The social construction of risk among adolescent girls: A case study of Ntcheu and Salima Districts in Malawi

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It all starts here ™

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KEY WORDS

Adolescent, disaster, disaster risk, Malawi, social construct of risk, vulnerability, gender.

ABSTRACT

The issue of gender has been a much talked about topic in spheres of relief and by disaster risk reduction practitioners. Disasters tend to affect the poorest and most marginalised people the hardest. Women and children are likely to suffer higher rates of death, loss and economic damage.

Gender is a socially constructed phenomena anchored in cultural norms and beliefs. It is therefore widely considered socially appropriate for individuals to behave in a specific way. These societal expectations tend to increase the disaster risk of some unique segments of society, especially adolescent girls.

The aim of this research was to find the social factors contributing to the gendered construction of risk among adolescent girls in the Ntcheu and Salima districts in Malawi. This was done in order to highlight the plight of this unique sub-group in society within a Southern Africa context and to build onto research based knowledge that is cropping up. This research involved qualitative secondary data analysis of transcribed scripts. Thematic analysis was used to come up with basic, organising and global themes and these were used as units of analysis.

Analysis of themes highlighted the major determinates contributing to the gendered construct of risk. These could be explained using seven extracted attributes, viz: gendered educational opportunities, gendered poverty, gendered value of life, gendered social justice, gendered empowerment, gendered food security and gendered labour opportunities.

The most important attribute was that of gendered educational opportunities as it cut across other factors and appeared to close most avenues through which adolescent girls can build their capacity

The results of this study highlighted the need to confront the gendered plight of adolescent girls by engagement of all stakeholders in communities. This, coupled with education, involving adolescent girls in decision making and community development projects can go a long way in building their capacity and thus reducing their risk to disasters.

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CHAPTER 1: ORIENTATION AND PROBLEM STATEMENT

1.1   INTRODUCTION

Today, more than ever, the United Nations, national governments, research institutions and civil society have become more concerned about the causes and impact of natural hazards on communities. This has seen the prioritisation of programmes and strategies aimed at reducing the causes and impact of natural hazards. Natural hazards do not affect people and communities equally, it is the most marginalised that are affected the worst (Neumayer and Plumper, 2007). Literature (Anderson, 2000, WHO, 2002, Fordham, 2004) points out that, inequalities in access to resources, capabilities and opportunities disadvantage certain groups making them more vulnerable to the impact of hazards.

This research uses Malawi as a case study to establish the social factors contributing to the construction of risk among adolescent girls in rural southern African countries. Much attention has been put on women and children, however adolescent girls seem to lie in the gap between children and adulthood and thus present a unique subgroup within communities. This may result in them being overlooked in disaster risk initiatives and consequently increase their vulnerability to hazards. This chapter will provides an orientation and problem statement as to the phenomenon under investigation. Objectives of the research will be highlighted as well as research objectives and questions. The method of investigation, the significance of the study as well as the contributions of this research to the body of knowledge pertaining to disaster risk reduction will be discussed.

1.1 ORIENTATION

Wisner *et al.* (2012) posit that the past decades have born witness to the evolution of our understanding of the origins of disasters. Certain scholars (Blaike *et al.,* 2014; Wisner *et al.,* 2012; Twigg, 2004; UNISDR, 2008) assert that "a disaster is an overwhelming disruption that affects the ability for people to live a normal life due to environmental and or material losses that exceed the ability of the affected community to cope using their own resources". Historically, disasters have been perceived as acts

of God, over which humankind has had little or no control (Drabek, 1991). In some cultures, losses, injuries and deaths have been regarded as punishment from a divine, unknown supernatural being, according to McEntire (2001). Adopting this way of thinking has downplayed the role of humankind in contributing to catastrophic events, as it does not consider the human culpability with regard to hazards.

Lately the prominent perspective in disaster studies is that people have the ability to avoid, deal with and live normal lives in the face of natural hazards, thereby avoiding or mitigating the effects of disastrous situations (Wisner *et al.,* 2012; Gaillard *et al.,* 2005). Twigg (2004:12) defines a hazard as "a potential threat to humans and their welfare". These threats include latent conditions that may represent future threats. This assertion favours "a holistic perspective of disaster, one that takes into account multiple causal sources" (McEntire, 2001:190), and challenges the premise that disasters are entirely natural occurrences. Wisner *et al.* (2012) posit that there is a close relationship between disaster risk and vulnerability, and more specifically for the purpose of this study, between disaster risk and social vulnerability. Thus, disaster risk can be explained by the notation:

$$Disaster\ risk = Hazard \times Vulnerability$$

Social vulnerability is defined as "the degree to which one's social status influences differential impact by natural hazards and the social processes that led there and maintain the status" (Wisner *et al.,* 2012). Social status implies "culturally and socially constructed roles, responsibilities, rights, duties and expectations concerning behaviour" (Wisner *et al.,* 2012:22). Lorber (2007:55) argues that "social construction is how society groups people and how it privileges certain groups over others". She further asserts that one's gender at birth somehow seems to set up the blueprint for social expectations: "you are a woman or a man because society tells you that you are, not because you choose to be. The gender process of social construction starts when a baby is born and the doctor pronounces whether one is a boy or girl based on the baby's genitalia" (Lorber, 2007:55). This is then perpetuated by the fact that "parents become part of this societal process as they start dressing them with colours that identify their gender" (Lorber, 2007:55), and children then grow up by observing and imitating people of the same gender. These behaviours then lead to stereotypes.

According to Johnson (1997:160), common stereotypes of men include "control, strength, *efficiency*, competitiveness, toughness, coolness under pressure". This creates the blueprint for what is considered normal for men, and for how they should act and portray themselves. Women are also associated with specific characteristics, for example, "*inefficiency*, cooperation, mutuality, equality, sharing compassion, caring...emotional expressiveness" (Johnson, 1997:160). This contributes to the social construction of gender, by making men seem to have more power and privilege than women. From the viewpoint that social vulnerability has differential impact on different members of society, it can be argued that adolescent girls comprise one stratum in society whose plight is worth investigating. Wisner *et al.* (2012) present a model that can be adopted in order to investigate the social construct of risk.

This model is illustrated in Figure 1.1 below.
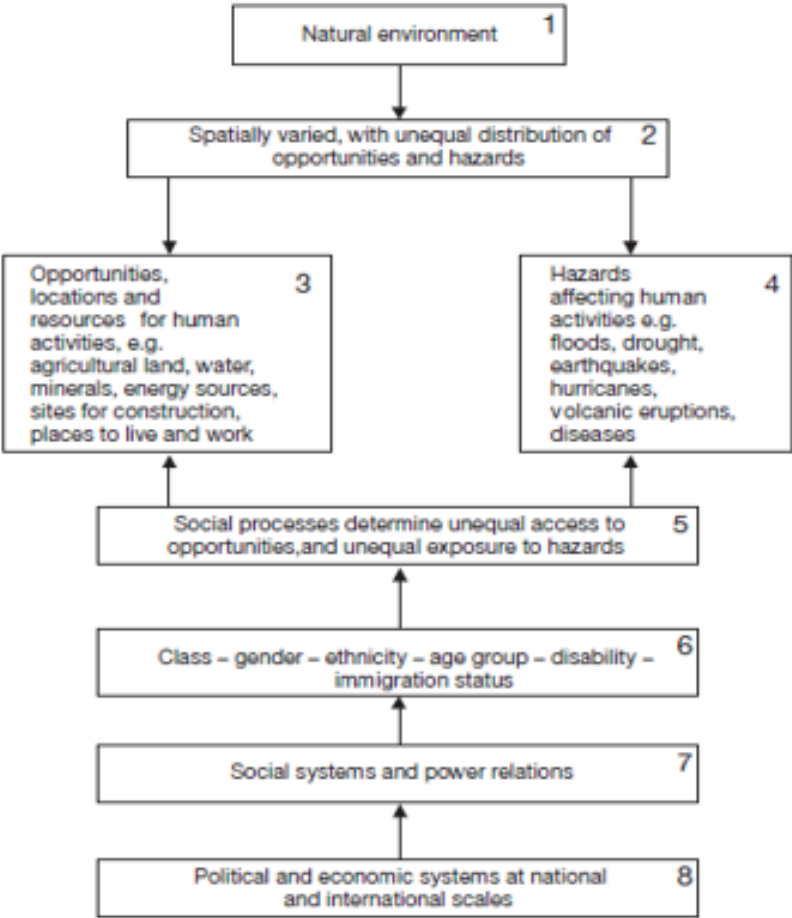
Figure 1.1 The social construct of disasters (Wisner *et al.*, 2012:21)

Figure 1.1 shows the dual nature of disaster risk in the natural environment, and how it is modified by gender. This presents both opportunities and hazards. Therefore the "natural" environment is not entirely natural but is influenced by activities such as economic and political decisions, as shown in boxes 5-8 in Figure 1.1 (Wisner *et al*., 2012:20). Boxes 6-8 show how "political, economic and social processes foster differential access to specific groups of people" (Wisner *et al*., 2012:20). Therefore, understanding the social construct of risk can be used to minimise risk.

Informed by the assertion that the impact is not uniform, one can infer that certain groups are negatively affected by disasters more than others because they are more vulnerable. It is further argued that social status is influenced by culture and results in different roles, responsibilities, rights and duties that are socially constructed (Wisner *et al.,* 2012). These different roles, according to Wisner *et al.* (2012: 22), "may have a bearing on potential loss, injury or death in the face of a hazard". The progression to vulnerability (see Figure 2.1) can be used in the disaster risk reduction framework to explain the vulnerability of adolescent girls due to social constructs.

Within the African context, adolescent girls are uniquely vulnerable because social characteristics such as gender, (Jabry, 2005); age, (Bradshaw & Fordham, 2013); physical and mental health status, (Wisner *et al*., 2012); and ethnicity. The following paragraphs seek to explain the significance of adolescence and how it presents double-jeopardy situation for girls (Van der Gaag, 2013).

Plan (2011) argues that adolescence is an important time in the development of humans. It is characterised by key changes such as "the transition from girlhood to womanhood, from primary to secondary education, from education to work and to family life". There are 500 million adolescent girls aged between 10 and 19 years globally (UNFPA, 2005); yet this stage is still marked by high dropout rates from school (75 million in 2008 (UNESCO, 2011)); exposure to violence and abuse (globally 25.3% of adolescent girls experience sexual violence (UNFPA, 2005)); high mortality rates (due to pregnancy before physical maturity (World Population Foundation, 2011)); and HIV infections (76% of people aged between 15 and 24 years in sub-Saharan Africa living with HIV are female). One in every three girls in the developing world is married by the age of 18 (IPCC, 2011).

As children age, especially female children, gender roles become more entrenched and their lives in some countries become limited, for example, to domestic chores (IPCC, 2011). Van der Gaag (2013) argues that this seclusion brings with it greater exposure to a range of risks. Exploring the social construct of risk will contribute to reducing individual vulnerability, because people actually need to understand and perceive that they are susceptible to threats in order to change their behaviour or how they treat others.

Bradshaw and Fordham (2013) also posit that there is not enough gender- and age-based evidence to provide solid substantiation for the gendered nature of disasters in Africa. The available information is on adolescent girls in other parts of the world and not on African adolescent girls (such as studies by Plan (2011) on adolescent girls and climate change in the Philippines). Furthermore, because disaster risk is contextual and specific to location, among other attributes, research carried out in Asia, Europe and Australia cannot be applied to adolescent girls in Africa. This therefore justifies the need for research-based information relevant to the African context. A focus on sub-Saharan Africa and in particular Malawi can be seen as a worthwhile venture, considering the natural hazards such as flash floods and drought that recently (2012-2015) affected the country. Political instability as well as other socio-economic structures are root causes that may exacerbate the plight of adolescent girls.

Malawi is a landlocked, multiracial country in Africa. According to the Office of the President and Cabinet in Malawi (2005), the country has a population of more than 17 million people spread across 28 administrative districts. A massive 50.7% of the population of Malawi is considered to be living in poverty. Approximately 23.9% of the population is between the ages of 10 and 19 years old. The majority of the population is dependent on agriculture for its livelihood. This dependence on natural resources for income means that Malawians are susceptible to the effects of hazards such as floods, drought, flash floods, hail storms, mealybugs and army worm infestations (Misomali, 2014).

1.2   PROBLEM STATEMENT

Central to this research is the understanding of socially constructed vulnerabilities. This is important in order to establish the social construct of risk perceptions, in communities

and individuals. Risk is contextual and tends to be connected to race, location and cultural beliefs (Solvic, 1987). This study proposes that there is a need to focus on subgroups that will enable the establishment of new development initiatives aimed at helping reduce vulnerability, thus building capacity and resilient communities.

It can be argued from literature (Wisner *et al.,* 2012; Neumayer & Plumper, 2007; Forbes-Biggs & Maartens, 2012; Blaike *et al.,* 2014) that there is rising concern due to the realisation that people in different social strata as well as of different genders, experience different exposure and exhibit differential capacity to cope with risk. Addressing disaster risk from this point of view could help build more resilient communities.

According to Forbes-Biggs and Maartens (2012:235), "females and children are often considered the most vulnerable members in societies, based on their typical lack of access to essential resources". Adolescent girls fall within the broad group of women and yet they are also children: this increases their vulnerability. Bradshaw and Fordham (2013) argue that unlike women, who benefit from this broad category of gender either due to "their productive (income generating) or reproductive (mothering) roles", girls tend to fall in between the gaps of disaster risk initiatives. Furthermore, research in disaster studies has thus far excluded them from the attention that they deserve and only a few studies are beginning to emerge in this field (Bradshaw & Fordham, 2013; Wisner *et al.,* 2012; Plan, 2011; Van der Gaag, 2013; Forbes-Biggs & Maartens, 2012).

According to Van der Gaag (2013:9), adolescent girls "need to be included in reducing risk". She further states that adolescent girls are "hidden from view, prevented from interacting with others and getting the opportunity to express themselves" (Van der Gaag, 2013:9).

In light of the above orientation, the problem under investigation in this study is therefore which aspects contribute to determining the social construction of risk among adolescent girls in the Ntcheu and Salima districts of Malawi.

1.3 RESEARCH OBJECTIVES

The objectives of this research were to:

1. Define and explain the theoretical grounding of the social construction of risk.
2. Determine the elements of the social construction of risk among adolescent girls in two selected rural communities in Malawi.
3. Make recommendations regarding the understanding of the social construction of risk by adolescent girls for disaster risk reduction.

1.4 RESEARCH QUESTIONS

In order to investigate the problem in a coherent manner, the study sought to answer the following questions:

1.   What is the theoretical grounding of the social construct of risk?

2.   What are the elements of the social construct of risk among adolescent girls in the Ntcheu and Salima districts of Malawi?

3.   What recommendations can be made regarding the social construction of risk by adolescent girls for disaster risk reduction?

1.5 CENTRAL THEORETICAL STATEMENT

This research was informed by central theoretical statements as proposed in the disaster risk reduction framework of Wisner *et al.* (2012:20). Wisner *et al.* present the disaster risk reduction framework according to six variations, namely:

- Resources and hazards (the social construct of resource and hazard);
- Vulnerability and capacity;
- Livelihood and location;
- Access and marginalization;
- Disaster and recovery; and
- The progression to safety.

Central theoretical statements relevant to this study were drawn from the social construct and the vulnerability aspects of the six aforementioned variations.

Fordham (cited in Wisner *et al.,* 2012:433) argues that there is an "inequitable impact of disasters on women, based on the understanding that gender-based inequalities are not innate or biological but socially constructed". Goulds (2011) further asserts that "adolescence is also a time when gender roles for girls become more entrenched", implying that the disaster risk of adolescent girls is amplified by "demanding household and family tasks, lack of access to information and resources, lack of knowledge of their rights and of lifesaving skills, lack of power in decision making" (Goulds, 2011). It can be argued, according to Bradshaw and Fordham (2013) that due to the social values that deny adolescent girls opportunities to actively manage their own situations, adolescence is a key factor to understanding social vulnerability.

Van Der Gaag (2013:66) propounds that "adolescent girls, especially if separated from their families, may not know how to protect themselves...girls who are in the care of a relative or an adult… or an institution are even more at risk". Informed by this notion, it can be argued that "disaster risk is socially distributed in ways that reflect the social divisions that already exist in society" (Enarson *et al.,* 2004; cited in Rodriguez *et al.*, 2007:130). They continue to state that "social vulnerability to disaster is a social dynamic rooted in gender [and] age". The contributions of these authors, among others (Jabry, 2005; Van der Gaag, 2013; Wisner *et al.*, 2012; Goulds, 2011; Enarson *et al.,* 2004) provide the basis on which this research is founded.

1.6 RESEARCH METHODOLOGY

Secondary analysis of data were conducted on a data set that has already been collected as part of the Integrating Adolescent Girls (IAG) Project. The IAG Project was a collaborative project implemented across four countries (Malawi, Zimbabwe, Lesotho and Zambia) during 2012 and 2013 by the Cooperative for Assistance and Relief Everywhere (CARE) and the African Centre for Disaster Studies. The IAG Project focused on adolescent girls as the most vulnerable and highly marginalised group in society (UNISDR, 2008) and sought to use capacity building and empowerment programmes based on the original Girls in Risk Reduction Leadership (GIRRL) project design. The GIRRL project design focused on traditionally marginalised girls in South Africa and made use of participatory action research to gather data.

Bryman (2012:35) explains that "research methodology is the collection of tools and methods required for the systematic, accurate and methodical execution of the research design". Put differently, it is a "technique for collecting data" (Bryman, 2012:46). This study followed a qualitative research methodology, because the focus of the study was to gain a holistic understanding of the risk perceptions among adolescent girls in the Ntcheu and Salima districts of Malawi. Gathering knowledge from their points of view therefore relied on the characteristics of qualitative research. These characteristics as pointed out by Bryman (2012) include interpreting meaning from what they say and constructing meaning without predetermined categories or direction.

1.6.1 Literature review

Literature review is the study of work already done in the field of the study that is being conducted. According to Mouton (2008:87), it is scholarly analysis of the most recent, credible and relevant information on the topic under research. It is important for a number of reasons, which are explained in the following paragraphs.

