Chapter 14

Double Disaster: Disaster through a Gender Lens

Sarah Bradshaw[1] **and Maureen Fordham**[2]

[1] *Department of Law and Politics, Middlesex University, London, UK,* [2] *Department of Geography/ Gender and Disaster Network (GDN), Northumbria University, Newcastle, UK*

ABSTRACT

This chapter explores the impact of disasters on women and girls, with particular reference to the context of the developing world. It critically explores the conceptual and theoretical basis for assuming that a differential impact exists. It highlights that disasters are gendered events and women and girls experience them differently from men, suffering longer term and more intangible impacts such as a rise in violence or greater insecurity in employment. Given women and girls are impacted more and differently than men and boys, it might be expected gender issues would be a key policy concern, yet the chapter highlights that gender is still excluded from much policy on disaster risk reduction. Drawing on the lessons learned from processes to "engender development," it suggests that, although exclusion remains an issue, how women are included in disaster risk reduction and response can also raise concerns. It concludes by highlighting that tackling gendered risk demands both a reconceptualization of "disaster" and for disasters to become a development issue.

14.1 INTRODUCTION

This chapter explores the impact of disasters on women and girls, with particular reference to the developing world context. It begins by considering why "natural" disasters should be understood as gendered events, before critically examining the existing evidence that suggests there is a differential impact on women and girls. Through consideration of the "double disaster" women face, including increased violence, poverty, and insecurity postevent, it problematizes ideas of what the disaster really is for women. Drawing on evidence from the developing world, it then explicitly considers the situation of adolescent girls to highlight how they often fall through programming cracks, being conceptualized neither as women nor children, meaning their specific needs are largely invisible

Hazards, Risks, and Disasters in Society. http://dx.doi.org/10.1016/B978-0-12-396451-9.00014-7
Copyright © 2015 Elsevier Inc. All rights reserved.

and remain unmet. The final sections highlight how the capacities of women and girls mean they are increasingly being seen as much as policy solutions as policy problems and suggests inclusion can bring its own problems. It concludes by highlighting that to reduce disaster risk for women demands an explicit focus on reducing gender inequalities. Without this, although a focus on women within disaster risk reduction (DRR) and response will reduce the risk of disasters, it will not reduce women and girls' disaster risk.

14.2 WHY SHOULD DISASTERS BE UNDERSTOOD AS GENDERED EVENTS?

Although "disaster" is a contested notion (Cardona, 2004; Oliver-Smith, 2002; Quarantelli, 1998), it is usually understood that one occurs when an individual or group is vulnerable to the impact of a natural or human-made hazard, that is they are unable to "anticipate, cope with, resist, and recover from" an event (Blaikie et al., 1994). The root causes of vulnerability lie with the lack of access to the resources that allow people to cope with hazardous events, such as income, education, health, and social networks. This access may be gendered, in that women and girls in general tend to have less access to, or control over, assets than men and boys. Thus, from the outset, it may be assumed women and girls will be more vulnerable to hazards than men and boys. Vulnerability may also be related to the roles women and men play in society. Typically women (and especially poor women) juggle triple roles simultaneously: a reproductive role (this is mainly related to childbearing/rearing responsibilities and domestic tasks); a productive role (this is paid work or subsistence/home production); and a community managing role (these are voluntary, unpaid roles carried out in and for the community) (Moser, 1993). These roles add to women's vulnerability through making them time poor and have implications for their health and well-being. Since reproductive and community roles do not generate an income they are little valued, and this, coupled with the fact women's jobs generally pay less than men's, means women may be poorer and/or dependent on a male income, giving them less voice than men in the home and the community. Gendered norms may impact directly on women's ability to respond to a natural hazard. Their socially prescribed roles mean they are not taught to swim or climb trees, skills that may be vital for survival during floods and tsunamis, or the fact they are slowed down by their clothing, for example (Oxfam, 2012) may mean they are more likely to die during an event than men. Studies suggest gendered social norms mean women are not only less able, but also less willing to save themselves, given they may be constrained by socially constructed roles and norms that suggest they cannot leave the home without male permission or because care of children and the elderly slows their escape (Chowdhury et al., 1993; Oxfam, 2005; WEDO, 2008).

Vulnerability to an event then is not based on sex or biological differences between men and women, but rather due to how society constructs what it means to be a man or a woman—what roles they should play and how they should behave. As gender intersects with characteristics such as class, ethnicity, and sexuality, and interacts with age/life course, different women experience different levels of vulnerability.

Although it is important to take into account the different characteristics of a woman when determining vulnerability, understanding vulnerability as a product of the intersection of gender, generation, and other characteristics such as disability or race/ethnicity should not result in checklists of characteristics used in a cumulative fashion to predict who will be "most" vulnerable. For example, the assumption that women over 65 years of age would be more vulnerable to the negative impact of hurricane Katrina was not borne out, and what was important in understanding impact was the twinning of race and gender (Willinger and Knight, 2012). One group generally highlighted in the literature as particularly vulnerable is single mothers/female heads of household since they are seen to be among those most asset-poor and "have been found to be among those most affected by natural disasters" (DFID, 2004: 3). However, little empirical evidence exists to support such an assertion, since disaggregated data are scant, and the assumption rests on the contested assertion that female heads are the "poorest of the poor" in "normal" times (see Chant, 2003, 2008 for discussion). Furthermore, as the risk of disaster is a product of both hazard and vulnerability, in many ways checklists of vulnerability are nonsensical without a hazard to which to relate them.

Women's vulnerability should not be assumed, nor can the hazards they face be known in the current "risk society" (Beck, 1998). Exogenous shocks by their nature are often "known unknowns" but increasingly the "unknown" element is being stressed as climate-induced hazards are increasingly unpredictable, whereas financial, fuel, and food crises make it more difficult to predict vulnerability. Due to existing inequalities of power, women and girls may be the most impacted by exogenous shocks that bring both environmental and financial crises. Ironically, it is their lack of access to resources that may make them most practiced at responding to crisis, through living this on a daily basis. Women's responses to economic crisis brought about by the neoliberal policies of the 1980s demonstrated their ability to adapt and cope; they also demonstrated the heavy price women pay in their time and well-being to ensure the survival of the household (Elson, 1991). Although women may have ideas about how best to adapt, they may be least able to translate ideas into practice, given their limited voice in the household and community. In the short term then we might expect to see greater gender losses. Since the Indian Ocean Tsunami, women's greater vulnerability to hazards has been assumed; however, the evidence on which to base this assumption is not as robust as might be imagined.

