FLOOD DISASTERS IN MALAYSIA: EXAMINING THE IMPACT ON OLDER PEOPLE'S VULNERABILITIES AND RIGHTS

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ABSTRACT

Flood is the most frequent disaster in the Asian region, and Malaysia is no exception. Malaysia has been experiencing floods since 1920. Flood affects lives, health, properties, infrastructures, and the economy. Flood issues have been getting severe over the years and consequently intensify the vulnerability of flood victims or survivors, especially older people who are more susceptible to flood effects and aftermath than the general population. Older people tend to be more vulnerable due to their health conditions, limited physical mobility, impairment, low income, and social isolation. This study aimed to demonstrate the effect of flood disasters on older people's vulnerabilities, their rights to health, and an adequate standard of living. The study elaborates on recent flood disasters by focusing on older victims' situations. Data on disaster casualties and their effect on the vulnerabilities of older people, in general, are also discussed. The study also focuses on the challenges older people face in enjoying their rights and recommendations to improve the situation. The data were centrally collected through library research and descriptive analysis based on the qualitative method. The study found that the well-being of older people is affected in many ways, and they need continuous support to get back on their feet.

Keywords: Flood disaster, the vulnerability of older people, rights of older people

INTRODUCTION

According to the Department of Irrigation and Drainage (DID) data, 5.7 million people in Malaysia face flood risk. Malaysia has been experiencing floods since 1920 (Sani et al., 2014). Since then, many flood occurrences have occurred, with several severe disasters. In December 2021, catastrophic flooding again hit Malaysia, and the effects were quite severe.

The rush of water from rivers, lakes, or oceans into normally dry land results in floods, a natural disaster. They can be caused by torrential downpours, a hasty melting of the snowpack, or storm surges from hurricanes or tropical cyclones. Floods have the potential to destroy large portions of infrastructure, as well as homes, companies, and communities. Floods are one of the most frequent and extensive natural catastrophes, affecting millions of people worldwide each year, according to the United Nations Office for Disaster Risk Reduction. In reality, nearly 1.9 billion people were impacted by floods between 2000 and 2019, making up 44% of all documented natural disasters.

In Malaysia, floods are a frequent natural calamity that affect millions of people and seriously harm property and infrastructure. Due to its location in a tropical area with a monsoon climate, the nation is vulnerable to flash flooding and excessive rainfall during the rainy season. Over 100,000 people were affected by 89 flood disasters in Malaysia in 2020, according to the National Disaster Management Agency (NADMA), which also saw six fatalities. The worst-affected states were Kelantan, Terengganu, Pahang, and Johor. The government of Malaysia has implemented a number of efforts to lessen the effects of floods, including building flood protection infrastructure such embankments, levees, and drainage systems. In order to aid citizens in preparing for emergencies, the government also offers early warning systems and emergency response measures.

Many factors contribute to the occurrence of flooding in Malaysia. These factors include natural and human-made factors (DID, 2020). The effects of floods should not be underestimated, mainly because Malaysia frequently experiences numerous flood disasters. According to Chan (2015), floods can result in deaths, disease outbreaks, property loss, economic and agricultural destruction, and other intangible losses. For example, floods cause a massive capital loss in Malaysia. Malaysia's estimated loss from floods is at least MYR 1.15 billion per year (DID, 2020). In addition, floods wreak havoc on the transportation system. For instance, the massive flooding in Kedah and Perlis in 2010 forced the closure of the North-South Expressway (Chan, 2012). Furthermore, many rice fields were also destroyed during the flood, costing loss more than MYR 37 million (Chan, 2012).

As stated earlier, flood damages property and results in casualties. For instance, Chan (2012) stated that the 1971 flood killed 61 individuals. In 1996, floods caused by Tropical Storm Greg killed 241 people, damaged over MYR 429 million worth of infrastructures and properties, and destroyed thousands of homes in Keningau, Sabah. Another 18 lives were lost in the 2007 flood in Johor (Chan, 2012). Last but not least, the death toll from the 2021 floods stood at 50, with two individuals remaining missing (Berita Harian, 2022). In addition to the loss of lives, floods also affect an individual's health. During the recent flood, the Malaysia Ministry of Health (MOH) reported that acute respiratory tract infections, skin infections, acute gastroenteritis, and hand, foot, and mouth illness were found among flood survivors in relief centres (PPS) (The Vibes, 2021).