Bryman (2012) explains that a literature review firstly explores what is already known about the intended area of research. Secondly, it investigates the concepts and theories that are relevant to the area. The third import aspect of a literature review is that it examines the research methods and research strategies that have been employed in the study area. Lastly, it explores and provides a good basis for the investigation of any unanswered research questions in the area. By so doing, a literature review evaluates information found in the literature related to the area being studied.

This study will describe, summarise and evaluate literature on the social construct of risk among adolescent girls and how this is important in disaster risk reduction. Journal articles were used as sources of information because they tend to undergo peer review, and as such present acceptable and credible knowledge in the field of disaster risk reduction and risk perception. Reports published by non-governmental organisations, for example World Vision, the United Nations and CARE International, were also used in the research.

Emphasis were placed on the advantages and disadvantages of methods and strategies used by other researchers in the field. The review identified gaps in knowledge in other studies, which assisted in the development of the knowledge base for the topic at hand and prevented the repetition of research already conducted.

1.6.2 Research design

Research design differs from research methodology, in that research design is an umbrella term describing the overall plan, whereas research methodology describes the collection of methods and tools required for a systematic execution of the design. (Mouton, 2008:55).

This research followed a case study design. A case study is associated with a location such as a community or organisation. Emphasis is usually placed on intensive examination of a setting. Bryman (2012:68) argues that in a case study, "participation [and] observation is helpful in the generation of an intensive, detailed examination of a case". The case study under discussion is the AIG Project in Malawi, specifically in the Ntcheu and Salima districts. A total of 20 girls from each district participated in this research. The research generated ample data for secondary analysis, as will be discussed in section 3.2.4.

1.6.3 Population and sampling

The research sample in this study is comprised of the adolescent girls who participated in the IAG Project in 2012 and 2013 in the Salima and Ntcheu districts of Malawi. The IAG Project is an application of the GIRRL Project (see section 3.2.4 for a detailed description of the IAG and GIRRL Projects). The aim of the projects (GIRRL and AIG), is "to address some of the inherent problems related to the social vulnerability of adolescent girls living in both peri-urban informal settlements and poor, rural communities through the provision of concise, locally relevant information and the encouraged development of effective decision-making skills" (Forbes-Biggs & Maartens, 2012). The girls were selected from each district based on specifically identified criteria guided by the GIRRL Project and implemented by CARE Malawi. CARE is a

humanitarian organisation fighting global poverty and its aim is to serve individuals and families in the poorest communities in the world (CARE, 2005).

1.6.4 Instrumentation and data collection

The study made use of focus groups in order to obtain sufficient data on the research topic. The reason focus groups were chosen is because adolescent girls are a fairly homogeneous group. The advantage of using focus groups in a homogeneous setting is that it allows the free flow of conversation between participants. They are less afraid to say what they feel compared to if, for example, a boy were to be amongst them.

This method of data collection was chosen to allow the participants to share their own stories in their own words, rather than being forced to comply with pre-established lines of thinking developed by the researcher (Bryman, 2012). Focus group interviews are also regarded as the best way for exploring and gathering experiential narrative material that may serve as a resource for developing a richer and deeper understanding of a human phenomenon (Munhall, 2001:156; Streubert & Carpenter, 1999:59). Furthermore, focus groups are accepted as valid methods for studying experiences and perceptions of adolescent girls, as they have been used in many qualitative studies on gender and disaster risk reduction (Bryman, 2012).

1.6.5 Data analysis

Qualitative data analysis of the case study in question involved four steps, namely transcription of focus group interviews, coding the feedback into themes, interpreting (as explained in chapter 3), and then organising the feedback in such a way that it can be used to draw meaningful conclusions (see chapter 5).

The coding procedure used involved looking at themes in passages of transcribed text obtained from the focus group interviews. Labels were applied to the coded text to indicate themes and patterns. This enabled the quick retrieval and collection of text that is associated so that it can be examined and different ideas could be compared.

Interpretation, according to King (2004), is a process where coded text is summarised. Template analysis were used in this research. Template analysis, as King (2004) posits,

involves developing a template of themes that emerge from the data collected and then organising it in a comprehensive manner. The template is then used to analyse the whole data set. This is so that it can be analysed in order to reach meaningful conclusions.

1.6.6 Limitations and delimitations

Limitations according to Wiersma (2000) are the influences that the researcher cannot control. They are the unavoidable shortcomings that place restrictions on a researcher's methodology and conclusions. Delimitations are choices made by the researcher, which should be mentioned. They describe the boundaries that have been set for the study.

The outcomes of this study cannot be generalised to apply to all adolescent rural girls because risk is highly contextual and the contextual factors that prevail in Malawi may be different to those in other settings. This research and its findings are therefore applicable to the Salima and Ntcheu districts, within the context of the IAG project. However, as alluded to in the final chapter, the study reached conclusions and makes recommendations valuable in understanding the social construct of disaster risk in the target audience.

1.7 ETHICAL CONSIDERATIONS

Polit & Beck (2004:717) explain that ethics "is a branch of philosophy that deals with morality". Although the definition of morality is a highly contested one, and tends to be subjective, in this context, ethical morality refers to the quality of research procedures with regard to adherence to professional , legal and social obligations to the research participants (Burns & Grove, 2001:196).

This research involves minors and therefore ethical clearance for the research were obtained from the Research Ethics Committee of the Faculty of Arts of the North-West University under the ethics number NWU-00113-13-57.

The researcher maintained the privacy in all personal matters arising from information obtained from the participants. This was in the form of feelings, beliefs or attitudes, and

opinions. Raw data was protected from unauthorised persons, and was not shared, and no names were linked to the data.

1.8 SIGNIFICANCE OF THE STUDY

It is anticipated that this study will contribute to the existing knowledge of risk perception and disaster risk reduction studies by documenting the risk perception among adolescent girls in the Salima and Ntcheu districts of Malawi. By developing research-based understanding of perceived risk, government, policy makers and decision makers as well as other stakeholders will be able to develop a solid foundation and a tangible reason to consider the plight of adolescent rural girls.

The adolescent girls' opinions about their perceptions of risk that are highlighted can be conveyed to decision makers and used to encourage the inclusion of adolescent girls in disaster risk reduction initiatives. This should lead to the inclusion of adolescent girls in disaster risk reduction initiatives where girls participate as fully-fledged members of society within the context of the Ntcheu and Salima communities of Malawi.

1.9 LAYOUT OF THE STUDY

Chapter one seeks to explain the context of risk perception and its contributions to disaster risk reduction. A presentation of the gaps that leave vulnerable groups (particularly adolescent girls) unaccounted for is made. It essentially summarises these gaps and the justification for this research, as well as detailing how it will be carried out.

Chapter two is a review of relevant literature in terms of disaster risk reduction and risk perception among adolescent girls. It seeks to identify gaps in existing studies on disaster risk reduction, focusing on subgroups in communities and information from similar studies.

Chapter three presents the research design, the research processes and the methods of data analysis employed in the study.

In Chapter four the results is presented, followed by a discussion of the results.

Chapter five concludes the research, followed by implications and recommendations.

1.10   CONCLUSION

In conclusion, this chapter aimed to achieve the objective of providing a wide overview of the study as well as its significance. It also informed the reader of what to expect in the chapters that follow.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter aims to provide an extensive and analytical evaluation of the social construct of risk. It seeks to give an in-depth evaluation of gender, gendered risk and how the concepts combine to increase disaster risk among adolescent girls.

This chapter also presents the review of literature pertaining to key concepts and issues that contribute to the social construction of risk and the social construction of risk based on gender. This is done with the view of reducing disaster risk among adolescent girls in rural and peri-urban southern African countries. It seeks to provide an in-depth investigation and evaluation of the components of disaster risk and how these can be linked to social settings within communities. This chapter investigates the theoretical grounding of the social construction of risk by exploring relevant literature relating to risk, disaster risk, disaster risk reduction, vulnerability and the engendered nature of disaster risk, with particular reference to adolescent girls. This is important, as it gives a picture of the current position regarding the body of knowledge used to support, validate and advance knowledge of the social construct of risk among adolescent girls.

2.2 THE SOCIAL CONSTRUCTION OF GENDER

Lorber (1994:54) suggests that "gender is not bred into genes but is constantly created and recreated out of human interaction, out of social life, and is the texture and order of that social life". Unlike sex, which is genetic and is determined by chromosomes, as posited by Campbell and Reece (2010), gender is not natural. It is an act of nurture. Social constructivist theory conceptualises gender as a system of social classification that influences access to power, status and material resources (Crawford, 2005; Marecek, Crawford & Popp, 2004). It can be inferred therefore that gender is a social institution by means of which people organise themselves; this institution (gender) does not flow automatically from the main physiological differences of males and females but comprises "social statuses carefully constructed through prescribed processes of teaching, learning, emulation and reinforcement" (Lorber, 1994:54). Freud (1994:100) agrees with Lorber and is of the opinion that "sex category becomes a gender status

through naming, dressing and the use of gender markers"; it is at this time that gender construction starts. Lorber (1994) further adds that once gender is established, children start being treated according to their orientation. Chodorow (1978:165) concurs with Lorber (1994), and further adds that "for boys the major goal is the achievement of personal masculine identification with their father and sense of secure masculine self-achieved through superego formation and disparagement of women". Gilmore (1990) argues that, because of culture, boys tend to separate their identity as much as possible from that of their mothers.

Researchers in social construction (Martin, 2000; Morris, 2005; West & Zimmerman, 1987; Lorber 1994), put forward arguments to support the notion of the social construction of gender. Martin (1988) studied the unnaturalness of gendered bodies in preschool children. In her study, she focused on children between the ages of three and five. Her findings concluded that males and females display gender differences in everyday movements. She further asserted that five-year-old boys sat in more open positions and tended to take more space for themselves as compared to girls. Martin (1988) is of the opinion that younger children are less concerned about and are less aware of gender norms, but as they grow older, gender normative behaviour increases. Morin and Maxfield (2010) concur with Morris (2005) in stating that social institutions, for example schools, reinforce gender differences.

To further support the notion that gender is not biological but is a social construct, West and Zimmerman (1987) came up with a concept called "doing gender". Put briefly, this concept argues that gender is an accomplishment that is achieved. From one perspective, people tend to believe that they are born gendered. On the contrary, Lorber (1994:4) posits that "individuals are born sexed but not gendered and have to be taught to become masculine".

Adding more literature to bolster the arguments put forward thus far, it is further asserted by Neumayer and Plumper (2007:1) that "biological and physiological differences between sexes are unlikely to explain large-scale gender differences in disaster risk between males and females". They further suggest that "what is likely to matter is the everyday socio-economic status of women" (Neumayer & Plumper, 2007:1). Along the same line of thought, Neumayer and Plumper (2007:1) continue to state that women occupying higher social strata in communities tend to be less affected by hazards, thus they posit that "socially constructed gender-specific vulnerability of

females built into everyday socio-economic patterns lead to the relatively higher female disaster mortality compared to men". This assertion will be further explored in the next section of this literature review, which looks specifically at the social construction of risk, based on gender. To summarise, the section above has argued that:

- Gender is not genetic.

- Gender is socially constructed and is a contextual term.

- It can be acknowledged that physiological differences exist between women and men; however these cannot account for the situation in which women find themselves.

Since gender is a social phenomenon, its relationship with disaster risk will now now be argued.

2.3 THE SOCIAL CONSTRUCTION OF RISK BASED ON GENDER

Having established that sex alone cannot account for disaster risk among women, it can be asserted that disaster risk is socially constructed based on gender. Bantebya *et al.* (2013) are of the opinion that the situation in which adolescent girls find themselves is highly contextual. This implies that an adolescent girl in America has different challenges to one in the United Kingdom and one in Africa. Even within Africa this will vary from country to country: a closer look within a country will show that those adolescent girls who reside in urban areas have different issues to deal with compared to those in the rural areas. It is argued by Bantebya *et al.* (2013:10) that a diverse "range of factors will influence the specific experiences of adolescent girls and their resulting capabilities, from their household income to their ethnicity and from their location to their religion". Consequently, it is imperative to come up with contextual, research-based evidence that uncovers the factors that influence disaster risk among adolescent girls, in order to provide the support that offers the greatest potential and empowerment for these girls. There is widespread recognition that HIV is gendered and that it is an extensive risk for marginalised girls (Baylies, 2004:71; Seckinelgin, 2008:147).

HIV/AIDS is one disease affecting humankind that causes an enormous amount of loss, both economic and social, resulting in devastating consequences (WHO, 2009). According to Anderson (2015), 71% of the global population living with HIV are in sub-Saharan Africa. Anderson (2015:2) further posits that "the challenges remain in addressing the gender dynamics of the pandemic". It is well established that the spread of HIV is embedded in socio-economic context (Gillespie, 2006; Kalipeni *et al.*, 2004). It can be argued therefore that to address these gender disparities, social and structural determinants thereof need to be challenged (Anderson, 2015; WHO, 2009; Graham, 2000). Many countries that are signatories to the United Nations have adopted policy changes and have "heighted gender as one of the key drivers" to disaster risk, especially HIV risk (USAID Malawi, 2008:70). Further to this, there have been wide calls for women to be empowered to mitigate their particular risk (Fordham, 2011; Forbes-Biggs & Maartens, 2012; Global Coalition on Women and AIDS, 2008).

Adamchak *et al.* (2000) explain that adolescents live in communities in which cultural, religious and traditional influences are important motivators of behaviour. This environment, which influences human behaviours, includes individuals, peers, partners, family and households, institutions and communities, policies and social norms. This environment is also intricately interwoven with the economic and political environment which cannot be separated from the factors above (Enarson, 2001). The sporting fraternity is one area in which gender inequality is manifest. The notion of male superiority was however seriously challenged by Michelle Payne when she became the first female jockey to win the Melbourne Cup in its 155-year history (Sunday Times, 2015). In her post victory interview she states that "it is such a chauvinistic sport, a lot of the owners wanted to kick me off" (Sunday Times, 2015). This statement is heavily laced with the marginalisation women face in trying to access a sustainable livelihood. Had she given up on her dreams and paid attention to the cultural norms that undermine girls based on gender, she would have limited her options in life and because of the economic pressure, diverted to means of survival that would increase her risk to hazards. Winning this tournament means she has the financial resources needed to build her capacity. Fortunately it also offers practitioners in disaster risk reduction an opportunity to argue that as within the field of sport, and possibly other fields, the place for girls is not behind the white line cheering boys. Instead it call for an end to the "defeatist attitude among girls and women who are taught to believe they do not have the ability to compete alongside men because of their biology…yet the truth is

that the difference between men and women is culturally created" (Sunday Times, 2015, Baylies, 2004).

A relationship between gender and power is evident in the findings of Anderson (2015) and Umberson (2001), who pronounce that the issues of power, powerlessness and control are central to the construction of risk among women. They go on to say that men restrict the movements of women and this limits their ability to work and consequently increases their reliability on men. The death of a breadwinner, who in most cases is the man, results in women facing a catastrophic situation of having to fend for themselves and the family. Apart from "women's' sexuality as a site for male control". Boonzaier and De la Ray (2004:456) argue that it appears women have accepted what the community says about them. Most adolescent girls appear to have assimilated negative perceptions about themselves because the community continues to undermine them (Anderson, 2015). They have come to accept that nothing good can come out of a girl child and that they should look up to males for everything including as a source of livelihood. This sexual subordination of girls in "gender-segregated spaces is not logical, natural or biological" (Sunday Times, November 2015).

Adolescent girls are seen as a means to food and financial security for the family (Fordham, 2011). Anderson (2015:650) ascertains that "marriage for the daughter is believed to be of greater benefit for the family and the daughter than her education". It can be inferred from this statement that, adolescent girls are taken as a survival strategy to preserve the family networks and repay debts (Phiri, 1983, Anderson, 2015, Leach *et al.*, 2015, West and Zimmerman, 1987, Wisner *et al.*, 2012, Greene *et al.,* 2013). The consequences of this present a myriad of risks to adolescent girls. In these marriages, they cannot negotiate schooling because they are considered as married women whose responsibility is to bear children and look after the house (Anderson, 2015). Again, their bodies are not ready for child bearing hence the high percentage mortality rates for pregnant girls in Malawi (World Disaster Report, 2007). The Malawi Constitution's provision that girls could enter into marriage as young as 15 years (Malawi Government, 2004) and also allows parents to consent to their daughters entering into marriage at the age of 13 years further worsens the jeopardy of adolescent girls (Jabry, 2005). Though the constitution (Malawian Government, 2004) stipulates that the State shall discourage marriage of those under fifteen, there is no reinforcement

as marriages are traditionally organised and hence there is no tracking of people's ages at marriage. As a result, some girls can be married at an even younger age.

Malawi has been one of the worlds' poorest countries and the link between poverty and disaster risk is pertinent. Boeslen and Poku (2009:6), assert that "poverty and sexual behaviour matter to individuals' HIV risk but in gendered ways". Anderson (2015:62) concurs with this notion and adds that, "despite knowledge of the risks, due to lack of access, women in particular engage in risk-taking in sex to bring about immediate security". The implication here is that adolescent girls feel they have no other means to get rid of poverty other than engaging in transactional sex. They therefore risk getting HIV in order to temporarily relieve the effects of poverty. In doing so, they attract more problems later on in life when HIV becomes a more life threatening situation compared to poverty which could have been dealt with by education which is instrumental in fighting poverty.

Where gendered inequality is present, Farmer *et al.* (2006) argue that people or specific groups of people are prevented from reaching their full potential. Swarup (2011) contends that adolescent girls are one such group who tend to "weather the storm". She goes on to suggest that, in the face of climate change, justice will not be met until "girls themselves, their skills, knowledge and energy be part of the search for solutions" (Swarup, 2011:3).