14.3 EVIDENCE FOR A GENDERED IMPACT OF NATURAL HAZARDS

A disaster is generally defined as such if the levels of loss of life, numbers injured, or loss of material goods goes over a specific, but subjective, threshold. Loss of material goods while devastating at a household or individual level often does not even register at a national level where loss is usually recorded in terms of economic and social infrastructure, or in terms of output and production. Holland (2008) attempted to estimate the household cost of the floods in Fiji in 2004, and suggested a loss of F$4,815 per impacted household. Given the average household income was F$3,500 a year, this clearly would have forced many families to fall below the poverty line if no external assistance was provided to counteract this. No estimate of the differential loss by sex was provided. Losses women suffer to their asset base, such as cooking utensils or chickens raised to supplement food consumption or for sale, often go unrecorded, yet loss of this output can have a large economic cost; for example, the loss of subsistence egg production to Nicaragua was calculated to be between US$90,000 and US$120,000 per month immediately after hurricane Mitch (Bradshaw, 2004).

Perhaps the most obvious evidence of women and girls being more vulnerable to hazards would be if larger numbers of them die or are injured. Biological differences between men and women may suggest more women than men will die, but not because women are born physically "weaker" than men but because women's lack of access to resources such as food may mean they are undernourished lowering their physical strength to respond or because their socially constructed roles impact on their ability to respond effectively. Ironically, concerns about women's safety may also have a role to play as many parents in Bangladesh consider cyclone shelters to be unsafe for girls, for example, and prefer to leave them at home (Plan, 2011). The key constraints then are not biological but arise from the socially constructed roles of women and men, and the social norms that govern their behavior. Given this, in some cultures and situations men may be more likely to die, especially in sudden-onset events. Gendered ideology and gendered practice give rise to systematic gender differences in the perception of risk (Gustafson, 1998) and studies suggest white males are likely to rank a variety of risks significantly lower than women or minority groups (Finucane et al., 2000; Fothergill, 1996). Men may display more risk-taking behavior than women, explaining why men accounted for 73 percent of all road traffic deaths in 2002 (Waldron et al., 2005). In Latin America cultural ideas of maleness may mean men exhibit more risky behavior (Bradshaw, 2004), which may help explain why more men than women were said to have died post—hurricane Mitch (Gomáriz, 1999). Jonkman and Kelman's (2005) study of UK and European flood fatalities also points to higher risk-taking by men. In Australian bushfires, men are most often killed outside

while attempting to protect the home and other assets, whereas most female and child fatalities occur while sheltering in the house or when fleeing, usually too late (Haynes et al., 2010). Lack of information, education, and engagement with preparedness activities means women when faced by a perceived risk often do not feel they can act, do not know when to act, or how to act on warnings (Tyler and Fairbrother, 2013) but when warnings are in the hands of women casualties overall are dramatically reduced (Buvinić, 1999).

How does this translate into actual impact? First and foremost, it is important to note reliable fatalities data, disaggregated by gender and generation, is still largely missing (Mazurana et al., 2011). Even the Emergency Events Database does not hold data disaggregated by gender and generation, not because they do not choose to or are unaware of the need for such data, but because the organizations who provide data for the database do not collect it (Fordham et al., 2007). In this context the study by Neumayer and Plümper (2007) is of particular note. The researchers constructed indicators of disaster magnitude and of women's socioeconomic status and explored how these relate to the size of the gender gap in life expectancy. They concluded that in countries where a disaster had occurred, where the socioeconomic status of women is low, more women than men die or die at a younger age. In the absence of gender disaggregated date on deaths due to disasters this study is often cited as evidence to support the notion that women are more vulnerable to hazardous events, but perhaps more importantly it suggests that some women are more vulnerable than others. The studies highlight that socioeconomic status and gender matter, but more importantly highlight the need for data to be disaggregated by gender and generation in order to understand and address this.

There is then growing evidence to suggest that natural hazards may have a different impact on men and women, on women and girls, and on different groups of women; however, the impact may not just be felt in terms of loss of life and material goods, but there may be longer term "secondary" impacts.

14.4 THE DOUBLE IMPACT OF DISASTERS ON WOMEN AND GIRLS

A disaster tends to be measured in terms of loss of life and/or economic output and social infrastructure, and measured immediately after an event, yet as the discussion below suggests the real disaster for women might develop over time and be experienced differently than for men (see also Bradshaw and Fordham, 2013). This raises the old question of what a "disaster" is (Quarantelli, 1998). If, as will be argued, the "real" disaster for women and girls is the "secondary" impacts felt in intangible changes to well-being or increased time burden then the notion of "disaster" needs to be reconceptualized if gendered risks are to be addressed (see Bradshaw, 2013a).

14.4.1 Time Burden

Perhaps the biggest impact on women and girls is the escalation of hours in the working day. Studies suggest women in general are "time poor" compared to men and postevent women often find themselves having to spend even more time in reproductive activities (because that work has become more difficult postdisaster), having to continue in, or to find productive work (because of the loss of other income sources), and are also increasingly targeted as "participants" in processes of reconstruction, spending time rebuilding homes, livelihoods, and communities. The elongation of an already long working day may have a negative impact on women's health and well-being and a knock-on effect on their daughters' well-being if they have to step in to help their mothers. Activities will also be made more burdensome by the context of insecurity in which they occur.