The effect or loss of vulnerable people from the flood is even greater. Vulnerability is best defined as "the features of an individual or group and their environment that affect their capacity to foresee, cope with, resist, and recover from the effects of a hazardous occurrence" (Jeong, 2018). To summarise, vulnerable people are the group of people who find it difficult to overcome a disaster due to their current situations or conditions. For example, low-income communities, people with health issues, and ageing people are categorised as vulnerable. The vulnerable group includes women, children, persons with disabilities (PWD), refugees, and older people.

An older person is an individual who is 65 years of age or older. In the United States, older adults can be categorised into three subgroups based on their life stages: the young-old (aged approximately sixty-five to seventy-four), the middle-old (aged seventy-five to eighty-four), and the old-old (over the age of eighty-five) (The Lumen, 2013). In Malaysia, according to National Older Persons Policy, individuals who are 60 years and above are classified as older people.

Disasters can affect everyone, but older people often suffer more severe consequences as the elderly are more biophysically vulnerable (Climate Just, 2017). The statement can be proven with the evidence from Japan's aftermath of the 2011 earthquake and tsunami. Japanese government officials reported that, as of August 2012, 90% of those who perished during the catastrophe and in the following months were seniors over 70 (Danielle, 2019). The situation is also the same in Malaysia. During the recent flood, a 60-year-old man reportedly died attempting to cross a river (Berita Harian, 2022). The news also reported another case involving an elderly couple. The elderly couple suffering from diabetes and kneecap problems were stranded in their home for 24 hours after failing to flee as the water level rose rapidly (Free Malaysia Today, 2021). Another 66-year-old male victim died of a heart attack while attempting to save his livestock during the flood in Tampin (Free Malaysia Today, 2022). Similarly, it was reported that the elderly were the first to perish due to the Johor floods (Sinar Harian, 2022). The cases demonstrate that the elderly are extremely susceptible as a single flood attack is capable of worsening their situation or, in the worst-case scenario, loss of their lives.

METHODS

This study aimed to identify various factors that can contribute to the enhancement of older people's vulnerabilities. It also highlights the struggles and multi-challenges older people face as part of the vulnerable group during post-disaster. In addition, this study also focuses on and explores the important aspect of human rights that need to be upheld during disasters, for older people in particular. The study's methodology involves qualitative research through library research. In addition, it involves the data and documentation on flood history, government reports, government websites, journals, and research papers on the elderly.

RESULTS AND DISCUSSION

VULNERABILITIES OF OLDER PEOPLE

The term vulnerability has been traditionally used to refer to specific risks that could negatively affect an individual's life. Old age vulnerabilities can be classified into exogenous disasters (for example, drought or floods) that affect all age groups equally and endogenous events (such as health problems) that are more likely to affect older adults (Golaz, 2011).

Schröder-Butterfill and Marianti (2006) defined two possible instances that separate susceptible individuals or groups from non-vulnerable individuals or groups in the event of a threat. The two possible instances are exposure and coping capacity. Exposure refers to conditions that increase the likelihood of meeting a particular threat. A person's exposure is determined by individual and family characteristics that designate him or her as at risk (Golaz, 2011). On the other hand, the term 'coping ability' refers to the mechanisms that prevent danger from having a detrimental effect on an individual or a group (Golaz, 2011).

In other words, for example, older people tend to have certain characteristics, either physical, mental, emotional or even life conditions, that can make them more exposed and lessen their coping ability when disaster strikes. For instance, ill health, disabilities, frailty, low income, a low literacy level, the remoteness of their residence, lack of disaggregated data, or failure to assess needs correctly or monitor the effectiveness of assistance provided (United Nations, 2019) are factors that greatly expose the elderly to disasters than the general population.

To further explain older people's vulnerability, one of the factors or characteristics that contribute to the elderly's state of vulnerability which is physical and health, should be explored. Older people tend to have limited mobility due to their age and body conditions. Mobility is an individual's capacity to move about the environment purposefully (Andrea, 2017). Limited mobility situations afflict around one-third to one-half of individuals who are 65 years or older. Mobility constraints negatively affect an individual's health and well-being, including an increased chance of disability.

The cause of limited mobility is closely connected to the health issues suffered by the elderly. Most elderly suffer from arthritis, heart issues, impairment of hearing and eyesight, osteoporosis, balance and coordination issues and obesity (Andrea, 2017). These diseases can lead to immobility among the elderly. In the event of a flood, limited abilities to move can result in a delay or inability to evacuate. For example, in the 2021 flood, two elderly individuals were stuck in their house at Puchong and unable to evacuate because one of them used a wheelchair (The Star, 2021). In worst cases, delay in evacuation might cause casualties among the older people.