Climate change is not the only risk that adolescent girls face. Considering that adolescence starts while they are still at school, the school can be an institution that fosters gender disparities. According to Leach (2003:1), "gender violence is a major feature of school life" among adolescent girls in Malawi. This, they argue, includes not only sexual violence, but also harassment by elder men who solicit sex by offering gifts and who sometimes make use of threats. These elderly men have been documented to include teachers (Scott, 1990:7). The school thus no longer provides a safe haven for adolescent girls but becomes "breeding grounds for potentially damaging gendered practices which remain with pupils into adult life" (Leach, 2003:3). Schools can perpetuate harmful engendered practices by "not reporting or prosecuting teachers in an effort to protect the reputation and image of the institution" (Leach, 2003:3). Girls therefore feel powerless and sometimes are afraid to report abuse, as they may end up "ridiculed, victimised and stigmatised by pupils and teachers" (Mirembe & Davies, 2001). This practice fosters an authoritarian culture, where the behaviour of those in

charge cannot be questioned, and girls come to accept such conditions as part of their lives. It can be argued that those girls who are of high morality and who cannot cope with these social ills drop out of school (Mensch *et al.,* 1999). This results in them being at greater risk later on in life because they close the academic route to empowering themselves, which may have led to better job opportunities. They then become more prone to male domination later on in life, thus rendering themselves prone to disaster risk (Dunne *et al.,* 2003; Mirsky, 2003). The factors discussed above inevitably lead to lack of access, which results in girls being vulnerable to disaster risk. This leads to the next aspect: access and vulnerability.

Disaster risk can be analysed from a lack of access and a vulnerability point of view. Wisner *et al.* (2012) and Anderson (2015) argue that when disasters occur, they do so indiscriminately. However, people are not all affected equally: "a vulnerability approach to disasters suggests that inequalities in exposure and sensitivity disadvantages certain groups of people rendering them more vulnerable" (Neumayer & Plumper, 2007:1). Several pieces of literature (Bantebya *et al.,* 2013; Van der Gaag, 2007; International Federation of Red Cross Crescent Societies, 2007) exist that support Wisner *et al.* (2012).

Among other studies conducted on adolescent girls, Bantebya *et al.* (2013), establish the following key findings within the Uganda context:

- There is an enabling legal and policy environment for gender empowerment and adolescent girls' development, but there are large gaps in application and practice.

- Positive changes include growing educational opportunities for girls, as well as changes in practices related to marriage and household roles and responsibilities.

- Adolescent girls lack a voice in the matters that concern them and there are limits on their earning potential and skills, their reproductive and sexual health and their legal and physical protection.

- Adolescent girls are still entrenched in discriminatory norms and practices; this, combined with high levels of poverty and limited service provision, limits their

development and capabilities, consequently fostering their isolation and imposing strict boundaries that circumscribe their life trajectories.

- Gender discrimination spans every aspect of girls' lives.

Considering that adolescent girls are poised at the intersection between childhood and adulthood, it is important to invest in adolescent girls because they are seen "as critical in efforts to break the inter-generational transmission of poverty", according to Bantebya *et al.* (2013:2). There is therefore a need to develop research-based evidence aimed at making adolescent girls more visible in policy and planning processes. In an effort to establish this, Bantebya *et al.* (2013:2) argue for the need to "pinpoint the social and cultural forces that shape their lives".

Within the Malawian context, Leach (2003:2-5) gives the following reasons for the increased vulnerability of adolescent girls:

- They occupy a subordinate status in society.

- Girls who make allegations of sexual abuse are often not believed.

- Girls have fewer opportunities to earn casual income compared to boys; as a result poverty pushes them into having sex as a means of paying school fees and meeting living expenses.

- Schooling is important in increasing adolescent knowledge of HIV/AIDS, but if the school is a site of sexual abuse, it can increase the risk of infection.

- Boys learn that masculine behaviour involves being aggressive towards females.

Greene *et al.* (2013) suggest that in order to address some of the issues above, a holistic approach starting at national level and continuing right down to the family unit is important to curb the impact of institutionalised violence against girls. At national level, this involves the formulation and dissemination of legislation on abuse of adolescents and of girls in particular. In South Africa, legislation has been passed to publicise names of abusive teachers so that they are not allowed to practice, and the public has access to information on such teachers (Mahlase, 2015). Schools and institutions working with adolescent girls must be empowered and should work in collaboration with social workers and communities, as well as teacher associations. This not only facilitates

efficient prosecution of offenders but also acts as a deterrent to those who would otherwise commit sexual crimes (Leach *et al.,* 2014).

The restoration of the family unit is also important and parents must be encouraged to listen to their children and "refrain from entering into negotiations for compensation with teachers who have made their daughter pregnant", as stated by Leach *et al.* (2014:5). Such acts seem to condone moral decadence and perpetuate the plight of adolescent girls (Oyĕwùmí, 2002).

In summary, it is argued above that:

- Nothing puts men in a better position than women apart from social structures.

- These social structures marginalise women and girls and reduce their access to better livelihoods.

- This increases their vulnerability and consequently their disaster risk.

- Because of gender, adolescent girls are less able to survive in disaster situations.

Having established the link between gender and risk, this research will now turn to models of vulnerability; as has already been alluded to in Chapter one, there is a relationship between risk and vulnerability.

2.4   MODELS OF VULNERABILITY

The Pressure and Release model, the Access model and the Sustainable Livelihood model will be discussed in the sections that follow because they provide a theoretical foundation from which the key aspects of the social construction of risk can be investigated.

2.4.1 The Pressure and Release Model

The Pressure and Release (PAR) framework is a tool "that provides an analysis that traces unsafe locations and fragile livelihoods through dynamic pressures and root causes, it ties vulnerability to access, marginalization, capacity and recovery through an

original suite of diagrams" (Wisner *et al.,* 2012:11). It comprises a set of twin-diagrams, namely the pressure model and the release model.

The pressure model, according to Van Niekerk (2005:75), "indicates that there are certain underlying causes, dynamic pressures and unsafe conditions which contribute to vulnerability". The intersection of the above with a hazard can lead to increased disaster risk within a community.

The PAR model explains how risk can be reduced so as to promote safe communities. Wisner *et al.* (2012:31) argue that the pressure release model illustrates how "policy and practice... confronts and encounters dynamic pressures and occasionally even addresses some of the root causes of vulnerability". The PAR model seeks to addresses risk reduction within communities that are facing risk.
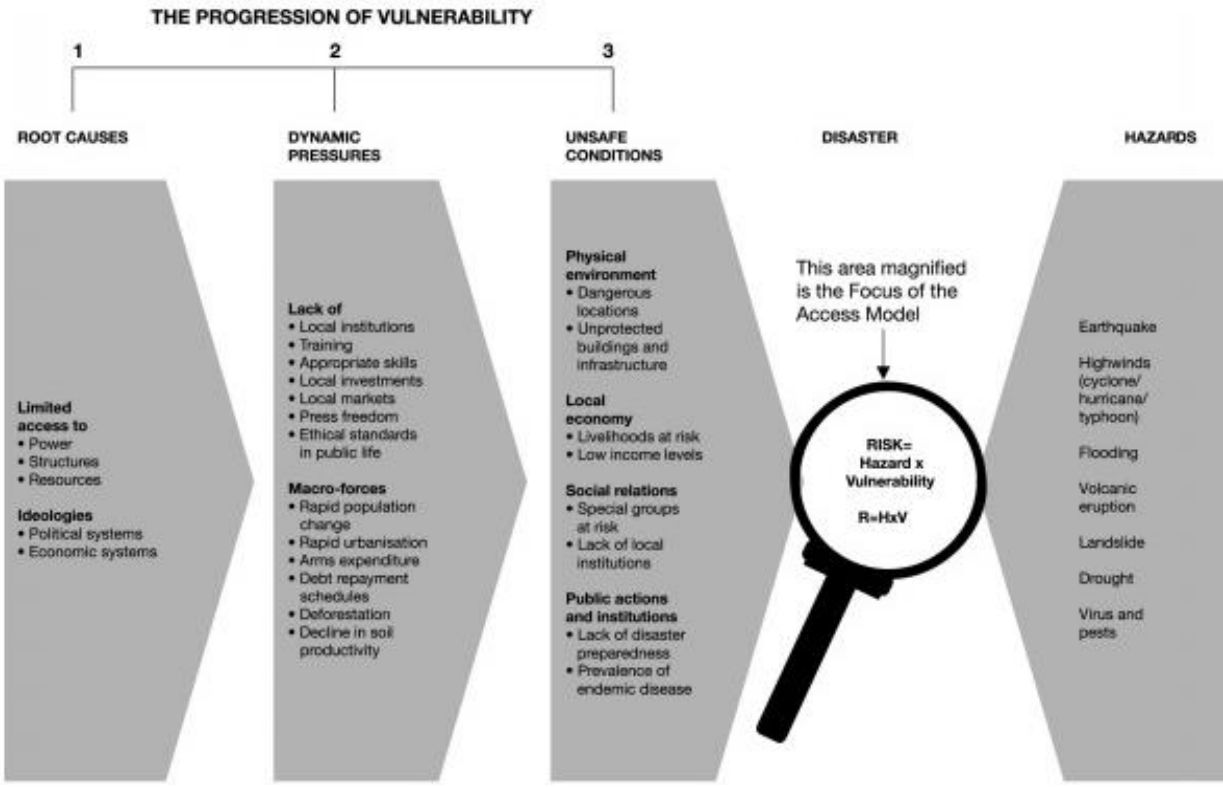
Figure 2.1 The progression of vulnerability (Pressure Model) (Wisner *et al.,* 2012:23)
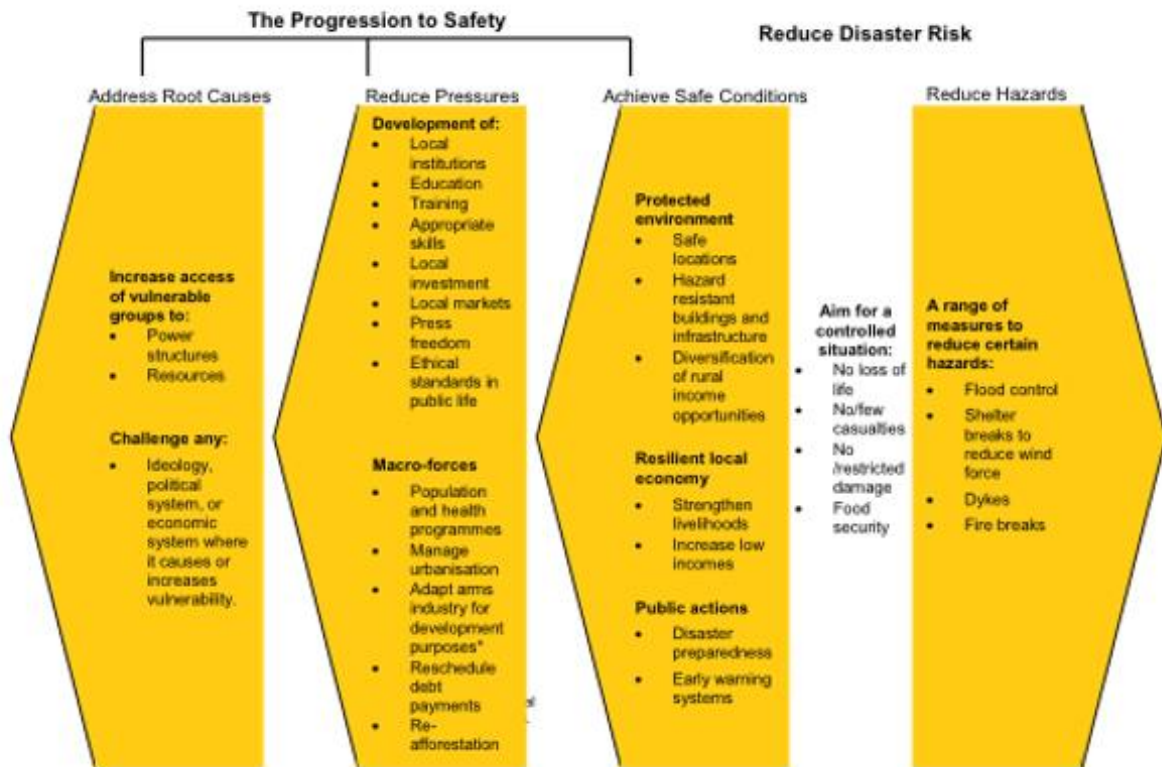
Figure 2.2 The Progression to safety (Release Model) (Wisner *et al.,* 2012:23)

Van Niekerk (2012:75) contends that "the disaster pressure model (PAR) has become the internationally accepted model for the explanation of the pregression to vulnerability and the progression to safety (risk reduction)". The UNISDR (2008:71) further posits that even though this model was first published by Blaike *et al.* (2014:23), "its relevance has become even more significant today".

The PAR model illustrates important attributes needed in order to address disaster risk, and by so doing, to achieve safe conditions (Van Niekerk, 2012:75). The PAR model is an important point of reference in this research because it seeks to address how risk within communities can be reduced. Seven risk reduction objectives are identified within this model. These are:

i.   C   - community understanding of vulnerability

ii.   A   - analysis of vulnerability

iii.   R   - focus on the reverse of the PAR model

iv.   D   - emphasis of sustainable development

v.   I   - improving livelihood

    vi.   A - add recovery

    vii.   C - extent of culture

(Wisner *et al.*, 2004:330)

Van Niekerk (2005) further elaborates that the objectives shown above can be used to reduce vulnerability and hence disaster risk. Table 2.1 provides greater insight into the link between the above objectives and disaster risk reduction.

Table 2.1 Risk reduction components of the PAR model (Van Niekerk, 2005:77)

Objective	Aspect of disaster risk reduction
Communicate understanding of vulnerability (Wisner *et al.*, 2004:330-332)	- Training and education - Aquisition of knowledge - Capacity building - Public awareness - Public participation - Risk communication - Governance - Self-regualation and actions by civil society - Risk perception - Local knowledge and trust - Regional networks
Analyse vulnerability (Wisner *et al.*, 2004:333-342)	- Hazard assessment - Capacity vulnerability analysis - Risk assessment - Hazard mapping - Interdisciplinary research
Focus on reverse of PAR model (Wisner *et al.*, 2004:342-348)	- Acces to resources - Political will

	• Mitigation efforts
	• Structural measures (building codes and retrofitting)
	• Economic development
	• Conflict prevention
	• Governance
Empasis on sustainable development (Wisner *et al.*, 2004:348-350)	• Land use planning
	• Environmental proctection
	• Improve service delivery
Improve livelihoods (Wisner *et al.*, 2004:351-353)	• Local investment
	• Gender sensitivity
	• Collective action
	• Community self-protection
	• Diversification (income sources and production)
	• Review livelihood activities in terms of disaster risk
	• Land reform and access to resources
	• Increased food security
	• Facilitating local networks
	• Developing buffers and safety nets
Add recovery (Wisner *et al.*, 2004:352-366)	• Linking relief and development
	• Business continuity
	• Sustainable development
	• Increased resilience and building enhanced capacity
	• Micro-credit and financial instruments
	• Address vulnerbility
	• Indigenous coping mechanisms
Extend to culture (Wisner *et al.*,	• Cost/benefit anlysis

2004:367-374)	- Environmnetal protection - Community involvement and participation - Mitigation

The triangle of vulnerability, discussed next, makes it abundantly clear that elements of the pressure model can impact on adolescent girls in various ways.

2.4.2 The triangle of vulnerability

The weight of the various aspects of vulnerability becomes more apparent when a hazard strikes (Wisner *et al.,* 2012). Root causes and dynamic pressures can form a triangle of forces, which traps adolescent girls in the centre. This is shown in Figure 2.3. The factors combine and people are deprived of access to a sustainable livelihood, ending up at high risk and prone to disasters. Social structures including gender are seen to contribute to the demise of these disadvantaged individuals, because of their gender (Swarup *et al.,* 2011).
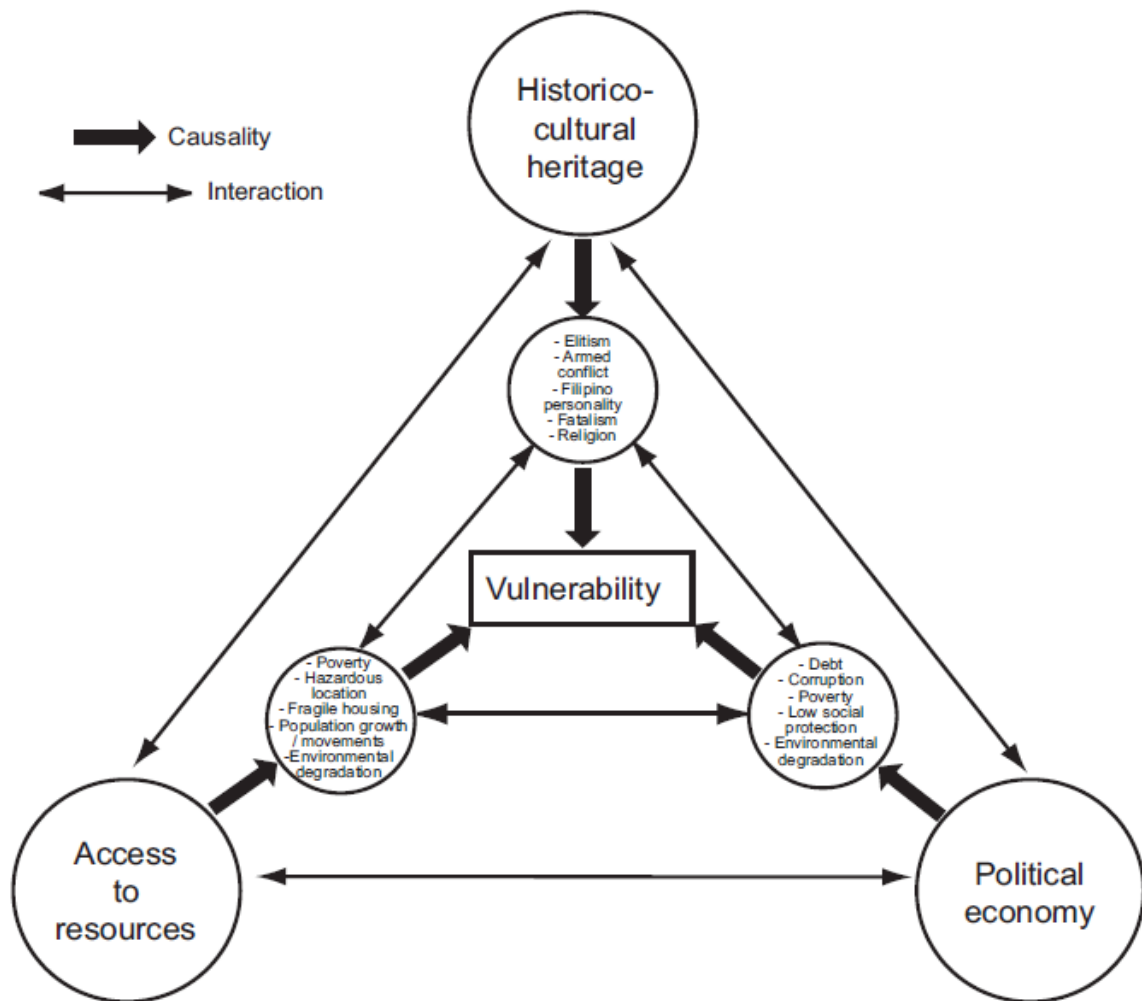
Figure 2.3 The triangle of vulnerability (Wisner *et al.,* 2012:27)

Wisner *et al.* (2012) argue that root causes and dynamic pressures are found in the three large circles at the triangle's corners, and act as structural limitations, which determine people's access. The vulnerability of adolescent girls can be seen at the centre of the triangle, and this illustrates their position in society.