14.4.2 Violence against Women and Girls

Violence against women and girls (VAWG) is beginning to be taken seriously at all policy levels as its inclusion in the recent illustrative goals for the post-2015 development agenda highlights (HLP, 2013; OWG 2014). Violence, here understood as physical, emotional, and economic violence, and the threat of violence, are important in policy terms, not only because of the moral issues they raise, or the public health issues, but also since the threat of "domestic" violence keeps women in the home, whereas the construction of outside the home as populated by dangerous unknowns further constrains women's movements and actions and limits their life choices. Data on the prevalence and incidence of violence are patchy and commonly unreliable, but it is estimated that over 30 percent of women suffer physical partner abuse during "normal" times (Ellsberg et al., 2000).

Theoretically, we might expect to see an increase in violence or that violence has become more visible postevent (Merton, 1970), yet from the outset authors have stressed that for violence to increase there must be other factors present, that is, the disaster in itself is not enough to "cause" violence (Barton, 1970). It could be argued that disasters, or their aftermath, reveal existing actual levels of violence or the potential for violence. Those who are displaced and forced to live communally may continue to carry on their private lives in public, including violence. It may be the case that the levels of violence increase due to the frustration felt by men unable to fulfill their socially constructed gendered roles of protector and provider. It may be the case that the nature of violence changes, with higher levels of stranger violence as social systems and structures of protection break down (see Bradshaw, 2013a; Phillips et al., 2010 for discussion). In particular, large-scale "refuges" and displaced people's camps have seen high levels of sexual violence by "unknowns" (Delaney and Shrader, 2000; Duramy, 2011; Dynes

and Rodríguez, 2007) and their design has been critiqued for facilitating this. Although sexual violence and forced sex is often assumed to increase post-event, care needs to be taken as dramatic media reports may promote that perception, whereas data to support this are still lacking (GSDRC, 2013). Moreover, intimate partners and close family may remain the highest risk to women and girls: a study in internally displaced person camps in northern Uganda found women were 8–10 times more likely to experience violent assault by their husband than by a stranger (IFRC, 2012: 85).

The 2012 World Disasters Report noted that, although violence in a disaster context might be complex, it is not inevitable; rather it is predictable and preventable (IFRC, 2012: 120). VAWG is increasingly a humanitarian concern; however, survivors of violence still suffer from the continued construction of humanitarian response as short term, which means, in the medium term, their needs fall into the "gap" between when the emergency response ends and "normal" services resume, or in the developing world context, between relief and development (Bradshaw, 2013b).

14.4.3 Psychosocial Impact

Living through a violent and destructive natural event is assumed to bring further distress to those with mental health issues and to provoke emotional distress in those who have not suffered previously. The International Federation of Red Cross and Red Crescent Societies suggests addressing psychosocial needs should be based on the principle that most acute stress problems during emergencies are best managed without medication, following the principles of "psychological first aid" (IFRC, 2009). However, the interaction of long-term conflict and rapid-onset "natural" disaster can provoke severe psychosocial response. Although the applicability of post-traumatic stress disorder (PTSD) in a non-Western context has been questioned (Norris et al., 2001; PTSD Research Quarterly, 2009) as has the "medicalization of distress" (Summerfield, 1999), PTSD is increasingly recognized as an issue in the developing as well as "developed" world context postevent.

A study in Nicaragua that asked people about the "emotional impact" of hurricane Mitch found 74 percent of those who reported being affected were women (CIET/CCER, 1999a,b), and research in the occupied Palestinian territories found exposure to traumatic events was associated with more severe psychiatric disorders among women than men (Punamäki et al., 2005). Young people may display different symptoms than adults, and variation exists between the very young and adolescents (Hamblen, 2006). Gender differences also occur, with boys becoming more aggressive and antisocial, and often taking longer to recover than girls who are more verbal and show more distress. Why women suffer more or more severely is less to do with them being women than to do with their position and situation in society as

women. A study from Tamil Nadu (Kumar et al., 2007) showed PTSD was higher among individuals with no household incomes and those who were illiterate. Because women tend to occupy a lower socioeconomic position than men, they may be more susceptible to psychological problems. Emotional health is also related to physical health and, once again, due to reproductive health risks and the social and economic limitations around dealing with these, women tend to be less physically well than men. Caution needs to be exercised when evaluating mental health data, however, as history demonstrates that women have been diagnosed as "ill" for displaying attitudes considered radical at the time or actions that are outside the gender norm (Showalter, 1985).

In contrast to PTSD, posttraumatic growth suggests positive change is possible after a traumatic event or recognizes that at least people often feel a mixture of positive and negative emotions (Tedeschi and Calhoun, 2004). Research suggests some people find positive changes arise from struggling with the aftermath of trauma and develop a deeper appreciation of life. One woman survivor of the Marmara earthquakes in Turkey in 1999 reported that the changes in opportunities postearthquake were so profound that she had "adopted a new identity" (Ozsoy and Sariipek, 2010: 103), whereas research post-Katrina highlights for some young women the event was a catalyst for them feeling more able to openly express their sexual identity (Overton, 2014).

14.4.4 Deterioration in Reproductive and Sexual Health

Although women and girls may be more susceptible to health threats given their lower entitlements to resources such as food and water, they also face specific health issues related to their sex. Pregnant women, and those women who give birth soon before, during, or immediately after an event, face specific health concerns. Nursing mothers, for example, are particularly susceptible to malnutrition and dehydration and this might be assumed to provoke higher mortalities and morbidity. However, lack of centralized, systematic records postevent means the extent of the problem is largely unknown.

The World Health Organization suggests a core package of minimum reproductive health interventions should be put in place in emergency settings; however, only limited awareness exists of this and limited funding. Even as late as 2005 in the Indian Ocean tsunami response, "hygiene kits" for women, although provided, were underresourced (Nobel de Silva, 2006). Often products, where available, are sourced from overseas and these may not be culturally appropriate and thus not used, and privacy issues and cramped living exacerbate the situation, leaving many women suffering from urinary tract and other infections (Ha-Redeye, 2006).

Although sexuality is seldom discussed in the emergency context, the specific sexual health needs of those living outside the heteronormative

expectations of a society may not be met and the postevent context may leave them more vulnerable to assault and discrimination. An increase in sexual assaults can lead to an increase in sexually transmitted infections and, in a situation of limited access to contraception, unplanned pregnancies for women forced to have sex with known or unknown men.

