

Abstract

This study sheds light on the less-researched areas of the psycho-social issues faced by flood-affected residents, and the conflicts arising among those residents, according to government officials as key informants within the Kalu river basin of Sri Lanka. Here, a workshop was conducted in Kuruwita Divisional Secretariat (DS) with the key informants who deal with floods in the area. First, key informants individually answered a questionnaire related to conflicts and psycho-social impacts of floods faced by the affected community. Second, group poster presentations were conducted to investigate the issues faced by key informants during floods. Conflicts were reported both within and outside of the relief camps during floods and stressed behavioral features were observed among the affected residents. The key informants also faced many problems when performing their duties during flood events and it could be concluded that the provision of solutions to their problems by the Sri Lankan government are key to solving the issues of the flood-affected residents. Moreover, further research and policy making needs to be undertaken, based on the outcomes of this study, for effective flood risk reduction and management within the river basin.

Key Words: *Relief camps; Floods; Key informants; conflicts; Psychological issues*

1. Introduction

1.1 Floods- the global situation

Floods, of both fluvial and coastal origins, have a long history of being the most common natural disaster across the globe [13]. Flooding is more prevalent with greater negative impacts in Asia than other regions of the world. EM-DAT data, sourced by Bubeck *et al.* (2017) [8], showed that between 1980 and 2015 the significantly highest flood-related losses occurred in Asia (62%), followed by Europe (19%) and then the Americas (15%). Floods cause significant human fatalities, injuries, displacement, spread of infectious diseases and loss of or damage to property and infrastructure [51]. The negative impacts of floods have been further exacerbated with population growth, changes in land use, development on flood plains and other flood prone areas, land degradation and climate change [42]. The increased impact is despite significant investment in flood prevention and flood management in recent times [8]. Despite how common and costly floods are, they remain significantly under-researched compared to other natural disasters, such as droughts and storms [24]. Therefore, ongoing research to understanding the impacts of floods on affected residents and other stakeholders is key.

Floods are long understood as a natural occurrence that can have a catastrophic effect on ecosystems and human societies. Recent scientific data, however, indicates that human activities have significantly increased the intensity and frequency of flood disasters globally [6]. In many locations, the chance of extreme rainfall events has increased due to human-caused climate change, leading to more frequent and severe floods, claims a study published in the top-ranked journal *Nature* [23]. Another study indicated that the risk of flooding has increased in various areas, including the Amazon basin and Southeast Asia, as a result of deforestation and changes in land use [5]. With these and a number of other anthropogenic activities, including urbanization, and dam building, recently highlighted as major causes of floods, such events can no longer be seen as solely “natural” occurrences.

With the impending climate crisis, the risk of floods is increasing for many regions and nations outside of Asia, Europe and the Americas. Increased risk arises as the magnitude, frequency and distribution of cyclones, tropical storms and other extreme precipitation events grow [10]. There is more that communities who have relatively less experience of floods can learn from the experiences of residents and key informants in contexts that have for many decades or centuries been prone to flooding.

1.2 Economic, social and psychological impacts of floods

The highly visible economic and social impacts of floods often make international media headlines and are generally very well researched and documented according to the existing global literature [29]. Bubeck *et al.* (2017) [8] remind us that economic and social impacts of floods are diverse, spanning a range of spatial and temporal scales. Further, Bubeck *et al.* [8] have developed a typology of the negative economic and social impacts of floods. This typology addresses the complexity of impacts by categorising according to whether they are direct or indirect and tangible or intangible.

Being comparatively less visible and less tangible than other flood impacts, psychological effects of flooding have been historically far less researched than other social and economic impacts. Internationally, more studies have explored the mental health/psychological impact of natural disasters in general than at the local level [28] and of floods specifically. One flood-related study in Australia, found individuals who had experienced flooding between 1997 and 2008 were four times more likely to experience psychological anguish than those who had not [14]. In another Australian study, elevated symptoms of Post-Traumatic Stress Disorder (PTSD), depression and anxiety were experienced by older residents when faced with floods [3]. Othman *et al.*, (2022) [35] describes the mental, social and health effects experienced by the students of a Malaysian University due to the flood that occurred in 2021.

