

A Review Paper: The Role of the Internet in Promoting Youth Well-Being in Flood-Prone Communities

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Abstract

Nowadays, the youth has been recognized as a distinct stage of human development. Along with all the problems that youth faced, the challenges of young people in some flood-prone communities have also appeared as a vital focus of research and policy efforts in the past decades, specifically after climate change has become a threat to the health and life of humanity, both now and in the future. Therefore the main attempt of the present study is to explore on how the Internet can improve youth well-being during the disruption arising from floods. For this purpose, the study highlights the concept of intolerance of uncertainty, youth resilience and information communication technology such as internet that provides an overview and a critical evaluation of a body of literature relating to the research topic. Two gaps in this study are addressed: (1) inadequate attention is given to understanding the causes and correlates of well-being among youth experiencing flooding and (2) existing studies in the context of disaster recovery fails to show how the internet enables youth to be resilient during disruption of floods and after. It is hoped that it may compel social and health policymakers to develop youth health development programs to disseminate well-being to difficult-to-reach youths in the early stages of flood situations.

Keywords: internet, youth well-being, resilience, and flood-prone communities

1. Introduction

Youth has been recognized as a distinct stage of human development. The difficulties faced by youths in some flood-prone communities have also appeared as a vital area that is in need of attention from research and policy efforts in recent decades, particularly since climate change has come to represent such a threat to people's health and lives, both now and in the future (The World Youth Report: Youth and Climate Change, 2010). In various parts of the world, extreme weather is perceived as a great challenge to the safety and survival of human beings in the 21st century (Spring, 2007). In recent years, extreme weather such as hurricanes, floods, tropical storms and drought have happened with greater frequency (Ospina & Heeks, 2010) and the number of individuals affected both physically and mentally has doubled in vast areas of the five continents (IPCC, 2007). For instance, flooding has a long-lasting effect on the physical and mental health of people in Central America, South and Southeast Asia, the Caribbean and the Pacific Islands, and the impacts not only have immediate effects on people and their productivity, and well-being but can also cause a major risk with respect to the long-term events of global development (Strazdins & Skeat, 2011). Meanwhile, along with the increasing popularity of information communication technology such as internet among youths, many researchers have started pointing to the positive potential of the Internet for the psychological health of youths who can easily gain access to resources and needed information (Sutton, Palen, & Shklovski, 2008). While there is a growing body of literature on the link between sustainable development and the information society has been a broad research area since the 1990s (Ospina, 2012), there is no work particularly understood the potential of the Internet in natural disaster recovery research, is considered a relatively new area of research. The Internet should be viewed as a useable arena for promoting youth health and providing a forum for their well-being in crisis situations (Reissman, Klomp, Kent, & Pfefferbaum, 2004). In this regard, the research attempts to highlight the role of the internet as a prominent act for enhancing several aspects of resilience and the well-being of youths and compensating for the torment of emergency settings by addressing these two questions around which we structure this paper:

- Can internet serve as an important tool in enhancing well-being, when a flood will strike youth community?

- How specific ways of conceptualizing of resilience may help to develop well-being of young internet users in the field of disaster recovery?