Considering the fact that the elements within the triangle of vulnerability lead to lack of access, the Access model will be discussed below.

2.4.3 The Access model

According to Wisner *et al.* (2004:50), the Access model is "an expanded analysis of the principal factors in the PAR model that relate to human vulnerability and exposure to physical hazard and focuses on the process by which the natural event impact upon

people and their responses". Put differently, the Access model is a detailed analysis of how vulnerability is created and propagated by socio-economic and political processes, and the results of these processes, as disasters unfold. Wisner *et al.* (2004) further posit that the point of application of the Access model is indicated by the magnifying lens in Figure 2.1. A close scrutiny of the Access model illustrates how conditions need to change to reduce vulnerability. When vulnerability is reduced, Wisner *et al.* (2004) are of the opinion that capacity and protection also increase. The PAR model and the Access model can therefore be seen to work together, complementing each other.

As previously alluded to in Figure 2.2, disasters occur as a result of the impact of hazards on vulnerable people. However, vulnerability is not uniform within communities. "The Access model explains differential vulnerability at the 'pressure point' where hazards and vulnerability interact and the disaster starts to unfold" (Wisner *et al.,* 2004:87). It is imperative to note at this point, as postulated by Wisner *et al.* (2004), that the Access model deals with the amount of access that people have to the capacities , assets and livelihood opportunities that will enable them in (or deprive them from) reducing their vulnerability and avoiding a disaster situation. The vulnerability approach, as adopted by this research, takes the position that disasters cannot be approached from the point of view of the hazard; but rather by looking at the shared characteristics of a group, which characteristics render them vulnerable and consequently unable to cope in the face of such hazards. Wisner *et al.* (2003) argue that not much can be done about natural hazards, but communities, or groups within communities, can increase their capacity to cope with the effects of a hazard in order to prevent a disaster situation. The Access model is shown in Figure 2.4 below.
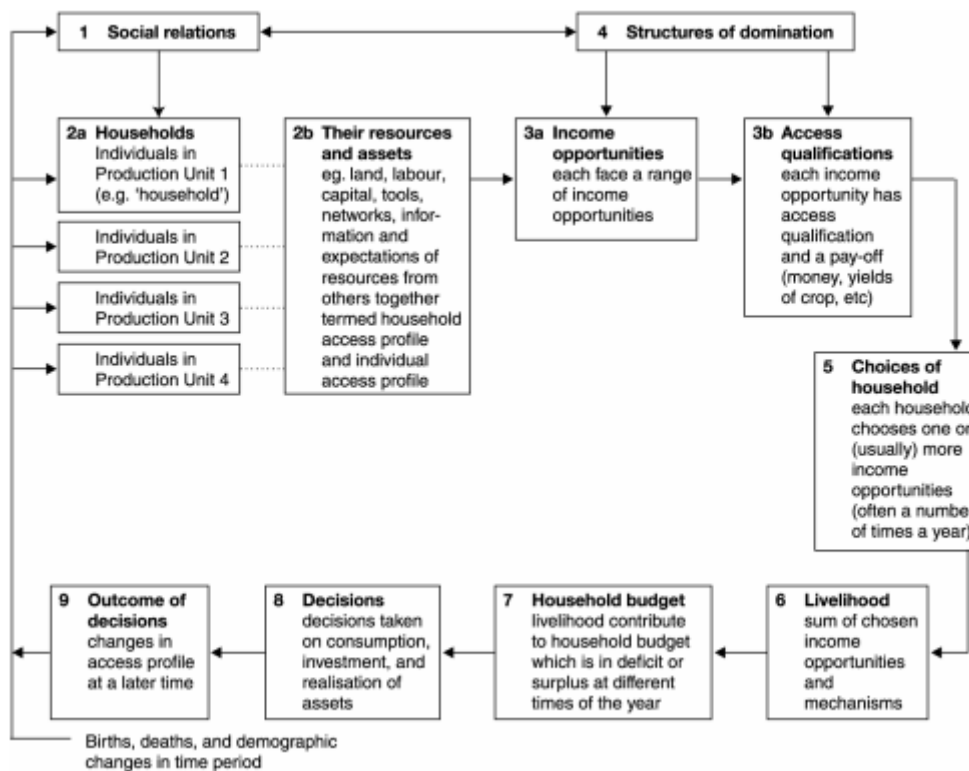
Figure 2.4 The Access model: access to resources for normal life (Wisner *et al.,* 2004:94)

2.4.3.1 Explanation of the Access model

The "normal life", is an ideal point of departure in explaining the Access model. At this point, Wisner *et al.* (2004) argue that people earn a livelihood with differential access to materials, social and political resources. In this regard, the Access model incorporates hazards into social systems and alludes to the fact that the two cannot be separated. From this point of view, unsafe conditions come about as a result of these socio-economic and political processes that differentially impact on various societies, and groups within society. Wisner *et al.* (2004:93) further argue that "differential access progression of vulnerability and the idea of access is central to understanding how distribution is structured in normal life". This is because "access involves the ability of an individual , family, class or community to use resources which are directly required to secure a livelihood in normal, pre-disaster times and their ability to adopt to new threatening situations" (Wisner *et al.,* 2004:94). These characteristics can be rooted in gender, age, ethnicity, and the social relations of production, rights, etc.; with the implication that distribution is not equal among all people. Figure 2.4 shows a diagrammatic representation of access to resources under *normal* conditions.

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The Access model as presented by Wisner *et al.* (2004:94) is modelled according to two connected systems, namely, "social relations and … structures of domination". Box 1a, in Figure 2.4, shows how social relations influence the flow of goods, money and surplus between different actors. Box 1b shows the structures of domination and refers to the politics of relations between people at different levels. Included in these are "relations between people in a household, between men and women, children and adults , seniors and juniors…these relations shape, and are shaped by existing rights, obligations and expectations that exist within the house and which affect the allocation of work and rewards" (Wisner *et al.,* 2004:94). The structures of domination also include the relationship between citizens and the state. In times of shock and stress, structures of domination are crucial in terms of disaster risk. This is because "structures of dominance may draw on dominant and shared ideologies, world views and beliefs for legitimacy" (Wisner *et al.*, 2004:95). Wisner *et al.* further posit that these ideologies and world views may be the root causes of vulnerability, and are represented at the extreme left of the of the PAR model.

The Access model posits that households are central to understanding and examining vulnerability. Households in this context are "units that share labour and other inputs and consume meals together under one roof" (Wisner *et al.,* 2004:98). Box 2a in Figure 2.4 shows that households have a profile of resources and assets that is related in a way to their level of access. Each individual within each household has a "state of well-being primarily defined by physical abilities to withstand shocks, prolonged periods of stress and deprivation specific to the disaster being addressed" (Wisner *et al.,* 2004:99). It therefore follows that each individual in a household has a collective claim, which may be termed as access to resources. Box 2b shows access to resources "can be land of various qualities, livestock, tools and equipment, capital, labour power and specialist knowledge and skills" (Wisner *et al.,* 2004:98). Wisner *et al.* (2003) further argue that ethnicity, class, gender, and political orientation are some attributes that constitute non-material resources and should be taken into consideration, because they can act as either enablers or may exclude a person from networks of support, or facilitate or prevent access to resources and their utilisation.

Box 3a in Figure 2.4 shows that each household takes up opportunities by making choices within their constraints. It should be highlighted however that each income opportunity has a set of access qualifications, as is shown in Box 3b.These

qualifications are defined by a set of resources and social characteristics such as gender, caste, tribe, and religion, which are a prerequisite before one can take up an income opportunity. Wisner *et al.* (2003:100) go onto argue that "some income opportunities have high access qualifications such as capital, rare skills and bar most people from taking them up"; considering that not all people have the same access profile (all the resources that each individual or household possesses), and that some have a much wider access than others. This wide access allows such individuals flexibility in securing a livelihood under adverse conditions like disaster situations, because they have a good resource profile. Contrary to this, those with limited resources have limited choices and consequently limited access, and tend to select "over-subscribed and lowest paying options" (Wisner *et al.*, 2004:101) because they have the least flexibility in adverse conditions.

Box 6 explores the aspect of livelihood. According to Wisner *et al.* (2004:101), a livelihood is "the sum of the pay offs of the household's constituent income opportunities". Structuring income in such a way as to avert risk is important in order to secure one's livelihood. Inherent to this is the ability to use survival strategies and coping mechanisms for how to cope once a threat presents itself. Decisions made as a result of these coping mechanisms greatly influence one's access profile and may change the social relations between groups, shown in Box 1.

The PAR model presents root causes of vulnerability that lead to shifts in access to resources and disaster risk. The structures of domination and social relations at local level in Boxes 1 and 4 are of specific importance, because they involve the allocation of food, determine who benefits first, who receives medical treatment, etc. Wisner *et al.* (2004:102) are of the opinion that "gender politics within the household are of great importance and show how inadequate it is to treat the household as a homogenous unit". They go on to assert that "women and children sometimes bear the brunt of disasters because of the power of male members of the household to allocate food" (Wisner *et al.*, 2004:102). It can be inferred from this assertion that conditions of vulnerability are shaped by individual households. "Their decisions about income opportunities (or ignorance of risk), may place them in a dangerous time-space" (Wisner *et al.*, 2004:102) which affects the choices they make. The Access model provides a dynamic framework of socio-economic change in which people of different identities, castes, genders, ethnic groups, and classes avail themselves of the means of securing

a livelihood. Considering the fact that access and livelihood seem to be interlinked, the next section describes livelihood in greater detail.

2.4.4 The livelihood framework

Several livelihood frameworks have been developed by different non-governmental organisations (CARE, World Vision international, UNICEF, and United Nations). The core fundamentals are generally similar, with cosmetic changes made to each of the frameworks, which are designed to meet the specific needs of these organisations.

Chambers and Conway (1992) define livelihoods based on presence of economic activity, ownership of human capabilities (education, skills, psychological orientation and health) and access to tangible and intangible assets. The interface of these elements outlines how a household advances its livelihood approaches. It is worth noting that these frameworks tend to be broad, and overlook unique subgroups with particular needs that have to be met in order to reduce their risk of disasters.

Adolescent girls form part of households. The fact that a household is doing well does not necessarily mean that all the individuals within that household are all equally resilient to hazards, Leach *et al.* (2014). Adolescent girls may be cushioned from disaster risk due to the presence of a capable male breadwinner. Research on this topic, (Enarlson and Chakrabarti, 2010), Dankelman, 2010) reveals that death of breadwinner usually results in dire consequences for those who remain.

Chambers (1989) and Scoones (1998) put forward that most literature on sustainable livelihoods currently available can be credited to the Institute of development at the University of Sussex in the United Kingdom. From a livelihood point of view, vulnerability is considered as the chance that livelihood strain will occur (Chambers, 1989). Scoones (1998) further argues that vulnerability can be internal or external. By internal vulnerability is meant lack of means to cope without incurring losses and external vulnerability refers to shocks, stress and risks.

Different orgainsations use different livelihood frameworks depending on the particular aspects they need to serve in disaster relief. This research identified four main agencies, viz. The Department For international Development (DFID), UNDP, CARE and Oxfam.

Cooperative for Relief and Assistance Everywhere (CARE), focuses on helping the poor and most vulnerable in society. The livelihood framework adopted by CARE aims to foster inter-sectorial coordination in order to maximise the impact of development relief. Figure 2.6 shows CARE's livelihood model and linkage of capitals. Households are at the core of programming and drives its definition of livelihoods (Chambers and Conway, 1992).

Briefly put, the White Paper on International Development of 1997 states that the Department for International Development (DFID) aims to rid poor countries of poverty. Its livelihood approach puts forward three attributes namely assets, activities to make a living and capabilities. This is similar to version presented by Chambers and Conway (1992) and thus adopts the definitions and livelihood principles. Figure 2.5 shows DFID's Sustainable Livelihoods Framework, central to its understanding is the fact that it is rooted in physical, natural, financial and human capitals.

Figure 2.5 depicts DFID's Sustainable Livelihoods framework.

Department For International Development (DFID) Sustainable Livelihood Framework
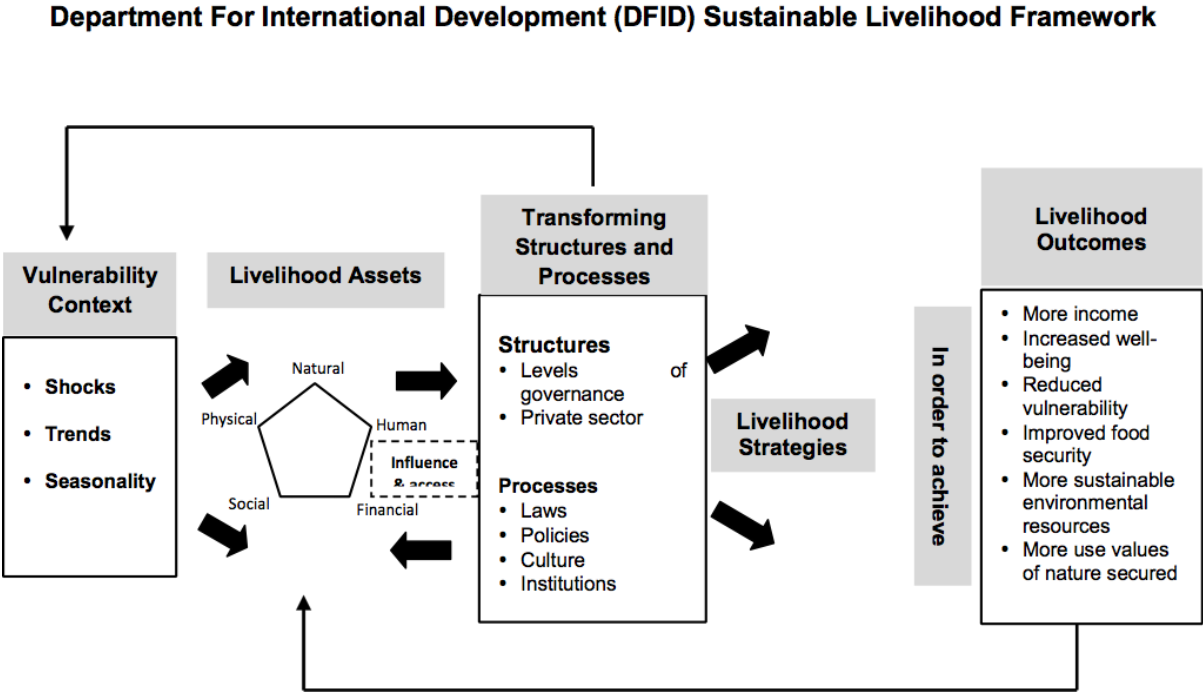
Figure 2.5 DFID's Sustainable Livelihoods framework (DFID, 1999)

The DFID's sustainable livelihood framework shares important commonalities with CARE's model. Firstly they both highlight the significance of the extent of vulnerability in

relation to the context. Secondly, they both visibly and soundly offer livelihood outcomes and strategies. Furthermore, the DFID's framework integrates the significance of access and power as important attributes in swaying assets into livelihood strategies. This framework strives to offer a way of thinking about livelihoods for poor households in their current social, organizational and institutional setting.

CARE's Livelihood Model

Natural Resources

Infrastructure

Economic Cultural and Political Environments

Shock & Stresses

Assets
Human Capital (Livelihood Capabilities) Social Capital (Claims & Access) Economic Capital (Stores & Resources)

Production and Income Activities

Household

Consumption Activities

Processing and Exchange Activities

Security of:

.Food
.Nutrition
.Health
.Water
.Shelter
.Education

Community Participation

Personal Security

Context   Livelihood Strategy   Livelihood Outcome

Figure 2.6 CARE's Livelihood model (Krantz, 2001)

A close analysis of these frameworks reveals that organisations make use of different approaches for the sole mandate of trying to eliminate poverty. CARE's framework appears to focus on the activities for eliminating poverty whilst DFID's livelihood approaches provides a podium for analysing poverty. These organisations use livelihood frameworks informed by the organisations mission and goals.

The use of Livelihood frameworks give oranisations strategic strength as they enable them to offer a multidimensional analysis of resources and how these impact on a household's ability to respond to disasters, earn a living and shocks. They do this by

tracing and identifying root causes that hinder people from accessing a basic quality of life.

The current study aims to identify how social factors contribute to disaster risk. This calls for understanding targeting mechanisms applied to identify those adolescent girls who require assistance. These targeting mechanisms need to address the variables that contribute to the social construction of risk.