14.4.5 Poverty and Insecure Employment

It is often suggested that women and girls postdisaster will be forced into sex work or into "transactional sex," where women and girls are coerced into providing sex in exchange for food and other basic goods or "protection." For example, a study by United Nations High Commissioner for Refugees (UNHCR) found that the practice of women and adolescent girls engaging in transactional sex in Port-au-Prince after the earthquake was "widespread" (UNHCR, 2011), whereas a survey in a refugee camp and surrounding host villages near Tanzania's border with Democratic Republic of the Congo found refugees were two-and-a-half times more likely to have experienced forced sex and three times more likely to have engaged in transactional sex (IFRC, 2012: 91). In Sierra Leone in 1999, 37 percent of those involved in sex work or transactional sex were found to be under the age of 15 years (IFRC, 2012: 82). However, it is not clear the extent to which levels of such sexual exchanges increase postevent, or if it is the nature of sexual exchanges that changes, in terms of with whom women engage in sex or which women engage in such transactions, since large-scale studies do not exist, especially tracking change over time. The impact on the self-perception of the women and how they are viewed by others is also an unknown.

14.4.6 Changes in Networks and Family Support

Although community and familial networks are important for ensuring survival during and immediately after the event as well as therapeutic communities, "corrosive" communities have been noted (see Brunsma et al., 2007 for discussion) and at the very least social and familial networks may be put under pressure. Although women may have better and wider social networks than men, their ability to effectively transform good networks into tangible resources may be less than a man's since her access to "household" resources may be determined by her ability to negotiate with a male partner (Bradshaw, 2013a). All people may suffer a loss of friendship and kinship networks postevent and for women loss of networks may have implications for child care and their ability to (re)engage in income-generating activities as well as increasing their vulnerability to violence (Duramy, 2011). On the other hand, calling on familial networks for support may allow the reestablishment or reenforcement of familial power relations, which further removes agency and control from women in particular (Hoffman, 1998).

14.4.7 Change in Self-Perception

A less well-recognized consequence of disasters might be women's perception of a loss of status and dignity. Being in a refuge may add to this through the "inhuman" conditions found in camps such as those in Haiti after the 2010 earthquake (Horton, 2012). The media coverage, which constructed men as violent criminals and women as prostitutes, meant the women's desire for respect and dignity was also undermined, something also found post-Katrina where African-American women had suffered from being constructed as undeserving recipients of benefits long before the event (Sterett, 2012). However, it is not only external perceptions that may have a negative impact, but also processes of reconstruction may not always have the positive outcomes assumed. In post-Mitch Nicaragua, female heads of household, despite continuing with their reproductive and productive roles and taking an active role in reconstruction, were less likely to recognize their own contribution to the household and named an adult son as the main contributor instead (Bradshaw, 2002). Differences in how disasters are understood may also mean not all disasters are "disasters" for all women. Cupples (2007) and Fordham et al. (2007) research in very different parts of the world highlight "disasters" can be seen as "windows of opportunity" in which women find their prospects have changed radically for the better; at least for a time.

How women's perception of self is changed by an event remains an issue still to be researched, and how response and reconstruction impact upon this is still largely unknown. The impact of disasters on young women is even less known, and how adolescent girls grow up under the shadow of disasters is only now starting to be explored.

14.4.8 Specific Issues Faced by Adolescent Girls

During the relief period, adolescent girls are often seen only as "daughters" with the focus being on supporting those who care for them or as "orphans" when the focus lies on finding someone to care for them. Reconstruction projects similarly do not target adolescent girls as beneficiaries of aid, if they are not seen to be providers for others, as "workers," or mothers, but instead constructed as dependents. Girls then fall between the gaps in programming. This is exacerbated in the developing world by the division between disaster and development, meaning a 13-year-old girl who survives an event effectively grows up in "transition." By the time development funding returns, girls of a disaster will be young women, and the bounded choices they were able to make, or had made for them, will have determined to a large extent their "development" possibilities (Bradshaw, 2013b).

While there is limited information on women, there is even less on adolescent girls especially as there have been no systematic follow-up studies tracking the situation of girls after the reconstruction period is "over" to

determine if the impact of the issues highlighted here persist in the longer term. This is compounded by the fact the concept of "girls" is a contentious one and "adolescence" may be a short or nonexistent period, and at very least is definitionally difficult to pin down. The notions of child and adolescent, young and adult woman then should be seen as fluid and not determined by age but by life course and context.

Notions of childhood and youth are associated, especially in the developed world, with education. Willingness to school girls is far more strongly determined by income and the broader costs of education, than is the case for boys. Thus, losses postevent, including the need to replace books and uniforms, may mean girls more than boys are delayed in returning to the classroom, while insecurity of roads and the fear of violence might further limit their return. The opportunity cost to leaving girls in school may increase postevent if they have to replace their mother's role in the household due to her death, disability, or migration, or as their mothers are occupied with reconstruction. Even if they remain in school, their reduced time for learning due to household chores, compounded by stress and trauma, may adversely affect their performance.

While adolescent girls juggle productive, reproductive, and community management roles, aid agencies prioritize and promote their role as "school girl," blurring their dual identity as adult/child. This blurring is important as the specific needs of adolescent girls may be ignored if they are classified as "children" rather than young women, in particular their sexual and reproductive health needs are often bottom of the checklist of relief agencies, if they feature at all (UNFPA, 2013).

Yet adolescent girls may be sexually active, sometimes by choice, but other times due to lack of choices. As noted above, a rise in transactional sex is suggested to occur postevent and this may include the trafficking of women, girls, and boys across countries. Trafficking may increase but it is important to note that the forced movement of children and adolescents by their parents for financial gain, including being sold as domestic servants or being "lent" to relatives, may be widespread in some cultures.