Furthermore, an older person's vulnerability might be caused by social isolation. Some older people may be socially isolated from the rest of the community. Social isolation, also known as objective isolation, is a term that refers to physical separation from other individuals or, in short, living alone. Individuals are deemed isolated if they live alone, never leave their houses, have no close relatives, never visit anyone, have no interaction with their neighbours, do not have a phone, or spend more than nine hours each day alone (Kate, 2020). Numerous factors lead to social isolation among the elderly. The factors include disability, chronic health issues, widowed, poverty, retirement, and death of friends and family members (Kate, 2020).

Being socially isolated can potentially cause serious harm. The effect of social isolation was proven during the Paris heat wave when 92% of those killed were the ones who lived alone, and 25% of them lacked strong social ties (Climate Just, 2017). A

study also indicated that people with social contact were more inclined to take preventative measures during the disaster and eventually lower their death risk (Climate Just, 2017).

Additionally, older people face other life conditions or situations that intensify their vulnerability. Over the past year, one out of six people aged 60 and above were subjected to abuse in public places (WHO, 2021). World Health Organisation (WHO) described elder abuse as "a single or repeated act or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person." Specific examples of abuse or violence faced by the elderly include physical, sexual, psychological, emotional, financial, and material abuse, abandonment, neglect and a severe loss of dignity and respect. The factors contributing to elder abuse include functional dependence or disability, poor physical health, cognitive impairment, poor mental health, and low income (Karl, 2016).

To focus in the event of a disaster, the abused elderly may face desertion or abandonment issues. Abandonment is described as "the act of abandoning an elderly person by an individual who has assumed responsibility for the senior's care or by a person who has physical custody of the elder." Abandonment cases among elderly persons rose following the 1989 Hurricane George in the Dominican Republic. In addition, incidences of abandonment at hospitals and elderly homes were also recorded during Hurricane Katrina and the Japan earthquake (Gloria, 2014).

Consequently, abuse among the elderly causes serious physical harm and long-term psychological effects. A report by WHO in 2021 stated that abused elders suffer from physical injury, mortality, sadness, cognitive decline, financial ruin, and placement in nursing homes (WHO, 2021). Besides, abuse can have particularly severe implications in older people, and the recovery may take longer.

Other conditions that can enhance the vulnerability of older people are those struggling with mental health issues. Numerous older people are in danger of acquiring mental or neurological diseases. For example, anxiety problems impact 3.8% of the senior population, and over a quarter of self-harm deaths occur in those aged 60 or older. In addition, more than 20% of individuals aged 60 and over have mental or neurological illnesses (WHO, 2017).

For instance, dementia and depression are the most frequent mental and neurological illnesses among the elderly (WHO, 2017). Dementia is a condition that causes impairments in memory, cognition, behaviour, and abilities to perform daily activities. On the other hand, depression affects 7% of the general older population (WHO, 2017). Elderly persons with depressive symptoms perform worse than those with chronic medical conditions such as lung disease, hypertension, or diabetes.

Research has shown that older people with mental health issues face a higher risk of dying, suffer injuries, seldom receive sufficient support and assistance from authorities or NGOs and evidently develop health problems post-disaster (Danielle, 2019). Furthermore, when placed in emergency shelters, individuals with diminished cognitive function and physical strength are also vulnerable to crimes such as theft (Gloria, 2014). Their vulnerability is caused by the individuals' decreased cognitive functioning, which may portray them as easy candidates for theft due to their diminished abilities to protect their property. Their vulnerability is also related to the issue of neglect, where most of them will be alone during disasters and are frequently ignored or underserved by medical and social care workers in the shelter.

Cognitively challenged older people may have difficulty absorbing information or following directions (William, n.d), causing evacuation delays. Delays in evacuation can limit their chances of reaching safer areas, for example, if a passage or available path is blocked (Atsuo, 2021). In the worst-case scenario, the delay could result in death.

In addition, the elderly from minority groups also tend to be highly vulnerable to disasters. A minority group comprise a group of people whose practices, colour, religion, ethnic origin, or other traits are less numerous than those of the classification's major groups. Additionally, the term 'minority group' also refers to a group of people who face relative disadvantage compared to members of a dominating social group (Wikipedia, 2022). Examples of those in minority groups are older refugees, elders in poverty, older women, and others.

