidemiological aspects in the Covid-19 pandemic from an integrated platform applied in the canton of Ambato. *Investig. Clin.* **2021**, *62*, 159–173.

242. Phiri, P.; Delanerolle, G.; Al-Sudani, A.; Rathod, S. COVID-19 and black, Asian, and minority ethnic communities: A complex relationship without just cause. *JMIR Public Health Surveill.* **2021**, *7*, e22581.

243. Mick, E.O.; Alcusky, M.J.; Li, N.-C.; Eanet, F.E.; Allison, J.J.; Kiefe, C.I.; Ash, A.S. Complex patients have more emergency visits: don't punish the systems that serve them. *Med. Care* **2021**, *59*, 362–367.

244. Anumandla, S.R.; Jayet Bray, L.C.; Thibeault, C.M.; Hoang, R.V.; Dascalu, S.M.; Harris, F.C.; Goodman, P.H. Modeling oxytocin induced neurorobotic trust and intent recognition in human-robot interaction. In Proceedings of the 2011 International Joint Conference on Neural Network, IJCNN 2011, San Jose, CA, USA, 31 July–5 August 2011; pp. 3213–3219.

245. Bowles, H.R.; Babcock, L. Are outside offers and answer to the compensation negotiation dilemma for women? In Proceedings of the 69th Annual Meeting of the Academy of Management, AOM 2009, Chicago, IL, USA, 7–11 August 2009.

246. Martínez-Buján, R.; Corral, P.M. Migraciones, trabajo de cuidados y riesgos sociales. *Migraciones. Publicación Del Inst. Univ. De Estud. Sobre Migr.* **2021**, 1–26. https://doi.org/10.14422/mig.i53y2021.001.

247. Boden, M.; Zimmerman, L.; Azevedo, K.J.; Ruzek, J.I.; Gala, S.; Magid, H.S.A.; Cohen, N.; Walser, R.; Mahtani, N.D.; Hoggatt, K.J. Addressing the mental health impact of COVID-19 through population health. *Clin. Psychol. Rev.* **2021**, *85*, 102006.

248. Sanabria-Mazo, J.P.; Useche-Aldana, B.; Ochoa, P.P.; Rojas-Gualdrón, D.F.; Mateo-Canedo, C.; Carmona-Cervelló, M.; Crespo-Puig, N.; Selva-Olid, C.; Muro, A.; Méndez-Ulrich, J.L. Social inequities in the impact of COVID-19 lockdown measures on the mental health of a large sample of the Colombian population (PSY-COVID study). *J. Clin. Med.* **2021**, *10*, 5297.

249. Duby, Z.; Bunce, B.; Fowler, C.; Bergh, K.; Jonas, K.; Dietrich, J.J.; Govindasamy, D.; Kuo, C.; Mathews, C. Intersections between COVID-19 and socio-economic mental health stressors in the lives of South African adolescent girls and young women. *Child Adolesc. Psychiatry Ment. Health* **2022**, *16*, 23.

250. Springgate, B.F.; Arevian, A.C.; Wennerstrom, A.; Johnson, A.J.; Eisenman, D.P.; Sugarman, O.K.; Haywood, C.G.; Trapido, E.J.; Sherbourne, C.D.; Everett, A. Community resilience learning collaborative and research network (C-LEARN): Study protocol with participatory planning for a randomized, comparative effectiveness trial. *Int. J. Environ. Res. Public Health* **2018**, *15*, 1683.

251. Silove, D.; Manicavasagar, V.; Baker, K.; Mausiri, M.; Soares, M.; De Carvalho, F.; Soares, A.; Amiral, Z.F. Indices of social risk among first attenders of an emergency mental health service in post-conflict East Timor: An exploratory investigation. *Aust. N. Z. J. Psychiatry* **2004**, *38*, 929–932.

252. Akalp, G.; Başol, O.; Aytaç, S. COVİD-19, Hasta Bina Sendromu ve Stres. *Int. J. Soc. Inq.* **2021**, *14*, 357–382.