More specifically, an emerging body of research focuses on the mental health/psychological impacts of flood events and the associated displacement on individuals, the communal and political conflict and unrest that emerge from flood events and the associated displacement of people, and the relationships among these. According to Ide *et al.* (2020) [24], one of the most disruptive effects of anthropogenic climate change on society is natural disasters. In the context of the security consequences of climate change, there is considerable discussion about their potential impact on the probability of armed conflict.

1.3 Role of government officials engaging with communities affected by floods

Government officials are considered as the first responders during floods [36], first to reach the affected and those who do the fundamental rescue and relief distribution. Further, these government officials are also responsible for maintaining the relief camps where the affected are sheltered and cared for until the flood waters recede. Preparedness of the local government institutions and officials is important in facing a disaster with minimal complications [20]. There is widespread agreement that the government should be the leader, planner, promoter and organizer of disaster risk reduction process [45].

1.4 Government officials as key informants in research to prevent and manage flood impacts

There is a growing body of literature that has involved government officials as key informant participants in research to prevent or manage the impacts of floods on people and property. Rehman *et al* (2019)[40] included expert interviews with key government officials triangulated with an analysis of relevant literature and research reports to come up with policy recommendations for long-term mitigation, resilience, and management and response strategies to floods in Pakistan. Similarly, Buba *et al.* (2021) [7] employed key informant interviews, together with several other participatory research tools, to explore communities' perceptions of the causes and impacts of flood events in Nigeria.

1.5 Accepting floods as a persistent disaster in Sri Lanka & Ratnapura District specifically

Floods are the most common natural hazard in Sri Lanka [2] and most floods are associated with the monsoons [11]. Over the past few decades, the frequency of and negative impacts of floods have increased markedly in Sri Lanka due largely to ongoing spread of cultivation and settlement on flood prone areas, deforestation and alteration of water sheds [49]. It has been realized that the complete elimination of flood hazards is not possible and therefore alternative mitigation approaches are needed such as land use modification, afforestation, regulating of flows from urban areas, improved flood forecasting and warning, and redistribution of losses through disaster relief and tax remission [44]. With an acceptance that floods will never be eliminated in Sri Lanka, understanding the psycho-social effects of floods is also key.

Kalu River basin is one of the most commonly flooded river basins in Sri Lanka [17]. Kalu River, carries the largest volume of water discharged by any Sri Lankan river to the Indian ocean and, during her journey, the river generates flood impacts on human settlement and other activities that begin from the Ratnapura district [34]. Ratnapura district, with a land area of 3,275 sq. km., is split into seventeen Divisional Secretariat Divisions [16] with a population of 1088,007. Ratnapura town has a predominately Buddhist population (52.88%) as well as a sizeable Muslim community (33.52%) [39]. Other groups include Hindus and Roman Catholics. It serves as the hub of a long-running industry that mines precious stones like rubies, sapphires, and other jewels. Ratnapura, which lies in Sri Lanka's so-called rainy zone in the south-west, has a tropical rainforest climate. From May to September, the town primarily experiences rainfall from the south-western monsoons. 3,500 to 5,000 mm of precipitation falls annually on average. The average annual temperature ranges from 24 to 35 °C [38]. The Ratnapura district is subjected to floods due mainly to the south-west monsoon rains.

Evidence that the Ratnapura district is very prone to floods is well established in existing literature [15, 22]. A record of annual floods in the district has been maintained since 1970 by the Department of Irrigation, Sri Lanka.

1.6 Psycho-social effects of flooding in Sri Lanka

There have been some studies of the mental health impacts of natural hazards in Sri Lanka. Morgan *et al.* (2005)[33] and Dewaraja and Kawamura (2006)[12] both described the mental health consequences of the Tsunami which occurred in Sri Lanka in 2004. Senarath (2011)[43] studied the relationships between post-traumatic stress disorder and coping strategies in children's post disaster adjustment in Sri Lanka.

Samantha (2018)[41] explains the impact of floods on the enterprises of Western Sri Lanka. However, only a very limited number of studies descriptively address the mental health issues related to the direct exposure of floods. Among them, Randeniya (2018)[37] studied the impacts of flooding on the mental health and interpersonal relations of adolescents enrolled at a Sri Lankan college. Nevertheless, such studies within the context of Ratnapura district are not available through recognized databases.

This study focused on the flood of 2017, as this was the most recent year in which a flood was recorded to have had a significant impact as measured by the much higher number of deaths, and greater damage to property than ever before [46]. The study aimed to understand the impacts of floods on the mental health of residents of the Kuruwita DS division belonging to Ratnapura district, and specifically, explored the mental health issues reported within the relief camps following the flood in 2017. Kuruwita DS division was chosen as it is one of the DS divisions which were severely affected by floods in 2017 within the Ratnapura district [46]. Relief camps are usually set up during the floods and during the 2017 floods, nearly 500 relief camps were established, 221 of which were located within the Ratnapura district [47]. Within these relief camps, nearly 11,000 affected residents were provided shelter and other necessities. In particular, this study explored the mental health/psychological impacts of conflict, between spouses, within family units and between households that emerged as a consequence of the flood events.

The second objective of this study was to explore the problems faced by key informants before, during and after flood events within the Kuruwita DS division. The existing literature supports that although key informants perform a special function during any kind of a disaster, including floods, their role is largely unspoken [4]. Key informants are people who, because to their professional background, leadership roles, or unique personal experience, have specialized knowledge of various aspects of the community, the place visited, the population, or the disaster [26]. A limited number of studies have been performed on the problems faced by Key informants when dealing with flood events [1]. Local level key informants are the first to reach the affected and therefore, their function is highly important, so it is essential to understand and address the issues faced by them when supporting flood-affected residents.

2. Methodology

A community-engagement for action research methodology blended with an interpretive qualitative research methodology was employed in this study. It was used to explore the psycho-social behaviors of, and conflicts arising among, flood-affected residents, as well as to establish the problems faced by government officials in supporting these residents. The community engagement methodology involves a researcher engaging with representative officials from the community of interest with the objective of establishing the challenges or issues the community faces to then instigate action for positive change. The approach of this research acknowledges that qualitative research is “multi-method in its focus, involving an interpretive, naturalistic approach to its subject matter” [19]. This study adopted an interpretive position which assumes that participants construct social reality. In employing an interpretive approach to knowledge-generation it is recognised that humans subjectively create meaning, and that data analysis required the primary researcher to “interpret the range of constructions and meanings that present themselves in participants’ perceptions and experiences” [31].

2.1 Participants

The specific method used involved engagement with purposively selected government officials as key informants. In the context of this study, the primary researcher/ first author opted to engage with key informants for several reasons. First, key informants who are government officials help to strengthen the link between disaster research/ disaster practice and policymaking. Second, key informants were seen as the most appropriate participants in a first phase to broadly understand the community and gain an overall summary of the conflicts and other psycho-socio issues faced by flood-affected residents in the district of Sri Lanka. Finally, she did not have an established relationship with flood-affected residents to have developed the trust required to engage with them directly. By instead building relationships and trust with key informants, the researcher can then work with these informants during the next phase of this study to draw on their cultural expertise and access to flood-affected residents to collect more detailed information. Also, as key informants are government officers, it can be argued that the quality, in terms of the accuracy, validity and reliability of the information provided is higher [9]. Following Tremblay's (1957) [48] criteria, the government officials invited to participate as key informants in this study: held formal positions in the community, had knowledge relevant to the study, were willing to share this knowledge, communicated well, and were unbiased or able to reflect upon their own biases.

2.2 Method

A mixed-method approach was followed in this study incorporating both quantitative and qualitative data collection through a participatory workshop. The workshop was co-designed with the key informant participants.

2.3 Workshop

A workshop was organized by the primary researcher/ first author in the Divisional secretariat of Kuruwita to raise awareness of floods as well as to share experiences of flood management with and among key informants. The workshop was sponsored by the Sri Lanka Water Partnership and the funds were allocated through their grants for research in Sri Lanka. Forty key informants including Development officers, Disaster Management officers and the Grama Niladari (officers in charge of suburban areas or a cluster of a few villages as the smallest administrative units of Sri Lanka) of the Kuruwita DS division were invited to participate in a 3 hour workshop on 2nd June 2023. Thirty-four of the 40 government officials invited, participated in the various workshop activities including filling out a questionnaire and a poster presentation.

2.4 Questionnaire

During the workshop, a questionnaire was distributed to each of the key informants for them to complete individually. The questions were designed to gain each key informant's experience of flood-affected residents' psychological behaviors and of conflicts arising between such residents during and following the 2017 flood in this specific DS division. Guidance for preparing the questionnaire was taken from an expert and academician in the field of mental health (the third author of this article). The questions were formulated to focus on aggressive behaviors, Post-Traumatic Stress Disorders, and adaptive disorders and anxiety, observed in the flood-affected residents by the key informants. The questions were a balance of closed dichotomous yes/no questions and open-ended questions.

2.5 Team poster presentation

Later in the workshop, the key informants were given the opportunity to present the problems (and challenges) they face when dealing with flood events. The key informants were allocated randomly into four groups with eight or nine participants in each. The groups were asked to present these issues in the form of poster presentations.

The workshop, questionnaire and poster presentation group work were all completed in the Sinhala language, the mother tongue of all the participants, and then translated into English by the primary researcher/ first author prior to data analysis.

2.6 Ethical considerations

The questionnaire and the poster presentation were subjected to high-risk ethical clearance of the Institute of Biology in Sri Lanka (Registration No: ERC IOBSL 296 04 2023)

2.7 Data analysis

The quantitative data collected via the questionnaires was analyzed using Microsoft excel and SPSS Version 26 to arrive at some basic descriptive statistics. The qualitative data resulting from the open-ended questions was thematically analysed by the first author to grasp the general perception of the Key Informants.

The qualitative data resulting from the group poster presentation was analysed and the responses were categorized based on the source of the problems.

2.8 Trustworthiness, credibility and dependability

To improve the accuracy and the credibility of the responses obtained through both the questionnaire and the poster presentation, discussions were held with the key informants. During the time in which the questionnaire was being answered, the primary researcher facilitated a discussion with the key informants to ensure that they understood the questions. When the key informants were presenting their group findings through the poster presentations, questions were asked by the primary researcher to clarify the information provided. Ultimately, at the end of the program, a meeting was held with the Divisional Secretary of Kuruwita for clarification (member checking) to ensure the accuracy of the obtained responses from the key informants.

3. Results and discussion

Thirty-four of 40 key informants invited participated in the workshop. Of the 34 participants, 21 were Grama Niladhari officers, 10 were Disaster Management officers and 3 were Development officers. More than 50% of the participants were female officers.

3.1 Conflicts and psycho-social issues and among the affected communities during floods

Each of the 34 participants completed the questionnaire that contained questions related to reports of conflict and experience of mental health issues.

Of those 34 informants, 20 (59 percent) responded that conflicts had been reported in their area during or following the 2017 flood event.

Each of the 20 key informants who had reported conflicts in their area during floods were asked to provide the main reasons for those conflicts. These reasons have been translated into English, grouped by the researchers/authors into seven broad categories, and then member checked by the relevant participants. The number of officials experiencing each of the five main reasons for conflict is displayed in Figure 1 below. The total number of reasons for conflict (24) is greater than the number of participants who reported conflict (20), as several key informants provided more than one main reason for the conflict.

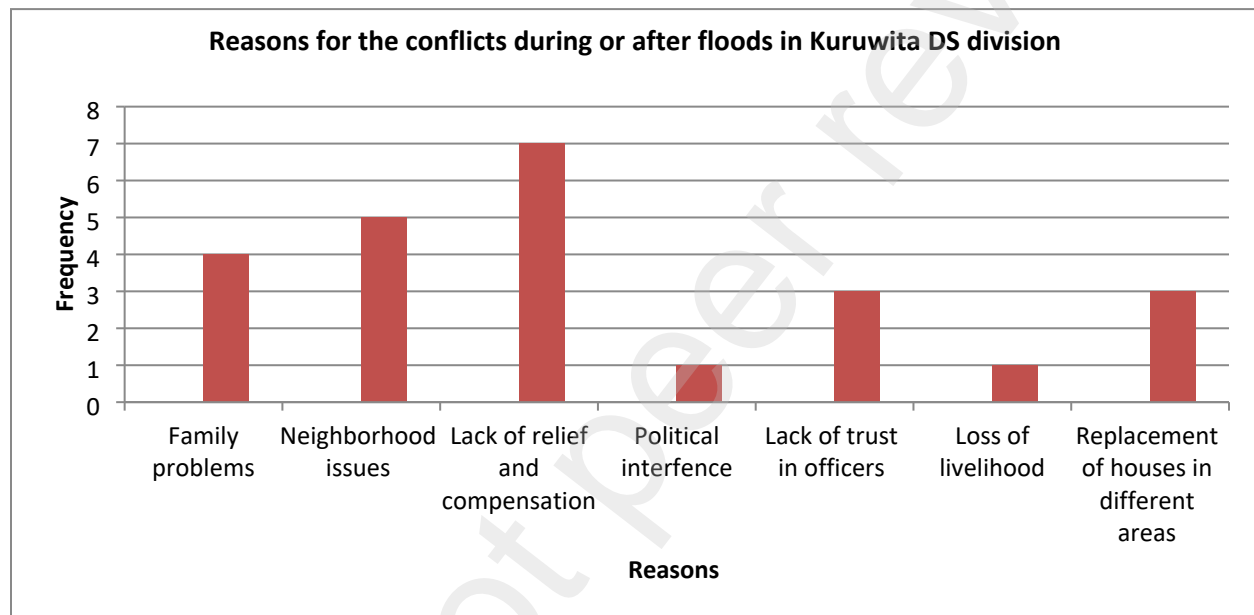


Figure 1: Reasons for the conflicts during or after floods in Kuruwita DS division

According to these 20 government officials, the most common reason for the conflicts during the 2017 flood in Kuruwita DS division was the lack of relief and compensation received by the affected residents.

Of the 34 participants, 26 (76 percent) of the informants responded that they had observed stressed behaviour, frustrated behaviour and/or aggressiveness in or among the flood victims. Eighteen (53 percent) of the Key Informants responded that conflicts had been reported in the relief camps which were under their control, during the 2017 flood.

The main reasons for conflicts within the relief camps as provided by each of the key informants who agreed that there had been conflicts in relief camps, have been translated into English and then grouped by the researchers/authors into five broad categories, and then member checked by the relevant officials. The number of participants who experienced each of the five main reasons for conflict in the relief camps is shown in Figure 2 below. The total number of reasons for conflict (34) is greater than the number of key informants who reported observing conflicts in the relief camps (18), as several key informants provided more than one main reason for conflict.

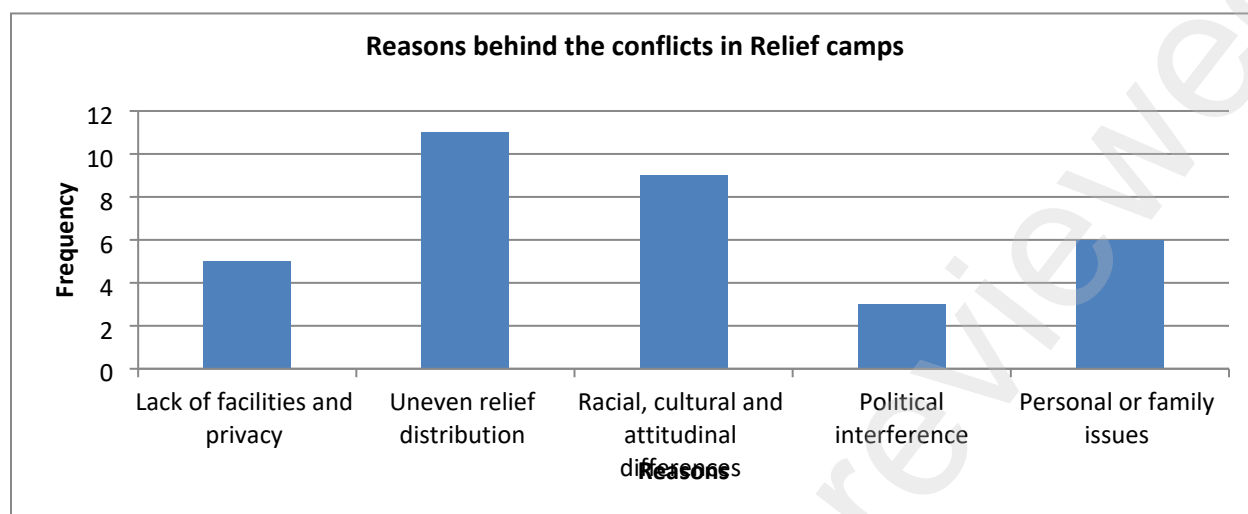


Figure 2: Reasons for the conflicts within the relief camps in Kuruwita DS division

Here too, the main cause of the conflicts is uneven relief distribution among the relief campers, which was very similar to the results of Figure 1. Each key informant provided more than one reason.

Three of the 34 key informants provided responses to the open-ended questions, highlighting the conflicts, other psycho-social issues and problems reported during the flood in 2017. These responses were translated into English and are summarized below.

“In 2017, the most disastrous flood of the last decade occurred in Ratnapura district. It caused a significant impact on human lives, including destruction of houses, loss of livelihood and loss of lives, psychological stressors, family issues, neighbor issues, disagreements with government officers, and frustrations due to extra-marital affairs, aggressive behavior, and competition for food, political interference, and differences in opinions. Conflicts mainly due to uneven distribution of funds, insufficient compensations, lost livelihood, and economic issues were reported. Frustration was caused by the destruction of domestic equipment and documents, and the need to re-construct houses.”

“Conflicts were reported due to attitudinal problems and people's mindsets about total dependency on government funds during the floods. Mental stress was observed in the affected residents mainly due to loss of documents to receive compensation and loss of property and livelihood. Within relief camps, issues arose due to caste problems and differences in cultural practices. Domestic violence was also reported and there were no cases observed or reported such as suicides due to the residents being quite accustomed for the flood events now as they have experienced it for a very long time.”

When analyzing the conflicts reported among the affected, both within relief camps and outside of relief camps, more conflicts were reported within the relief camps. One reason for increased conflict within the relief camps is that these camps comprised a gathering of people from different racial, cultural and social backgrounds, thus leading to a variety of attitudes and opinions. This diversity can bring up differences in ideas and practices leading to more conflicts. Out of the total population of the Kuruwita DS division, more than 50% is comprised of Sinhalese while the rest are Tamils, Muslims and Burgers [30], with this

racial diversity present within the relief camps too. As stated by Ide et al. (2020) [24], and mentioned previously, such differences in religions and ethnicities can be the cause for the armed conflicts during floods.

Also, of the reasons for the conflicts reported within and outside the relief camps, the most frequently stated cause was the uneven distribution or lack of relief and compensation. When the residents are affected by floods, it is essential to provide their basic needs while they reside in the relief camps. Relief as a concept necessitates the prompt provision of aid to lessen suffering and meet bare minimum requirements for food, drink, and shelter [50]. Among the relief, there needs to be early and ongoing access to dry rations or cooked food, sanitary items, water, clothes and many other basic items. Not having enough of these can create social unrest, leading to conflicts. According to Lo (2022) [27], lack of relief can occur mainly due to lack of financial aid from the government during the crisis time. Inability to reach the affected areas due to continuous rains and not having a proper plan to distribute the relief equally can also impose such problems [32].

Severe weather conditions push people out of their homes and social networks and into unfamiliar environments including the relief camps, where they face a variety of risks to their mental health [21]. Changes in how people see their surroundings and homes, a breakdown in social cohesiveness, and the breakdown of connections in families and affected communities can lead to residents developing mental health problems [8]. Those who have been evacuated frequently experience fear, flashbacks, and emotional shocks as well as low self-esteem, sleep disturbances, and feelings of guilt for forcing injured and disabled family members to move [25]. Also, as mentioned previously, such mental breakdowns can lead to PTSD, Anxiety and Depression [3]. First the affected people lost their normalcy and then they were hindered by a lack of provisions to meet their basic needs. The distress and emotional pressure made them extremely vulnerable to mental health issues. The majority of flood refugees experience phobias, sadness, stress, shock, helplessness, and hopelessness, all of which manifest as frustration and aggression [18]. This provides the reason for a majority of the refugees showing the stressed/frustrated behaviors evident in the findings of this study.

3.2 Problems faced by Key Informants before, during and after floods

The key informants worked in groups to discuss and record the problems they faced as government officials in the fields during and following the 2017 flood. In Table 1 below, these problems have been grouped by the first author into four broad categories based on the causes of each of the problems:

Table 1: Problems faced by Key Informants before, during and after floods in Kuruwita DS division

Problems associated with the behaviours of flood-affected residents		Problems associated with the government/ higher administration		Problems from outside parties		Problems due to lack of communication, equipment and facilities	
Problem	Frequency	Problem	Frequency	Problem	Frequency	Problem	Frequency
Racial and religious differences within the relief camp.	2	Insufficient funds from the government to provide relief and not receiving the funds on time.	2	Political interference to the distribution of compensation	5	Damages to the boats and ferries during relief and rescue activities.	1
Being unable to provide compensation due to lack of legal documentation	1	Negligence by the government in terms of them not taking early and preventative actions to address the causes of danger in the places of risk (ex: blockages in dams, drains and illegal gem mines and deforestation in upper basin)	1	NGOs and other organizations distributing funds improperly without informing the key informants.	1	Lack of sufficient equipment (boats, ferries, safety jackets) to face the floods.	5
Protests from the affected during the distribution of relief.	2	The funds allocated by circulars and other legal provisions for disaster relief being insufficient at the present due to inflation and price hikes in the market.	1	Religious organizations trying to recruit the affected by providing privileges.	1	Problems in communication	3
Lack of satisfaction in the distribution	4	Weaknesses in planning and wrong decision making related to	1			Lack of proper places to establish relief camps.	1

n of compensation for the damages.		distribution of relief and funds.					
The Affected residents not willing to leave their houses during floods.	1	Problems due to not distributing funds through one control center.	1			Weaknesses in early warning systems.	1
The Flood-affected residents always trying to depend on the government funds without finding solutions of their own.	1	Planning of programs/methods which are not practically feasible at ground level (ex: issuing red alerts at midnight)	1			Not having suitable shops to buy groceries as relief during the flood events.	1
Negligence of the residents to comply with on red alerts and disaster risks.	1					Difficulties in reaching the inundated areas and the safety of key informants can be compromised.	1
The affected giving false information for acquiring more	1					Problems due to lack of health and sanitation facilities at relief camps.	1

compensation							
The affected not obeying the instructions of key informants.	1						

Accordingly, it seems that most of the problems faced by the key informants were due to the behaviors of flood-affected residents and lack of communication, equipment and facilities.

When analyzing the problems faced by key informants before, during and after floods, it becomes evident that many of those problems are the causes for the conflicts among the affected, both within and outside the relief camps. For example, many key informants mentioned “being unable to provide compensation due to lack of legal documentation”, “lack of satisfaction in the distribution of compensation for the damages” and “Lack of sufficient equipment (boats, ferries, safety jackets) to face the floods”. As mentioned previously, the main cause for the conflicts occurring among the refugees is the lack or uneven distribution of relief. Therefore, it can be inferred that the government providing solutions to the problems faced by the key informants will reduce the mental health issues of the affected residents.

Government/higher administration can take steps to provide solutions to the problems faced by the government officials. Basically, this requires a commitment from the government to ensure that there is both sufficient and timely provision of equipment and other items for flood relief and compensation paid to the affected residents. The affected residents also need to cooperate with the officers and help to lessen the barriers in communication. Meetings should be conducted with the participation of the necessary key informants and the affected residents to discuss the problems of both parties in one room. Both groups are sensitive and under pressure, with the government officials having limited resources to assist them in addressing the demands of the people. People are not going to cooperate with the government officials unless what they have experienced in the past significantly changes. Transparency and aspects of good governance can benefit the key informants.

Moreover, the NGOs and religious organizations should coordinate properly with the government agencies and the government officials so that there would be fewer problems with relief distribution. Having a proper and a permanent set of guidelines to follow during a natural hazard for the governmental officials, affected residents and external parties could be helpful in reducing conflicts in hazard situations. Ultimately, all these actions would assist in having happy and content relief campers as well as efficient and committed government officials working towards mitigating and reducing the flood impacts within their divisions.

As stated previously, other than the natural causes like rainfall and monsoons, increasingly many of the causes of floods are human-made which include deforestation, mining activities, etc. Most of such actions are conducted by the wealthier and/or more powerful sectors of society such as by multi-national

companies or through political influence. The affected residents and the government officials who work with those residents are not typically involved in such actions. This has then become yet another situation where the poorer communities are paying the price of the unplanned negative consequences of the actions of the wealthier, which has been a persistent tragedy in human history [52]. Therefore, we argue that bringing in policies and regulations to prohibit the human actions that cause large-scale flooding would assist in reducing the flood occurrences and associated loss of life, displacement and other damage. Such actions for mitigation and reduction will eventually indirectly reduce the psycho-social issues, conflicts and other problems faced by the affected residents and the government officials by removing the root-cause of the problem.

4. Limitations of the study

This article reports on only the first phase of a multi-phase study exploring psycho-social issues, conflicts and other problems faced by officials and flood-affected residents in Kuruwita, Sri Lanka. Data for this study so far was only collected from government officials, so has not yet been triangulated with data from other sources such as from the flood-affected residents themselves. Some key local government officials were not available to participate in the workshop.

5. Further research

This study will be extended to work with the key informant government officials to collect more in-depth data from the flood-affected residents. This study could also be extended to other DS divisions within the Ratnapura district to get a broader understanding about the status of such issues across the whole district. Ultimately, the study can be expanded across all of Sri Lanka which would facilitate the creation of a common set of guidelines and rules to support flood relief campers and government officials.

6. Conclusion

This study provides important insights into the conflicts and the psycho-social impacts related to the floods from the viewpoint of the government officials as key informants. We found some crucial information about the conflicts reported both within and outside of the relief camps, the stressed/frustrated behavioral features observed in the affected community and the problems encountered by the government officials during the flood events of the Kalu river basin, mainly in 2017. A thorough literature review indicated that the psycho-social impacts of floods and the contribution of government officials during these events have been the subject of only limited research to date, especially within Sri Lanka. Therefore, the outcomes of this study facilitate the commencement of further research and development of new policies and regulations related to flood impacts mitigation in the river basin. Moreover, we suggest providing practically-feasible solutions for the issues faced by government officials because if addressed it will ultimately reduce the problems faced by the affected residents within the study area.

7. Recommended actions

The Sri Lankan government should be informed about the problems of the government officials and should be encouraged to provide solutions quickly, which will ultimately solve the issues faced by the residents. More research should be conducted to understand the conflicts within the relief camps and the

psychological stressors behind those conflicts in Sri Lanka. Training programs and awareness sessions can be conducted for both government officials and the affected residents within relief camps on how to successfully avoid, minimise and manage the conflicts, psychological stressors and other negative impacts and problems related to floods to have 'happy relief campers'.

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Title Page

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Towards Happy Relief Campers: A Key Informant Approach to Commence Exploration of Psycho-Social Issues, Conflicts and Other Problems Faced by Officials and Flood-Affected Residents in Kuruwita, Sri Lanka

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