In a disaster scenario, the individual that belongs to the minority group will face more extreme consequences than the majority group. According to a report by Federal Emergency Management Agency (FEMA), communities with higher levels of social capital recover faster and have better overall conditions. In contrast, communities that suffer from poverty need a longer time to recover from the disaster, and some do not fully recover (FEMA, 2020).

Recovering from a disaster is also far more difficult for an elderly lady who belongs to an ethnic minority group within her culture and has a physical disability. Contrarily, a younger woman who belongs to the dominant ethnic group and has no physical disabilities face fewer difficulties (UNISDR, 2017). The Committee on the Elimination of Discrimination against Women acknowledges that in the face of natural disasters, older women are disproportionately disadvantaged due to their physiological disparities, physical ability, age, and gender and often receive an inequitable allocation of relief and resources based on social hierarchy (United Nations, 2019).

RIGHTS OF OLDER PEOPLE TO HEALTH DURING DISASTER

The older people's particular needs must be addressed to lessen their vulnerability in emergencies and protect their rights (UNECE, 2020). According to a report by the Human Rights Commissioner of the United Nations in 2019, older people tend to be neglected and face many challenges in obtaining access to their basic needs from humanitarian assistance due to their physical problems and poor health conditions. The report also showed a high tendency for the elderly to face human rights abuses during and after disasters, such as rights to health, an adequate standard of living, and rights to equality.

Health rights are one of the basic rights that older people should not be denied in disaster situations. The health of senior citizens deteriorates significantly during flood disasters due to their previous or existing health concerns such as mobility limits, impairments, poor health, dementia, and other health issues. Flooding can also have a detrimental psychological effect on senior citizens, with some exhibiting symptoms of post-traumatic stress disorder (PTSD). The psychological effect and pre-existing health concerns can substantially impact an elderly flood victim's health and well-being (Gary, 2019). Besides, flood-related water contamination is more likely to impact older people due to weakened immune systems (Vardoulakis, 2012).

Flooding might pose difficulties for older people to receive critical emergency medical treatments and non-emergency appointments (Gary, 2019). Studies have shown that older people receive significantly less assistance than younger people following a disaster. The elderly are not viewed as priorities by local authorities or are reluctant to inform their relatives, the public, or community organisations of their support needs (Danielle, 2019). Moreover, according to the Inter Agency Standing Committee (IASC) report, health services are frequently affected during natural disasters. Hence, older people may have trouble managing their chronic diseases or conditions effectively (Danielle, 2019).

The International Covenant on Economics, Social and Cultural Rights define the right to health as "an inclusive right, extending to timely and appropriate health care as well as to the underlying determinants of health, such as access to safe and potable water and adequate sanitation, adequate housing, and healthy occupational and environmental conditions." Health rights are not the rights which ensure that everyone should be in good health. Instead, it compels the state to actively protect human health (Barbara, 2018). Therefore, the state is responsible for providing the necessary strategies and equipment to ensure that older people access their right to health to the highest standard.

In addition, these rights are also a part of the right to an adequate standard of living which is enshrined in Article 25 of the Universal Declaration of Human Rights (UDHR). Article 25 of UDHR states that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in the circumstances beyond his control."

Britta (2016) listed the four core principles that must be attained to guarantee the older person's rights to health in a disaster. The principles are availability, accessibility, acceptability, and quality. Availability refers to the presence of a sufficient number of health care facilities, goods, services, and programmes. In the ageing context, availability entails taking into account the extent to which health services, facilities, and equipment that satisfy the health needs of older individuals are available. Providing them with the necessary tools, such as assistive equipment and medicines, can greatly enhance the health of the elderly. Assistive equipment such as eyeglasses, hearing aids, and walking aids can make a major difference in the life quality of older people during a disaster.

On the other hand, accessibility is when health facilities, goods, and services are easily accessible to the elderly without any prejudices or discrimination. The healthcare facilities must also accept and respond to older people's requirements by considering the differences among older people suffering from all health conditions and circumstances. Last but not least, health facilities and services should be of high quality, with adequately skilled, knowledgeable, and compassionate health workers to effectively address the health concerns of the elderly.