253. Spencer, A.E.; Oblath, R.; Dayal, R.; Loubeau, J.K.; Lejeune, J.; Sikov, J.; Savage, M.; Posse, C.; Jain, S.; Zolli, N. Changes in psychosocial functioning among urban, school-age children during the COVID-19 pandemic. *Child Adolesc. Psychiatry Ment. Health* **2021**, *15*, 73.

254. McCloskey, J.K.; Ellis, J.L.; Uratsu, C.S.; Drace, M.L.; Ralston, J.D.; Bayliss, E.A.; Grant, R.W. Accounting for Social Risk Does not Eliminate Race/Ethnic Disparities in COVID-19 Infection Among Insured Adults: A Cohort Study. *J. Gen. Intern. Med.* **2022**, *37*, 1183–1190.

255. Bei, W.J. On the Social Risk and Social Management Innovation in the Minority Regions in China. In Proceedings of the 9th International Conference on Public Administration, Cape Town, South Africa, 31 October–2 November 2012–2013; pp. 700–706.

256. Snodgrass, M.B. The social side of unconventional oil and gas in Latin America. In Proceedings of the SPE International Conference on Health, Safety and Environment 2014: The Journey Continues, HSE 2014, Long Beach, CA, USA, 17–19 March 2014; pp. 1414–1432.

257. Renn, O.; Klinke, A.; Schweizer, P.-J. Risk governance: Application to urban challenges. *Int. J. Disaster Risk Sci.* **2018**, *9*, 434–444.

258. Coutaz, G. *Coping with Disaster Risk Management in Northeast Asia: Economic and Financial Preparedness in China, Taiwan, Japan and South Korea*; Emerald Group Publishing: Bingley, UK, 2018.

259. The Committee of ICBAR. Preface: ICBAR 2021. Available online: https://ieeexplore.ieee.org/abstract/document/9727038 (accessed on 10 November 2022).

260. Scolobig, A. Stakeholder perspectives on barriers to landslide risk governance. *Nat. Hazards* **2016**, *81*, 27–43.

261. Zhu, X.N.; Wu, X.S. Study on the Risk Governance Mode of Public Security in Big Data Era. In Proceedings of the 2014 International Conference on Public Administration (10th), Chengdu, China, 24–26 October 2014; pp. 887–892.

262. Wang, H.-W.; Chen, G.-W.; Lee, W.-L.; You, S.-H.; Li, C.-W.; Jang, J.-H.; Shieh, C.-L. Learning From Each Other in the Management of Natural Disaster and COVID-19 Pandemic: A Case Study in Taiwan. *Front. Public Health* **2021**, *9*, 777255. https://doi.org/10.3389/fpubh.2021.777255.

263. Mohanan, C.; Menon, V. Disaster Management in India—An Analysis Using COBIT 5 Principles. Available online: https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7857282 (accessed on 10 November 2022).

264. Li, W.; Yuan, J.; Ji, C.; Wei, S.; Lia, Q. Agent-Based Simulation Model for Investigating the Evolution of Social Risk in Infrastructure Projects in China: A Social Network Perspective. *Sustain. Cities Soc.* **2021**, *73*, 103112. https://doi.org/10.1016/j.scs.2021.103112.

265. Zhang, L.W.; Zhao, J.; Liu, J.X.; Chen, K.L. Community Disaster Resilience in the COVID-19 Outbreak: Insights from Shanghai's Experience in China. *Risk Manag. Healthc. Policy* **2020**, *13*, 3259–3270. https://doi.org/10.2147/rmhp.S283447.

266. Zhou, T. Application of big data acquisition and analysis technology in social risk management. In Proceedings of the 2021 International Conference on Big Data, Artificial Intelligence and Risk Management, ICBAR 2021, Shanghai, China, 5–7 November 2021; pp. 32–35.