1.1 Source of Risk Factor

Risk factors are widely viewed as factors that increase a negative outcome following adverse events (Fraser & Richman, 1999) which include natural disasters, poverty, child abuse, peer rejection, chronic illness, and family conflict. Currently, the source of the risk factor comes from climate change impacts, which are a cause of the increased incidence of extreme weather: in this case, floods. Based on scientific evidence, it is believed that the effect of climate change as a global environmental threat creates uncertainty which may have a negative effect on human health and well-being (Brown & Macy, 1998; Fritze, Blashki, Burke, & Wiseman, 2008; Nichol森, 2003) and may result in increased a greater risk for cognitive impairment. This article introduces the concept of intolerance of uncertainty as a risk factor in the well-being of youths because it has contributed to our understanding of youth anxiety disorders (Brown & Macy, 1998; Moser, 2007; Nicholas, 2010; Nichol森, 2003) and such situations can lead to more inappropriate expressions towards youth. For instance, when the possibility of a negative event is happening irrespective following disasters, it creates high levels of uncertainty and depression. It may arise in youth through expectations about future hopelessness in the early experience or negative future-events schemata; i.e., the point at which there is a tendency for youth to hold very pessimistic views of the future, that negative outcomes will happen, or that positive future outcome will not happen (Anderson, Lau, Segal, & Bishop, 2007). Furthermore, intolerance of uncertainty explains youth's anxiety about their health through the cognitive bias in predicting future events, because they may not able to tolerate the uncertainty of possible negative future events (Miranda & Mennin, 2007). Evidence suggests that a high intolerance of uncertainty about the future is irrational, worrying, and stressful, and that uncertainty leads to an inability to think and act (Buhr & Dugas, 2006). After Hurricanes Katrina, Galea et al. (2007) realized uncertainty about the weather still exists among young people who lived at comparatively high risk of Anxiety disorder. Particularly, a study of Acierno et al. (2006) after hurricanes Katrina observed psychopathology among older at age 60 and above as compared with that in youth (age 18 years +). They found that youth reported more symptoms of post-traumatic stress disorder (PTSD). Thus, WHO Regional Office for Europe meeting report on climate change, extreme weather events and public health that was held in Bonn on 29-30 November 2010 highlights a significant impact of an increase of water (a flood) on human life and well-being" (McArthur, Dawson, & Walters, 2010).

2. Youth Well-Being First Aid

The well-being of young people is vital, as young people represent hope and promise for the future. As tomorrow's youth will be the future world leaders, civilians, workers and parents, practitioners, so policymakers must pay more attention to the importance of youth well-being. For this reason, the ultimate goal of every society should be to maintain and improve a sense of happiness and well-being in its youth (Kahn & Juster, 2002), because young people with better mental health are more socially productive. Conversely, unhealthy young people place a significant social and financial burden on society in terms of cost of treatment and distress (Busch & Barry, 2007). Generally, well-being is a concept that is universally recognized by many economists, sociologists, psychologists and anthropologists, who have carried out research to facilitate a better understanding of well-being. Well-being is related to the concept of happiness, and is known as a multifaceted construct can be measured via two approaches: eudemonic and hedonic (Ryan & Deci, 2001). Well-being is the outcome of adaptation and adjustment to a hazardous world in the absence of negative condition. Moreover, in order to assist young people who are experiencing mental health problems, or who may develop mental health problems in a crisis. In some cases, although the consequences of a dangerous or violent flood, storm, or earthquake on the mental health of children can increase the risk of mental health disorders and can be especially traumatic for youth, some appropriate interventions can provide an opportunity to transform a terrifying event into a learning experience for youth. Lazarus and et al. (2003) considered school-based programs can play an important role to help young people return to normal routines and activities. On the contrary, in this paper we attempt to recognize other intervention that act to modify the effect of being in a flood-risk setting, and to explore the processes by which youths can adapt successfully through an in-depth understanding of the meaning of well-being. It helps youths with mental problems to know what to do to resolve crises, and there is no doubt that the role of the Internet will be significant in helping young people to overcome mental health crises when used as a first aid asset. Young people, as the main Internet users in flood-affected communities, must regularly update their knowledge and skills about the Internet as they might one day need to provide mental health aid to their communities, and also each other in the form of resiliency, until the difficult situation has been resolved via professional assistance. Nowadays, Internet resources have become more complicated and widespread due to the

growing use of information and communication technology. This widespread use of the Internet has opened up communication networks around the world ("The Internet WordIQ.com," 2007). Recently, with the growing popularity of the Internet among youths, the technology is set to become an important part of young people's life. In general, youths are taking up opportunities by using the Internet, with some of them benefiting more than others. It has been widely concluded that these opportunities include participation, health information, entertainment, and creativity (Livingstone, 2004; Livingstone & Helsper, 2007). For this reason, the Internet may supply a rich environment that contains importantly positive dimensions as well negative dimensions and, when used properly, may greatly improve the well-being of its users (Amichai-Hamburger & Furnham, 2007). From a health-promotion perspective, the Internet can be understood as empowering, as it strengthens the control youths have over their own health and well-being by giving them opportunities for obtaining information, communicating with others and discovering useful health information when and wherever they like.