Malaysia's National Policy for Older People was established in 1995. Due to this policy, the government introduced the National Plan of Action Plan for Health Care of Older Persons in 1997. Nevertheless, Malaysia adopted a new strategy to provide effective and comprehensive health care to older people in 2008. The strategy is known as the National Health Policy for Older Persons 2008. The policy established six main guiding principles to improve the healthcare of the older. The principles include recognising each unique needs of older people, providing adequate support to older people's caregivers, creating opportunities and encouragements for healthy ageing, ensuring access to services of continuous care for ill or disabled older persons, and preserving the rights of the older persons to quality of life and death.

RIGHTS OF OLDER PEOPLE TO THE ADEQUATE STANDARD OF LIVING

Besides health rights, older people are entitled to receive adequate living standards from attaining their basic needs during disasters. Older people are frequently overlooked during assistance distribution or unable to enjoy their rights due to poor health, which results in the denial of basic needs. Rizal (2018) stated that relief aid, basic requirements, basic facilities, and communication and connectivity were the primary challenges and issues encountered by older people during floods. According to the concerns and problems stated above, restricted food, water and electricity supply, cutting off highways and delayed rescue aid were some issues and problems cited by older people during Malaysia's 2014 floods. In addition, they stated that they face similar concerns and difficulties while staying in relief centres, such as a shortage of electricity and clean water and the lack of particular space and assistance services for the older and disabled.

The right to an adequate standard of living means that "everyone at a bare minimum should enjoy the necessary basic rights; appropriate food and nutrition, water, clothing and housing" (IHRC, 2022). This right is essential since it is enshrined in several treaties, including Article 25 of the UDHR, Article 11 of the International Covenant On Economic, Social and Cultural Rights (ICESR), Article 5 and 7 of the Covenant on the Elimination of All Forms of Racial Discrimination (CERD), Article 14(2)(h) of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), Articles 24(2)(c) and 27 of the Convention on the Rights of the Child (CRC), and Article 28 of the Convention on the Rights of Persons with Disabilities (CRPD) (AG, 2022).

The General Comment 12 by the Committee on Economic, Social, and Cultural Rights (CESCR) provides the core elements of the right to adequate food. It brings the idea that the right to food is not only limited to a 'minimum package of calories, proteins, and other specific nutrients'. Nevertheless, it must be available in sufficient quantity and quality to meet an individual's nutritional requirements. It must be free of any harmful ingredients and be safe to consume. Additionally, the food must be culturally acceptable and economically and physically accessible. On the other hand, General Comment 15 provides that "the right to water entitles everyone to be sufficient, safe, acceptable, physically accessible, and affordable water for personal and domestic uses."

The term 'physical accessible' is critical in both statements since it emphasises that food and water should not only be available but must also be within reach of vulnerable individuals, particularly those with limited mobility, such as an older person, to ensure that they have complete access to food and water without any discrimination (EHRC, 2019). Malaysia, through its National Policy for Older Persons and Plan of Action for Older Persons 2011, supports the elderly's right to an adequate standard of living by recognising older people as citizens with diverse backgrounds and experiences who have the right to live a comfortable and respected life.

Besides, several guidelines have been issued or established by international agencies to protect the rights and needs of the elderly during disasters. For example, the guidelines include the Madrid International Plan of Action on Ageing 2002 (MIPAA), Humanitarian Action and Older Person (2008), Guidelines for Mainstreaming the Needs of Older Persons in Disaster Situations in the Caribbean (2012) by WHO and the United Nations High Commissioner for Refugees (UNHCR) recommendations for best practices in humanitarian aid during calamities with a focus on older persons.

The MIPAA's goal is to ensure that people worldwide can age in safety and dignity while being able to participate in their society as citizens with full rights fully. Furthermore, the plan is meant to be a useful tool for policymakers to help them focus on the important issues surrounding individual and population ageing. One of the issues focused on in MIPAA is vulnerability issues among older people in emergencies and developing a plan of action to address the problem.

For example, MIPAA's objective is to ensure that older people in emergencies have equal access to food, shelter, and medical care. In order to achieve their objective, MIPAA proposed a specific plan of action to locate and identify older people in emergencies, make assessment reports on their contributions and vulnerabilities, and raise awareness regarding physical and health issues specific to older persons. The plan also includes ways to adapt basic needs support to their requirements and ensure that appropriate services are available and that older persons have physical access. Malaysian National Policy for Older Persons and Plan of Action for Older Persons 2011 were also formulated based on the three principles outlined in the MIPAA 2002, which are "older persons and development, advancing health and well-being into old age, and ensuring enabling and supportive environments."