While some girls leave behind the school room for precarious employment, for others their identity changes as they move from being daughter to wife, from child to mother. Forced and early marriage is an existing "problem" across the world, and in the developing world one out of seven girls marries before the age of 18 years (UNFPA, 2012). An increase in early marriages postevent has been suggested to have occurred in Haiti, Pakistan, and in various countries impacted by the Indian Ocean tsunami. Early marriage may also be associated with slow-onset "disasters" and food insecurity with girls being exchanged for food, and this may increase as part of a climate change (mal) "adaptation" strategy (Deen, 2010).

Young married women may face extreme isolation and this may be something more generally shared by adolescent girls. In general, the ability to

restore friendship networks may be more difficult for girls, given the increase in time helping their mothers, and as parents may be more protective of them and not encourage them to go "out" and meet new friends (IFRC, 2012). This may leave girls more isolated and without emotional support postevent with long-term implications for their mental health and self-perception. In contrast, for some young women post-Katrina the changes may have been more positive with young women establishing new friendships and social support networks (Overton, 2014).

14.5 GENDERED CAPACITIES: INCLUDING WOMEN AND GIRLS IN DRR

While women's vulnerability has become assumed, their capacity to respond not only individually but also collectively to hazards is less well documented. While often depicted as dependent on heroic men (often Western military personnel and male relief workers arriving to "save" them), women do take actions to save themselves and others. A study on post-Mitch Nicaragua documented how women helped to save people and possessions. However, women's actions were constructed in postevent narratives as "helping" men and even this help was often forgotten over time (Bradshaw, 2001, 2002). Typically, women's actions are associated with rescuing other women, children, and the infirm, not men. Yet, Fordham's (2006) study highlights that through engagement in local-level DRR women come to understand they can take a lead role at all stages, including by rescuing men. Women's engagement in early warning systems and other preparedness activities can reduce the need for them and others to be "rescued" (Buvinić, 1999).

Where they have the opportunity to do so, research suggests that women are more likely to receive and act upon early warnings (Fothergill, 1996; Fordham, 2001; Enarson, 2006). Women have their own social networks, often formed through parenting and caring roles, which make them best able to identify those at greatest risk in the community. Social networks and social capital are also important resources to help respond to a crisis in the short and medium term. Girls too can be important communicators of risks and risk management options especially in terms of communications with parents, adults, or those outside the community (Plan UK, 2013).

At the international level, DRR initiatives have also made tentative steps toward including gender into policy frameworks. The Hyogo Framework for Action (HFA 2005–2015), which provides the framework for DRR at an international level, in the opening section states that a gender perspective should be integrated into all disaster risk management policies, plans, and decision-making processes. However, as this did not even result in gender being integrated throughout the HFA itself, the commitment to gender seems to have been more rhetoric rather than reality. In a survey in 2010 by the International Strategy for Disaster Reduction the theme that scored lowest on

both expertise and recognition of the need to strengthen knowledge of this area was "gender," with only 13 percent suggesting they had expertise in the area, yet only 13 percent suggesting it was an area that needs more expertise.

It seems that despite the growing evidence to support the notion of disasters as gendered events, there is still a long way to go to convince DRR professionals of the importance of adopting a gender approach. In contrast, in development programs the benefits of involving women in projects seem more accepted.

14.6 "ENGENDERING" POLICY INITIATIVES

The parallels between how gender and development and gender and disasters emerged and developed have been noted in the literature (see Bradshaw, 2015). The former is more "advanced" not only in terms of the achievements made to date to integrate gender into development, but also in terms of how this has been systematically documented. For the last 15 years the global development agenda has been framed by the Millennium Development Goals. While critiqued by gender activists from the outset (see WICEJ, 2004) the 10 goals do include a stand-alone goal focused on gender equality and women's empowerment, as well as a goal focused on maternal mortality. Despite their limitations, they suggest an acceptance of gender as an important issue, something that is still lacking from DRR policy. A consideration of why gender has become "accepted" within development suggests, however, that "inclusion" can bring its own problems.

Based on evidence that suggests that societies that discriminate by gender tend to experience less rapid economic growth and poverty reduction than societies that treat males and females more equally, it became understood by actors such as the World Bank that social gender disparities produce economically inefficient outcomes (World Bank, 2001). The World Bank notes that "gender-sensitive" development strategies "contribute significantly to economic growth, as well as equity objectives" (World Bank, 2002) leading to the assertion that reducing gender inequalities is "smart economics" (World Bank, 2006). Yet, while the evidence highlights gender equality is good for growth, it also highlights that economic growth is not necessarily good for gender equality.

Within this economic development discourse women have been recognized as efficient providers of goods and services to others (see Bradshaw et al., 2013). Women are the preferred providers of "social protection" in programs such as Conditional Cash Transfers designed to reduce poverty in the short and longer term, programs that are increasingly being utilized in postdisaster settings (Heltberg, 2007; Vakis, 2006). Women are targeted with resources because they are seen to use them more efficiently than men (Bradshaw, 2008; Molyneux, 2007), yet this targeting often leads policy makers to claim these are gendered projects bringing women's empowerment. Jackson (1998) noted

in the late 1990s that poverty reduction programs targeted at women became equated to gender equality projects, yet the assumption that poverty reduction programs automatically bring gender equality can be challenged. She pointed to the need to "rescue gender from the poverty trap," highlighting if gender equality is the goal then gender equality projects are the only means to achieve this goal.

Translating the lessons learned from gender and development to the field of disasters highlights that if losses are to be avoided or lessened, and if women are more vulnerable to disaster loss as suggested by the evidence presented above, then drives to promote the role of women and girls in disaster response and risk reduction could be justified in "value for money" terms alone. Including women and girls in all the stages of the disaster "cycle" can improve the outcomes or bring "efficiency" gains. Yet, as noted from the development literature, while including women and girls in this way will improve disaster response and reduce disaster risk, unless DRR and response activities specifically address gender inequalities they will not change the situation and position of women. They will not then fundamentally change women's and girls' risk of disaster.