267. Li, P.; Liu, Z.-M.; Fan, J.; Li, W.-H. Adaptive control theory and index system for social stability risk assessment of major projects: Based on 22 typical cases. *Int. J. Inf. Manag. Sci.* **2018**, *29*, 381–402. https://doi.org/10.6186/IJIMS.20181229(4).0003.

268. Hatch, N.R.; Daniel, D.; Pande, S. Behavioral and socio-economic factors controlling irrigation adoption in Maharashtra, India. *Hydrol. Sci. J.* **2022**, *67*, 847–857.

269. Glückstad, F.K.; Wiil, U.K.; Mansourvar, M.; Andersen, P.T. Cross-cultural bayesian network analysis of factors affecting residents' concerns about the spread of an infectious disease caused by tourism. *Front. Psychol.* **2021**, *12*, 635110.

270. Looi, J.C.; Allison, S.; Bastiampillai, T.; Maguire, P. Fire, disease and fear: Effects of the media coverage of 2019–2020 Australian bushfires and novel coronavirus 2019 on population mental health. *Aust. N. Z. J. Psychiatry* **2020**, *54*, 938–939.

271. Morehouse, B.J.; O'Brien, S.; Christopherson, G.; Johnson, P. Integrating values and risk perceptions into a decision support system. *Int. J. Wildland Fire* **2010**, *19*, 123–136.

272. Lindner, B.L.; Johnson, J.; Alsheimer, F.; Duke, S.; Miller, G.D.; Evsich, R. Increasing risk perception and understanding of hurricane storm tides using an interactive, web-based visualization approach. *J. Coast. Res.* **2018**, *34*, 1484–1498.

273. Caponecchia, C. Relative Risk Perception for Terrorism: Implications for Preparedness and Risk Communication. *Risk Anal.* **2012**, *32*, 1524–1534. https://doi.org/10.1111/j.1539-6924.2011.01784.x.

274. Rozakis, M. The cultural context of emergencies: Seeking for a(n) holistic approach on disaster management. *Disaster Prev. Manag.* **2007**, *16*, 201–209.

275. Han, Z.Q.; Wang, H.; Du, Q.Y.; Zeng, Y.Y. Natural Hazards Preparedness in Taiwan: A Comparison Between Households With and Without Disabled Members. *Health Secur.* **2017**, *15*, 575–581. https://doi.org/10.1089/hs.2017.0025.

276. Woyessa, A.H.; Teshome, M.; Mulatu, B.; Abadiga, M.; Hiko, N.; Kebede, B. Disaster preparedness in selected hospitals of western Ethiopia and risk perceptions of their authorities. *Open Access Emerg. Med. OAEM* **2020**, *12*, 219–225.

277. Fang, J.; Huang, D.; Xu, J. Social risk early warning of environmental damage of large-scale construction projects in China based on network governance and LSTM model. *Complexity* **2020**, *2020*, 8863997. https://doi.org/10.1155/2020/8863997.

278. Gao, X.; Hu, Y. Typology of consumers' risk perceptions in online shopping: An empirical approach based on the questionnaire data. In Proceedings of the International Conference on E-Business and E-Government, Guangzhou, China, 7–9 May 2010; pp. 2188–2191.

279. Kosovac, A.; Hurlimann, A.; Davidson, B. Water experts' perception of risk for new and unfamiliar water projects. *Water* **2017**, *9*, 976. https://doi.org/10.3390/w9120976.

280. Liu, R.; Wu, L.; Shan, L.; Li, H. Consumers risk perception of genetically modified food and its influencing factors: Based on the survey in Jiangsu Province, China. *Open Biotechnol. J.* **2014**, *8*, 30–35. https://doi.org/10.2174/1874070701408010300.

281. Gomez-Zapata, J.C.; Parrado, C.; Frimberger, T.; Barragán-Ochoa, F.; Brill, F.; Büche, K.; Krautblatter, M.; Langbein, M.; Pittore, M.; Rosero-Velásquez, H. Community Perception and Communication of Volcanic Risk from the Cotopaxi Volcano in Latacunga, Ecuador. *Sustainability* **2021**, *13*, 1714.