Regrettably, the rules are not binding but serve as general recommendations (Powerdms, 2020). They are considered part of the soft law, implying they lack legal authority but may have practical consequences. Stefan (2006) remarked that although the principles are not legally enforceable, they can be utilised to enhance legislative flexibility and serve as a valuable point of reference or standard in countries. Moreover, if the guidelines are subjected to the judicial transformation process, they might also become a law that has a legally binding effect.

CONCLUSION

Older people are susceptible by virtue of age. At their age, individuals may face and suffer from a variety of issues which can enhance their vulnerability, such as bad health, poverty, limited mobility, disability, abuse, and many other issues. Therefore, they cannot bear to be hit by catastrophes because it will increase their fragility, worsening their lives and forcing them into difficulty getting back on their feet. Their rights as older people should be acknowledged, particularly during and after a disaster. They must also be prioritised in every aspect during the humanitarian relief phase to ensure that their pre-existing vulnerabilities as older people are not amplified whenever a disaster occurs.

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REFERENCES

- Andrea, L. R., Jennifer, A. T., Loni, P. T., & Yvonne, L. M. (2013). Mobility disability, and social engagement in older adults. *J Aging Health*, 25(4), 617-637. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3683993/pdf/nihms471291.pdf
- Australian Government: Attorney General's Department. (n.d.). Right to an adequate standard of living, including food, water and housing. https://www.ag.gov.au/rights-and-protections/human-rights-and-anti-discrimination/human-rights-scrutiny/public-sector-guidance-sheets/right-adequate-standard-living-including-food-water-and-housing#what-is-the-right-to-an-adequate-standard-of-living
- Barbara, M. (2018). Older person's right to health a challenge to international law. *Ageing and Society*, 39(8), https://www.researchgate.net/publication/323549639
- Britta, B., Anjana, B., Hala, A. T., Javier, V., & Rebekah, T. (2016). The right to health of older people, *The Gerontologist*, 56 (2), 206–217, https://doi.org/10.1093/geront/gnw039
- Chan, N. W. (2012). Impacts of disasters and disasters risk management in Malaysia: the case of floods. In Sawada, Y. & S. O. (Eds.), Economic and welfare impacts of disasters in East Asia and policy responses.
- Chan, N. W. (2016). Challenges in flood disasters management in Malaysia. 1-9. https://www.iwra.org/member/congress/resource/3060518.pdf
- Chan, N. W., Zakaria, N., Ab, G., Aminuddin., & Lian, T. (2004). Integrating official and traditional flood hazard management in Malaysia. *International Conference on Managing Rivers in the 21st Century*, 409-419. http://redac.eng.usm.my/html/publish/2004_22.pdf
- Climate Just. (n.d.). Older people. https://www.climatejust.org.uk/messages/older-people
- Climate Just. (n.d.). People who are socially isolated. https://www.climatejust.org.uk/messages/people-who-are-socially-isolated Committee on Economic, Social and Cultural Rights. (1999, May 12). Substantive issues arising in the implementation of the international covenant on economic, social and cultural rights: general comment 12 (twentieth session, 1999) the right to adequate food (art. 11). https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=E/C.12/1999/5&Lang=en
- Committee on Economic, Social and Cultural Rights. (2003, January 20). Substantive issues arising in the implementation of the international covenant on economic, social and cultural rights general comment no. 15 (2002) the right to water (arts. 11 and 12 of the international covenant on economic, social and cultural rights. https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=E/C.12/2002/11&Lang=en