2.1 Youth-Related Strategy and Well-Being in the Context of Internet Usage

The current study uses a strategy that clearly points to the importance of understanding the needs of youth, and this strategy should give policy makers ideas for meeting these basic needs in order to foster the well-being of youths as they are confronted by climate change impacts such as floods, and as Internet users. This strategy for understanding youth needs highlights the importance of focusing on context, and reveals how problematic behavior apparently underlies the basic needs. In fact, young people need to be given the chance to formulate and practice skills in order to achieve a sense of mastery, competency and self-confidence. In addition to all categories developed in this strategy for understanding the needs of youth, it is suggested that how to gain, how to keep and how to recover happiness is in fact important for most youths all the time, even though the climate change represents a threat to the long-term sustainability of young people's lives. As casualties occur as a result of global warming, the mass media have started to highlight how complex global warming is, along with their reports of natural disasters (Masten & Obradovic, 2008), in order to promote a sense of hope or despair for future generations, especially those who have been directly affected by the disasters. Thus, in recent years the potential impacts of climate change on human health and well-being have received considerable attention (A. IPCC, 2007). Much research on adolescents' fear of their future appeared in the 1980s (Eckersley, 1998). Millions of young people have been uprooted or are permanently on the move, and many more millions will follow. Youth well-being is implicated in this, and social science should be involved to combat the problem, while the focus of policymakers must return to the consequences of climate change and the threat it poses to health and safety. The focus must shift from how young people are likely to be affected by extreme weather related to climate change, to how they can contribute to remedying the situation. Strategies relating to youth health development can be implemented regardless of the future risks of climate change on the mental health of youth. Healthy youth development strategies are based on the premise that young people can be described as a deliberate process of supplying young people with the support, connectedness, experiences, resources and opportunities become functioning adults (McLaughlin, Irby, & Langman, 1994; Rew, 2004). Many researchers have demonstrated that improving elements in the lives of young people can reduce their mental health issues. According to salutogenesis, a term which comes from medical sociology, youth development strategies can support human health and well-being (Antonovsky, 1991).

Along with additional points, the strategies can influence the process of adjustment and the adaptive capacity of youth to floods related to climate change. This can be an alternative approach to disaster recovery which was not well-suited to the issue and is costly. Based on the salutogenesis, the ability to adapt is following three major factors: comprehensibility, manageability and meaningfulness, which are related to well-being. Eckersley (2005) argues that young people's sense of comprehensibility skill is enhanced by having ability to arrange and describe a problem or difficulty. Secondly, manageability for youth is required to meet the resources. The third component, meaningfulness, refers to the problems youths face in terms of life being worth engaging in, and the idea that life has a meaning emotionally and is worth their commitment (Antonovsky, 1991). Researchers have also identified global environmental challenges, such as climate change, to be significant sources of salutogenesis, for instance in terms of the psychological distress youths feel when the natural environment in which they live is changed for the worse (Albrecht et al., 2007). The 21st century is a time for action, as the perceptions of the future are increasingly shaped by the images of global threat and natural disaster to which youths are exposed, including floods (Gullone, 2000). As part of the strategy for achieving well-being, researchers need to address a complex set of underlying impacts of long-term climate change on the health of the population at the local, national and global level. At this point, it is important to consider which sections of the population are most affected by natural disasters. Young people are at much greater risk from the trauma of disaster, particularly if they are not making a good recovery (Delamere, Morden, & Rose, 2006; Luthar, Cicchetti, & Becker, 2003; Masten &

Obradovic, 2008), and by understanding the links between nature and society, we must also reinforce bottom-up resilience-building, where affected young people are enabled to develop their own coping strategies (Urista, Dong, & Day, 2009). In terms of strategy, the empowerment of youths requires the Internet (Ospina, V, 2012). Major attention should be drawn to the fact that the Internet can develop from being part of the challenge to becoming part of the solution. Hence, it should be taken into account that while developing a strategy towards increasing adaptive capacity and reducing vulnerability to floods specifically, and to other natural hazards in general. Practically, if we employ these needs as the most important for realizing a response to climate change, it is possible for various levels of need to interact, to happen at the same time or in parallel, specifically when a flood occurs and affects people directly or indirectly. Therefore, this understanding can also help in formulating a better and more resilient adaptation strategy, and at the same time identifies potential areas for Internet-supported actions to improve the well-being of youths who experience difficulties when floods strike their community.

3. Resilience Assists Well-being of Young Internet Users during Disruption Caused by Floods

While theory and research on resilience in human development have been in existence for well over a decade, scholars have only recently paid attention to resilience in discussions of disaster-recovery (Dohrenwend, 1978) rather than other coping processes, because it is more applicable to all individuals during the natural disaster as resilient process can maintain its structure and function in spite of experiencing disturbances (Few, 2007). The term “resilience” in the disaster-recovery context, is considered as the basic capacity of individuals and infrastructure to rebound from stress and shocks and sustain a normal function, ask for and receive help, and solve problems (Bonanno & Mancini, 2008; Castleden, McKee, Murray, & Leonardi, 2011). It gives youth a better sense of capability and ability assessment— before, during and after disasters; especially when they are first adopter of the internet. For example during flooding in Queensland, the Internet is potentially a very powerful opportunity to strengthen the resilience of young people and it could engage Queensland youth in emergency-related activity around their community (Riddell, Clothier, & London, 2011). Recently, Masten and Obradovich (2008) proposed that most human resilience, at least in children and youth with the aim of informing plans for disaster recovery and response. They noted that large capacity for resilience of youth, either to maintain or recover to good functioning (or well-being), and outlined adaptive systems that are supposed to be most important for youth resilience, which are included;

- Attachments and social relationship
- Agency, Problem-Solving, and Information-Processing
- Macro system

3.1 Internet Enabled-Attachments and Social Relationships

All plans for disaster must justify for the attachment system are likely provide a sense of security and the foundation for resilience (Masten & Obradovich, 2008), because social relationships can themselves be damaged by disasters. In addition to the importance of internet for the present study, by communication through the internet, we can create the common understandings and the provision of opportunities for youth to express needs during natural disasters. Resilience in youth in emergency setting will be influenced by the availability of information and the ability to communicate with others (Wadsworth, 2010; Palmer, 2008). When youth face with ambiguity, they look for information, or communicate with others to decrease uncertainty and to improve a sense of order (Weick, Sutcliffe, & Obstfeld, 2005) with respect to the unusual situation they are experiencing. It is also shown that online relationships can be a vital basis of social support which has significant influence on their well-being (Cohen, 2004; Diener, Suh, Lucas, & Smith, 1999; Glanz, Wenzel, & Lerman, 2002; Myers, 2000; Vaux et al., 1986), however, some studies could not prove that online social support is stronger than offline one. For instance, during the Virginia Tech (VT) shootings, young people created and accessed social networking groups through which young people could prepare and receive moral support (Hughes et al., 2008). These authors also stated that young people made virtual cemeteries in another Life following the VT shootings to sorrow for young people who had passed away. In conclusion, the ability to connect with others through Internet, in turn, has greater implications for resiliency namely in allowing youth to involve in sense making activities.

3.2 Internet Enabled-Agency, Problem-Solving, and Information-Processing

Overcoming difficulties in emergency setting often requires individuals to control their thoughts, and behaviors in order to continue functioning, development, learning processes, and experiences (Masten & Obradovic, 2008). Agency in resiliency can be understood as the various ways in which youth are active agents in their own lives, futures, events, and environments (Synofzik, Vosgerau, & Newen, 2008). Bandura (1982) argues that agency can be realized either cognitively or behaviourally. Whereas — cognitive control happens when youth can control and manage threats, — behavioural control happens when youth can take action as that adapts to unusual events,

and must they reach. For an understanding of resilience in the context of the Internet, Internet skill is recommended. Internet skills are similar to Internet self-efficacy which is applied by Eastin & LaRose (2000). It allows youth to utilize many resources and ideas based on their actual needs and information in virtual space. Previous studies show that, it provides the opportunity for young people to increase their mental health literacy; strengthening meaningful participation and relationships; enhancing skills that bolster resilience; and improving help seeking (Burns, Morey, Lagelee, Mackenzie, & Nicholas, 2007; Nicholas, 2010; Oliver, Collin, Burns, & Nicholas, 2006), youth who have gained access, and who are confidence in their internet skills use the internet more, taking up more opportunities (Eastin & LaRose, 2000; Livingstone & Helsper, 2007); particularly through the study of health promotion. It contributes to our understanding of how youth health and well-being are closely tied to, and are costs of, power and powerlessness. According to empowerment theory (Zimmermann, 1995), young people experiencing floods are powerless, as they have no power over their lives and often have little perceived control and sense of competence. Internet skill gives to youth in an emergency setting, the power to think in terms of wellness versus illness, competence versus deficits, and power to take action versus powerlessness (Rappaport, 1987). Similarly, the mechanism of psychological empowerment improves young people's capabilities to maintain control over their lives and their communities by thinking about issues that they emphasize as important.

3.3 *Macrosystems*

In behavioural studies, Macrosystems (e.g., belief systems, cultures, the internet, mass media, and societies) have been combined into the resilience of individuals (Masten & Obradovic, 2008). Bronfenbrenner (1979) proposed that people need to be understood within the systems in which they have existed. He stresses that individuals can be affected by Microsystems as well. Currently, when floods have been occurring more often due to the effects of global warming, internet effects have become a main subject of disagreement about understanding of disaster with regards to considering the influence of disasters on youth who are directly and indirectly harmed. The internet can help to strengthen the capacity and the confidence of local youths to adapt to the changing circumstances posed by climate change and it can also provide access to relevant information about responsibilities in the management of natural resources, promoting youth leadership and participation in these processes (Ospina, 2012). Following these guidelines have been developed and are maintained by The Inter-Agency Standing Committee (IASC) (2007) will help youth to protect and improve their mental health and well-being in the all emergency setting by generating the internet and communications directory, including;

- Inviting humanitarian workers to give advice through internet
- A list of websites with name and contact details, covering health-related issues or problems of young people
- A list of email addresses of youth worker who are working in emergency settings
- Communication teams may make a free website to disseminate information using local content in responding to an emergency or crisis
- In the absence of any media, consider innovative mechanisms such as providing affordable, effective and flexible internet availability
- Involve local youth at every step of the communication process, and make sure that messages are uncomplicated and can understandable
- Maintain local media interest by highlighting different viewpoints, such as the various dimensions of well-being and mental health ,survivors' recovery

Youth affected by emergencies frequently experience enormous suffering. The Guidelines offer essential advice on how to facilitate internet access to address the most urgent mental health in emergency situations.

4. **Conclusion**

In flood- emergency settings, most young people experience strong fear and uncertainty. In some situations, the majority of affected young people will progressively start to feel better, especially if they use helpful ways of dealing with stress feelings of uncertainty– i.e. positive resiliency methods – is having access to appropriate online information related to the emergency, relief efforts. In addition, Internet literacy is viewed as useable tools to highlight the role of internet as a prominent act for enhancing several aspects of resilience and well-being of individuals. Specifically, youths in flood-affected communities have much to gain from developing their Internet literacy; they often possess low levels of perceived control, and lack competence, however the Internet has the potential to empower them, make them more confident, and makes them feel that they are in the charge of their lives. Furthermore, Internet literacy fosters young people's capacity to implement change in their own lives, in

their communities, and in society, by acting on issues that they define as important. It is hoped that the points in this article will add to the disaster recovery literature, through an examination of the role the Internet plays in the adaptive ability of youth to disseminate well-being to difficult-to-reach youths in emergent flood situations. The findings from this paper support the idea that both social scientists and educators would benefit from collaboration in investigating ways to build well-being for youths who are exposed to flooding. It may also provide scientific information for social workers, counsellors, and other professionals working with youths in terms of the Internet as an important resource for their therapeutic work in the maintenance of youth well-being. The results of this study may also promote greater awareness among social and healthcare providers to invest their efforts into preparing youths for future flood situations.

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