282. Yang, J. The influence of culture on Koreans' risk perception. *J. Risk Res.* **2015**, *18*, 69–92.

283. Ma, L.; Christensen, T. Government trust, social trust, and citizens' risk concerns: Evidence from crisis management in China. *Public Perform. Manag. Rev.* **2019**, *42*, 383–404.

284. Mahmood, M.I.; Elagib, N.A.; Horn, F.; Saad, S.A.G. Lessons learned from Khartoum flash flood impacts: An integrated assessment. *Sci. Total Environ.* **2017**, *601–602*, 1031–1045. https://doi.org/10.1016/j.scitotenv.2017.05.260.

285. Ryschka, S.; Rodewyk, B.; Ha, K.-H.; Bick, M. A qualitative investigation of risk perceptions in the case of check-in services. In Proceedings of the 20th Americas Conference on Information Systems, Savannah, GA, USA, 7–9 August 2014.

286. Stoop, J.; Roed-Larsen, S. Public safety investigations—A new evolutionary step in safety enhancement? *Reliab. Eng. Syst. Saf.* **2009**, *94*, 1471–1479. https://doi.org/10.1016/j.ress.2009.02.016.

287. Wu, D.; Song, J.; Bian, Y.; Zheng, X.; Zhang, Z. Risk perception and intelligent decision in complex social information network. *Ind. Manag. Data Syst.* **2021**, *121*, 99–110. https://doi.org/10.1108/IMDS-10-2020-0566.

288. Xue, T.; Liu, H. Prediction of social risk perception on petition in China. In Proceedings of the 4th International Conference on Behavioral, Economic, and Socio-Cultural Computing, Kraków, Poland, 16–18 October 2017; pp. 1–6.

289. Bodoque, J.M.; Amérigo, M.; Díez-Herrero, A.; García, J.A.; Cortés, B.; Ballesteros-Cánovas, J.A.; Olcina, J. Improvement of resilience of urban areas by integrating social perception in flash-flood risk management. *J. Hydrol.* **2016**, *541*, 665–676. https://doi.org/10.1016/j.jhydrol.2016.02.005.

290. Labosier, C.F. Bug out bags and first aid kits: Undergraduate college students' awareness, perceptions, preparedness, and behavior around severe weather. In *Emerging Voices in Natural Hazards Research*; Butterworth-Heinemann: Oxford, UK, 2019; pp. 1–25.

291. Pan, A.P. Study on mobility-disadvantage group' risk perception and coping behaviors of abrupt geological hazards in coastal rural area of China. *Environ. Res.* **2016**, *148*, 574–581. https://doi.org/10.1016/j.envres.2016.04.016.

292. Ahmed, M.A.; Sadri, A.M.; Amini, M.H. Data-driven inferences of agency-level risk and response communication on COVID-19 through social media-based interactions. *J. Emerg. Manag.* **2021**, *19*, 59–82. https://doi.org/10.5055/jem.0589.

293. Yong, A.G.; Lemyre, L.; Pinsent, C.; Krewski, D. Risk perception and disaster preparedness in immigrants and Canadian-born adults: Analysis of a national survey on similarities and differences. *Risk Anal.* **2017**, *37*, 2321–2333.

294. Wang, J.; Guo, C.; Wu, X.; Li, P. Influencing factors for public risk perception of COVID-19—Perspective of the pandemic whole life cycle. *Int. J. Disaster Risk Reduct.* **2022**, *67*, 102693.

295. Ren, Q.; Zia, A.; Rizzo, D.M.; Mathews, N. Modeling the Influence of Public Risk Perceptions on the Adoption of Green Stormwater Infrastructure: An Application of Bayesian Belief Networks Versus Logistic Regressions on a Statewide Survey of Households in Vermont. *Water* **2020**, *12*, 2793.

296. Li, M.; Xu, J.; Wei, L.; Jia, X.; Sun, C. Modeling a risk-based dynamic bus schedule problem under no-notice evacuation incorporated with dynamics of disaster, supply, and demand conditions. *J. Adv. Transport.* **2019**, *2019*, 9848603. https://doi.org/10.1155/2019/9848603.

297. Mei, S.; Mei, Q. A Study on Government Emergency Disposal System of Network Emergencies. In Proceedings of the 2016 International Conference on Computer Engineering, Information Science & Application Technology (ICCIA 2016), Guilin, China, 24–25 September 2016; pp. 171–176.

298. Onggo, B.S.; Busby, J.; Liu, Y. Using agent-based simulation to analyse the effect of broadcast and narrowcast on public perception: A case in social risk amplification. In Proceedings of the 2014 Winter Simulation Conference, WSC 2014, Savannah, GA, USA, 7–10 December 2014; pp. 322–333.

299. Zhang, Y.; Gao, J.; Luo, X.; Wu, X.; Bao, H. Dynamic evolution of Public's positive emotions and risk perception for the COVID-19 Pandemic: A case study of Hubei Province of China. *Math. Probl. Eng.* **2021**, *2021*, 6680303. https://doi.org/10.1155/2021/6680303.

300. Zhu, H.; Deng, F. How to influence rural tourism intention by risk knowledge during COVID-19 containment in China: Mediating role of risk perception and attitude. *Int. J. Environ. Res. Public Health* **2020**, *17*, 3514.

301. Scrieciu, A.; Pagano, A.; Coletta, V.R.; Fratino, U.; Giordano, R. Bayesian Belief Networks for Integrating Scientific and Stakeholders' Knowledge to Support Nature-Based Solution Implementation. *Front. Earth Sci.* **2021**, *9*, 674618.

302. Renn, O.; Benighaus, C. Perception of technological risk: Insights from research and lessons for risk communication and management. *J. Risk Res.* **2013**, *16*, 293–313. https://doi.org/10.1080/13669877.2012.729522.

303. Xiang, Z.; Tian, Q.; Li, Q. Perceived risk, environmental attitude and fertilizer application by vegetable farmers in China. *Int. J. Low-Carbon Technol.* **2021**, *16*, 683–690. https://doi.org/10.1093/ijlct/ctaa101.

304. Cvetković, V.M.; Nikolić, N.; Radovanović Nenadić, U.; Öcal, A.; K Noji, E.; Zečević, M. Preparedness and preventive behaviors for a pandemic disaster caused by COVID-19 in Serbia. *Int. J. Environ. Res. Public Health* **2020**, *17*, 4124.

305. Deng, X.; Chen, Y.; Gao, J.; Sun, X. The effect of E-service category on consumer's perceived risk. In Proceedings of the 2010 IEEE 2nd Symposium on Web Society, SWS 2010, Beijing, China, 16–17 August 2010; pp. 92–96.

306. Botzen, W.; Mol, J.M.; Robinson, P.J.; Zhang, J.; Czajkowski, J. Individual hurricane evacuation intentions during the COVID-19 pandemic: Insights for risk communication and emergency management policies. *Nat. Hazards* **2022**, *111*, 507–522.

307. Fakhruddin, S.H.M. Disasters in Thailand. In *Handbook of Disaster Risk Reduction & Management: Climate Change and Natural Disasters*; World Scientific: Singapore, 2017; pp. 659–676. https://doi.org/10.1142/9789813207950_0027.

308. Katsikopoulos, P.V. Individual and community resilience in natural disaster risks and pandemics (COVID-19): Risk and crisis communication. *Mind. Soc.* **2021**, *20*, 113–118.

309. Kunguma, O.; Mokhele, M.O.; Coetzee, M. Investigating the prevention and mitigatory role of risk communication in the COVID-19 pandemic: A case study of Bloemfontein, South Africa. *Jàmbá J. Disaster Risk Stud.* **2021**, *13*, 11.

310. Macnamara, J. New insights into crisis communication from an "inside" emic perspective during COVID-19. *Public Relat. Inq.* **2021**, *10*, 237–262.

311. Martell, M.; Perko, T.; Zeleznik, N.; Molyneux-Hodgson, S. Lessons being learned between the Covid-19 pandemic and radiological emergencies: Report from experts' discussions. *J. Radiol. Prot.* **2021**, *42*, 011518.

312. Radwan, A.F.; Mousa, S.A. Government Communication Strategies during Coronavirus Pandemic: United Arab Emirates Lessons. *J. Health Manag.* **2020**, *22*, 516–527. https://doi.org/10.1177/0972063420983091.

313. Sadasri, L.M. Micro-celebrity participation and risk communication in Indonesia: A content analysis of@ dr. tirta and@ rachelvennya Instagram posts during the COVID-19 pandemic. *Pac. Journal. Rev.* **2020**, *26*, 53–71.

314. Samaan, G.; McPherson, M.; Eidman, J.; Obubah, O.; Baptiste, J.-P.; Kuppens, L.; Von Harbou, K.; Sembiring, M.F.; Acharya, S.; Graaff, P. The World Health Organization's actions within the united nations system to facilitate a whole-of-society response to COVID-19 at country level. *Front. Public Health* **2021**, *9*, 831220.

315. Sutton, J.; Rivera, Y.; Sell, T.K.; Moran, M.B.; Bennett Gayle, D.; Schoch-Spana, M.; Stern, E.K.; Turetsky, D. Longitudinal risk communication: A research agenda for communicating in a pandemic. *Health Secur.* **2021**, *19*, 370–378.

316. Miller, L.A. The SARS-CoV-2 Pandemic: Real-Time Training and Service for Preventive Medicine Residents. *J. Public Health Manag. Pract.* **2021**, *27*, S123–S128.

317. Rahman, F.N.; Bhuiyan, M.A.A.; Hossen, K.; Khan, H.T.; Rahman, A.; Dalal, K. Challenges in preventive practices and risk communication towards COVID-19: A cross-sectional study in Bangladesh. *Int. J. Environ. Res. Public Health* **2021**, *18*, 9259.

318. Ow Yong, L.M.; Xin, X.; Wee, J.M.L.; Poopalalingam, R.; Kwek, K.Y.C.; Thumboo, J. Perception survey of crisis and emergency risk communication in an acute hospital in the management of COVID-19 pandemic in Singapore. *BMC Public Health* **2020**, *20*, 1919. https://doi.org/10.1186/s12889-020-10047-2.

319. Parida, D.; Moses, S.; Rahaman, K.R. Analysing media framing of cyclone Amphan: Implications for risk communication and disaster preparedness. *Int. J. Disaster Risk Reduct.* **2021**, *59*, 102272.

320. Adu-Gyamfi, B.; Shaw, R. Characterizing risk communication and awareness for sustainable society: The case of foreign residents in the tokyo metropolitan area of japan. *Sustainability* **2021**, *13*, 5786. https://doi.org/10.3390/su13115786.

321. Grace, R.; Sinor, S. How to text 911: A content analysis of text-To-911 public education information. In Proceedings of the 39th ACM International Conference on the Design of Communication: Building Coalitions. Worldwide, SIGDOC, Virtual Event, USA, 12–14 October 2021; pp. 135–141.

322. Sampson, N.R.; Price, C.E.; Kassem, J.; Doan, J.; Hussein, J. "We're Just Sitting Ducks": Recurrent Household Flooding as An Underreported Environmental Health Threat in Detroit's Changing Climate. *Int. J. Environ. Res. Public Health* **2019**, *16*, 6. https://doi.org/10.3390/ijerph16010006.

323. Spence, A.; Poortinga, W.; Pidgeon, N. The Psychological Distance of Climate Change. *Risk Anal.* **2012**, *32*, 957–972. https://doi.org/10.1111/j.1539-6924.2011.01695.x.

324. Susmayadi, I.M.; Sudibyakto; Kanagae, H.; Adiyoso, W.; Suryanti, E.D. Sustainable Disaster Risk Reduction through Effective Risk Communication Media in Parangtritis Tourism Area, Yogyakarta. In Proceedings of the 4th International Conference on Sustainable Future for Human Security (SUSTAIN), Kyoto Univ, Kyoto, Japan, 19–21 October 2013; pp. 684–692.

325. Musacchio, G.; Falsaperla, S.; Solarino, S.; Piangiamore, G.L.; Crescimbene, M.; Pino, N.A.; Eva, E.; Reitano, D.; Manzoli, F.; Fabbri, M. KnowRISK on seismic risk communication: The set-up of a participatory strategy-Italy case study. In Proceedings of the International Conference on Earthquake Engineering and Structural Dynamics, Reykjavík, Iceland, 12–14 June 2017; pp. 413–427.

326. Kugo, A.; Yoshikawa, H.; Shimoda, H.; Wakabayashi, Y. Text mining analysis of public comments regarding high-level radioactive waste disposal. *J. Nucl. Sci. Technol.* **2005**, *42*, 755–767.

327. Zamboni, L.M.; Martin, E.G. Association of US Households' Disaster Preparedness With Socioeconomic Characteristics, Composition, and Region. *JAMA Netw. Open* **2020**, *3*, e206881. https://doi.org/10.1001/jamanetworkopen.2020.6881.
328. Watanabe, T.; Yamamoto, Y.; Yajima, H.; Sasaki, R. Evaluation of the participant support method for information acquisition in the multiplex risk communicator. *IEEJ Trans. Electron. Inf. Syst.* **2008**, *128*, 310–317+18. https://doi.org/10.1541/ieejeiss.128.310.
329. Kallenberg, K. The role of risk in corporate value: A case study of the ABB asbestos litigation. *J. Risk Res.* **2007**, *10*, 1007–1025. https://doi.org/10.1080/13669870701497795.
330. Barton, D.; Saloranta, T.; Moe, S.; Eggestad, H.; Kuikka, S. Bayesian belief networks as a meta-modelling tool in integrated river basin management—Pros and cons in evaluating nutrient abatement decisions under uncertainty in a Norwegian river basin. *Ecol. Econ.* **2008**, *66*, 91–104.
331. Choi, C.-I.; Bae, S.-K.; Kim, C.-M. Applications of SMCRE Model on Social Amplification of MERS Risk Information and its Implications. *J. Distrib. Sci.* **2016**, *14*, 89–98.
332. Brewer, L.C.; Asiedu, G.B.; Jones, C.; Richard, M.; Erickson, J.; Weis, J.; Abbenyi, A.; Brockman, T.A.; Sia, I.G.; Wieland, M.L. Emergency preparedness and risk communication among African American churches: Leveraging a community-based participatory research partnership COVID-19 initiative. *Prev. Chronic Dis.* **2020**, *17*, E158.
333. Hu, G.; Qiu, W. From guidance to practice: Promoting risk communication and community engagement for prevention and control of coronavirus disease (COVID-19) outbreak in China. *J. Evid.-Based Med.* **2020**, *13*, 168–172.
334. Burmaz, T.; Selle, V.; Baldo, V.; Savoia, E. Organization or community-based outbreak? Responding to cases of meningitis under epidemiologic uncertainty. *Disaster Med. Public Health Prep.* **2019**, *13*, 368–371.
335. Balog-Way, D.; McComas, K.; Besley, J. The Evolving Field of Risk Communication. *Risk Anal.* **2020**, *40*, 2240–2262. https://doi.org/10.1111/risa.13615.
336. Ablah, E.; Nickels, D.; Hodle, A.; Wolfe, D.J. "Public Health Investigation": Focus Group Study of a Regional Infectious Disease Exercise. *Public Health Nurs.* **2008**, *25*, 546–553.
337. Perez, O. Precautionary governance and the limits of scientific knowledge: A democratic framework for regulating nanotechnology. *UCLA J. Envtl. L. Pol'y* **2010**, *28*, 29.