14.7 CONCLUDING COMMENTS

Reducing the impact of disasters on women and girls cannot be solved by disaster-based actions alone. It is inequities in the everyday, and not just in times of disaster, that create greater risk and reduce life chances for women and girls. Thus, action across the gender—disaster—development nexus is key to creating lasting change. This would imply not only reconceptualizing "disaster" to construct it as a "development" concern, but also understanding that to reduce disaster risk for women demands a focus on reducing gender inequalities. Without such fundamental change in how disasters are understood women will continue to be at greater risk of a natural hazard becoming a disaster for them. They will face the "double disaster" of material losses from the event itself being compounded by longer term losses in health and well-being, through violence, insecurity, and time poverty. While there is growing recognition of the need to focus on women in disasters, the double identity of adolescent girls as child and as adult, rather than leading to a double response, sees them falling between the gaps in programming. The disaster for them will be measured not only in the short or long term, but also in their lifetime.

ACKNOWLEDGMENTS

This paper draws on a report commissioned by the UK Department for International Development (DFID) on "Women and Girls in Disaster." We would like to thank DFID and

all those involved for their support. We would also like to thank Brian Linneker, and all those who commented on earlier drafts of the paper, for their useful suggestions.

REFERENCES

Barton, A.H., 1970. Communities in Disaster: A Sociological Analysis of Collective Stress Situations. Doubleday, New York.

Beck, U., 1998. Risk Society: Towards a New Modernity. Sage, London.

Blaikie, P., Cannon, T., Davis, I., Wisner, B., 1994. At Risk: Natural Hazards, People's Vulnerability, and Disasters (also published in 2003 with these authors listed: B. Wisner, P. Blaikie, T. Cannon, I. Davis). Routledge, London, New York.

Bradshaw, S., 2001. Dangerous Liaisons: Women, Men and Hurricane Mitch/Relaciones Peligrosas: Mujeres, Hombres y el Mitch. Puntos de Encuentro, Managua, Nicaragua.

Bradshaw, S., 2002. Exploring the gender dimensions of reconstruction processes posthurricane Mitch. J. Int. Develop. 14, 871–879.

Bradshaw, S., 2004. Socio-economic Impacts of Natural Disasters: A Gender Analysis, 32. United Nations Economic Commission for Latin America and the Caribbean (ECLAC) Serie Manuales. Available at: http://www.eclac.org/publicaciones/xml/3/15433/lcl2128i.pdf.

Bradshaw, S., 2008. From structural adjustment to social adjustment: a gendered analysis of conditional cash transfer programmes in Mexico and Nicaragua. Global Soc. Policy 8 (1), 188–207.

Bradshaw, S., 2013a. Gender, Development and Disasters. Edward Elgar, Northampton.

Bradshaw, S., 2013b. Bridging the humanitarian - development divide' opinion piece in. In: Double Jeopardy: Adolescent Girls and Disasters because I Am a Girl Report: The State of the World's Girls 2013. Plan International, UK.

Bradshaw, S., 2015. Engendering Development and Disasters (forthcoming in Disasters, January 2015).

Bradshaw, S., Castellino, J., Diop, B., May 2013. Women's Role in Economic Development: Overcoming the Constraints. Background paper prepared for the High Level Panel on the post-2015 agenda. UN Sustainable Development Solutions Network. http://www.post2015hlp.org/the-report/.

Bradshaw, S., Fordham, M., August 2013. Women and Girls in Disasters. Report Produced for the Department for International Development (DFID), UK. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236656/women-girls-disasters.pdf.

Brunsma, D., Overfelt, D., Picou, J.S., 2007. Introduction: Katrina as paradigm shift: reflections on disaster research in the twenty first century. In: Brunsma, D., Overfelt, D., Picou, J.S. (Eds.), The Sociology of Katrina: Perspectives on a Modern Catastrophe. Rowman and Littlefield, Maryland USA, pp. 1–24.

Buvinic, M., 1999. Hurricane Mitch: Women's Needs and Contributions. Inter-American Development Bank, Sustainable Development Department Technical Papers Series.

Cardona, O.D., 2004. The need for rethinking the concepts of vulnerability and risk from a holistic perspective: a necessary review and criticism for effective risk management. In: Bankoff, G., Frerks, G., Hilhorst, T. (Eds.), Mapping Vulnerability: Disasters, Development and People. Earthscan, London, pp. 37–51.

Chant, S., 2003. Female Household Headship and the Feminisation of Poverty: Facts, Fictions and Forward Strategies. London School of Economics and Political Science, London, UK. Gender Institute. Available at: http://eprints.lse.ac.uk/574/ (14.08.12).

Chant, S., 2008. Dangerous equations? how female-headed households became the poorest of the poor: causes, consequences and cautions. In: Momsen, J. (Ed.), Gender and Development: Critical Concepts in Development Studies. Routledge, London, UK.

Chowdhury, A.M.R., Bhuyia, A.U., Choudhury, A.Y., Sen, R., 1993. The Bangladesh cyclone of 1991: why so many people died. Disasters 17 (4), 291–304.

CIET-CCER, 1999a. Social Audit for the Emergency and Reconstruction: Phase 1-April 1999. Civil Coordinator for Emergency and Reconstruction/CIETinternational/Carqui Press, Managua, Nicaragua.

CIET-CCER, 1999b. Auditoría Social para la Emergencia y la Reconstrucción - Fase 2 -Noviembre. Civil Coordinator for Emergency and Reconstruction/CIETinternational/Carqui Press, Managua, Nicaragua.

Cupples, J., 2007. Gender and hurricane Mitch: reconstructing subjectivities after disaster. Disasters: J. Disaster Studies, Policy Manage. 31 (2), 155–175.

Deen, T., 2010. Famine Marriages - Just One By-Product of Climate Change. webpost 9/3/10 on. www.globalchange.me.

Delaney, P., Shrader, E., 2000. Gender and Post-Disaster Reconstruction: The Case of Hurricane Mitch in Honduras and Nicaragua. Decision review draft presented to the World Bank, January 2000. Available online: www.gdnonline.org.

DFID, 2004. Adaptation to Climate Change: Making Development Disaster-Proof. DFID Key Sheet 06. Department for International Development, UK.

Duramy, B.F., 2011. Women in the aftermath of the 2010 Haitian earthquake. Emory Int. Law Rev. 25, 1193–1215.

Dynes, R., Rodríguez, H., 2007. Finding and framing Katrina: the social construction of disaster. In: Brunsma, D., Overfelt, D., Picou, J.S. (Eds.), The Sociology of Katrina: Perspectives on a Modern Catastrophe. Rowman and Littlefield, Maryland USA, pp. 23–34.

Ellsberg, M., et al., 2000. Candies in hell: women's experiences of violence in Nicaragua. Soc. Sci. Med. 51 (11), 1595–1610.

Elson, D., 1991. Male bias in macro-economics: the case of structural adjustment. In: Elson, D. (Ed.), Male Bias in the Development Process. Manchester University Press, Manchester, pp. 164–190.

Enarson, E., 2006. SWS Fact Sheet: Women and Disaster. Available at: http://www.socwomen.org/wp-content/uploads/2010/05/fact_10-2006-disaster.pdf (accessed 22.09.14).

Finucane, M.L., Slovic, P., Mertz, C.K., Flynn, J., Satterfield, T.A., 2000. Gender, race, and perceived risk: the 'white male' effect. Health, Risk Soc. 2 (2), 159–172.

Fordham, M., 2001. Challenging boundaries: a gender perspective on early warning in disaster and environmental management. In: United Nations Division for the Advancement of Women (DAW) International Strategy for Disaster Reduction (ISDR) Expert Group Meeting on Environmental Management and the Mitigation of Natural Disasters: A Gender Perspective, Ankara.

Fordham, M., 2006. Unpublished Field Notes: El Salvador 2006, Plan International.

Fordham, M., Ariyabandu, M.M., Gopalan, P., Peterson, K., 2007. Please Don't Raise Gender Now - We're in an Emergency! 2006 World Disasters Report International Federation of Red Cross and Red Crescent Societies.

Fothergill, A., 1996. Gender, risk and disaster. Int. J. Mass Emerg. Disasters 14 (1), 33–56.

Gomáriz Moraga, E., 1999. Género y desastres: Introducción conceptual y análisis de situación (Paper prepared for the IDB technical meeting on the effects of Hurricane Mitch on women and their participation in the reconstruction of Central

America). Available from: http://www.cridlac.org/digitalizacion/pdf/spa/doc11630/doc11630.htm.

GSDRC, 2013. Helpdesk Research Report: Violence against Women and Girls in Haiti. Governance and Social Development Resource Centre.

Gustafson, E., 1998. Gender differences in risk perception: theoretical and methodological perspectives. Risk Anal. 18, 6.

Ha-Redeye, O., 2006. “Engendering” change in disaster response: increasing women in leadership roles. In: Provost, M. (Ed.), International Centre for Emergency Management Studies 2006 Gender and Disaster in Canada: New Thinking, New Directions, Record of Proceedings, October 31st to November 2nd, 2006.

Hamblen, J., 2006. PTSD in Children and Adolescents: A National Center for PTSD Fact Sheet. Available at: http://www.ptsd.va.gov/professional/treatment/children/ptsd_in_children_and_adolescents_overview_for_professionals.asp.

Haynes, K., Handmer, J., McAneney, J., Tibbits, A., Coates, L., 2010. Australian bushfire fatalities 1900−2008: exploring trends in relation to the ‘prepare, stay and defend or leave early’ policy. Environ. Sci. Policy 13 (3), 185−194.

HLP, 2013. A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development. The report of the High level Panel of Eminent Persons on the Post-2015 Development Agenda. http://www.post2015hlp.org/the-report/.

Heltberg, R., 2007. Helping South Asia cope better with natural disasters: the role of social protection. Develop. Policy Rev. 25 (6), 681−698.

Holland, P., 2008. An Economic Analysis of Flood Warning in Navua, Fiji. Pacific Islands Applied Geoscience Commission (SOPAC), Suva.

Hoffman, S., 1998. Eve and Adam among the members: gender patterns after the Oakland Berkeley firestorm. In: Enarson, E., Morrow, B. (Eds.), The Gendered Terrain of Disasters, Westport. Praeger, Connecticut and London, pp. 55−62.

Horton, L., 2012. After the earthquake: gender inequality and transformation in post-disaster Haiti. Gender Develop. 20 (2).

IFRC, 2009. Psychosocial Interventions: A Handbook. International Federation of Red Cross and Red Crescent Societies Reference Centre for Psychosocial Support, Denmark.

IFRC, 2012. World Disasters Report: Focus on Forced Migration and Displacement. International Federation of Red Cross and Red Crescent Societies.

Jackson, C., 1998. Rescuing gender from the poverty trap. In: Pearson, R., Jackson, C. (Eds.), Feminist Visions of Development: Gender Analysis and Policy. Routledge, London, pp. 39−64.

Jonkman, S.N., Kelman, I., 2005. An analysis of causes and circumstances of flood disaster deaths. Disasters 29 (1), 75−97.

Kumar, M.S., Murhekar, Manoj V., Hutin, Yvan, Subramanian, Thilakavathi, Ramachandran, Vidya, Gupte, Mohan D., 2007. Prevalence of posttraumatic stress disorder in a coastal fishing village in Tamil Nadu, India, after the December 2004 Tsunami. Am. J. Public Health 97 (1), 99−101.

Mazurana, D., Benelli, P., Gupta, H., Walker, P., 2011. Sex and Age Matter: Improving Humanitarian Response in Emergencies. CARE International, Feinstein International Center, Tufts University, UN OCHA - Office for the Coordination of Humanitarian Affairs. Available at: https://www.care.org/careswork/whatwedo/relief/docs/sex-and-age-disag-data.pdf.

Merton, R., 1970. Foreword. In: Barton, A.H. (Ed.), Communities in Disaster. Doubleday, Garden City, NY.

Molyneux, M., 2007. Two cheers for conditional cash transfers. IDS Bullet. 38 (3), 69−75.

Moser, C., 1993. Gender and Development Planning. Routledge, London.

Neumayer, E., Plümper, T., 2007. The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002. Ann. Assoc. Am. Geogr. 97 (3), 551–566.

Nobel de Silva, S., 2006. The trauma of tsunami-affected women in Sri Lanka. In: Domroes, M. (Ed.), After the Tsunami: Relief and Rehabilitation in Sri Lanka. Mosaic Books, New Delhi, pp. 61–70.

Norris, F.H., Weisshaar, D.L., Conrad, M.L., Diaz, E.M., Murphy, A.D., Ibañez, G.E., 2001. A qualitative analysis of posttraumatic stress among Mexican victims of disaster. J. Trauma. Stress 14, 741–756.

Oliver-Smith, A., 2002. Theorizing disasters: nature, power and culture. In: Hoffman, S., Oliver-Smith, A. (Eds.), Catastrophe & Culture: The Anthropology of Disaster. School of American Research Press, New Mexico, pp. 23–48.

Overton, L., 2014 forthcoming. Girls interrupted: girls growing up post-Katrina, (Ph.D. thesis). Middlesex University.

Oxfam, October 2012. Post-earthquake response and reconstruction gender-sensitive advocacy in Indonesia. Gender Equality Emerg. Oxfam GB, Oxford.

Oxfam, 2005. The Tsunami's Impact on Women. Oxfam Briefing Note, Oxfam International, March 2005. Available at http://www.preventionweb.net/files/1502_bn050326tsunamiwomen.pdf.

OWG, 2014. Outcome Document - Open Working Group on Sustainable Development Goals. Open Working Group on Sustainable Development Goals. United Nations. Available at: http://sustainabledevelopment.un.org/content/documents/4518SDGs_FINAL_Proposal%20of%20OWG_19%20July%20at%201320hrsver3.pdf.

Ozsoy, A., Sariipek, D.B., 2010. Women and their socio-economic situations. In: Dasgupta, S., Siriner, I., De, P.S. (Eds.), 2010 Women's Encounter with Disaster. Frontpage, Kolkata.

Phillips, B.D., Jenkins, P., Enarson, E., 2010. Violence and disaster vulnerability. In: Phillips, B., Thomas, D., Fothergill, A., Blinn-Pike, L. (Eds.), Social Vulnerability to Disasters. CRC Press, Boca Raton, Fl, pp. 279–306.

Plan, 2011. Weathering the Storm: Adolescent Girls and Climate Change. Plan International, UK.

Plan UK, 2013. In: Double Jeopardy: Adolescent Girls and Disasters because I Am a Girl Report: The State of the World's Girls 2013. Plan International, UK.

PTSD Research Quarterly 2009. Special edition on the 'The impact of disasters and political violence on mental health in latin America,' 20(4).

Punamäki, R.L., Komproe, I.H., Qouta, S., Elmasri, M., de Jong, J.T., 2005. The role of peritraumatic dissociation and gender in the association between trauma and mental health in a Palestinian community sample. Am. J. Psychiatry 162 (3), 545–551.

Quarantelli, E.L. (Ed.), 1998. What Is a Disaster? Perspectives on the Question. Routledge, London and New York.

Showalter, E., 1985. The Female Malady: Women, Madness and English Culture, 1830–1980. Penguin Books, New York.

Sterett, S., 2012. State policy and disaster assistance: listening to women. In: David, E., Enarson, E. (Eds.), The Women of Katrina: How Gender, Race and Class Matter in an American Disaster. Vanderbilt University Press, Nashville, pp. 118–129.

Summerfield, D., 1999. A critique of seven assumptions behind psychological trauma programs in war-affected areas. Soc. Sci. Med. 48, 1449–1462.

Tedeschi, R., Calhoun, L., 2004. Posttraumatic growth: conceptual foundations and empirical evidence. Psychol. Inquiry 5 (1), 1–18.

Tyler, M., Fairbrother, P., 2013. Bushfires are "men's business": the importance of gender and rural hegemonic masculinity. J.Rural Studies 30, 110–119.

UNFPA, 2012. From Childhood to Womanhood: Meeting the Sexual and Reproductive Health Needs of Adolescent Girls. Fact Sheet: Adolescent Girls' Sexual and Reproductive Health Needs. The United Nations Population Fund, December 2012. Available at: http://www.unfpa.org/webdav/site/global/shared/factsheets/srh/EN-SRH%20fact%20sheet-Adolescent.pdf.

UNFPA, June 2013. Report Calls for Sharper Focus on Adolescent Sexual Health Needs in Humanitarian Response. UNFPA.

UNHCR, 2011. Driven by Desperation: Transactional Sex as a Survival Strategy in Port-au-Prince IDP Camps. Haiti, Port-au-Prince. http://www.urd.org/IMG/pdf/SGBV-UNHCR-report2_FINAL.pdf.

Vakis, R., 2006. Complementing Natural Disasters Management: The Role of Social Protection, Social Protection Discussion Paper 0543. The World Bank, Washington DC.

Waldron, I., et al., 2005. Trends in gender differences in accidents mortality: relationships to changing gender roles and other societal trends. Demographic Res. 2005 (13), 415–454.

WEDO, 2008. Gender, Climate Change and Human Security: Lessons from Bangladesh, Ghana and Senegal. Prepared for ELIAMEP, May 2008. WEDO, New York. Available at: http://www.wedo.org/wp-content/uploads/hsn-study-final-may-20-2008.pdf.

WICEJ (Ed.), 2004. Seeking Accountability on Women's Human Rights: Women Debate the Millennium. Women's International Coalition for Economic Justice, New York.

Willinger, B., Knight, J., 2012. Setting the stage for disaster: women in New Orleans before and after Katrina. In: David, E., Enarson, E. (Eds.), The Women of Katrina: How Gender, Race and Class Matter in an American Disaster. Vanderbilt University Press, Nashville, pp. 55–75.

World Bank, 2001. Engendering Development through Gender Equality in Rights, Resources, and Voice. Oxford University Press, New York.

World Bank, 2002. Integrating Gender into the PRS Monitoring and Evaluation. World Bank PRSP Source Book.

World Bank, September 2006. Gender Equality as Smart Economics: A World Bank Group Gender Action Plan (Fiscal Years 2007–10). World Bank Group.