- Daniel, L. A. (2020, November). *Policy brief older persons in emergency situations*. UNECE. https://unece.org/fileadmin/DAM/pau/age/Policy_briefs/ECE_WG1_36_PB25.pdf
- Danielle, M. (2019). Elderly people with disabilities and natural disasters: vulnerability of seniors and post trauma. *HSOA Journal of Gerontology & Geriatric Medicine*, *5*(4), 1-7. https://www.heraldopenaccess.us/article_pdf/36/elderly-people-with-disabilities-andnatural-disasters-vulnerability-of-seniors-and-post-trauma.pdf
- Department of Irrigation and Drainage. (n.d.). Fenomena banjir di Malaysia. https://www.water.gov.my/jps/resources/auto%20download%20images/584130f686b1d.pdf
- Equality and Human Rigths Commission. (n.d.). The *right to an adequate standard of living: for ombudsman schemes*. https://www.equalityhumanrights.com/en/advice-and-guidance-human-rights-multipage-guide/right-adequate-standard-living-ombudsman-schemes
- FEMA. (2020, November). National advisory council report to the fema administrator. https://www.fema.gov/sites/default/files/documents/fema_nac-report_11-2020.pdf
- Free Malaysia Today. Warga emas maut sakit jantung ketika mahu selamatkan ternakan akibat banjir. (2022, January 1). Free Malaysia Today https://www.freemalaysiatoday.com/category/bahasa/tempatan/2022/01/01/warga-emas-maut-sakit-jantung-ketika-mahu-selamatkan-ternakan-akibat-banjir/
- Gary, H. (2019). Flooding and older people. *Encyclopedia of Gerontology and Population Aging*, 1-3. https://doi.org/10.1007/978-3-319-69892-2_462-1
- Gloria, G., & Yongjie, Y. (2014). Elder abuse and neglect in disaster: types, prevalence and research gaps. *International Journal of Disaster Risk Reduction*, 10, 38-47. https://www.academia.edu/14106322/Elder_abuse_and_neglect_in_disasters_Types_prevalence_and_research_gaps
- Hassan, R., Yadollah, A., Fardin, A., Momtaz, Hamidreza, K., Shokoufeh, A, Mohammad, S., Khoshnami, & Sharifah, A. H. (2016). Are older people more vulnerable to long-term impacts of disasters?. *Dove Press Journal: Clinical Interventions In Aging, 11*, 1791-1795. https://www.dovepress.com/getfile.php?fileID=33904
- Hazsyah, A. R. (2022, January 3). Warga emas maut gagal seberang sungai. BH Online. https://www.bharian.com.my/berita/nasional/2022/01/907083/warga-emas-maut-gagal-seberang-sungai
- Icelandic Human Rights Centre. (n.d.). The right to an adequate standard of living. https://www.humanrights.is/en/human-rights-education-project/human-rights-concepts-ideas-and-fora/substantive-human-rights/the-right-to-an-adequate-standard-of-living#:~:text=The% 20right% 20to% 20an% 20adequate% 20standard% 20of% 20living% 20requires% 2C% 20at, conditions % 20of% 20care% 20when% 20required
- Jabatan Pengairan dan Saliran Malaysia. (2020). *Laporan banjir tahunan 2020*. http://h2o.water.gov.my/man_hp1/LBT2020.pdf James, W. E., & Margaret, M. (2018). Congregational and social work responses to older survivors of natural human disasters. *Journal of the North American Association of Christians in Social Work 45*, 42-59. https://www.proquest.com/openview/1d26cac245ed3a13dcdd27538537ad38/1?pq-origsite=gscholar&cbl=40430
- Jeong, S., & Yoon, D. K. (2018). Examining vulnerability factors to natural disasters with a spatial autoregressive model: the case of South Korea. *Sustainability*, 10(5), 1-13. https://doi.org/10.3390/su10051651
- Karisma, A. (2020). Climate migrant elderly abuse and neglect: a study in slums of Dhaka, Bangladesh. *Journal of Aging Research and Healthcare*, 3(1), 1-38. https://openaccesspub.org/jarh/article/1332
- Karl, P., David, B., Catherine, R., & Mark, S. L. (2016). Elder abuse: global situation, risk factors, and prevention strategies. *The Gerontologist*. *56*(2), 194-205. https://doi.org/10.1093/geront/gnw004
- Kate, B. (2020, March 26). Causes of social isolation in elderly adults. Griswold home care. https://www.griswoldhomecare.com/blog/2020/march/causes-of-social-isolation-in-elderly-adults/
- Kevin, B., Maureen, F., JC, G., & Virginia, M. (2017). K. consideration of marginalized and minority groups in a national disaster risk assessment. UNISDR. https://www.preventionweb.net/files/52828_kconsiderationofmarginalized%5B1%5D.pdf
- Kornfeld, M., & Rosa. (2019). Enjoyment of all human rights by older persons: report of the independent expert on the enjoyment of all human rights by older persons. United Nations. https://digitallibrary.un.org/record/3823183?ln=zh_CN
- Lee, Y. M. (2021, December 19). 24 hours to rescue my aged parents is unacceptable. Free Malaysia Today.https://www.freemalaysiatoday.com/category/opinion/2021/12/19/24-hours-to-rescue-my-aged-parents-is-unacceptable/
- Lumen. (n.d.). Who are the elderly? aging in society. https://courses.lumenlearning.com/sociology/chapter/who-are-the-elderly-aging-in-society/
- Ministry of Health, Labour and Welfare. (2013) *Country report Malaysia* https://www.mhlw.go.jp/bunya/kokusaigyomu/asean/2013/dl/Malaysia_CountryReport.pdf
- Ministry of Health. (n.d.). National health policy for older person. https://fh.moh.gov.my/v3/index.php/component/jdownloads/send/23-sektor-kesihatan-warga-emas/470-dasar-kesihatan-warga-emas-negara?Itemid=0
- Nor, A. M. (2022, January 1). Banjir ragut 50 korban 2 masih hilang. Berita Harian. https://www.bharian.com.my/berita/nasional/2022/01/906611/banjir-ragut-50-korban-2-masih-hilang
- Powerdms. (2020, December 22). *The difference between guidelines and policies*. https://www.powerdms.com/policy-learning-center/guidelines-vs-policies
- Ruhizal, R., & Phil, O. (2012). Learning and adaptation of disaster management and housing provision: the Malaysian experience. *The Australian Journal of Emergency Management*, 27(3), 20-26. https://search.informit.org/doi/abs/10.3316/agispt.20123711
- Sairien, N. (2021, December 22). Post-discovery of 361 covid-19 infections, flood relief centres see zero cases today. The Vibes. https://www.thevibes.com/articles/news/50318/zero-covid-19-cases-in-flood-relief-centres-today
- Sani, G.D., Muhd, B. G., Mohd, E. T., & Musa, G. A. (2014). Floods in Malaysia historical reviews, causes, effects and mitigations approach. *International Journal of Interdisciplinary Research And Innovations ISSN 2348-1226*, 2, 60-65,