2.5 VARIABLES CONTRIBUTING TO SOCIAL CONSTRUCTION OF RISK

From the literature above, it is clear that a number of factors contribute to the social construction of risk. The need to address these factors has become urgent, because "the promotion of gender equality is critical for the realisation of the post-2015 development agenda" (70th United Nations (UN) summit, 2015). In his presentation, Mugabe (2015) argues that "the African Union has declared 2015 the year of the development of women empowerment and development towards agenda 2063 and this requires mobilisation of both individual and collective action around this key issue". Agenda 2063 seeks to eliminate the scourge of poverty and deprivation by building on the fourth (1995) UN summit and the Beijing Declaration and Platform for Action (Mugabe, 2015). Achievement of this goal requires that gender stereotypes be eliminated. Several studies have documented the development of gender stereotypes and attitudes (Martin & Ruble, 2004; Ward & Friedman, 2006; Leaper & Friedman, 2007). According to Leaper and Brown (2008:685), "these gender stereotyped beliefs reflect and perpetuate gender inequalities". Figure 2.7 shows some of the variables that contribute to the social construction of risk.
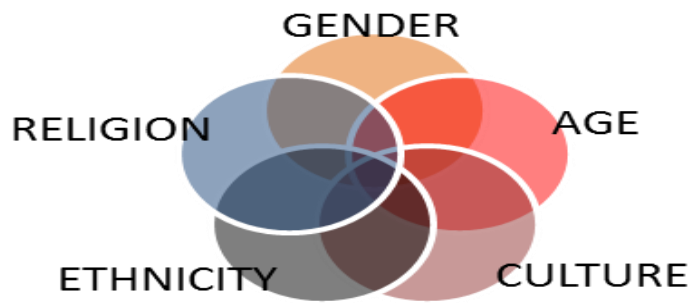
Figure 2.7 Variables contributing to the social construction of risk

Researchers in sexism (Freedman-Doan *et al.,* 2000; Hyde & Kling, 2001) argue that girls tend to internalise the low expectations bestowed on them by society, and this tends to affect their self-concepts, socio-emotional adjustment, achievement and career choices negatively.

Literature reveals a number of other attributes that contribute to the gendered social construction of risk. These include:

- Politics and power (Mascarenhas & Wisner, 2012);
- Human rights (Carmalt , 2011);
- Culture (Hewitt and Burton, 1971);
- Knowledge (Mercer *et al.*, 2007);
- Religious interpretations of disaster (Chester *et al.,* 2008);
- Age (Ngo, 2012);
- Caste, ethnicity and religion (Galliard, 2012);
- Poverty (Wisner *et al.,*2012);
- Disease (Anderson, 2015);
- Access (Wisner *et al.*, 2012); and
- Marginalisation and discrimination (Fordham, 2011).

Having identified these, it is the aim of this research to identify the variables that contribute to the social construction of risk in the Salima and Ntcheu districts of Malawi.

2.6 CONCLUSION

The underpinning conceptual framework of this study is that gender is socially constructed. Furthermore, there is a relationship between risk and gender. Considering that risk can be understood in terms of vulnerability, lack of access and livelihood, relevant models will be used to illustrate this relationship. These models include the PAR model, the Access model and the Sustainable Livelihood model.

When root causes are identified, adolescent girls can move from "high" vulnerability to "low" vulnerability levels (Wisner *et al.,* 2012). This can go a long way to reducing disaster risk among adolescent girls.

The review of literature has shown that disaster risk among adolescent girls is not genetic, but instead is socially constructed. Key theoretical statements derived from the PAR model, the Access model as well the livelihood framework can be used to identify some of the constructs that breed, foster and perpetuate disaster risk among adolescent girls.

The literature review has also shown that adolescent girls are a subgroup whose plight is worth investigating. Addressing issues that increase their vulnerability can go a long way to increasing the capacity of communities to face hazardous situations successfully and to prevent future disasters from occurring.

It was also established that not much research on adolescent girls has been conducted in Africa; as such there is a need to broaden the knowledge base pertaining to disaster risk among adolescent girls in southern Africa. This will provide research-based truths to replace commonly accepted myths, which truths authorities can use to formulate policies for risk reduction. This research aimed to be integral to filling in the existing gap in knowledge. In conclusion, this chapter aimed to achieve the research objective of defining and explaining the theoretical grounding of the social construction of risk.

CHAPTER 3: RESEARCH METHODOLOGY

3.1   INTRODUCTION

The review of literature presented recurring themes, emphasising the factors leading to the social construction of risk among adolescent girls in different settings. This chapter narrows the focus to the case under discussion and explains how data will be analysed. It therefore functions as the first step to understanding the complexities of gender in terms of risk, specifically among adolescent girls in the Ntcheu and Salima districts of Malawi. These complexities reveal how risk is socially produced, experienced and responded to by the research participants. Given the context-specific nature of the study, a case study was chosen as an appropriate design because it "aims to generate an intensive examination of a single case" (Bryman, 2012:71). The research is guided by an inductive theory. The epistemological orientation is interpretivist. This means that theory is generated out of research, and acceptable knowledge is that which is generated through an examination of the interpretation of the world by research participants. In this research, the adolescent girls' views of the world are therefore key. For this reason, focus group interviews were chosen as data collection instruments because "they are explicitly concerned to reveal how the group participants view the issues with which they are confronted" (Bryman, 2012:501). Since the research is based on data already collected, this chapter will explain how both primary data and secondary data were analysed.

3.2   RESEARCH METHODOLOGY

A research methodology is a strategy of inquiry, which spans from the underlying philosophical assumptions of the research, to research designs and data collection (Myes, 2009). Burns and Grove (2003:19) describe a qualitative approach as "a systematic subjective approach used to describe life experiences and situations to give them meaning". Qualitative methodology was deemed appropriate for this study, given the concern for understanding the gendered context of adolescent girls' social constructions of risk. It was used to explore the adolescent girls' subjective experiences of gendered attributes. As Semu and Chande-Binauli (1997:69) argue, "Statistical

measures do not present complete pictures of specific country situations, they are just concerned with the figures and not the true dynamics" that can lead to disaster risk. Charmes and Wierenga (2003:434) add weight to the choice of qualitative research designs by saying "there are many issues related to women…that escape quantification". Again, qualitative methods allow for the advantage of negotiated and context-specific results derived from active social interactions among people (Anderson, 2015). This was an important consideration concerning the choice of the methodology, as understanding the world views of adolescent girls and how they make sense of multiple and sometimes conflicting "truths" about gender and risk are central to this research. According to Maxwell (as cited in Van Niekerk & Roos, 2007) the purpose of a qualitative design is to:

- Understand the meaning of events, situations and actions;
- Understand the particular context and the influence of this context on actions;
- Identify unanticipated phenomena and influences;
- Understand the process through which events and actions take place; and
- Develop causal explanations.

The above factors influenced the choice of a case study method, as it "allows the investigation of complex and integrated systems" (Van Niekerk & Roos, 2007:19).

3.2.1 Description of study area

The study was carried out in the Ntcheu and Salima districts of Malawi. Figure 3.1 is a map showing the Ntcheu and Salima districts of Malawi.
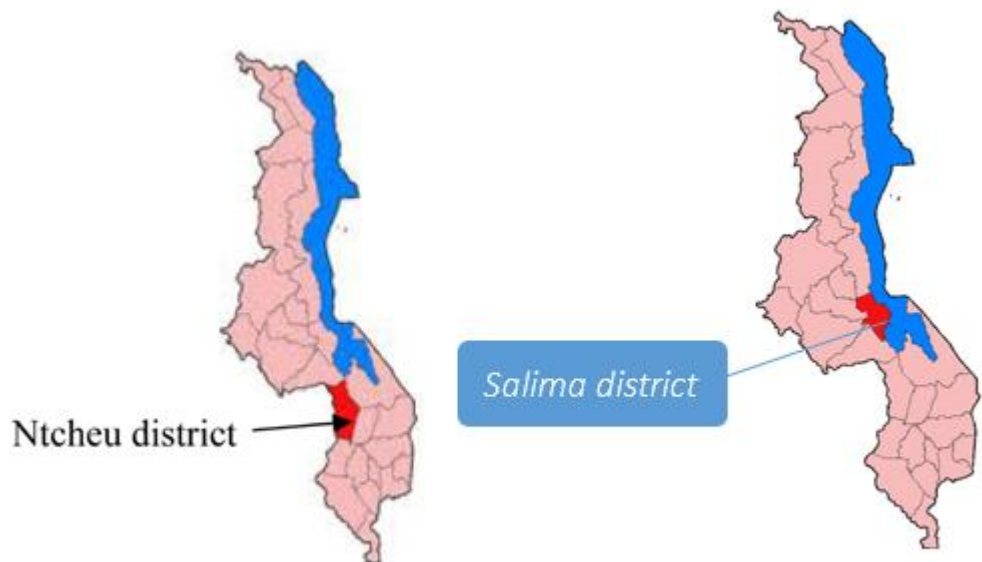
Figure 3.1 Map showing the Ntcheu and Salima districts of Malawi (Source: http://www.mapsofworld./malawi.html)

Malawi is a landlocked country located in central southeast Africa. Its neighbours are Tanzania to the northeast, Zambia to the northwest, and Mozambique, which surrounds Malawi from the southeast to the southwest. Malawi spreads over 118 480 square kilometres; 79% of which is land, and 21% of the total area consists of bodies of water (the largest of which is Lake Malawi). Malawi is a democratic country with a strong national government. The country is divided into 28 administrative localities, or districts, each overseen by a district commissioner, who is the chief executive for the district (Office of the President and Cabinet, 2005). There are three major cities in Malawi: Blantyre (Blantyre District), located in the southern region; Lilongwe (Lilongwe District), the capital of the country, located in the central region; and Mzuzu (Mzimba District), located in the northern region. Malawi's economy is heavily reliant on agriculture, which accounts for approximately 90% of its export earnings and 45% of its gross domestic product (Office of the President and Cabinet, 2005).

Malawi has a subtropical climate. The rainy season occurs between November and May. The topography of Malawi is characterised by rolling hills and plateaus. The highest peak is Mount Mulanje, reaching 3 002 metres, in southern Malawi (International Monetary Fund, 2007).

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Malawi's development statistics rank among some of the worst in the world, considering the fact that it is not a country at war (Scheper-Hughes, 1993). According to The World Bank Report (2010), with a gross national income per capita fluctuating between US $150 and US $280, this puts 40% of the population below the poverty line, with approximately 5 million people surviving on less than US $1 per day. Parts of Malawi experience a "hunger season" from November to March (MVAC, 2012; WPF, 2011).

According to the 2012 UN Gender Inequality Index (United Nations Development Programme, 2009), Malawi ranks 124 out of 148 countries in terms of gender inequality. Inequality is most evident in rural areas, where female-headed households are more likely to be poor and less educated than male-headed households (IFPRI, 2011). According to Anderson (2015:2), the major challenge in Malawi is "addressing the gender dynamics" of risk, especially the risk of HIV. In a period of ten years (1994-2005), women have moved from the periphery of the HIV pandemic to become the centre of concern (UNIFEM, 2004; Nath, 2004; UN, 2004).

3.2.2 Research approach

The research adopted a constructivist, ontological position: "social properties are the outcomes of the interaction between individuals rather than phenomena 'out there' separate from those involved in its construction" (Bryman, 2012:381). The theory generated by this research is grounded in the fact that it is "derived from data systematically gathered and analysed through the research process" (Strauss & Corbin, 1990:12). Figure 3.2 illustrates how grounded theory is generated. By this, it is meant that the contributions of the adolescent girls were instrumental in obtaining knowledge of the social construction of risk within the context of the case study. The world views of the adolescent girls provided the data necessary to create a theory that reflected only the participants in the Salima and Ntcheu districts of Malawi. For this reason, the results obtained and the conclusions reached in this study cannot be generalised to other settings.
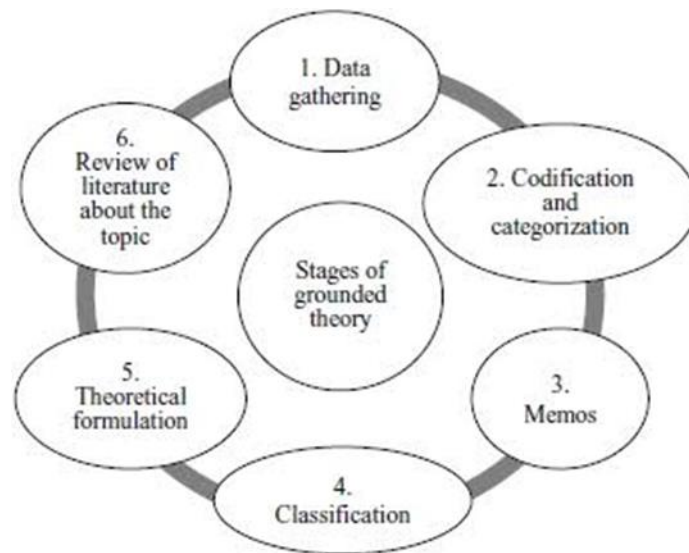
Figure 3.2 Stages of grounded theory (Kluge, 2000)

Through this process, social phenomena and categories were sought and an understanding of how they come to be through social interaction was established. Grounded theory was deemed an appropriate theoretical framework because it was important to understand action from the point of view of the respondents. It also allowed focus to be concentrated on the specific area of study. Thematic analysis was used to identify recurring factors raised by the respondents; these reflected their world views and formed the basis for analysis in Chapter four.

3.2.3 Research design

According to Bryman (2012:45), a research design is "a structure that guides the execution of a research method and the analysis of the subsequent data". The research design is summarised in Table 3.1.

Table 3.1 Summary of research design

Research process	Strategy
Research design	Qualitative method

Research paradigm	Constructivism
Data collection	Case study/focus group interviews
Data interpretation	Thematic analysis
Validity	From research instruments
Ethical issues	(i) Informed consent (ii) Ethics clearance from North-West University (iii) Permission from parents

3.2.4 Data analysis

As alluded to in Chapter one, this research is based on primary data collected by Forbes-Biggs, as part of the IAG project in Malawi. For coherent interpretation, data analysis in this chapter will be divided into two sections: primary data analysis and secondary data analysis. The former details how data was collected and the latter details the analysis of the collected data for the purposes of this study.

3.2.4.1   Primary data analysis

Primary data analysis is where "the researcher(s) who were responsible for the collection of the data do the analysis" (Bryman, 2012:13). In this case, data was collected, but was not analysed. Therefore, primary data analysis was limited to sampling, data collection and recording.

3.2.4.1.1   Sampling

A sample is "the segment of the population that is selected for investigation and is a subset of the population" (Bryman, 2012:187). This research used convenience sampling. According to Bryman (2012:201), "convenience sampling is one that is simply available to the researcher by virtue of its accessibility". Only girls who were available, had the time and were granted permission by their parents/guardians were able to take part as research participants. In total, 40 adolescent girls (20 from the Salima District and 20 from the Ntcheu District) participated in the study. Convenience sampling,

according to Bryman (2012:201), has both advantages and disadvantages. The advantages include the following:

- Participants are easily accessible.
- It allows the researcher to take advantage of all the opportunities available to gather data.
- Participants are more likely to cooperate, considering that they chose to participate, and thus there will be a good response rate.

Disadvantages are mainly due to the following:

- Such a sampling strategy makes it impossible to generalise findings.
- The sample that is obtained is not representative (in this case, of all adolescent girls).

3.2.4.1.2   Data collection

Through focus group interviews, the IAG researchers elicited the experiences of the adolescent girls from the two sites of the case study. A focus group "is a method of interviewing that involves more than one, usually at least four, interviewees" (Bryman, 2012:501). As the interviews progressed, the researchers paraphrased, probed and reflected on participant feedback to develop the discussions, so that these proceeded in line with the research context and objectives. According to Parahoo (1997:298), a focus group discussion has the following advantages:

- It is a cheaper and quicker way of obtaining valuable data.
- Colleagues and friends are more comfortable with voicing opinions in each other's company than on their own with the researcher.
- Participants are provided an opportunity to reflect on or react to the opinions of others, with which they may disagree or of which they were unaware.

Holloway and Wheeler (2002:117) list the following strengths of focus group discussions:

- The dynamic interaction among participants stimulates their thoughts and reminds them of their own feelings about the research topic.
- All participants including the researcher have an opportunity to ask questions, and these will produce more information than individual interviews.
- Informants can build on the answers of others.
- The researcher can clarify conflicts between participants and ask about these different views.

Holloway and Wheeler (2002:118) highlight the following limitations of focus group discussions:

- The researcher has more difficulty managing debate and controlling the process than in individual interviews.
- Some participants may be introverts, while others may dominate the discussion and influence the outcome, or perhaps even introduce bias.
- The group climate can inhibit or fail to stimulate the individual, or it can be livelier and generate more data than is needed.
- Recording data can present problems; it is not feasible to take notes when many people are talking at the same time. Furthermore, tape recorders may record only those that are seated in close proximity to the device's speaker.
- Data analysis can be daunting, considering the large volumes of data generated from participant feedback.
- Focus group discussions are not replicable.
- The validity and reliability of the findings are difficult to ascertain on their own.

Focus group interviews were used because they allow for the use of group interaction to produce data and insights. The advantages of focus groups outweighed the disadvantages in this research because, according to Babbie (2007), focus groups have a social inclination and capture real life data in a social environment; they have flexibility, high face validity, are speedy and not costly. Facilitators helped to guide the process but were careful not to be too intrusive. Facilitators also made handwritten notes, and audio recordings were used, which were later transcribed. The interviews were recorded digitally and field notes were also made. The project manager and his

team acted as transcribers to ensure in-depth immersion in the data, and transcribed interviews verbatim. Considering that they were familiar with the local community and were natives who understood English, they were found to be suitable as translators in cases where clarity was sought. The community was accustomed to them and perceived them as members of their own society: this fostered trust, better access to gate keepers and easier implementation of the project.

3.2.4.1.3   Recording of data

Through in-depth focus group interviews characterised by probing, reflection and paraphrasing, the IAG team invited respondents to elaborate on and confirm emerging themes in line with the research context and objectives. Researchers involved in the IAG project recorded the interviews digitally and substantiated them with field notes. One of the authors acted as transcriber to ensure in-depth immersion in the data, and transcribed the interviews verbatim onto paper.

3.2.4.2   Secondary data analysis

Secondary data analysis "occurs when someone else analyses the data" (Bryman, 2012:13). This section will explain what the researcher did with the data that was transcribed. The theoretical aspects of secondary data analysis below elaborate on the advantages and disadvantages of secondary data analysis,

According to Bryman (2012) secondary data analysis is economical, saves time and helps improve one's understanding of the problem, since most of one's time is spent on analysis rather than on actually collecting the data. On the other hand, it poses challenges, in that it seldom fits into the framework of the research factors, the information obtained may not be the information required, and the accuracy of secondary data is not known, or data may be outdated (Bryman, 2012). Furthermore, interviews that are transcribed may result in mistakes that might affect the meaning of participants' replies.

3.2.4.2.1 Thematic analysis

Thematic analysis was used to process and analyse the data obtained. After reading thoroughly and making notes on all transcribed material, potential topics were identified, which became potential categories. These broad categories were sorted into groups and organised into themes. This process is referred to as coding and categorising (Charmaz, 2011). Thematic content analysis is a coherent way of organising the research data in relation to the specific research question (Burnham, 1994). Initial analysis of the interview transcripts was conducted line-by-line for each piece of data. A data piece is a transcribed statement written in response to a question in the focus group interviews. These were labelled according to significance in relation to research objectives. This means that the responses that attempted to or successfully answered the research questions were prevalent among at least seven of the respondents in each district. According to Strauss and Corbin (1990) line-by-line analysis is characteristic of open coding in classical grounded theory. A thematic network structure as illustrated in Figure 3.4 was then developed, which formed the basis for analysis.
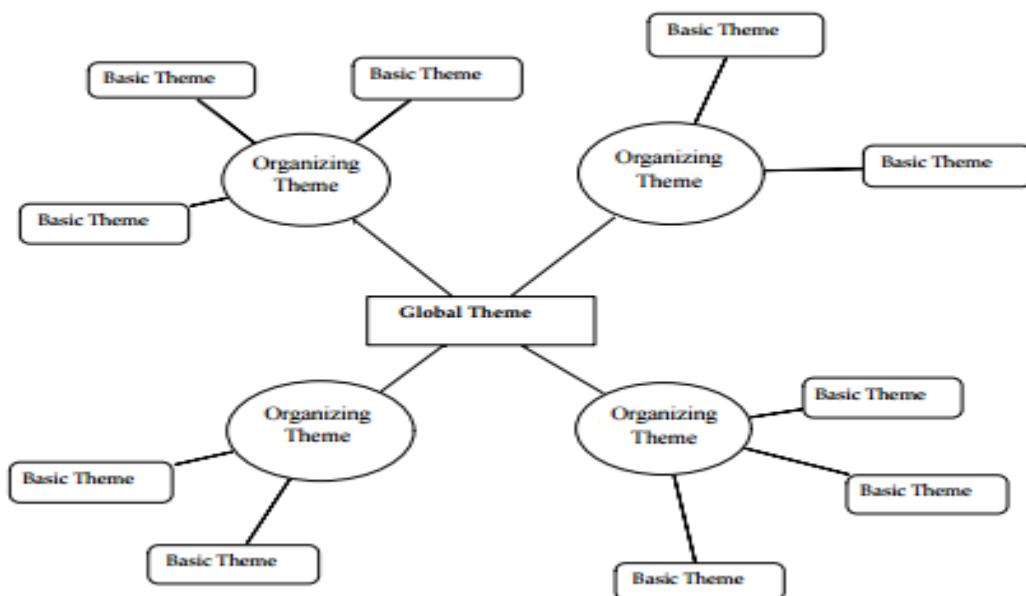
Figure 3.4 Structure of a thematic network (Attride-Stirling, 2001:388)

From the initial codes, recurring themes were labelled and categorised, following a colour-coding process (see Annexure L). This is referred to as axial coding (Gordon-

Finlayson, 2010) and it is at this stage that similar codes or categories of codes were marked with the same colour. As categorisation proceeded, recurring themes emerged across data sets. The process of thematic analysis is summarised in the Table 3.2 below.

Table 3.2 Phases in thematic analysis

Phase	Description of the process
1. Familiarisation with the data	Transcribing data (already done since this was secondary data analysis), reading and rereading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking whether the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic "map" of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis creates; generating clear

	definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature; producing a scholarly report of the analysis.

(Braun & Clarke, 2006:35)

3.2.4.2.3   *Strategies to ensure data quality*

In order to ensure data quality, the IAG project employed a local individual as project manager, in order to gain the trust of locals and to allow easy access to gate keepers. This project manager was an employee of CARE and had been working in the same communities for a reasonable length of time. Since he was fluent in both local languages and English, he was able to communicate with all stakeholders and provided clarity during implementation of the project. The researcher strived to adhere to the methodological and epistemological foundation that underlies constructivist research, in terms of planning, data analysis and reporting of the study.

3.3   REPORTING ON FINDINGS

The last aspect of thematic analysis is to report on findings, and this was achieved through "interpretation of the text, enabling disclosure and understanding for the reader" (Attride-Stirling, 2001:390). This section, as posited by Attride-Stirling (2001:402), seeks to "return to the original research questions and the theoretical frameworks underpinning them, addressing them with arguments grounded on the patterns that emerged in the exploration of the texts". The aim here was to take the key conceptual findings in the summaries of each thematic network and pull them together into a cohesive story by relating them back to the literature review.

3.4 ETHICAL CONSIDERATIONS

Most ethical considerations were addressed within the bigger IAG project and not only in the current study. It is accepted that these considerations were central in conducting the data collection. According to Babbie (2007), a basic ethical rule of social research is that participation should be voluntary. Ethical approval for the IAG project was obtained from the Ethics Committee of the North-West University (University's ethics number: NWU-00113-13-57). Ethical issues regarding protection of human subjects as respondents included the right not to participate, and confidentiality. In instances where participants were minors, written parental consent was sought. All the respondents were assured that the data would be treated with the strictest confidence. It was made clear that data and information generated through the study would only be used by CARE, North-West University, community leaders and local/national government, to improve the livelihood of adolescent girls through enhanced understanding of disaster risk. It was disclosed that the results of the study might be published widely. However, individuals' and households' names would not be divulged, nor would the results be linked with a particular individual or family as the source. The respondents were informed that participating in the survey was voluntary and that they had the right to choose whether or not to participate in the survey.

In order to ensure data security, the project manager and facilitators signed a non-disclosure agreement as part of the engagement process. Each field team had a facilitator who collected all the completed questionnaires for safekeeping before data processing and analysis.

The raw data was kept on a password-protected memory device in order to prevent other people from accessing it. It will be kept in a locked safe for a period of not less than five years before being destroyed.

3.5 CONCLUSION

This chapter described the research methodology, the purpose of which was to maximise valid answers to the research questions. This was achieved by using a

qualitative, grounded and interpretivist approach. Such an approach provided answers to the pertinent issues being investigated, based on the experiences of adolescent girls.

Since the research was based on secondary data analysis, it was deemed important to describe how primary data was collected, as this has implications for the validity of the findings as well as in terms of ethical concerns. The participants were morally and ethically protected by observing the principles of human dignity.

Thematic analysis provided a tool that could be used to explore the complexities of how risk is socially constructed; as such it formed the greater portion of secondary data analysis. The conceptual data analysis framework proposed above presents the researcher's construction of adolescent girls' experiences in the communities presented in this case study.

A combination of the factors stated above provided a solid methodology by means of which valid findings could be obtained. Chapter four discusses the empirical findings. In conclusion this chapter aimed to achieve the research objective of providing a framework for data analysis thus setting the foundation for determining valid results.

CHAPTER 4: EMPIRICAL FINDINGS

4.1 INTRODUCTION

One of the main objectives of this study was to investigate the elements contributing to the social construction of risk among adolescent girls in the case study at hand. The preceding chapters laid the groundwork for the investigation of this phenomenon. This was done by means of a qualitative research design, followed by focus group interviews in order to gather data. Secondary data analysis formed the core of this study through the application of a thematic analysis framework.

The findings in this chapter are contextual and are based on the respondents' natural settings and social systems. They reflect the lived reality of adolescent girls within the parameters of the case study at hand. Central to this chapter is the analysis of transcribed interviews and the exploration of themes arising from these interviews. Chapter two concluded by highlighting some theoretical themes that contribute to the social construction of risk among adolescent girls; in this chapter, the relationship, similarities and differences between these are explored. This chapter also seeks to establish the social factors contributing to the social construction of risk among adolescent girls in the Ntcheu and Salima districts of Malawi. The outcome of this chapter will therefore be key in either validating or refuting the assertions made in prior chapters.

A description of results is provided, followed by an analysis of findings and a summary of the key findings as well as the conclusions. The responses made by the participants will be analysed using social constructivist thematic analysis. This theoretic framework is explained in Chapter three.

4.2   IDENTIFYING THEMES

Primary data collection provided the information needed for secondary data analysis. It was from this transcribed data that the research commenced, and secondary data analysis generated themes based on the responses of the adolescent girls. Thematic analysis is defined as "a method for identifying, analysing and reporting patterns (themes) within data" (Braun & Clarke, 2006:79). The data was analysed using the six

steps of thematic analysis, as defined by Braun and Clarke (2006) and Attride-Stirling (2001). To establish a chronological analysis, responses were grouped into themes, related to the social attributes contributing to the risks that the participating adolescent girls face. In each section, qualitative data was represented, followed by literature and the theoretical framework used in this study to corroborate the established themes. Chapter two identified variables contributing to the construction of risk and, where applicable, these were merged with responses from the adolescent girls. The aim here was to identify any relationship between the themes identified in Chapter two's theoretical analysis with the findings of this study. Themes were classified as either basic, organisational or global.

Basic themes are "simple premises characteristic of data" (Attride-Stirling, 2001:389). In order to be clearly understood, basic themes are read collectively with other statements from the participants. When grouped together, intersecting ideas emerge, which summarise the key points that have been raised. These give rise to organisational themes.

Organisational themes are "clusters of significance that summarise the principal assumptions of basic themes" (Attride-Sterling, 2001:389). These themes are more abstract and show more of what has been said in the text collected from the focus group interviews. Organisational themes group the main ideas proposed by the basic themes. It is from such groups of themes that global themes are derived.

Global themes constitute the assertion that risk among adolescent girls in Malawi is socially constructed. According to Attride-Sterling (2001:389) global themes "encompass the principal metaphors in the data as a whole…that leads to the conclusion". Basic, organisational and global themes will be discussed in relation to the analysis of participant feedback when thematic networks are explored in section 4.5. Table 4.1 below lists the questions that were asked in focus group interviews, and from which the themes emerged.

Table 4.1 Questions asked during focus group interviews

QUESTION (See Annexure A)	THEME	SPECIFIC CONTENT
3. PERCEPTION OF SELF	Social factors contributing to risk (root causes)	3.1 Perception of self 3.2 Perception of value in community 3.3 Perception of value in family 3.4 Perception of person agency 3.5 Perception of personal identity 3.6 Perception of socialisation 3.7 Perception of social positioning 3.8 Perception of social/ cultural beliefs
4. HAZARD PERCEPTION	Hazards within the community	4.1 Hazard prioritisation
5. ACTION	Activities taken to reduce disaster risk	5.1 Action and collaboration to reduce disaster risk

Table 4.1 summarises all the questions relevant to this analysis. However, not all the questions posed to the respondents revealed prevalent social factors. A significant factor in this research was measured by a percentage prevalence of the factor in the

sample. A percentage of 45% or more was taken as significant. This meant that, for an attribute to become an organisational theme, that factor would need to have been raised as a basic theme by at least eight out of the twenty participants. The research questions discussed below reveal the issues that arose.

4.3   CATEGORIES OF BASIC THEMES (ORGANISATIONAL THEMES)

The responses made by the adolescent girls were analysed using a social constructivist thematic analysis. According to Braun and Clarke (2006:79) thematic analysis is "a method for identifying analysing and reporting patterns (themes) within data". The data was analysed using the six stages of thematic analysis as defined by Braun and Clarke (2006). Table 4.2 shows categories of themes that were established from the literature review alongside those found through focus group interviews

Table 4.2 Themes established from literature and from focus group interviews

Literature review	Focus group interviews
Culture	Gendered social justice
Location	Gendered poverty
Poverty	Gendered educational opportunities
Institutionalised gender inequality	Gendered empowerment
Lack of access	Gendered labour opportunities
Politics and power	Gendered food security
Economic systems	Age
Livelihood	Low self-esteem
Religion	
Age	

Gender	
Ethnicity	

Table 4.3 shows the basic, organisational and global themes that were established in the focus group interviews, which were used to develop the thematic network.

Table 4.3 Basic, organisational and global themes

Basic themes	Organisational themes	Global theme
• We are seen as people who cannot excel in education • Lack of education threatens my welfare • Parents force girls to drop out of school when they are destitute and starving	Gendered educational opportunities	Risk is a gendered social construct among adolescent girls in the Ntcheu and Salima districts of Malawi
• Girls engage in transactional sex when in need of money	Gendered poverty	
• My community has less expectations of me compared to boys • I am seen as someone who will get married and become a housewife to raise children	Gendered value/view of life	
• My mother influences	Gendered social	

my decisions • Being a girl means to learn from and being expected to be like your mother • I don't feel I have the power to make reasonable decisions	justice	
• My role is house girl • I do the chores, which include cooking, cleaning and collecting water • Lack of education threatens my welfare	Gendered empowerment	
• When parents need money they arrange marriages • We fall pregnant while young because of parents who are not supportive • Girls are pushed by the lack of possessions	Gendered food security	
• Lack of education threatens my welfare	Gendered labour opportunities	

4.4   THEMATIC NETWORKS

In order to give a more vivid visual representation of findings, a thematic network was developed. This is "a web-like representational means…it makes explicit the procedures that may be employed in going from text to interpretation" (Attride-Sterling, 2001:388). The thematic network for the social construction of risk among adolescent girls in the

Ntcheu and Salima districts of Malawi is shown in Figure 4.1 below. The thematic network illustrates concisely the key gendered themes on which risk is socially constructed: poverty, value/view of life, labour opportunities, education opportunities, security, empowerment, and social justice.

Figure 4.1 Thematic network analysis: structure for the social construct of risk among adolescent girls

4.5   DESCRIPTION AND EXPLORATION OF THEMATIC NETWORKS

From the literature review in Chapter two, variables contributing to the construction of risk were identified. These include culture, religion, gender, age, ethnicity, politics and human rights. Some of these are evident in the responses of the research participants. These formed the basis for the themes identified and will be explored in the paragraphs to follow.

Since the impact of gender and age is central, it was important to analyse how other factors further enhance risk. From the thematic network illustrated in Figure 4.1, various gendered attributes were identified. These included gendered educational opportunities, gendered poverty, gendered value/view of life, gendered social justice, gendered empowerment, gendered food security, and gendered labour opportunities.

The discussions on self-perception, value in community and cultural beliefs highlighted some fundamental tensions revolving around educational opportunities. The thematic network in Figure 4.1 illustrates concisely the key themes pertaining to how educational opportunities are anchored in gender. Research participant 3 (RP3) stated that:

"*Parents force girls to drop out of school when they are broke and starving.*"

The adolescent child therefore becomes the first victim of poverty as far as educational opportunities are concerned. The exacerbated long-term effect is that doors that education may have opened remain permanently closed, cementing the path to increased disaster risk in future. To add weight to this, RP4 agreed and pointed out that:

"*Lack of food and other basic resources are the conditions that often force parents to arrange marriage for their child.*"

As previously mentioned by Anderson (2015), and as can be inferred from this statement, adolescent girls provide food and financial security and are used as a survival strategy, to preserve family networks and to repay debts. In doing so, they act as economic shock absorbers for their family, despite the risk to which this exposes them. This brings to the fore the aspect of gendered food security. Adolescent girls become vulnerable in that, once married, they have very little power, because men are

the providers, and women must always please their husbands. What the man says is final, and the woman cannot negotiate things like family planning and the use of prophylactics to prevent contracting sexually transmitted infections. Thus, adolescent girls are at risk, often having to confront adult problems, for which they may not be ready or prepared.

Section 2.3 alluded to the relationship between the risk of HIV infection and gender. Simply put, HIV can be referred to as a gendered disease. The access model and livelihood framework pointed out that, with limited access to employment, income opportunities are also limited. This can lead to the incorporation of hazards (disease, e.g. HIV), and the differential access experienced by adolescent girls results in a progression of vulnerability. In order to secure a better life, girls may end up having transactional sex, thus risking the chance of disease or unwanted pregnancy, as mentioned by RP11:

> *"We get pregnant while young because of parents who are not supportive."*

The knock-on effect here is that high mortality rates occur among adolescent girls, due to pregnancy before physical maturity. Pregnancy is therefore a risk that adolescent girls face because of the social systems in which they exist and need to function. Teenage pregnancy can therefore be seen as motivated by culture, and as such, death due to pregnancy can be seen as a gendered risk.

Identity construction was one concept that arose and which the literature review had not enumerated. It was established that adolescent girls tend to imitate their peers' behaviours in an effort to match the group behaviour or to show others that they are able to do what their peers are doing. Such peer influence contributes significantly to disaster risk. RP11 and RP18 confirmed:

> *"[We] receive pressure from fellow girls to go out at night and also to start relationships".*

> *"I see myself as someone who is vulnerable to peer pressure from them (other girls). I feel like they have power over me."*

From the discussions, it was established that gendered poverty is prominent and is experienced by adolescent girls. This can be viewed from a gendered labour opportunities perspective. Considering the fact that adolescent girls are not educated as

well as their male counterparts, they cannot migrate to urban areas to seek better employment. They therefore rely on subsistence farming. Agriculture, by its nature, implies a heavy reliance on rainfall. If a drought occurs, adolescent girls are likely to be at the forefront of coping with low crop yields. Consequently, they may decide to relocate, so as to live near rivers and dams, building unsafe shelters with poor or no sanitation, which can easily be destroyed by floods or high winds. The issue of gendered location and unsafe living conditions becomes evident at this point. Areas near lakes (such as Lake Malawi) or rivers also imply infestations of mosquitoes, which present the risk of contracting malaria. As argued by RP11:

"Girls are pushed by the lack of basic things (poverty) to start transactional sex."

As stated in Chapter two (Anderson, 2015), Malawi is one of the poorest countries in the world, and this poverty results in adolescent girls taking drastic measures simply to survive. This immediate need for security tends to be myopic and does not permit consideration of the long term, or of slowly encroaching risks like HIV/AIDS. Focus group discussions revealed that pregnancy and hunger are seen as more threatening than HIV infection. As implied by RP11, girls would rather risk HIV infection by engaging in transactional sex than go hungry, yet hunger is something that can be prevented by engaging in better methods of agriculture, such as planting drought-resistant crops. On the other hand, there is often no cheaply available treatment for HIV infection, and a cure has yet to be discovered. HIV should therefore be seen as a more life-threatening risk than hunger.

The notion of culture is an important determinant of the socialisation process among young people in Malawi. Entrenched in the whole process of socialisation are cultural values that tend to emphasise and strengthen the dominance of males and the subordination of females. Farmer *et al.* (2006) are quoted in Chapter two, suggesting that from a very young age, while girls are taught their submissive roles, boys are empowered to become providers. The participants point out that girls are expected to take after their mothers in everything they do. This brings to the fore the gendered nature of social justice. The skills of girls, their knowledge and energy is therefore not fully utilised to build their capacity for dealing with hazards. RP1 stated that:

"To be a girl means to learn from and expected to be like your mom."

Furthermore, socialisation has increased the economic power of male adolescents, as they are encouraged to do productive work (paying jobs) while females are expected to assist with non-paying household chores (reproductive roles) (Moser, 1993); thus reinforcing females' dependence on their male sexual partners for financial and material support. Section 2.3 of this research also pointed out that gender discrimination spans every aspect of a girl's life. Different roles have a bearing on potential loss, injury or death in the face of a hazard. This culture that reinforces male control and female subordination results in girls subscribing to the belief expressed by RP12:

"No, there is nothing we can do to protect ourselves."

The participating girls were of the opinion that there is nothing they can do, because they do not have the power to control their lives. This highlights the gendered lack of power. The study also found that the culture in Malawi reinforces subservience among females in heterosexual relationships. The female adolescents for instance were socialised to serve their male partners as their masters, as explained by RP13:

"I am seen as someone who will become married and become a housewife to raise children."

It can be argued that this is a form of the gendered value of life, in the sense that social categorisation along gender lines undermines adolescent girls. Section 2.3 clarified the Malawian government's position on marriage, and the situation on the ground in terms of the cultural setting was also presented. As such, culture controls marriages and parents have final say regarding their daughters' marriages. In terms of social justice, adolescent girls are therefore left to the mercy of traditional systems. RP4 stated that:

"Most people, especially parents and teachers, have authoritative power over us."

The problem is that, if teachers (especially male teachers) have social power over the girl children, this could deprive girls of the opportunity to learn. As already alluded to in Chapter two, some teachers have sexual relationships with girls and when the girl falls pregnant, they enter into arrangements with the parents of the girl to avoid prosecution. The risks that adolescent girls face in most of the instances highlighted above can be traced to a lack of education. Van Niekerk (2005) illustrates (see Table 2.1) that there is

a need for training and education, acquisition of knowledge and capacity building, in order to reverse the build-up of pressure that results in disaster risk.

Section 2.3 alluded to the premise that, in the presence of gender inequality, certain groups of people are prevented from reaching their full potential. Thus, burdened by household chores, the participants argued that domestic tasks disrupt schooling for adolescent girls and limit their own time to do homework and even to attend class. As RP3 stated:

> *"Lack of education threatens my welfare."*

Section 2.3 concurs with this notion and explains that adolescent girls are still entrenched in discriminatory norms and practices. Combined with the effects of poverty, this limits their development and capabilities.

As to the matter of future prospects for adolescent girls, one common observation was highlighted by RP2:

> *"The community sees me as someone who is wasting time with involvement with this project."*

As a result of behaviour that is seen as unacceptable, the girls are treated poorly when they try and better their lives, as mentioned by RP6:

> "*They treat me differently, they say a lot of negative things about my involvement in the project."*

This once again reinforces the idea of gendered value of life. A girl's life and her capabilities are undermined, as mentioned in section 2.3.

Marriage is seen as a girl's best option. In most such cases, marriage is motivated by financial constraints and peer pressure (Anderson, 2015:102). It can be argued that "women are socialised into being obedient and submissive" (Mbweza *et al.*, 2008:45). Consequently they have less power, are considered less capable and are viewed as people who cannot think for themselves. This leaves adolescent girls more vulnerable. Muntali (2004:4) argues that they grow up seeing their mothers saying yes to their fathers; therefore, "a woman must listen to a man". RP5 shares the same opinion:

> *"My mother influences my decisions."*

This lack of decision-making power, prevalent among women, has important ramifications on the susceptibility of girls to risk. This gendered social injustice is further revealed by RP4's words:

"*Being a girl means to be at service for the family members.*"

This statement is intricately connected to maintaining the status quo for adolescent girls. Section 2.3 of this study alluded to the fact that domestic chores entrenched in the lives of adolescent girls result in seclusion that brings with it exposure to risks. Men are thus able to control what a woman can and cannot do. This raises a concern, especially for disaster risk practitioners and in this research in particular, because it counts as a significant loss if the solutions to the problems we face today (climate change, HIV/AIDS, renewable energy) lie in the mind of an adolescent girl in Malawi who is deprived of the right to education and becomes a housewife instead. RP5 argued that:

"*But given enough information, I can make wise decisions.*"

The presence of gendered educational opportunities therefore present a factor that diverts income opportunities away from adolescent girls and thus increases vulnerability among adolescent girls.

Interestingly, in this study, despite the numerous hindrances the adolescent girls face, they still remain optimistic regarding the future. RP13 proposed that, if given the opportunity:

"*We can try to teach people what is good and what is not, we can tell them the right way to use their power… I feel I have something to contribute.*"

This is in line with the arguments of Bradshaw and Fordham (2013:24): "because of this lack of access to resources on a daily basis, they (women), have learnt to be more adaptable to crisis than their male counterparts".

As can be seen from the discussion above, some themes and subthemes were related to more than one core category, which made it difficult to assign them to one category. On the aspect of hazards that the girls face, most of them mentioned drought, veld fires and, in a few instances, earthquakes. Even though HIV/AIDS was mentioned, it was not common. This could mean that the girls do not see HIV/AIDS as a disaster risk that is

prevalent in their community. This is contrary to reports on Malawi in the United Nations World Disaster Report (2007).

The literature review in this research provided the foundation and point of departure for analysis; however the focus group interviews allowed for an in-depth understanding based on the views of the adolescent girls. They allowed participants to speak freely about the social dimensions of risk, and to critically reflect upon their responses according to their own understandings. This synchronisation of literature and focus group interviews ensured that similar themes could be explored, which allowed for comparison in data analysis: either to refute or strengthen claims made in other research contexts.

4.6   SUMMARY OF THEMATIC NETWORK

The construction of risk among adolescent girls in Malawi was found to revolve around seven key areas (see Figure 4.1) centred on culture, religion, age, ethnicity, politics and socio-economic contexts.

Social injustice held a tenuous position in these discussions: girls are marginalised and do not have access to sustainable livelihoods. Without access to education, adolescent girls cannot be gainfully employed later on in life. Lack of training then exerts further pressure, leading to decisions that place the girls in unsafe conditions. The pressure model (see Figure 2.1) highlighted how root causes of disasters permeate social structures, leading to unsafe conditions. Socially constructed attributes rooted in ideologies, and in economic, political and cultural systems, are highlighted in the progression to vulnerability. This leads to poor living conditions, taking shelter on dangerous land or having limited livelihood choices. As alluded to earlier, many girls then see marriage, transactional sex or having relationships with older men as their only hope for survival.

Adolescent girls in the Ntcheu and Salima districts are faced with a negative gendered value of life. Not much is expected of them and this perception is simply based on the fact that they are girls. It is assumed that the only "good" thing that can happen to a girl is marriage. However, the risks they face seem not to have a grounding based on the

physiology of their bodies. They therefore grow up to maintain the status quo and perpetuate the plight of oppressed women, whom they eventually become.

Stereotypical gender roles and expectations also emerged from the participants' narratives. These roles lead to gendered poverty, as the adolescent girls do not prepare themselves adequately for later on in life. Considering the gendered nature of marginalisation, adolescent girls are seen as people who cannot excel in education, and they are the first to drop out of school if their families experience difficulties. Even if they remain in school, when they get home they are faced with so many domestic chores that there is little time for them to concentrate on academic work. The resultant lack of education thus threatens their welfare.

There seems to be insufficient implementation of certain policies and laws stated in the country's constitution. Traditional and cultural beliefs appear to reign supreme. Adolescent girls appear not to have a say in what occurs in their lives. They cannot make decisions for themselves and elders tend to force them into what they would not ordinarily choose. They therefore grow up with a gendered lack of empowerment. This has a myriad of effects, as it results in gendered poverty (because they cannot find jobs), gendered lack of food security and the gendered low value placed on their lives.

4.7   INTERPRETATION

The social construction of gender was central in the conceptualisation of risk among adolescent girls in the case study. Poverty, unemployment, poor food security, minimal education and labour opportunities, social injustice and reduced value of life are the organising themes that culminate in disaster risk among adolescent girls. These attributes are intricately interwoven, such that it is difficult to mention one without talking about the others. Together, they all act to marginalise adolescent girls by preventing them from accessing better livelihoods.

The organising themes among the respondents in this research are rooted in gender and lead to lack of access. Chapter two alluded to lack of access as the starting point in the progression to vulnerability. The PAR model (see Figure 2.1) highlighted that limited access to power structures and resources, as well as political and economic systems, are the root causes of disaster risk. The PAR model also illustrates how these root causes are transmitted by dynamic pressures, leading to a progression of vulnerability.

According to Wisner *et al.* (2012:25), dynamic pressures are "a set of macro processes that transmit the holistic weight of root causes along the chain of explanation, as an intermediary between them and fragile livelihoods and unsafe conditions". Lack of training coupled with parental debt act as dynamic pressures resulting in girls missing out on educational opportunities. As a result, the girls have limited resources and end up encountering unsafe conditions. The more vulnerable one is, the less likely one is to survive a hazard. As illustrated in Figure 2.1 the meeting of unsafe conditions and hazards gives rise to disaster risk.

No convincing evidence linking the risks adolescent girls face to their sex was forthcoming during this research. Instead, both the literature that was reviewed and the responses of the research participants indicated that risk among adolescent girls in the Ntcheu and Salima districts in Malawi is purely socially constructed.

4.8 CONCLUSION

This chapter explored the social factors that contribute to risk among adolescent girls. It was established that gendered social factors contribute significantly to the risk of adolescent girls. None of the adolescent girls blamed their situation on their sex. Reducing the risk among adolescent girls can be seen to have its roots in gendered social factors. As a result of the social construct of gender, adolescent girls tend to lose out on educational opportunities, are used to secure food and financial security, are exposed to diseases, are forced into unsafe conditions, are marginalised by culture and cultural beliefs, suffer social injustice and do not see the value of their own lives. The next chapter will conclude this study by providing a summary of findings, conclusions and recommendations for further research. In conclusion, this chapter aimed at to achieve the research objective of identifying the social factors contributing to the construction of risk among adolescent girls in the case study at hand.

CHAPTER 5: CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDY

5.1 INTRODUCTION

The aim of this research was to establish the social factors contributing to the gendered construction of risk among adolescent girls in the Ntcheu and Salima districts of Malawi. These findings will serve as a guideline for government, non-governmental organisations and other authorities, on a strategic level, so as to implement disaster risk reduction based on the world views of the affected group. Of paramount importance is to use these findings to implement strategies aimed at reducing the vulnerability of adolescent girls. Even though the research findings in this study cannot be generalised, the methods applied here can be adapted for similar research in different settings for similar studies. The findings can also be used for comparative purposes, within the same community or elsewhere.

5.2 ATTAINING THE RESEARCH OBJECTIVES

Three objectives were stated in Chapter one. Firstly, there was the need to define and explain the theoretical grounding of the social construction of risk. This was addressed in Chapter two, by means of an extensive literature review. The second objective was to determine the elements of the social construction of risk among adolescent girls in the case study at hand. In this regard, Chapter three presented a framework and tools to establish these elements; whilst Chapter four was instrumental in identifying the factors contributing to the social construction of risk among the participating adolescent girls. The last objective is the focus of this chapter: conclusions will be drawn, and recommendations for disaster risk reduction and suggestions for further study will be proposed.

5.3 CONCLUSIONS

A constructivist framework was used to establish the social attributes of risk among adolescent girls in this case study. This was done with the anticipation that, if established on the foundation of research-based evidence, the study could highlight the urgency of the plight of adolescent girls for government and other stakeholders. These stakeholders will then be expected to channel resources towards this subsector of society, with the aim of reducing their vulnerability.

Based on the evidence presented in this research, one can conclude that gender is socially constructed. Within the context of the Salima and Ntcheu districts of Malawi, society dictates, and plays an integral role in determining what is expected of girls and what is expected of boys. These boys and girls, in most cases, grow up to fulfil their preconceived gender roles, most of which marginalise the latter.

It was revealed that culture, gendered social injustice, gendered educational opportunities, gendered poverty, gendered empowerment, gendered labour opportunities and gendered food security, all act to marginalise adolescent girls and deprive them of access to sustainable livelihoods. The girls become vulnerable to risk because their choices and opportunities are limited. Considering the fact that they are not educated, working in the formal sector may mean doing merely general work. They are therefore not in a position of authority and can easily be taken advantage of by more powerful men in the workplace. This increases their susceptibility to HIV infection, because they can seldom negotiate the terms of the relationship they are involved in, for fear of losing their jobs.

Poverty and gender are related, and add to the myriad factors that increase risk among adolescent girls. As was highlighted in this research, parents fail to provide for the family, which in most cases adversely affects the adolescent girl children. The adolescent girls are then forced to drop out of school and are often forced into marriage. Some girls attempt to fend for themselves and take part in transactional sex, thereby increasing their chances of contracting sexually transmitted diseases or becoming mothers at an early age. Both these factors increase the vulnerability of girls in terms of ill health and even early death.

Culture also plays a significant role in contributing to the disaster risk of adolescent girls. In the Ntcheu and Salima districts, it is apparent that life is valued according to gender

norms, which in turn is linked to the gendered division of labour. This is a form of gendered structural violence, in the sense that social categorisation along gender lines heightens disaster risk.

Gendered social injustice contributes to the construction of risk. Based on the fact that they are girls, they (adolescent girls) are perceived as incapable of making decisions on their own. Hence, in most cases they admit to their mothers making choices for them. These decisions, for example being lured or forced into marriage, have implications in terms of their vulnerability to risk. In some cases their bodies are not fully physiologically ready to bear the burden of pregnancy, and this may result in their deaths.

The issues highlighted in this research are all closely related, such that one can easily be linked to the other. Addressing them all will therefore require a multifaceted approach. Given that one's sex does not lay down the blueprint of what one is capable of achieving in society, the implication is that, given the opportunity and an enabling environment, adolescent girls are capable of empowering themselves, thus reducing their vulnerability to hazards.

The problem statement in this research highlighted the need to understand the origins of disasters. It also asserted that the impact of disasters is not uniform. It was established that disasters among adolescent girls can originate due to marginalisation within society as a result of socially constructed attributes, which are anchored in gender. Due to lack of access, adolescent girls face disaster risk more frequently than their male counterparts.

5.4   RECOMMENDATIONS

From the findings of this study, the researcher is of the opinion that the plight of adolescent girls can only be confronted by the engagement of all stakeholders in the community, namely: parents, traditional leaders, political authorities, schools and the adolescent girls themselves. These stakeholders all have a crucial role to play in alleviating the various complexities leading to gendered vulnerability and consequently the risks facing these girls. The following strategies are therefore proposed:

- Involve adolescent girls in decision making.
- Involve adolescent girls in community development projects.

- Educate adolescent girls on disaster risk reduction.
- Enforce legislation in order to protect adolescent girls from cultural beliefs and norms that may lead to increased disaster risk.
- Encourage capacity building of adolescent girls by training them in better agricultural methods, and also by educating them about the hazards that they face, from the experts' points of view.
- Improve rural infrastructure: better water supply and sanitation methods would imply that the girls are able to spend less time doing domestic chores and spend more time doing school work.

Implementation of the above can go a long way to reducing the vulnerability of adolescent girls, thereby reducing their disaster risk.

5.5   SUGGESTIONS FOR FURTHER RESEARCH

The research found the following areas suitable for further research:

- A longitudinal study to test the effectiveness of the IAG/GIRRL projects, as they deal with gender issues affecting women later on in life.
- Considering that adolescent girls were interviewed and an analysis made based on their opinions, further insights from other community members could be helpful in order to obtain a more objective view of the jeopardy adolescent girls find themselves in.
- Since the results of this study cannot be generalised, more research of this nature can be carried out in other African countries in order to present a broader assessment of the situation facing adolescent girls in Africa as a whole.

In conclusion, this study succeeded in identifying some of the social factors contributing to risk among adolescent girls. Most of these factors added to the evidence in the literature review regarding the social construction of risk among adolescent girls.

BIBLIOGRAPHY

Aboagye, D., Dari, T. & Joseph, J. (2013). Risk Perception and Disaster Management in the Savannah Region of Ghana. *International Journal of Humanities and Social Science,* 3:85-96.

Adamchak, S., Bond, K., MacLaren, L., Magnani, R. & Nelson, K. (2000). A guide to monitoring and evaluating adolescent reproductive health programs. Washington DC: FOCUS on Young Adults.

Anderson, E.L. (2015). Gender, HIV and Risk. Navigating structural violence. UK. Palgrave McMillan.

Anderson, W. A. 2000. Women and children facing disaster. In *Managing disaster risk in emerging economies* (eds.) A. Kreimer and M. Arnold, 85-90. Washington, D.C.: World Bank.

Asia Pacific Forum on Women, Law and Development (APWLD). (2006). Guidelines for Gender Sensitive Disaster Management: Practical steps to ensure women's needs are met and women's rights are respected and protected during disaster. Thailand. Available at www.apwld.org/pdf/gender_sensitive.pdf

Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative research*, 1(3): 385-405.

Babbie, E. (2007). The Practice of Social Research. 11th edition. Belmont: Thomson/Wadsworth.

Bachan, K., Bennett, J., Goulds, S. & Sriskandarajah, D. (2011). Because you're a girl: growing up in the Commonwealth.

Bantebya, G.K., Muhanguzi, F.K. & Watson, C. (2013). Adolescent girls and gender justice: understanding key capability domains in Uganda. *PPT presented and discussed at the ODI Adolescent Girls' Partnership meeting*, p.p. 16-19.

Baylies, C. (2004). Cultural hazards facing young people in the era of HIV/AIDS: Specificity and change. In Poku, N.K. and Whiteside, A. (Eds). *The political economy of AIDS in Africa.* Aldershot: Ashgate, p.p. 71-84.

Blaike, P., Wisner, B., Cannon, T. & Davis, I. (2014). *At Risk: Natural Hazards, People's Vulnerability and Disasters.* New York: Routledge.

Boesten & Poku, (2009). 'Introduction: Gender, Inequalities, and HIV/AIDS, in Boesten and Poku (eds.) Gender and HIV/AIDS: Critical Perspectives From the Developing World (Farnham:Ashgate), 1-25.

Boholm, A. (1998). Comparative studies of risk perception: a review of twenty years of research. *Journal of Risk Research,* 1(2):135-163.

Boonzaier, F. & De la Rey, C. (2004). Women abuse: The construction of gender in women and men's narratives of violence. *South African Journal of Psychology,* 34(3): 443-463.

Botterill, L. & Mazur, N. (2004). Risk and risk perception: A literature review. Rural Industries Research and Development Corporation. RIRDC Publication No. 04/043.

Bradshaw, S. & Fordham, M. (2013). Women and Girls in Disasters. A review of DFID. Middlesex University.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology,* 3(2): 77-101.

Brink, H. (1996). *Fundamentals of research methodology for health care professionals.* Cape Town: Juta.

Bryman, A. (2012). *Social Research Methods.* New York: Oxford University Press.

Burnham, E. (1994). Interviewing. In Banister, P. (Ed.). *Qualitative methods in psychology: a research guide.* Buckingham: Open University Press.

Burns, N. & Grove, S.K. (2001). *The practice of nursing research: conduct/critique and utilization.* 4th edition. Philadelphia: Saunders.

Campbell, NA and JB Reece. (2008).Biology, eighth edition. Pearson Benjamin Cummings, San Francisco.

CARE Bangladesh (2005). Urban policy environment in Bangladesh: Making CARE'S response effective, Dakha: CARE Bangladesh.

Carmalt. J. (2011). 'Human rights, care ethics and situated universal norms', *Antinode*, 43, 2, 296-325.

Chambers, R. & Conway, G. (1992). *Sustainable rural livelihoods: Practical concepts for the 21st century*. IDS Discussion Paper No. 226. Brighton: IDS..

Chambers, R. (1989). Editorial Introduction: Vulnerability, Coping and Policy. *IDS Bulletin,* 20(2): 1-7.

Charmaz, K. (2011). Grounded theory methods in social justice research. *The Sage handbook of qualitative research*, 4: 359-380.

Charmes, J. & Wieringa, S. (2003). Measuring women's empowerment: an assessment of the gender-related development index and the gender empowerment measure. *Journal of Human Development*, 4(3): 419-435.

Chester, D. K., Duncan, A. M and Dibben, C. R. J. (2008). 'The importance of religion in shaping volcanic risk perceptions in Italy, with special reference to Vesuvius and Etna', *Journal of Volcanology and Geothermal research* 172, 3-4: 216-28.

Chodorow, N. (1978). *The reproduction of mothering*. California: Berkeley.

Corbin, J.M. & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, 13(1): 3-21.

Crawford, M. (2005). *Transformations: Women, gender and psychology*. New York: McGraw-Hill.

Creswell, J.W. (2003). *Research design. Qualitative, quantitative approach and mixed methods approaches.* 2nd edition. London: Sage.

Dankelman, I. (Ed.) (2010).Gender and climate change : An Introduction. Oxford,UK. Earthscan

DFID. (1999). Sustainable Livelihoods Guidance Sheets. Department for International Development: Natural Resources Policy and Advisory Department (UK). Available at http://www.livelihoods.org/info/info_guidancesheets.html

Drabek, T.E. (1991). The evolution of emergency management. In Drabek, T.E. & Hoetmer, G.J. (Eds). *Emergency Management: Principles and Practice for Local Government.* Washington DC: ICMA, p.p. 3-29.

Dunne, M., Leach, F., Chilisa, B., Maundeni, T., Tabulawa, R., Kutor, N., Dzama, F. & Assamoah, A. (2003). *Gendered School Experiences: the impact on retention and achievement.* London: DFID.

Enarson, E. (2001). Gender Equity, Environmental Management, and Natural Disasters Mitigation: Report from the on-line conference conducted by the division for the advancement of women. Turkey. UN.

Enarson, E. and Chakrabarti, P.G.D. (Eds.) (2010). Women, Gender and Disaster: Global Issues and Initiatives. Delhi: Sage India.

Farmer, P.E., Niyzeye, S., Stulac, S. & Kesshavjee, S. (2006). Structural violence in clinical medicine. *PLoS Medicine*, 3(1): 449.

Forbes-Biggs, K. & Maartens, Y. (2012). Adolescent Girls at Risk: The GIRRL Program as a capacity-building initiative in South Africa. *Children, Youth and Environments*, 22(2): 234-248.

Fordham, M and Bradshaw S. (2013). Women, Girls and Disasters: A review for DFID. Northumbria. Middlesex University.

Fordham, M. (2011) 'Gender sexuality and disaster' in Wisner B, Gaillard, J.C and Kelman (eds.) The Routledge Handbook of Hazards and disaster risk reduction, Londaon: Routledge, 395-406.

Freedman-Doan, C., Wigfield, A., Eccles, J.S., Blummernfeld, P., Arbreton, A. & Harold, R.D. (2000). What am I best at? Grade and gender differences in children's beliefs about ability improvement. *Journal of Applied Developmental Psychology*, 21: 379-402.

Freud, S. (1994). The social construct of gender. *Journal of Adult Development,* 1(1).

Gaillard, J.C. (2012) People's response to disasters: Vulnerability, Capacities and Resilience in the Philippines Context, Angeles City: Centre for Kapampangan Studies.

Gaillard, J.C., Maceda, E.A, Stasiak, E., Leberre, I., and Espaldon, M.A.O. (2005). Susatainable livelihoods and people's vulnerability in the face of coastal hazards. Journal of coastal conservation 13: 29-119.

Gillespie, S.R. (2006). *AIDS, Poverty, and Hunger: Challenges and Responses.* Washington DC: International Food Policy Research Institute.

Gilmore, D.D. (1990). *Manhood in the making: Cultural concepts of masculinity.* Connecticut: Yale University Press.

Global coalition on women and AIDS, IPPF and UNFPA (2008). Report Card: HIV Prevention for girls and Younger Women. Lilongwe. UNFPA

Gordon-Finlayson, A. (2010). QM2: Grounded theory. *Doing qualitative research in psychology*, 154-176.

Graham, H. (2000). *Understanding Health Inequalities*. Buckingham: Open University Press.

Greene, M., Robles, O., Stout, K. & Suvilaakso, T. (2013). *A girl's right to learn without*

Hewitt, K. and Burton, I. (1971). *The Hazardousness of a Place: A regional ecology of damaging events,* Toronto: University of Toronto Press.

Holloway, I. & Wheeler, S. (2002). Ensuring trustworthiness and quality.

Hyde, J.S. & Kling, K.C. (2001). Women, motivation, and achievement. *Psychology of Women Quarterly,* 25: 364-378.

International Committee of the Red Cross (ICRC) (2007).Tolerance, non-discrimination, respect for diversity. Geneva. ICRC.

International Monetary Fund (2007). Malawi: poverty Reduction Strategy Paper. Growth and development strategy.

International Strategy for Disaster Reduction (ISDR). (2004). Living with Risk: a global review of disaster risk reduction initiatives. Kobe: UN/ISDR.

IPCC (2011). 4th Assessment Report: Forthcoming IPCC SREX Special report on extreme events. Intergovernmental Panel On Climate Change.

Jabry, A. (2005). *After the cameras have gone: Children in disasters.* UK: Plan.

Johnson, G. (1997). *The Gender Knot: Unraveling Our Patriarchal Legacy*. Philadelphia: Temple University Press.

Kalipeni, E.S., Craddock, J., Oppong, R. & Ghosh, J. (2004). *HIV/AIDS in Africa: Beyond Epidemiology.* Oxford: Blackwell.

King, N. (2004). *Template Analysis – What is Template Analysis?* Available at http://www2.hud.ac.uk/hhs/research/template_analysis/

Krantz, L. (2001). "The Sustainable Livelihoods Approach: An introduction". Swedish International Development Agency (SIDA): Division for Policy and Socio-Economic Analysis.

Leach, F. (2003). Learning to be violent. *Compare,* 33(3): 385-400.

Leach, F., Dunne, M. & Salvi, F. (2014). *School-related Gender-based Violence: A global review of current issues and approaches in policy, programming and implementation responses to school-related gender-based violence (SRGBV) for the Education Sector.* UK: UNESCO.

Leach, F., Dunne, M. & Salvi, F. (2014). *School-related Gender-based Violence: A global review of current issues and approaches in policy, programming and implementation responses to school-related gender-based violence (SRGBV) for the Education Sector.* UK: UNESCO.

Leaper, C. & Brown, C.S. (2008). Perceived experiences with sexism among adolescent girls. *Child development*, 79(3): 685-704.

Leaper, C. & Friedman, C.K. (2007). The socialisation of gender. In Grusec, J. & Hastings, P. (Eds). *Handbook of socialisation: Theory and research*. New York: Guilford, p.p. 561-587.

Lewins, A., Taylor, C. & Gibbs, G.R. (2005). What is qualitative data analysis (QDA)? *Online QDA.* Available at onlineqda.hud.ac.uk/Intro_QDA/what_ is_qda.php

Lorber, J. (1994). Night to his Day: The Social Construction of Gender. *Paradoxes of Gender*, 1:1-8.

Malawi Government (2004). The Constitution of the Republic of Malawi. Lilongwe: Government of Malawi.

Malawi Vulnerability Assessment Committee (MVAC) (2012). Vulnerability Update Report: Malawi Food Security Outlook: October 2012 to March 2013, http://www.fews.net/docs/Punlications/Malawi_OL_2012_10_Final.pdf,accessed October 2014.

Marecek, J., Crawford, M. & Popp, D. (2004). On the construction of gender, sex, and sexualities. In Eagly, A.H., Beall, A.E. & Sternberg, R.J. (Eds). *The psychology of gender.* 2nd edition. New York: The Guilford Press, p.p. 192-216.

Martin, C.L. & Ruble, D. (2004). Children's search for gender cues cognitive perspectives on gender development. *Current directions in psychological science*, 13(2): 67-70.

Martin, C.L. (2000). Cognitive theories of gender development. In Eckes, T. & Traumer, H.M. (Eds). *The developmental social psychology of gender*. Mahwah, N.J: Erlbaum, p.p. 91-121.

Mbweza, E., Norr, K.F. & McElmurry, B. (2008). Couple decision making and use of cultural scripts in Malawi. *Journal of Nursing Scholarship*, 40(1): 12-19.

McEntire, D.A. (2001). Triggering agents, vulnerabilities and disaster reduction: towards a holistic paradigm. *Disaster Prevention and Management*, 10:189-196.

Mensch, B.S., Clark, W.H., Lloyd, C.B. & Erulkar, A.S. (1999). *Premarital Sex and School Dropout in Kenya: can schools make a difference?* World Bank Working Paper No. 124.

Mercer, J., Dominey-Howes, D., Kelman, I. and Lloyd, K. (2007). 'The potential for combining indigenous and western knowledge in reducing vulnerability to environmental hazards in small island developing states', *Environmental Hazards* 7, 4: 245-56.

Mirembe, R. & Davies, L. (2001). Is schooling a risk? Gender, power relations and school culture in Uganda. *Gender and Education*, 13(4): 401-416.

Mirsky, J. (2003). *Beyond Victims and Villains: addressing sexual violence in the education sector.* London: Panos.

Misomali, R. (2014). Emergency Management in Malawi: A Work in Progress with a Strong Foundation.

Morin, C. & Maxfield, J. (2010). Gender Differences in Sitting Positions of College Students and an Explanation of these Differences. *Sociological Perspectives. The Undergraduate Sociology Journal at the University of New Hampshire,* Spring: 7.

Moser, C. (1993). *Gender Planning and Development.* London: Routledge.

Mugabe, R.G. (2015, 29 September). 70th United Nations Summit. A paper presented at the general assembly of the United Nations. New York.

Munhall, P.L. (2001). *Nursing research: a qualitative perspective.* 3rd edition. USA: National League for Nursing.

Munthali, A.C., Chimbiri, A. and Zulu, E.M. (2004). Adolescent Sexual and Reproductive Health in Malawi: A synthesis of the research evidence. Alan Guttmacher Institute occasional Report 15(4)

Nath, M.B. (2004). Gender, HIV and Human Rights; Training Manual (Geneva: UNIFEM).

Neumayer, T. & Plumper, T. (2007). The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981–2002. *Annals of the Association of American Geographers*, 97(3):551-566.

Ngo, E. (2001). 'When disasters and age collide: Reviewing vulnerability of the elderly',

Office of the President and Cabinet. (2005). Malawi HIV and AIDS Monitoring and Evaluation Report. Republic of Malawi.

Oxfam International. (2005). The Tsunami's impact on women. Oxfam briefing note. Available at www.oxfam.org.uk/what_we_do/issues/conflict_disasters/

Oyĕwùmí, O. (2002). Conceptualizing gender: the Eurocentric foundations of feminist concepts and the challenge of African epistemologies. *JENDA: A Journal of Culture and African Women's Studies,* 2(1). Available at www.jendajournal.com

Phiri, K. (1983). Some changes to the matrilineal family system among the Chewa of Malawi since the nineteenth century. *Journal of African history*, 24(2): 257-274.

Plan, C. (2013). Plan 2013-2017. *Health Service Executive.* Publication pending.

Polit, D.F. & Beck, C.T. (2004). *Nursing research: Principles and methods*. Lippincott Williams & Wilkins.

Rodriguez, H., Quarantelli, E.L. & Dynes, R.R. (2007). *Handbook of Disaster Research*. New York: Springer.

Scheper-Hughes, N. (1993). *Death without weeping: The violence of everyday life in Brazil*. California: University of California Press.

Scoones, I. (1998). Sustainable Rural Livelihoods: A framework for analysis. Brighton, UK: Institute for Development Studies (IDS) Working Paper No. 72.

Scott, J.C. (1990). *Domination and the Art of Resistance: Hidden transcripts.* London: Yale University Press.

Seckinnelgin, H. (2008). *The international politics of HIV/AIDS: global disease – local pain.* London: Routledge.

Semu, L. & Chande-Binauli, L. (1997). Women's status in Malawi: a case for gendered development. *Bwalo*, (1): 85-103.

Sjoberg, L., Moen, B.E. & Rundmo, T. (2004). *Explaining risk perception. An evaluation of the psychometric paradigm in risk perception research*. Rotunde: Norway.

Sokoya, G.O, Collings, S.J and Muthukrishna, N. (2005). Exploring the complexities of gender roles and psychological wellbeing in farm-families: the implications for agricultural extension, management and research. *South African Journal of Agriculture Extension*, 34(1): 122-135.

Solvic, P. (1987). Perception of risk. *Science,* 236(4799): 280-285.

Streubert, H.J. & Carpenter, D.R. (1999). *Qualitative research in nursing advancing the humanistic imperative.* 2nd edition. Philadelphia: Lippincott.

Swarup, A, Dankelman, I, Ahluwalia, K and Hawrylyshyn, K (2011). Weathering the storm: Adolescent girls and climate change. London. Plan International

Twigg, J. (2004). *A good practice review: disaster risk reduction-mitigation and preparedness in development and emergency programming.* London: HPN.

UN (2004).UN joint gender policy statement – Malawi: section1,http://www.sdnp.org.mw/gender/un_pol_sec1.html

UNESCO. (2011). Global Monitoring Report, Table 5, p. 309.

UNFPA. (2005). The State of the World Population: The Promise of Equality – Gender Equity, Reproductive Health and the MDGs. Available at http://www.unfpa.org/hiv/women.htm

UNICEF. (2010). Narrowing the Gap to Meet the Goals. UNICEF Summary Report.

UNICEF. (2011). The State of the World's Children 2011. Adolescence: An Age of Opportunity. New York: UNICEF.

UNISDR. (2008). Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change – Good Practices and Lessons Learned.

USAID Malawi. (2008). Gender Assessment, June. Lilongwe: USAID Malawi.

Van Der Gaag, N. (2013). Because I am a Girl. The state of the world's girls 2013. In *Double Jeopardy: Adolescent Girls and disasters*. Italy: Graphicom.

Van Niekerk & Roos, (2007). The Impact of Drought in the Bophirima District Municipality (South Africa) on older people. Potchefstroom, South Africa. African Centre for Disaster Studies and the Department of Psychology.

Van Niekerk, D. (2005). A comprehensive framework from multi-sphere disaster risk reduction in South Africa (Doctoral Thesis). Potchefstroom: North-west University. Available at http:/dspace.nwu.ac.za/

Wahlberg, A.A.F. & Sjoberg, L. (2000). Risk perception and the media. *Journal of Risk Research,* 3(1): 31-50.

Ward, L.M. & Friedman, K. (2006). Using TV as a guide: Associations between television viewing and adolescents' sexual attitudes and behaviour. *Journal of Research on Adolescence,* 16(1): 133-156.

West, C. & Zimmerman, D.H. (1987). Doing Gender. *Gender and Society,* 1(2): 125-151.

WHO. 2002. *Gender and health in disasters*. Geneva: World Health Organization.

Wisner, B., Blaikie, P., Cannon, T. & Davis, I. (2004). At risk. *Natural hazards, people's vulnerability and disasters*, 2.

Wisner, B., Gaillard, J.C. & Kelman, I. (Eds). (2012). *The Routledge Handbook of Hazards and disaster Risk Reduction*. London: Routledge.

World Health Organisation (WHO). (2008). Closing the gap in a generation: Health Equity through action on the social determinants of health. Available at whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf

World Population Foundation. (2011). Reproductive Rights. Available at http://www.wpf.org/reproductive_rights_article/facts

World Vision International. (2010). A brief history of World Vision: Building a better world for children. USA: Federal Way. Available at www.worldvision.org

Xu, J., Zhang, Y., Liu, B. & Xue, L. (2014). Risk Perception in Natural Disaster management. China: National Natural Science Foundation, 912242039.

Yodmani, S. (2001). *Disaster risk management and vulnerability reduction: Protecting the Poor*. The Centre for Disaster Management.

Young, H.Y., Aklilu, G., Were, A. & Catley, T.L. (2002). Nutrition and Livelihoods in Situations of Conflict and Crises: Reducing vulnerability and risk. Paper presented at the ACCSCN 29th one-day symposium on nutrition in the context of crises and conflict.