- https://www.researchgate.net/publication/268152474_FLOODS_IN_MALAYSIA_Historical_Reviews_Causes_Effects_and_Mitigations_Approach
- Shafiq, T. (2022, January 7). Warga emas korban pertama banjir di Johor. Sinar Harian, https://www.sinarharian.com.my/article/181968/BERITA/Semasa/Warga-emas-korban-pertama-banjir-di-Johor
- Sharifah, N. S. A. R., Mohd, R. H., Mohamad, F. B., Amna, M. N., & Bukryman, S. (2018). Investigating older persons and ngos flood preparedness to reduce vulnerabilities associated with ageing: a case study. *The International Journal of Social Sciences and Humanities Intervention*, 5(1), 4258-4264. https://www.researchgate.net/publication/322263339_Investigating_Older_Persons_and_NGOs_Flood_Preparedness_to_Reduce_Vulnerabilities_Associated_with_Ageing_A_Case_Study
- Sheila, S. P. (2021, December 19). Flood alert: senior citizens, disabled stranded without food, electricity in Batu 13 Puchong. The Star. https://www.thestar.com.my/news/nation/2021/12/19/senior-citizens-disabled-stranded-without-food-electricity-in-batu-13-puchong
- Sotiris, V., & Clare, H. (2012). *Health effects of climate change in the UK 2012*. Health Protection Agency. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/371103/Health_Effects_of_Climate_Change_in_the_UK_2012_V13_with_cover_accessible.pdf
- Stefan, & Oana A. (2008). European competition soft law in European courts: a matter of hard principles?. *European Law Journal*, 14(6), 753-772. https://papers.csm.com/sol3/papers.cfm?abstract_id=2512715
- UNHCR (n.d.). Older people in disaster and humanitarian crises guidelines for best practice. https://www.helpage.org/silo/files/older-people-in-disasters-and-humanitairan-crises-guidelines-for-best-practice.pdf
- United Nations. (2002). Political declaration and Madrid International plan of action on ageing.https://www.un.org/esa/socdev/documents/ageing/MIPAA/political-declaration-en.pdf
- Velerie, G., & Gideon, R. (2011). The vulnerability of older adults: what do census data say? an application to Uganda. *African Population Studies*, 24(2), 605-622. http://www.bioline.org.br/pdf?ep11044
- Wikipedia. (n.d.). Minority group. https://en.wikipedia.org/wiki/Minority_group
- William, F. B. (n.d.). Disaster planning tips for older adults and their families. CDC Healthy Aging Program Health Benefits ABCs. https://www.cdc.gov/aging/pdf/disaster_planning_tips.pdf
- World Health Organization. (2021, October, 4). Elder abuse https://www.who.int/news-room/fact-sheets/detail/elder-abuse
- World Health Organizations. (2017, December 12). *Mental health of older adults*. https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults