

Family influence on youth disaster risk and vulnerability perceptions in a South African context

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“You get dark only to shine and light up the sky. Stars that burn the brightest fall too fast and pass you by because they spark like empty lighters”. *Marina Diamantes*.

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Abstract

Key words: *disaster risk, vulnerability, perception, family, youth.*

Youth is among groups that are mostly affected by disasters with impacts ranging from psychological, to physical, socioeconomic and educational. Yet, there are still some gaps during policy-making and Disaster Risk Reduction (DRR) planning which see young people falling short in terms of active participation in DRR as well as in using the opportunity to shape their contexts and futures effectively within context. This study attributes such to implications of risk perception and the factors contributing to the formation of such perceptions. This is because the perception of risk has been found to have behavioural linkages to fear, emotions, trust, personal responsibility, altruism, risk sharing, adaptability and response actions to unexpected events.

Considering the above paragraph, the role played by different types of contexts has been identified as a major factor that contributes to the formation of perceptions regarding risks. Such contexts or settings include the physical environment, the social interactions that take place within the physical environment, as well as the receptiveness of external influences by the individual. The main aim of this study is to, determine the role that family and the community play in the process of forming the views, idea and understanding of disaster risk and vulnerability among young people in South Africa. This is done to identify whether South African youth conceptually understand what disaster risk and vulnerability are and the extent to which family, space and the environment influence these perceptions of disaster risk and vulnerability in and within their respective communities.

To achieve the aim of this study, a number of young respondents were interviewed in individual interviews as well as through focus groups in order to get a sense of their perceptions relating to disaster risks as well as how those perceptions are influenced by contextual factors. This study found that people do not exist in isolation and are interconnected to others through their environments. These dynamic relations moderately influence the measure of attention, consciousness and judgement of conditions that may prohibit or promote normal functioning and development, hence influencing social-wellbeing. Psychological growth between the ages of 15 – 35 years is a crucial step at development and is characterised by great environmental changes. Accordingly, family functioning affects the outcome of cognitive growth and environmental adjustment throughout a person's life. Furthermore, this study finds that family and amity support help serve as a buffer mechanism to negative environmental impacts that people may be faced with in life as much as family and the community influence views and beliefs about the world within which a young person exists.

It is generally accepted by researchers that resilience to life-limiting conditions is a function of buffer or protective psychological processes that equip the individual to withstand, control, or

avoid factors that affect their well-being. Considering this, interventions aimed at empowering populations are recommended to invest in every aspect of life, including the psychological processes that are involved in subjecting people to feelings of weakness and inability. By so doing, individuals in this regard need to be studied holistically as systems along with the environments within which they reside which therefore warrants the emphasise on "social interactions, environmental and social psychological factors that influence the consciousness of an individual as well as their personality". Furthermore, through cultural norms and settings amongst other factors, community members are regarded as legitimate sources of social change and development. Therefore, targeting development at the familial level, the influence or power that families impose on their members can be used and adjusted accordingly to have positive outcomes on the healthy development of youth. Consequently, youth are then enabled to actively adopt attitudes and actions that promote a culture of safety and protection against any undesirable outcomes. In this regard, family serves as the immediate context through which young people can filter their knowledge and understanding as inferred by society at large. While on the other hand, society provides the guidelines on behaviour and traditions as it encompasses institutions that serve as a platform for development to promote the well-being of communities.

According to the 2011 census, the greater part of South Africa is made up of young people. This places the country in an advantage to invest in the optimal development of the youth to ensure a well-functioning population which can be groomed to gravitate towards effective disaster risk reduction. The potential of a country that is predominantly made up of youth is an opportunity to better livelihoods by educating young people and providing them with the necessary skills and resources to make informed choices and be motivated to actively participate in developmental initiatives as they will be aware of the benefits. The value of this study is to highlight the importance of having South African youth participate in efforts to reduce disaster risks in order to promote successful personal development as well as the development of the country. The study further shows the importance of understanding the basis of attitudes and behaviour by young people towards disaster risks, what influences their composition and how they affect DRR. The role of immediate influencers to young people is also looked at in order to highlight the possible opportunity of imparting the right kinds of attitudes and behaviours on young people from a young age so as to adopt a countrywide culture of safety and informedness.

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Chapter 1: Background and orientation

1.1. Introduction

Over the years, psychological research on risk perception has accepted the influence of social and cultural factors on the ways in which people regard and interpret risk (Pidgeon & Beattie, 1998). However, recent work in the perception of risk, disasters and vulnerability has identified the gaps in sufficient knowledge and consideration regarding the conceptualisation of psychological influences and the environmental factors that link how people perceive risks (Bickerstaff, 2003:827). Moreover, studies have identified gaps on how people gauge the risks that lead to disasters, as well as how they are affected by and respond to the disasters themselves (Bickerstaff, 2003:827). The field of Disaster Risk Management started recognising the individual “cognitive and attitudinal” processes that influence perception formation relating to disaster risk and vulnerability in the past two decades (Bickerstaff *et al.*, 2006:5-6).

The interest in and concern of how disaster risk and vulnerability may be perceived among young people have prompted the development of numerous studies to investigate the influence that different contexts have on the development of such perceptions. This focus has not only been on personal characteristics but also on mechanisms involved in the development as well as maintenance of perceptions. The main aim of this study was to determine the role that family and the community play in the process of forming the views, ideas and understanding of disaster risk and vulnerability among young people in South Africa. This was done to identify whether South African youth conceptually understand what disaster risk and vulnerability are and the extent to which family, space and the environment influence these perceptions of disaster risk and vulnerability in and within their respective communities. This research further interrogated the level of awareness from youth regarding factors or conditions that have an influence on how much they know about disaster risks, as well as with regard to conditions that lessen or exacerbate their vulnerability.

This chapter provides an overview of the study and outlines the problem under investigation. Other issues addressed in this chapter include the research questions and objectives, as well as the central theoretical statement. This chapter further provides an overview of the method of investigation, which includes aspects such as the literature review, research approach and design, sampling, data collection methods and data analysis. The chapter concludes highlighting limitations and delimitations of the study, the significance of the study, as well as a chapter layout of the overall study.

1.2. Problem statement

“Education commences at a mother’s knee, and every word spoken within the hearing of a young child tends towards the formation of character” (Best, 2000:81).

Some authors argue that young people can be regarded as blank pages, where everything they know as well as the actions they incline themselves towards can all be attributed to the influence of their surroundings (Gianoutsos, 2006:1). Social factors such as immediate family, friends and community members in the very environment within which young people exist then serve as input that can be translated into subjective experiences (Bernstein *et al.*, 2008). This view is referred to as *Tabula rasa/clean slate*, which was held by the philosopher John Locke (1689) , who defended the belief that humans are not born with knowledge and understanding, but rather acquire these from “external sensible objects which they then perceive” and relate subjectively with personal experience (Gianoutsos, 2006:1). Individuals start formulating their own understanding of the world and its dynamics to discover how they fit into the greater scheme of things (Creswell, 2003:9). This understanding is referred to as perception, as it is the ‘the view of things’ from a personal viewpoint. A review in psychological literature defines perception as a cognitive process that involves “the selection, organisation and interpretation of sensory input” (Weiten, 2014:127; Decker, 1995:10).

The above-mentioned definition of perception indicates that subjective understanding is a function of context. According to Levinston (2003:54), context refers to beliefs and assumptions about temporal, spatial and social settings, prior, on-going and future actions (verbal, nonverbal) and the state of knowledge and attentiveness of those participating in the social interaction at hand. Like text, understanding changes based on the perspective of the perceiver, which also describes the dynamics of context. Looking at the concept of perception from a socio-natural perspective, strong links can be drawn from standing convictions original to each young person and environmental outcomes that are consequent of such ideals. For instance, documented conceptualisation of disaster risk includes the potential disaster losses in lives, health status, livelihoods, assets and services that could happen to a particular community over a defined time period (Turnbull *et al.*, 2013:2). However, this conceptualisation possesses different meanings and consequences for different people due to each having a distinct understanding of the concept fuelled by the context from which they view it.

White (2007:10-14) acknowledges that personal factors, such as age, gender, educational level, profession, personal knowledge, personal disaster experience, trust in authorities, trust in experts, confidence in different risk reduction measures, involvement in cleaning up after a disaster, feelings associated with previously experienced floods, world views, degree of control and religion have an influence on risk perception (Wachinger *et al.*, 2013:1051). However, the comprehensive

familial context is an important structure of influence that is often neglected when considering other factors at play. According to research on this subject, much attention has been placed on the socio-demographic determinants of disaster risk and not much consideration has been given to the cognitive processes that take place inherently within individuals, which subsequently determine their risk perceptions (Adeola, 2007:13).

Bearing in mind the influence exerted by context on perception formation, successful youth development, particularly the positive completion of growth milestones and a swift transition from one phase to the next, is a delicate process (McLean *et al.*, 2017:3). Accordingly, developmental theories, such as Erik Erikson's stage theory, posit that individuals develop over several stages of maturity in a lifespan (Weiten, 2014:437). According to this theory, each stage is characterised by a "psychosocial crisis that involves confronting fundamental questions of being such as 'who am I?' and 'where am I going?'" (Sokol, 2009:5). The stages relevant for this study include late adolescence and early adulthood where both critical learning and making logical sense of aspects are at peak (WHO, 2013:1). Whereas adolescence is marked with the crisis of developing identity versus that of confusion thereof, early adulthood is marked by choices of intimacy versus isolation (Fleming, 2004:9-12), both of which stem from external influence from contextual factors (McLeod, 2008; 2013:5).

For the purpose of this study, the word context is used to refer to one's space, including relations like family/community and the place/environment within which they exist (Hoffman, 2002:315-316). Furthermore, the study also explored the extent to which family, space and environment influence particularly young adults' perceptions of disaster risk and vulnerability in and within their respective communities. In addition, the World Health Organization provides a generic definition of young adults as "persons with age ranges between 18 and 26" (WHO, 2006:1), however, young adults are placed under the 'youth' umbrella term as stipulated in the African Youth Charter to refer to persons aged 15 to 35 (AUC, 2006:11). In this study, the term is used in reference to persons aged between 20 and 35. According to Gentry and Campbell (2002:3); as well as Fleming (2004:9-11), youth is an intense time in every person's development, where compelling social, physical, psychological and emotional changes that influence the way in which one views life, the world and the future take place (US Global Strategy to Empower Girls,2016). While considering youth as a gravely vulnerable period for growth, it also represents a great opportunity to learn and undergo transition into adulthood (Coertze, 2012:3). In a South African context, the development of a young person is often a joint effort and the success of this transition lies not only with the young person, but equally so with their surroundings which, in this study, are referred to as family or community (Epstein *et al.*, 2003:581).

Within this context, the concept of family refers not only to blood-related and immediate connections, but rather to all persons/connections who have an influential role in the other person's ideals as well as values and perceptions about the world around them (Amoeteng *et al.*, 2007:43-59). Because disasters affect all people, it is important to approach them from both the geographic and anthropological point of view, focusing on the interdependent relationship between the cognitive and social factors that determine the outcome of risk and its extent in manifesting into a full-blown disaster (Fabian, 2008:346). The influence of context on the development of young people is therefore a pivotal matter that deserves more attention than is currently given in terms of seeking understanding of how the process of perception formation takes place in the sampled group with regard to disaster risk and vulnerability on a general scale.

According to Thomalla *et al.* (2006:29) and (Cannon, 2000:3), research over the past few decades as well as in the current existing literature has placed more focus on the social and environmental influences, such as socio-economic and socio-environmental factors as the sole determinants of people's perceptions on disaster risk and vulnerability (Krellenberg *et al.*, 2016:2; Birkman, 2012:10). As also noted by Nordensedt and Ivanisevic (2010:335), "Risk perception research has largely focused on finding how different demographic variables predict risk perception dimensions". However, there is a visibly grave neglect on the subject of the psychological factors influenced or posed by disaster risk and vulnerability in available literature. This inadequacy in the knowledgebase therefore hinders the achievement of complete research results that can be referenced (Turnbull *et al.*, 2013:3).

Considering the above argument, there is an acknowledgement of the various factors that influence development at this critical stage (i.e. *transitioning adolescence into young adulthood*) of growth, although, little or no attention is given to the underlying factors that bring about such influences. The lack of available comprehensive literature on the subject serves to confirm the accuracy of this point. Therefore, this study sought to determine the role of *family* on the psychological/cognitive processes of perception in young people regarding disaster risk and vulnerability within an urban and rural context in South Africa. The problem under investigation and the purpose of the study are further addressed by responding to the research questions and research objectives as outlined in sections 1.3 and 1.4 respectively below.

1.3. Research questions

- What are the theoretical perspectives on disaster risk and vulnerability within disaster risk reduction?
- How can the role of family in perception formation be explained using the systems theory?

- To what extent do contextual and familial factors influence young people's perceptions of disaster risk, vulnerability and developmental outcomes?
- What recommendations and conclusions can be made on the influence of family on disaster risk and vulnerability perception in the opinion of young people and young adults in South Africa?

1.4. Research objectives

- To explore theoretical perspectives on disaster risk and vulnerability within disaster risk reduction.
- To explain the role of family in perception formation using the systems theory.
- To investigate the extent to which contextual and familial factors influence young people's perceptions of disaster risk, vulnerability and their developmental outcomes.
- To make recommendations and conclusions on the influence of family on disaster risk and vulnerability perception in the opinion of young people and young adults in South Africa.

1.5. Central theoretical statement

This study is grounded on the contention that a person's social surroundings, especially during the transitional period of adolescence to young adulthood, play a pivotal role in the way they formulate and base their ideas about the subject of disaster risk and vulnerability (Jones, 2005:3). An important issue raised by Levin and Trost (1992:350) is the distinction between concept of family and that of *the* family, where the former refers to one's biological family and the latter a social family. However, the consequences posed by either context or family, not only predispose the youth to certain conceptual perceptions, but also equally determine their active participation in the processes proposed for disaster risk reduction and management. This study is grounded on the systems theory and the social learning theory.

Although research has projected that there is a faster global growth of a population older than 60 years, youth (i.e. people 35 years and younger) accounts for 46% of the world population (United Nations *et al.*, 2017:11). The World Bank Group (2007:xi) also notes that it is more worthwhile to devote knowledge and resources to the development of young people. Devoting knowledge and resources will enable young people to take leading participatory roles in reducing their own disaster risks and vulnerabilities than it is to only rest the responsibility to older people. The basic assumption on disaster risk perception is that the degree to which people acknowledge the probability of a disaster event and their level of exposure to the impacts of that disaster rest on

their individual beliefs thereof which in turn influence behaviour and attitudes (Kwon *et al.*, 2019:1).

The three quotes below summarise the theoretical basis of this study:

- "...It is generally assumed that human beings perceive and understand the world through the senses, and that epistemic connection with the world occurs via the transmission of information from the world through those senses into a mind. The converse perspective on this same assumption is that the environment influences individuals, both micro genetically and developmentally, via the information that is generated in that environment and transmitted into the minds of those individuals" (Bickhard, 1990:1).
- "...Although there are wide individual differences in attainment, most young adults are able to deal with cognitive tasks in a more abstract way, and to attain solutions to problems by comparing possible explanations" (Durkin, 1995:210).
- "...The thinking and behaviour of young adults reflects their social context" (Jones, 2005:3).

1.6. Method of investigation

According to Teddlie and Tashakkori (2009:339; 2003:11), research methodology is "a broad approach to scientific inquiry specifying how research questions should be asked and answered". A method of investigation is "a way of finding solutions to problems and the steps that are necessary to do so" (Goddard & Melville, 2001:16). The method of investigation used in this study is the qualitative research approach where only qualitative data was collected and analysed in an exploratory manner. According to Dawson (2009:14), "qualitative research explores attitudes, behaviour and experiences through such methods as interviews or focus groups, and it attempts to get an in-depth opinion from participants".

1.6.1. Literature review

Boote and Beile (2005:1) defines a literature review as "an evaluative report of studies found in the literature related to your selected area of study... and is a process that involves the tracing, identification, and analysing of information that relates to one's topic" (Struwig & Stead, 2001:38). This served to provide reference to already existing empirical findings as available in literature, as it also provides a frame of reference for new findings to be based. The following sources were consulted for the review of the literature, Emerald, Springer, JSTOR, Ebscohost, NEXUS, Books and other Internet sources.

1.6.2. Empirical study

This section outlines the ways in which the empirical study was conducted.

1.6.2.1. Research approach and design

A qualitative research design was applied in this study. Tashakkori and Teddlie (2003:191-192; 2009:343) refer to a qualitative research design as techniques associated with gathering, analysis, interpretation and presentation of narrative information. The qualitative method was chosen for its fitness to answer the proposed research questions of this study. The researcher used this approach for data gathering to relay the collected information in the form of subjective narrative responses from the respondents.

1.6.2.2. Sampling

The process of determining a research population is an important step in research when collecting data (Robinson, 25:2014). Teddlie and Yu (2007:78) define sampling as a technique used for selecting research units for a study. It is also defined as the process of selecting a suitable representative part of a population for the purpose of determining characteristics of a bigger population (Mugo, 2002:2). The sampling method used in this study is purposive sampling. The reason for using purposive sampling was to tie the framed sample to the objectives of the study and answer the research questions as accurately as possible (Palys & Given, 2008:697). Purposive sampling is viewed as a technique that ensures the selection of respondents with specific aspects whom the researcher deems representative for a study (Etikan *et al.*, 2016:2). It is "sampling that is designed before the research starts, where the sampling strategy is selected to fit the purpose of the study, available resources, the questions being asked, and the constraints being faced" (Emmel, 2013:34). This sampling procedure was used in this study to select the appropriate respondents to participate in the process of data collection.

A total of thirty (30) respondents participated in the study. Fifteen (15) of these respondents worked within and had studied disaster risk management or have some form of formal training on the subject and were thus regarded as people with a background in disaster risk management. Such respondents were expected to have specialist/expert knowledge on the subject of the research. The other 15 respondents were youths that were considered to be part of the general public and who did not have experience working in disaster risk management or have any prior theoretical specialist knowledge of disasters. The sample was chosen based on the context within which this study was focused and the specific respondents that were targeted. These targets were mainly based on age and tentatively on the engagement of respondents with the disaster management fraternity as specified in the research questions and objectives of the study.

1.6.2.3. Data collection methods

Data collection is one of the essential steps in conducting research and it is defined as a process of collecting information from targeted sources in order to inform the results of a study (Polkinghorne, 2005:138). This is to collect all the relevant evidence to support or refute the problem statement of a study and thus requires that appropriate tools be selected to use in the undertaking of the collection process. Instrumentation of data concerns the use of certain tools and apparatus as methods for capturing information (Williams, 2007:66).

This study employed a qualitative data gathering method and the significance of using such a method is to account for the requirements of social research in a way that seeks thorough understanding of people's thoughts and attitudes (Creswell, 2014:219-222). Data in this study was collected using semi-structured, face-to-face interviews as well as focus group discussions. Semi-structured interviews refer to a method of interviewing that consists of moderate control or structuring from the interviewer's side (Harrell & Bradley, 2009:25). Respondents are guided through the interviews by use of probing questions and are allowed time to give their opinion as accurately as they desire. Moreover, face-to-face interviews are a data collection method where the researcher communicates with the respondent(s) directly/in person to investigate the research questions for a study (Creswell, 2013:163). Focus groups are dynamic group discussions used to collect information (Harrell & Bradley, 2009:80). The group participation was moderated and the discussions were established for the purpose of directly gathering information relating to the study in question. This method of interviewing is handy, particularly when conducting an interview with more than two respondents present. A focus group helps put the respondents at ease when they feel like the interview is a conversation amongst a group of people/friends/or even strangers. It also helps each person to build on what others have said or allows them to explain the ideas better. The group discussions are made up of at least three to six participants from diverse backgrounds who are not strictly from the same blood-related family as the word family is implied in this study.

1.6.2.4. Analysis

Data analysis is the process of minimising and evaluating data using specific tools that allow for the data to be presented as logical and usable information (Hammon *et al.*, 2003:31). Qualitative data includes in-depth explanatory information from a compact sample that does not have predetermined categories of answers but draws patterns from ideas and perspectives (Walliman, 2011:71). In qualitative research, data analysis consists of preparing and organising data for analysis, then reducing the data into themes and finally representing the data in figures, tables or discussions (Creswell, 2013:180). Qualitative data analysis is the spectrum of processes and measures by which the qualitative information gathered is moved from raw data to some sort of explanation, comprehension or interpretation and circumstances that are being

researched. Creswell (2013:180) describes a total of six steps to the process, which includes stages where the researcher a) transcribes and files all documented data; b) reads and reviews the data in order to derive information relating to the study topic and furthermore gain a generic comprehension of the information given in relation to the study topic; c) Coding the data; d) the clustering of similar categories or themes where the categories are then used to formulate and describe the final results of the study; e) the discussion of findings is a process that involves the conversion of clustered data into sensible and understandable information that can be used; and f) the interpretation of data where comprehensive findings are drawn according to the analysed information in relation to the theories used in the literature chapters as well as the research questions of the study. The collected qualitative data is analysed using content/thematic analysis where the frequency of themes is identified and recorded into an excel spreadsheet where it is then further analysed.

1.7. Limitations and delimitations

With regard to the study limitations, this study is based on subjective views of the respondents. The implication of this is that the respondents might have been under the impression that they were obligated to provide an answer or an opinion and the pressure of this might have led to answers that were not necessarily true and honest. To mediate this limitation, the researcher ensured that, prior to each interview, expectations were expressed to all the respondents, where it was strongly highlighted that respondents were not forced to answer as there would be no consequences should one choose not to provide an answer to any question posed. In addition, assurance was provided to respondents that, because the answers expected from them were opinion-based, there could be no wrong or right answer. This was done to ease any kind of pressure or discomfort respondents could have faced in participating in the study. Additionally, slight challenges were experienced in terms of language barriers as this study was conducted in English. This was a problem during interpretation where the original message might have been lost and thus having the wrong questions being answered. However, to negate this challenge, the researcher invested time in translating relevant disaster risk sciences and environmental sciences terms used in the study in several vernacular languages mainly spoken in Pretoria. This was done particularly to cater for those respondents who are not familiar with disaster management and the terminology. This helped respondents to provide comprehensive answers based on utmost understanding of what they had been asked.

1.8. Significance of the study

The aim of this study was to determine the social and psychological dimension of influence in the phenomenon of disaster risk and vulnerability within the fields of Natural Science as well as Social Sciences as the essence of the study is interdisciplinary. This will in turn add to the existing body

of knowledge about disaster risks and related factors as well as all the other factors that influence these phenomena from a human dimension, including their effects and the underlying factors that determine the extent of their impact on individuals. Furthermore, this study aimed to highlight the significance of youth participation in Disaster Risk Reduction (DRR) and how their perceptions could be the pinnacle of successful DRR. Based on the contention of this study, the exploration of the cognitive dimension in disaster risk is important and will build knowledge that will enable the processes of risk reduction and mitigation to be inclusive of all the necessary aspects and comprehensive in their implementation.

1.9. Chapter layout

This study is arranged according to the following chapter layout.

Chapter 1: Background and orientation

This chapter provides an overview of the study.

Chapter 2: Conceptualisation of disaster risk and vulnerability within disaster risk reduction

This chapter contains a broad overview of existing literature on the study in question to provide a better outlook on what is known, as well as what still needs to be pursued in research regarding the theoretical perspectives on disaster risk and vulnerability within disaster risk reduction.

Chapter 3: The role of family in perception formation using the systems theory and the social learning theory

This chapter looks at the two theories as the basis for learning behaviour within social contexts and influencing youth perceptions from a young age.

Chapter 4: Empirical findings: data analysis and presentation

This chapter provides the actual research findings to the ongoing study and where they can be analysed and interpreted so that they may be understood.

Chapter 5: Conclusions and recommendations

The last chapter of the study provides a comprehension of the study results along with the discussions, conclusions and recommendations. Where the study discussions are organised into a comprehensive narrative, the conclusions are based on the findings relating to the research questions and objectives investigated in the study and the recommendations made are related to

future research in the field of Disaster Risk Management within Environmental Sciences and derived from every conclusion made.

Chapter 2: Conceptualisation of disaster risk and vulnerability within disaster risk reduction

2.1. Introduction

Humans have an inevitably complex connection with the natural environment (Schenk, 2017:3). The intricacy of interactions between man and nature have become a compelling reason for science to move away from classifying disasters as only geological occurrences, hence the conceptual shift from *natural disasters* to just *disasters* (Kozák & Cermák, 2010:v). The standard definition for disasters provided by the United Nations International Strategy for Disaster (UNISDR, 2009) states that disasters are ‘a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceed the ability of the affected community or society to cope using its own resources’ (Hollis, 2015:7). The main aim of this study is to determine the role that family and the community play in the psychological/cognitive process of forming the views, idea and understanding of disaster risk and vulnerability among young people in South Africa. This is done to identify whether South African youth conceptually understand what disaster risk and vulnerability are and the extent to which family, space and the environment influence these perceptions of disaster risk and vulnerability in and within their respective communities.

The previous chapter of this study provided an overview of the study to orientate the reader on the problem under investigation. The overview also highlighted the research method(s) employed in this undertaking as well as research questions, objectives and purpose of the study. The purpose with this chapter is to identify, organise and review previously conducted research on the conceptualisation and theorisation of disaster risks and the factors that drive disasters. The chapter addresses the first objective of the study, which is “to explore theoretical perspectives on disaster risk and vulnerability within disaster risk reduction”. This chapter is structured in a way that addresses the definition of concepts such as: disasters and disaster risk, vulnerability and coping capacity. The chapter further addresses the historical conceptualisation of disasters, Disaster Risk Reduction and related concepts. Towards the end of the chapter, risk perception is unpacked through the lens of behavioural learning theories which also touch on aspects of risk perception such as the dread factor, the unknown risk factor, social amplification of risk. The final sections of Chapter 2 note the characterisation of risk perception among youth, the role of collective influence on disaster risk perceptions, as well as how the relationship between understanding and interpretation influence risk perception. Lastly, the chapter further highlights the importance of employing a multidisciplinary approach in understanding risk perception within the scope of disaster risk reduction.

2.2. Definition of concepts

Disasters exist in various forms and are typically classified through the five elements of nature, namely; earth, air, fire, water and humans (Tobin & Montz, 1997:7-10). These elements, however, are merely there to provide a territory through which disasters can be grouped and are not in themselves the underlying risk factors that cause disasters. Accordingly, the above statement regarding natural elements comes with caution for the use of the term 'natural' in the definition, which is used to merely indicate that the event is of natural phenomena (Alca´ntara-Ayala, 2002:109). However, natural occurrences are only natural when they have no impact on human life or have no human involvement at all (Tobin & Montz, 1997:8). Thus a need to break down the concept of disaster into its smallest aspects which include factors such as those included in the definitions in the section below.

2.2.1. Definition of disaster risk

Based on the United Nations International Strategy for Disaster Reduction (UNISDR) (2009) standard definitions, disaster risk is accepted as "the potential of disaster losses in lives, health status, livelihoods, assets and services- that could occur to a particular community or a society over a specified time frame" (Turnbull *et al.*, 2:2011). Several factors such as exposure, vulnerability and hazards, constitute disaster risk (Ikeda *et al.*, 2006:3). In disaster risk studies, risk is conceptually understood as "the probability of a hazard to reoccur in its intervals and the cost of its probable loss from that event" (Hyndman & Hyndman, 2006:6-7). Additionally, risk can be established as a dynamic concept that changes according to the interaction of exposure to certain hazardous conditions and the level of susceptibility to harm by the said conditions (Forbes-Biggs, 2011:7-8).

2.2.2. Definition of hazard

According to Kreimer *et al.*, (2003:4), the UNISDR cites a hazard as "a dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage". Some examples of hazards which people and their livelihoods can be vulnerable to include but are not limited to; earthquakes, lack of rain, cyclones, wildfires, volcanoes, floods, etc. (Van Niekerk, 2011:10). Hazards are further characterised by their "location, intensity, probability and frequency" (Van Niekerk, 2011:10). Hazards comprise different components, namely; the physical dimension and the human dimension, which interact to provide a wholesome arena within which the hazard can be realised (Tobin & Montz, 1997:8-9).

2.2.3. Defining vulnerability

Based on the disaster risk equation illustrated in section 2.4.4, exposure to the 'dangerous phenomena' interacts with vulnerability against a systems coping capacity in order for disaster risk to be determined. According to Bankoff *et al.* (2004:11), vulnerability to hazards is a concept that demonstrates the intersection of nature and culture and how these two concepts mutually influence one another as evidenced in the assessment of risks. Turnbull *et al.*, (2013:9) defines vulnerability as "...the set of characteristics and circumstances of an individual, household, population group, system or asset that make it susceptible to the damaging effects of a hazard. The said characteristics range between physical, institutional, political, cultural, social, environmental, economic and human factors (Turnbull *et al.*, 2013:9). For instance, a population could actively choose to ignore a procedure to evacuate a city against a flood hazard, thus rendering themselves susceptible to the harmful impacts of the flood. Kelman (2009:2) states that "...Vulnerability and hazard are triggers that combine in different ways to produce risk or shocks that may result in disasters". The hazards spoken of in this context could range anywhere from hydrological, technological, environmental, geographical, physical, or meteorological hazards, with each happening at a varying frequency and intensity and resulting in specific subcategories of disasters (Barenstein *et al.*, 2010:339-340).

To determine the extent to which a community or population is vulnerable to hazard(s), certain situation-specific key factors have to be considered (Neef & Shaw, 2013:3). Cutter (1996) emphasises the need for accuracy in the understanding of vulnerability as it is an inherently vital aspect in disaster and hazard studies as well as in the establishment and implementation of disaster risk intervention strategies. There is acknowledgement that the social dimension is naturally embedded within the physical perspective of disasters risks as a risk-driver (Oliver-Smith *et al.*, 2016:1-4). The social dimension is closely related to the decision-making process in dealing with disaster risk because it allows for a range of risk perceptions and their root causes. This can be explained in relation to the fact that for a disaster to qualify as a disaster, it needs to have impacts on human life and livelihoods. The interaction of the social and natural dimensions in this regard can be further related to the level of awareness different people display towards disaster risks as a result of personal characteristics and varied backgrounds. There is still however a pronounced need to divulge this linkage further and break it down to the smallest components to determine the depth of its complexities and create a practical bridge between causes and effects thereof (Oliver-Smith *et al.*, 2016:1-4). Insufficiency in methodological and factual documentation of the root causes of vulnerability on which to base understanding for current and prospective inquiries on the subject matter has made it difficult to achieve such a practice (Bankoff *et al.*, 2004:3). While vulnerability is with regards to exposure to unfavourable conditions, it is countered by coping capacity which works in tandem to vulnerability.

2.2.4. Defining coping capacity

Sungay *et al.* (2014: 1) provide that "coping capacity is resultant of both individual and institutional capacities emerging from physical conditions of the environment, socioeconomic situation, as well as disaster awareness and preparedness". Coping capacity can further be understood as the ability of people or systems to successfully deal with adversity while still using their own means and without external aid (Sungay *et al.*, 2014: 2). Coping capacity as a buffer mechanism needs to be maintained by ongoing awareness and the presence of the necessary resources in order to avert negative impacts of adversity. Section 2.4.4 of this chapter elaborates more on the concept of coping capacity.

2.2.5. Defining Disaster Risk Reduction

The UNISDR terminology on Disaster Risk Reduction (2009:10) refers Disaster Risk Reduction (DRR) to a "systematic approach (concept and practice) of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events". DRR employs the process of identifying and assessing disaster risks and vulnerabilities to humans and the environment in order to mobilise tailored efforts to reduce these risks.

2.3. Historical conceptualisation of disasters

Views on disasters have moved from the preliminary understanding that disasters are extreme events solely resultant from natural forces, to a holistic perspective which encompasses the integration of the ecological, socioecological, socioeconomic, psychological and political dimensions (Yodmani, 2000:2). Hoffman and Oliver-Smith (2001:3) further expand on this understanding by stating that disasters are not merely random ecological occurrences that have a negative impact on traditional human functioning. The above-mentioned notion by Hoffman and Oliver-Smith can be used as reference to implicate the consistent interrelation between man and nature as a cause and catalyst to the catastrophic impacts of disasters (Bankoff *et al.*, 2004:10).

Until recent progress in disaster risk research, early knowledge on disasters was based on personal and religious meaning assigned by people who sought to understand and cope with the events as they happened (Bentzen, 2015:2). Such lead to conceptual developments on disasters theorising them as; acts of God and/or nature, results of social constructs, as well as joint effects of nature and society (Oliver-Smith, 2001:29-37). According to authors like Wisner *et al.* (2003:10); Bryant (2005:2) and Drabek (1991:4, as cited in Carstens, 2007:6), disasters in the past were believed to be the acts of gods and a way to show disapproval of human actions or to punish humans and threaten their existence on earth. Considering this notion, cultural conceptions based on personal beliefs or inferred experiences by societies have had a profound

role in creating meaning and understanding of phenomena that is now only explained by science (Furedi, 2007:843-845). While certain people saw disasters as supernatural events, others moved away from this view and accepted disasters exclusively as natural occasions that could be explained by geographical knowledge (Tobin & Montz, 1997:8). However, current perspectives on disaster risk show that previous thinking of disasters as the wrath of gods as well as purely natural processes is a great contemporary misnomer as science would have it. Approximately two centuries ago however, such misconceptions fuelled the interests of parson-naturalists who modified the traditional perspectives on disasters (e.g. floods) (Kelman, 2010:1).

The aim of such a paradigm shift was to cater for the then somewhat disregarded involvement of humans in terms of their ideologies on hazards, disasters, risks, vulnerability, as well as any behaviour aimed at minimising the risk of disasters (Kelman, 2010:1). In his 1945 paper 'Human adjustment to floods in the development of risk and hazard management'; Gilbert F. White is said to not only have "shaped" perceptions regarding flooding but revolutionised how hazards, risk and disasters are conceptualised (Macdonald *et al.*, 2011:1). Following this publication, research on disaster studies grew considerably, leading to the questioning of existing theories; such as that of subjecting disasters to be products of singular events and not considering the combination of different aspects that interplay to result in a disaster (Bankoff *et al.*, 2004:11).

Although White's insightful paper had earned him a pioneering title in disaster studies, disaster research history reveals that he was not the first to conduct disaster focused research (Rodriguez *et al.*, 2006:3). There is some consensus showing that Samuel Prince's dissertation on the Halifax explosion in 1920 and the insights of Lowell J. Carr in 1932 on defining disasters and their destructiveness to human lives were actually the first systematic studies of disasters (Rodriguez *et al.*, 2006:3). Disasters had already been studied in research before the world wars around 1954 (Quarantelli, 2009:1), however, the 1960s represent a period of heightened attention towards a change in basic assumptions thereof (Neal, 1993:7).

With the new interest in disaster studies, perceived at the time by political figures as means for gaining cognisance on war and improving emergency responses; the relationship between humans, risk and hazards needed some form of formal theorisation (Rodriguez *et al.*, 2006:3). In 1975, the term 'natural disaster' was then transformed to just 'disasters' (Kelman, 2010:1). The reason for the change in perspective followed many debates that resulted in the acceptance of social and political conditions as causes of disaster and nature as merely a trigger (Gould *et al.*, 2016:94). However, there was noteworthy difficulty in presenting accurate conceptualisation of disaster concepts, as any definition would be subject to the dynamics and complexities of its given context (Oliver-Smith & Hoffman, 1999:19-21). According to authors such as Gaillard (2010:219) and Holloway (2009:100), integration of the concept of vulnerability into disaster risk/disaster

management studies began around the 1970s, where it rapidly developed and extended over into centuries to date. Present-day literature confirms that disasters are not natural and are believed to be caused by a variety of human activities; such as climatic, geographical, technological and other human-driven advents (Rodriguez *et al.*, 2006:97). Edwards (1998:115) notes that the integrative approach of disaster research has had an integral expansion between the first systematic conceptualisation of disasters in research to the time of publication of Edward's paper. One of the more recent considerations of the transdisciplinary system of disaster research is one that is proposed by Tierney (2007:504), who indicates approaches of disasters with respect to the field of sociology, behavioural and environmental studies. Notwithstanding the already mentioned disciplines, literature from other schools like psychology have also contributed immensely to disaster research. Although these are independently driven fields, the overall aim of disaster risk reduction organisations and disaster risk management is to prevent disasters from happening (Thomalla *et al.*, 2006:39). This is done by undertaking designated actions that minimise risks and in so doing, encouraging the development of resilient communities (Thomalla *et al.*, 2006:39). Resilience within this context is defined by Holling (1973) as "the persistence of relationships within a system; a measure of the ability of systems to absorb changes of state variables, driving variables, and parameters, and still persist".

In the last two decades, vulnerability has become the principal focus for undertaking disaster studies where attention had been refocused on both the extent of exposure to a threat and the ability to respond to and recover from the threat (White *et al.*, 2001:86). This perspective contradicts the earlier said theories to which disasters in the past were attributed. Within the prevailing context, vulnerability is concerned about people and their assets and the term vulnerability generally implies sensitivity to damage (Bara, 2010:3). As indicated by Anderson (1999) disasters happen when the destructions of nature collide with the affected societies' susceptibility to be harmed by the said disruptive event, however, it is to a great extent the human actions that render people vulnerable to such events.

Disasters are not new social experiences and have existed for as long as documented history can track, however, due to the changing dynamics of urbanisation, development and life itself; new risks and hazards have developed over time while older ones only lie dormant (Rodriguez *et al.*, 16-17). The socio-natural perspective of disasters had primarily been initiated by Carr (1932, 207–218), but was later redefined by Quarantelli (1998:iv), who then promoted greater emphasis on natural factors to be looked at not as causes of disasters, but as factors that, in conjunction with aggravating human activities; result in disaster occasions (FEMA, 2011:10). Corroborating this view is Wisner (2003:4) and his colleagues, who state that it is rather unrealistic to look at disasters and hazards independently from people and without taking regard of the apparent fact that what ultimately causes risk situations to build up to disasters comprises the daily risks that

people face which renders them consequently vulnerable. Essentially, this approach inherently assesses factors that contribute to risk through a socially oriented outlook in order to define the occurrence of disasters or the probability thereof (Burton *et al.*, 1993:251-253). This approach further assesses exposure, disasters and vulnerability from a people-centred view and does not follow an approach that separates disasters from human activity (Cannon, 1994:13). This view further accepts that social systems contribute mainly in provoking varying degrees of exposure to threats for different people (Cannon, 1994:13). "Social catastrophes associated with natural extremes are powerful events that can expose the often-hidden politics, policy-choices and asymmetrical geographies of the localities they devastate" (Murray, 2009:169). With many environmentalists asking the question of why people seem to have become more vulnerable to hazards over the years; some scholars attribute this trend to governmental incompetence, whereas others point out the way in which societies themselves perceive risk and allocate resources to counteract the said risk or recover from its impacts (Pastor *et al.*, 2006:5).

Looking at social-reengineering (i.e. the act of influencing certain attitudes and social behaviours on a large scale by manipulating reality in order to achieve desired outcomes) as an example of a socially inferred influence of vulnerability, an easy example within context is the apartheid era between the 1960 and 1983 (Murray, 2009:165). In South Africa, this was a period where non-white people were racially secluded and denied basic services such as medical care, proper housing and people were forced to relocate to isolated rural areas that were often located in hazard prone zones (Murray, 2009:165). As a result, an inequality was created due to political circumstances where people were forced to take shelter in areas that subsequently intensified their vulnerabilities to hazards such as building below flood lines. Pelling and Dill (2008:1-6) also refer to apartheid as a historical example of political influence and how it can work interchangeably with other social factors to predispose social systems to hazards and disasters. Such arrangements led to communities being marginalised, denied, or unevenly allotted resources and be forced to move to townships that are prone to various hazards (Pelling & Dill, 2008:1-6).

The risk of vulnerabilities and hazards actualising into disasters is always probable in everyday life where people exist in a group regardless of their socioeconomic status or physical health status (Wisner, 1995:260). It is however these seemingly unrelated threats that, when interacting with vulnerabilities multiply and result in more shock to the affected people or to the system (Wisner, 1995:260). For example, a community's geographical exposure to hazards when already facing poverty and unemployment naturally subjects them to more intensified impacts when a disaster strikes. The next section provides an understanding of the concept of disaster risk within disaster risk reduction.

2.4. Conceptualisation of Disaster Risk Reduction and related concepts

Disaster Risk Reduction (DRR) is an approach aimed at “identifying, assessing, and reducing the risk of disasters” (UNISDR, 2009:10-11). DRR is both theory and practice and further focuses on protecting against hazards and disasters by analysing and managing the causal factors through reducing the degree of exposure and minimising the vulnerability of societies to hazards (UNISDR, 2009:10-11).

From around the 1950s, numerous factors have contributed to the increment of disaster risks (Green, 1977:2-3). However, the systematic nature of DRR allows for efforts to be put in place to determine the rationale concerning such an increment, as well as draft corrective political and domestic measures to be taken to create a buffer system against the negative effects of hazards and disaster (Van Niekerk, 2011: 44-47). In the pursuit of better living and access to better living services, people, particularly from disadvantaged backgrounds; often migrate to cities and towns and live in hazardous conditions as a result of their economic deficits which consequently makes them primary targets in the event of disasters (Pelling & Wisner, 2009:3). As a result, South Africa has become one of the countries marked with rapid urbanisation and population growth within the Southern African region, with most of the urban development emerging randomly without any formalised organisation (Turok, 2012:4). Disaster risk reduction agencies then assess such challenges and determine the likelihood of risk exposure in such situations. Subsequently, planning on approaches to lessen the risks and subsequently reduce the risk that could have developed into a disaster.

2.4.1. Conceptualisation of disaster risk

In broad terms, disaster risk is a concept of probability, which in itself shows the dynamism of the concept in theory and in practice (Ellis, 2003:1-2). Risk is assumed from the dynamic circumstances of different facets (Forbes-Biggs, 2011:8-12). The understanding of the concept and reality of vulnerability for populations is imperative for the effectiveness of Disaster Risk Reduction (Shoroma, 2014:24). To fully understand all the elements of hazard risk and the propensity of vulnerability to the risk, one needs to discover what the risk is, as well as ability of the implicated system to cope with the risk (Forbes-Biggs, 2011:8-12). As a result, a comprehensive risk assessment and analysis needs to be undertaken to determine causal components of risks and triggers of vulnerability in a given situation (Forbes-Biggs, 2011:8). Respectively, a risk assessment allows for the identification of probable hazards and enables for a consolidated assessment of vulnerabilities among members of a community on individual basis (van Aalst *et al.*, 2008:167-169). To determine the extent to which a risk is potentially likely to actualise as well as determine the extent of its impact, the following theoretical notation is used:

Risk (R) = Hazards X Vulnerability

Coping Capacity

The risk equation indicates that Disaster Risk (R) is an outcome of a specific threat or Hazard (H), which when reacting with a population's susceptibility or Vulnerability (V) against the coping capacity (C) or capacity of that population to endure harm (Phiri, 2014:26).

2.4.2. Discussion on hazards

People respond to various hazards differently depending on the resources they possess which enable them to cope with the outcomes of the hazards, as well as their beliefs of where they place themselves within the process (Ellis, 2003:1-6). Drawing from the definition of hazard presented in section 2.2 which refers hazards to be dangerous phenomena that have potentially disastrous outcomes, hazards can be experienced in terms of physical, environmental, social, as well as economic conditions. Hazards can be caused by human activity or be resulting from natural phenomena coming into contact with humans or their livelihoods (Van Niekerk, 2011: 10). Van Niekerk (2011: 10) further notes that hazards can be categorised as either natural or man-made, where natural hazards refer to "extreme climatological (weather), hydrological (water), or geological (earth) processes that, when interacting with human beings, pose a threat to persons or property". On the other hand, human-induced or man-made hazards are those hazards which are caused by humans and can include aspects such as technological hazards, pollution, land degradation or environmental hazards and transportation hazards (UNISDR, 2009:19).

Hazards can manifest into a variety of disasters and have dreadful effects that disrupt the normal functioning of society. The order of current conditions as well as events that have transpired in the past years can be referred to in proving that South Africa is, amongst other Southern African countries- also prone to undergoing various hazards (Grobler, 2003:13). Regardless of regional specifics on occurrence, hazards unfolding in any part of the world have impacts that can go far beyond their physical range and can transcend globally through shared environments to affect populations in different parts of the world (WTO, 2009:6). South Africa has a relatively high level of man-made hazards, also known as anthropogenic hazards, that threaten the lives of many people, especially the disadvantaged people living in informal settlements and who have limited to no economic, political, nor personal means to protect against the adversity resulting from hazards.

2.4.3. Vulnerability

Vulnerability is by definition, a function of variable risk factors that can be categorised regionally, individually, or situation-specific and it is a dynamic concept that cannot be generalised for all

situations or systems (Alwang *et al.*, 2001:12). Stephen and Downing (2001:118) state that this is because specific conditions are based on time and space differentials, which then aggregate the outcome of vulnerability to the specific hazard. For instance, vulnerability data on different societies may indicate that even though people may essentially experience similar risk factors, the level of impact that everyone is experiencing may differ. That being so, hazards and disasters are viewed through the vulnerability of societies. Vulnerability is then divided contextually into at least four different contexts: social vulnerability, physical vulnerability, socio-political and socio-economic vulnerability. Several other sub-contexts include cultural, ideological and educational level vulnerability (Hoffman & Oliver-Smith, 2001:61-62). Hoffman and Oliver-Smith (2001:61), indicate that vulnerability is a function of social and economic disparities that build up to develop the concept of what they refer to as global vulnerability; which then involves the mentioned expansions of vulnerability.

Vulnerability is currently of paramount importance in multi-stakeholder dialogues involving local and international government departments as well as disaster relief agencies (CRED, 2015:10). Research from the 1990 shows the number of disasters that have happened from 1994 to have exceedingly increased, indicating that societies have constantly become more susceptible (CRED, 2015:10). Furthermore, Cardona *et al.* (2012:68) indicate that the rise in vulnerability reflects an implementation gap between policy and practice. For instance, the Hyogo Framework for Action (FHA) is a policy plan that details duties, responsibilities and actions needed to be undertaken by different actors in order to reduce disasters. It is also highlighted in the Hyogo Framework for Action (HFA 2005-2015) the need for the prioritisation of building resilience through innovation, education and the dissemination of knowledge as an outcome of reducing and managing disaster risks. However, even with an established framework on the type of work that needs to be done to make people resilient and reduce disasters, vulnerabilities are still rising. Such a phenomenon begs the question of what is making societies vulnerable and is a question that has dominated disaster research over the past fifty years (CRED, 2015:7). To adequately address such questions, understanding can be sought by analysing disasters through developmental changes such as population growth and aspects that drive it, rapid urbanisation and its effects, technological growth and its negative impacts (CRED,2015:7). Cannon (1994:16) share similar views and explains that in the pursuit to understand the interplay between humans and nature, determination should be made on how human systems perceive themselves and others in relation to the natural environment and risk it presents to human life. Thus, it is highly significant to understand that a big part of vulnerability concerns people, their perception and judgment of risk as well as how they respond to the perceived risk (Singh *et al.*, 2014:71).

Contextually, the dynamic nature of social vulnerability makes it difficult to define and quantify because each individual's extent of exposure is subject to personal and context specific conditions

that differ per person or population. Social vulnerability is therefore most often described using the individual characteristics of people such as; "age, race, health, income, type of dwelling unit, employment" (Cutter *et al.*, 2003:243). Other characteristics considerably influential to social vulnerability include; prestige, gender, ethnicity, commercial and industrial development, residential property, employment loss, rural or urban habitation, infrastructure, family structure, population growth, education, medical services, social dependence, and social needs (Cutter *et al.*, 2003:246-249). The mentioned factors themselves do not cause disasters, but when interacting with existing stressful conditions- will render a person or society more susceptible to harm from specific hazards (Brooks, 2003:4). In addition to the social dimension of vulnerability, McEntire (2001:191) acknowledges variables that increase people's physical vulnerability as the following: " the proximity of people and property to triggering agents; improper construction of buildings; inadequate foresight relating to the infrastructure and degradation of the environment". Conceptually, physical vulnerability is explained in relation to the minimised coping capacity of subjects (i.e. individuals or society) or systems to natural hazards- where the influence is emphasised on predisposing technical or physical factors that render the afflicted exposed to harm (Ciurean *et al.*, 2013:15). In such regards, an aspect of 'capital' is most recognised for playing a pivotal role as an all-encompassing enabling factor (Morse & McNamara, 2013:29).

Although disasters affect individual people differently, there is consensus that people with the most limited economic means are more inclined to be vulnerable to hazards (Anderson,1999:1-5). In the event of a disaster, such people experience the impacts unequally to those that are economically stable (Anderson, 1999:1-5). When identified with prevailing risk conditions- socio-economic disadvantages result in additional dimensions of vulnerability and ultimately subject people to further adversities of disasters (Donner & Rodriguez, 2008:1090). Among other factors, population growth, ideologies, culture, migration, poverty, racial and ethnic minorities as well as gender minorities, age and physical disability and level of education have been identified in risk studies as predominantly influential factors that either cause socio-economic vulnerability or exacerbate its impacts in societies (Donner & Rodriguez, 2008:1090-1106). The current perspective of hazards and disasters perceives vulnerability as a result of artificially created threats that are unevenly scattered across society and predispose people to the impact of disasters (Bara, 2010:5). Social implications of vulnerability relate to variety of factors, including a lack of access to certain basic resources as one of the known circumstances that subject people to sustain severe disaster impacts (Philip & Rayhan, 2004:1). Generally, people who are poor are believed to be more susceptible to the negative impacts of disasters and less capable of successful recovery post disastrous events (Cutter *et al.*, 2003:245). As mentioned in section 2.3, social constructs together with economic factors act as triggers for disasters and can be gauged and studied independently.

For instance, poverty is said to make risk exposed people helpless in the face of a disaster event, as they automatically have no resources that would enable them to buffer the impacts of the disaster (Philip & Rayhan, 2004:1). In such a case, the afflicted people may lose whatever limited means they had before the disaster and be subject to considerable amounts of time and effort to regain stability post the event (Philip & Rayhan, 2004:1). Notwithstanding the implications of poverty in the aggravation of disaster effects, other factors such as gender and age are highly regarded as incapacitating towards coping with disaster risks and in recovering post disasters (Flanagan *et al.*, 2011:1-4). Authors such as Bankoff *et al.* (2004:7) and Jones & Murphy (2009:3) have indicated in literature that the essence of vulnerability in general is socio-political in nature, in that the oversight of people's circumstances that result in vulnerability to hazards is essentially a function of political dynamics. Among others, academics like Bryrant and Bailey (1997) speak of the broad context of political ecology to address the characteristics of vulnerability that are principally due to political processes regarding environmental and social decisions- and consequently result in increased susceptibility to hazards (Collins, 2008:21-22). Political ecology as a theoretical framework is used by analysts to study social systems in relation to their environment (Greenberg & Park, 1994:1). Furthermore, political ecology allows for learning of the correlation between these two entities while consequently basing findings thereof largely on social-engineering and reengineering (Greenberg & Park, 1994:1).

In addition to the above section, the investment of efforts on the reduction of disaster risks lies largely with political executives who are administratively capable to monopolise resources according to their own guiding ideals. Therefore, politically-driven vulnerability can easily be an overarching causal factor of other forms of vulnerability (Cordana *et al.*, 2012:70). However, as warned by Cordana *et al.* (2012:70), the most important aspect of vulnerability to keep in mind the human element that is involved as it plays an important role in all dimensions. The role of vulnerability within disaster risk reduction framework is one that has prompted disaster management institutions to alter focus from physical outcomes of hazards to a more socially orientated outlook on pre-and-post disaster actions (Vermaak & Van Niekerk, 2010:554-557). According to Vermaak and Van Niekerk (2010:561), in South Africa, it is a duty of the department of Social Development to determine vulnerable communities and individuals within these communities so that they can be prioritised during interventions that are aimed at social development through the alleviation of various vulnerabilities. With reference to the framework, analytical information that is usually used in light of prevailing vulnerabilities of societies includes; the identification of prominent disasters and their geographical information, leading risk factors, as well as the resulting effects of such conditions (Cordana *et al.*, 2012:69-72).

2.4.4. Coping Capacity

Vulnerability works in terms of accumulation of risk and is indirectly proportional to coping capacity (Cordana *et al.*, 2012:72). This means that for a system to be deemed vulnerable to a hazard risk, the system's ability to cope with the extent of the risk individually would have been compromised (Thywissen, 2005:1). Inversely, if a system's capability to manage (hazard) risks is advanced, the system's level of vulnerability will inversely be lower. Moreover, coping capacity offers resistance against the weakness that vulnerability creates (Thywissen, 2005:1). While coping capacity is defined as "the level of resources and the manner in which people or organisations use these resources and abilities to face adverse consequences of a disaster" (Biling, 2005:2), vulnerability regards the absence of capabilities and resources to withstand adverse conditions (Ciurean *et al.*, 2013:4). Most importantly, as Thywissen (2005:1) states, coping capacity is a function of perception in that people are only as vulnerable or as resilient as they believe themselves to be. This bridges to the integration of the sciences showing convergence of disciplines on disaster risk by reviewing risk perception literature from a psychologically orientated perspective. The following section thus provides a theoretical basis of risk perception literature relating to hazard and disaster research.

2.5. Risk Perception

Risk perceptions characterise a person's subjective understanding and perspectives about eminent risks across varying conditions (Tonsor *et al.*, 2009:626). Risk perception is an important determinant of decision-making, not only to inform policy makers in relation to the reduction of disaster risks, but also as a guideline for people's attitudes and behaviour towards certain risk situations (Slovic & Weber, 2002:2). According to research on this subject, much attention has been placed on the socio-demographic determinants of disaster risk (Adeola, 2007:13). However, not much consideration has been given to the cognitive processes that take place inherently within individuals, which subsequently determine their risk beliefs (Adeola, 2007:13). For his comprehensive review of the technological activities that subject human life to risk and how the affected individuals see the risk as whether debilitating or beneficial to them in any way, Paul Slovic (1974), is hailed as a pioneer in the study of perceived risk in hazard and disaster studies (Löfstedt, 2000:1). Other proponents include Aaron Wildavsky and Karl Dake (1990), who together proposed a theoretical framework for the perception of risk from a social sciences perspective. Conceptual ideologies on risk perception can be derived from perspectives such as the behavioural learning theory, social learning theory, ethological, as well as theories of contextual and dynamic systems (Woolfork & Perry, 2012:56). The cultural theory, systems theory, as well as social learning theory will later on in this study be applied to risk perception to answer the question of what influences the way people interpret factors that relate to the risk of hazard and disaster.

2.5.1. Behavioural learning theory and risk perception

Risk perceptions have the potential to essentially drive or limit political, economic and social policy to handle specific risks (Leiserowitz, 2006:45). As an example, a community's estimation of benefits from government for residing in a floodplain can severely affect the effectiveness of initiatives aimed at risk reduction as well as the experience and extent of the risks. Furthermore, reference can also be made to the transference of cultural differences and similarities on perceptions of risks, as well as beliefs towards the perceived risk (Weber & Hsee, 1998:1205). In this sense, what people collectively agree or disagree on can be an attribute to the formation and facilitation of perceptions towards risk. In addition, a question of intra-cultural differences where a single culture may have subdivisions within it and whether that counts towards prevailing differences in risk perception arises. To answer this question, Wildavsky and Dake (1987) refer to different patterns of social relations that form within each culture and the entities they form (Chai *et al.*, 2009:195). Such structures then make up the different beliefs, norms and values that the culture holds as a function of cultural biases and which determine or drive behaviour (Chai *et al.*, 2009:195).

The Cultural theory is said to currently be the most predominant approach in risk research after the Psychometric paradigm (Rippl, 2002:147). Boholm (1996:67) defines the theory as "a general sociological theory formulated according to the principles of positive reasoning by making deductions from basic precepts about humans and their interactions". The cultural theory (CT), is a theory suitable for evaluating environmental issues through social and cultural contexts (Rippl, 2002:149). Wildavsky and Douglas (1982) identify the following arrangements of social relationships as explanatory avenues in risk perception differentials within cultures as constituents of the cultural theory: hierarchical, egalitarian, fatalism and individualist arrangements. Within this approach, hierarchical arrangements refer to structures where hierarchically aligned societies are believed to endorse risks by virtue of the prevalent risks being politically valid (Rippl, 2002:150). This type of arrangement reflects behaviours that are constrained by rules and characterised by discipline, as a result, the perceptions of risk are constructed and maintained within the boundaries of social units. In contrast to hierarchically centred arrangements, egalitarian societies are known to adopt strategies that are aimed at averting environmental risks and mitigating risks that already exist (Steg & Sievers, 2003:253). This is due to the fact that egalitarian societies are characterised by a strong sense of self-preservation where nurturing survival is key (Steg & Sievers, 2003:253). Another social arrangement as identified by Wildavsky and Douglas is fatalism. This arrangement describes a lifestyle of 'little to non-membership to any decision-making group while living within the boundaries set by external constraints' (Ruiui, 2013:105). Accordingly, people who have highly inclined fatalistic beliefs have lower perceptions of risk and are inclined to less adherence to a culture of safety or the maintenance of safe behaviours

(Sahovic, 2007:4). The last arrangement refers to individualism, which assumes that individualistic people typically deny disaster risks and regard them as concepts that are farfetched and overly estimated and remain committed to deriving benefits from what they regard as opportunities (Kahan *et al.*, 2007:5). The individualistic social arrangement regards people with low group membership and are influenced by few external constraints (Sahovic, 2007:3).

The cultural theory further states that people's decisions to respond to and think about disaster risk are largely influenced by one's personal values, social behaviours and customs that are original to each society (Wildavsky & Dake, 1994:43). According to Sjöberg (2000:6), the social relations arrangements identified by Douglas and Wildavsky (1982) as shown in the previous section are thus social determinants of the formation of risk attitudes among community members. Original theories of disasters include explanations of disasters as supernatural acts as was mentioned earlier in this chapter. Historical evidence indicated that such explanations were developed from cultural belief systems that members of society referred to through personal meanings and values to make logical sense of the concept of risk and disasters (Oliver-Smith, 2001:29-37). Wildavsky and Dake (1990:42) maintain that the application of the cultural theory in risk perception research has the ability to "predict and explain what kind of people will perceive which potential hazards and their extent" (Oltedal *et al.*, 2004:1). Furthermore, social theories such as CT correlate the development of perception towards disaster risk to; cultural convictions such as the one just mentioned, where institutionalised norms are spread through around members of society and become respectively internalised (Oltedal *et al.*, 2004:8). Although there are traces of similarities, different cultures usually have different belief systems and therefore promote different teachings to the members of those cultures (Geertz, 1973:12-13). As a result, different people belonging to different cultures will thus display differences in their acknowledgement of aspects such as that of disaster risk, while in some instances will show similarities in thoughts or beliefs on the subject (UNESCO, 2009:8-13). In addition to institutionalised norms and values as shaping behaviour and attitudes towards risks, disaster risk research further introduces the concept of risk communication as another aspect that relates to culture in the perception of disaster risk (Infanti *et al.*, 2013:6).

Risk communication as a component of risk perception refers to the way in which information about different risks is conveyed to the public (Peters *et al.*, 1997:2). According to Peters *et al.* (199:70), crucial to the content of risk information and the way it is communicated- are the element of trust and credibility. The aim of risk communication is to provide significant, truthful and accurate information about posed risks that is easy to understand and is accessible to the public before and during disasters (Abraham, 2010:1307). The implementation of effective risk communication is however, challenged by the paradoxical involvement of culture in the formation and maintenance of perceptions by communities (Infanti *et al.*, 2013:6). Seemingly, cultural

norms, values, behaviours, laws, beliefs and a general sense of expertise serve to influence populations subscribing to different cultures, to each question what benefits can be derived from adhering to risk communication and awareness (Alegria *et al.*, 2011:2-4). The cultural theory describes inherent habits and propensities towards certain behaviours and beliefs, as well as assumptions about one's world around them as functions of "broad sociocultural orientations" (Rippl, 2002:148; Oltedal *et al.*, 2004:6). CT further contends that such information is not primarily derived from 'singular cognitive processes', but rather acquired shared knowledge (Rippl, 2002:148). The following section provides an overview on some of the factors that affect the perception of risk and are often influenced by one's biases.

2.5.1.1. The dread factor

Dread is noted as the most relevant factor linked to feelings associated with perceived risks since people are believed to be more inclined to respond to risks when their perception thereof elicits emotions of strong apprehension (Löfstedt, 2000: xxxi). Accordingly, culture provides a basis for people to experience phenomena in specific ways. Due to institutionalised cultural beliefs for instance, certain cultures in Botswana refer to plant and animal behaviours as early warnings for disaster potential (Kaya & Koitsiwe, 2016:103). The result of this association prompts people to act out of dread to the said signs, while they may also ignore other non-cultural assertions.

In conjunction with the dread factor, the belief of awareness of risk and control over it also play a pivotal role in what people perceive as risks and how they further confront the said risks. Risk awareness is a concept of cognizance and a derivative of systematic as well as institutional risk data collection and availability associated with information sources such as Early Warning Systems (EWS) (Thomalla *et al.*, 2009:17). Inherent to the awareness and control of risk is the process of forecasting and disseminating early warning information which customises information in a way that is easy to understand and meets the temporal and resource needs of populations (Magunda, 2010:20-21). Aside from the procedural nature of risk awareness through systematic communication sources, the core of risk awareness is still largely influenced by the individualistic and collective process of personal meaning and subjective understanding (Zinn, 2017:1-2). Some of the aspects that notably influence people's regard of risks in relation to risk awareness include, but are not limited to, a state of uncertainty about and the compensation of risk. Uncertainty of risk results when there is very little known or no data available about the prevalence of a risk, its likelihood to actualise and its extent of impact (Strand & Oughton, 2009:9). Compensation of risk? How does that play a role?

2.5.1.2. The unknown risk factor

Contrary to the dread factor where the probability and impact of risk(s) is determinable, unknown risk factors are characterised by "hazards that are unobservable, unknown, new and delayed in

their manifestation of harm” (Slovic & Weber, 2002:10). The unknown risk factor concerns both a lack of knowledge about the possibility of risk and/or lack of knowledge on the reality or projection of its impact range (Hullet, 2016:2). Consequently, the lack of information may motivate people to rely on tradition and culture to guide their perceptions, as well as modify their behaviours and responses to the probable risk (Fischhof *et al.*, 2011:4). However, if a population regards a risk to be irrational, activities that would be aimed at reducing or avoiding the risk become discarded, leaving people and their assets further exposed to harm (Underhill, 2013:377-380). Additionally, if people are uninformed about the prevalence of risk, chances of mitigation become more limited (Hullet, 2016:8). Overall, the consequence of the concept of unknown risk is that of over exaggerated concern or absolute negligence of the inherent risk and its impacts.

2.5.2. Social amplification of risk

Although the concept of social amplification of risk (SARF) is widely recognised as a framework within disaster risk management, in this study, social amplification of risk will be used as a factor to explain socially distorted perceptions that worsen risks (Duckett & Busby, 2013:113). People’s behaviour is shaped by their observation of others and the imitation of these behaviours, which is influenced by various psychological and contextual factors that interact with each other (Lenono, 2007:15). Perceptions about specific events or phenomena are therefore the outcome of reinforcements or benefits for them for holding such beliefs (Rosenstock *et al.*, 1988:176). Most often, the potential and impact of risks are overemphasised or understated by society due to prediction of risk under uncertainty, as well as the inherent motivation (or lack of) for people to protect against situations they identify as risky (Busby & Onggo, 2013:638).

People are assumed to rely on personal value judgments and past behaviours to predict what causes of action to take to protect against probable risks (Bonnie & O’Connell, 2004:417-422). In addition, when people are motivated to protect themselves and livelihoods, they act based on their perception of how severe the potential danger is, its likelihood to happen and the belief that one can or cannot counteract or control the condition (Tanner, Jr., *et al.*, 1991:38). Accordingly, communities faced with certain risks act urgently to guard their safety or inversely learn to live with the risks and even ignore their prevalence because of recurrent exposure (Kasperson *et al.*, 1988:177-179). This further intensifies repercussions should the hazard risk manifest into an actual disaster and is referred to as risk acceptance (Kasperson *et al.*, 1988:180).

The concept of risk acceptance regards the subsequent weighing and ruling-out of the potential loss and damage resulting from hazard risk (Steel 2013:820). Steel (2013:820) notes that belief and disposition are two most potent aspects of risk acceptance as they are indicative of whether one will consider a risk condition rational and worth taking protective measures against or not. Accordingly, owing to people’s pre-existing convictions and tendencies, response to risk

information is based on their experience of emotions and subsequent thoughts (Leiserowitz, 2006:47). In accepting risk, people decide to give attention to certain risk they deem will negatively disrupt their lives, while ignoring those they deem comfortable to live with (Botterill & Mazur, 2004:3). As a result, risk acceptance may lead to the development of underrated risk perception, which in turn results in higher risk endurance and less risk reduction action (Carmona *et al.*, 2014:14-15). For instance, South Africa is burdened with the challenge of youth unemployment due to various background factors such as the lack of access to quality education. However, although unemployment is well recognised as a challenge to development and the achievement of resilience enabling mechanisms, the appropriation of it as a challenge has turned it into a common and less daunting issue. In such cases where the probability and extent of risk may be misinterpreted, Botterill and Mazur (2004) suggest that expert opinions on eminent risks be communicated to the public by policy makers and relevant risk management bodies in order to redirect invested efforts to meaningful risk and disaster reduction actions.

2.5.3. The characterisation of risk perception among youth

There are several factors that predispose young people to the adversity of disaster impacts; risk factors in this regard refer to behaviours that exacerbate the probability of being confronted with adverse consequences (McNeely & Blanchard, 2009:4). Processes such as the formation and identification of risks, as well as the judgment thereof play a pivotal role in the overall manifestation of hazard risk to the event of disasters.

Most of the current initiatives in risk management have taken the approach of targeting the enhancement of people's behaviours towards disaster risks and preparedness by altering their perceptions and behaviours thereof (Poljanšek *et al.*, 2017:395). Nevertheless, individuals are different in their attitudes towards certain subjects, but there is a general likeness about young people's behaviours regarding several matters. Similarities can be observed through their consciousness (or lack thereof) of risk severity and the subsequent outcomes of their actions thereof (Currie *et al.*, 2000:47). If one is not aware of the risks they are exposed to, their behaviour towards the risk and protection against its impacts will remain unchanged, whereas, when one is aware, they are then able to choose how they wish to respond, if at all (Kite *et al.*, 2018:140). Contended throughout this chapter is that cultural interpretations based on values, norms and standards- influence the perception of risk. As a result, cultural biased reasoning within CT is used to emphasise perception of risk based on people's individual characteristics such as individual learning capacities and beliefs about the usefulness of the information relating to the risk (Griffin *et al.*, 1999:230). This type of reasoning is also used with a focus on the characteristics of hazards, perceived effective responses to the risk, distinctive social pressures to process information about the risk and the adequacy of information about risks (Griffin *et al.*, 1999:230).

Most of what is known by the young person is influenced by the educative role of parental figures and the social and cultural values and norms they subscribe to; and it is this interaction with their environment that shapes their overall perceptions and behaviours regarding specific events (de Witt, 2009:13). Young adulthood is referred to by some academics as a developmental stage, one that is characterised by the prolonged period of dependency of the young adult on their family or parental figures as well as to gain advice on societal expectations (Smetana, 2011:120). In a South African context, in most cases, what constitutes social support for young people is not by necessity parental figures or cognate family, although there are formal blood-related family structures. The young person may be more inclined to seek advice from and adopt the worldviews and behaviours of his/her closely related peers (Okon, 2012:377-378). "Young people are by nature, generally defined by an extreme inclination towards participation in risky behaviour that often has adverse results and given the numerous risky behaviours that youth perform, one might speculate that they are deficient in their appreciation of risk, as a result underestimate the significance of the risk they are faced with" (Johnson *et al.*, 2002:67-69).

2.5.4. Collective influence and disaster risk perceptions

According to Spector and Kitsuse (1977), Disasters are not mere environmental issues but are deep social problems that interrupt human functioning on numerous levels (Stalling, 1991:70). Several empirical disciplines have undertaken to determine different factors that influence disasters in making societies more vulnerable (or resilient) to disasters. From a social vulnerability perspective, cultural institutions are highly regarded as forces with significant influence on intellectual, affective and communal functioning of individuals (Helander & Khalid, 2016:1514). Such can be evidenced through adherence to common values, beliefs, practices and behaviours shared amongst people who exist within a community (Helander & Khalid, 2016:1514).

The significance of context on perceptions of disaster risk is not a definite proposition in disaster risk literature. It is rather, one of the components adopted in present-day disaster research in pursuit of exhaustive understanding of disaster phenomena, their causal and effective nature, as well as the effective ways in which they can be reduced (Helander & Khalid, 2016:1514). Within communities, families exist as more immediate sources of influence to those who form them and subsequently transfer and reciprocate beliefs, values and expectations of the whole community (Pinazo-Hernandis, 2010:421). Families are interactive arrangements in which a sizable amount of reciprocity exists, even when there is some apparent dysfunctionality as may be in some cases (Odom *et al.*, 2010:153). In spite of available contemporary informational sources, youth still refers to immediate environments where their development and beliefs about the world were predominantly shaped (Radovic & Mercantini, 2015:68-69). Radovic and Mercantini (2015:12) describe this process of learning as involving "the integration of multimodal information for generating presentations, building associations and elaborating generalisations". Radovic and

Mercantini (2015:12) further state that “the ability to manipulate such knowledge allows the individual to develop behaviours that depend on the environment as well as immediate situations”. Most previous and current research on the influences of family on developmental outcomes of young people has largely focused on educational accomplishments and learning abilities (Walberg & Marjoribanks, 1976:528). The following section highlights the role of social environments on perceptions of young adults, followed by an account on theoretical perspectives of family.

2.6. The link between understanding, interpretation and influence in relation to disaster risk perception

There is no accurate approximation of the amount of people in any given society who are disaster risk-informed or not, as well as those who believe they are aware of the concept but have as a matter of fact- misinterpreted all conceptual knowledge about the disasters and disaster susceptibility (Schipper & Langston, 2015:9). Except on incidents of personal experience, most of what people know about disasters and their consequences they come to know via secondary informational sources such as media, government designates, or from word-of-mouth communication. In both cases, however, reaches the recipient and is decoded personally to the receiver’s understanding and convictions.

In deciphering information, it is most likely that everyone will have unique interpretations of the information and internalise it according to their judgment of how the outcomes will impact them. A multitude of factors contribute to people’s perceptions of the same risk situation (Cutter *et al.*, 2003:248). While it is important to disseminate accurate risk information for the purpose of reducing the negative impacts associated with risks, it should be noted that the relationship between understanding and interpretation of disaster risks rests on people’s ability to identify risks and making judgments on such risks, therefore influencing how one responds. However, if people are subject to perceptions of helplessness towards managing or avoiding risks that threaten their well-being, any intervention may never be fully effective.

To validate the need for countries to focus on the perspectives of young people when considering policies and practices aimed at disaster risk reduction and mitigation, The World Bank Group provides some insights on the advantages of this undertaking. Humanitarian organisations have raised the urgency of prioritising young adults in the ‘next generational’ development campaigns as is the message conveyed in the 2007 World Development Report (The World Bank, 2007: xi). According to The State of World Population 2014, there are more young people in between the ages of 10-24 in the world, approximated at 1.8 billion, which is the biggest number in the history of human existence (UNFPA, 2014:1-2). As a result, young people need to be given more consideration regarding disaster risk policies and planning as they make the middle third of

society that can be most relied on in cognitive and physical abilities. Developing countries will benefit most in investing in the empowerment and development youth as future ambassadors and stewards of the planet as they are the future citizens of their communities (The World Bank, 2007: xi).

2.7. The importance of a multidisciplinary approach in Disaster Risk Reduction

Disaster Risk management has evolved into a comprehensive field of study over the past years to embrace a variety of contributing factors to disaster risks (Coetzee, 2010:1). Its redirection has been underpinned on the development of innovative conventions aimed at reducing the probability of disasters rather than managing disaster events (Higgins & Lockie, 2002:419). Historically, disaster risk research has adopted the social-ecological approach as a contemporary means of reasoning which encompasses a multilevel integration of explanations to address holistically- the environmental, biological and social aspects influencing disasters and their impacts on society (Matthies *et al.*, 2001:8; Mqguba & Vogel, 2012:31).

It is generally accepted by researchers that resilience to disasters is a function of buffer or protective psychological processes that equip the individual to withstand, control, or avoid factors that lead to the disaster (Swanepoel & De Beer 2011:5-11). Disaster events are notorious for their adverse environmental impact globally, which creates disruption in people's lives and livelihoods (Mqguba & Vogel, 2012:31). A common goal for the social-ecological approach is to ensure the development and empowerment of communities and establish methods of reducing people's vulnerability to hazards (Thomalla *et al.*, 2006:42). To achieve such, there needs to be a deeper understanding and awareness of elemental causal factors of vulnerability for communities (Thomalla *et al.*, 2006:42). Considering such, interventions are to invest in every aspect of life- including the psychological processes that are involved in subjecting people to feelings of weakness and inability. By so doing, individuals in this regard need to be studied holistically as systems along with the environments within which they reside. Thus the integration of different disciplines on the emphasis "on social interactions, environmental, and social psychological factors that influence the consciousness of an individual as well as their personality" (Gifford & Nillson, 2014:2). Furthermore, through cultural norms and settings amongst other factors- community members are regarded as legitimate sources of social change and development (Healy, 1998:16-28). It therefore, is more worthwhile for initiatives aimed at reducing disaster risks to approach and understand the concept of disaster risk from a comprehensive contextual perspective to build a sense of capacity and safety (Swanepoel, 1997:16).

The increase in disaster emergencies (including the risk of disasters) and the magnitude of losses over the years has aroused a need for joint efforts across disciplines, sectors and stakeholders to reduce the risk of disasters (WHO, 2007:9). As a result, community-based DRR (CBDRR) has

been introduced as an alternative to the traditional approach of attempting to manage disasters (WHO, 2007:9). The basis of community-based risk reduction is to build capacity amongst populations and promote resilience against disasters and facilitate adaptability to disaster risks (Kafle & Murshed, 2006:1). It is accepted that disasters are perpetuated by risks that impair development on a macro level, subsequently subjecting communities, populations and regions to negative impacts of disasters (Gautam, 2009:1). Disaster risks are therefore recognised to be driven by factors that minimise the capacity of successful development for populations at large (Gautam, 2009:1). Community-based risk reduction thus defines a “multi-disciplinary agenda for community development by bringing community together to address common problems which affect everyone” (Habiba *et al.*, 2017:260). The implementation of initiatives to reduce disasters naturally calls for a variety of innovative methods to successfully achieve the process (Habiba *et al.*, 2017:260). While policy and frameworks provide detailed guidelines to be followed by disaster risk reduction initiatives, Shaw *et al.* (2009: xix) indicates that communities are central to the process of successful Disaster Risk Reduction (DRR). Focusing DRR at community level therefore needs to be supported by an effective integration of disciplines, as well as the participation of multiple stakeholders.

Disasters are widely known for disrupting development, making the importance of integrated efforts in DRR therefore of utmost importance (Shaw *et al.*, 2009:17). The said integration stems from socioeconomic, cultural, social, physical, environmental, political and technological components (Shaw *et al.*, 2009:17). Such a consolidation and proper coordination in turn enables the successful implementation of disaster risk reduction and help populations to cope with eminent disaster risks. The Disaster Management Act as well as the framework, No. 57 of 2002 (2002:47) confirm that disasters undermine development and this is in spite of ongoing progress to extend essential services to community members who need them. The act further indicates that during disaster events, services such as medical assistance, social welfare, safety and protection services, community and environmental health, technical services, communications and administrative support amongst others- are some of the most affected services that require a multisectoral or multidisciplinary approach in order to fully address issues at hand (Van Niekerk, 2014:860). Other integrated processes to combat disaster risks and vulnerability which necessitate an intensive involvement with different entities include that of building resilience, which highlights the following as some of the aspects as points of integration (Chandra *et al.*, 2011:8).

- Pre-event planning, exercises, agreements: this process involves training for disaster emergencies at local level and is deemed unlikely to be successful without the participation of the community.

- Partnership with state and federal government: the role of government in risk reduction is highlighted as a bridge for building resilience for societies through active engagement with communities.
- Culturally relevant education about risks: educational systems such as Indigenous Knowledge systems can be used as an example where knowledge is inferred to community members by knowledgeable leaders.
- Integration of preparedness and wellness: disaster impacts are usually gauged at macro level, therefore activities aimed at preparing communities strive through disasters is an ideal strategy to promote largescale resilience from disaster impacts.
- Strategies that empower and engage vulnerable populations: such strategies can be used to inform the family and community so that their direct influence on the youth can be constructive and promote DRR.
- Individual-level preparedness and self-sufficiency: at an individual level, preparedness involves psychological, cultural, physical and social practices that help an individual reduce the negative impacts of disasters (Blake *et al.*, 2017:283).

South Africa is a contender amongst developing countries with an advantage for its national accomplishments including its peacekeeping and conflict resolution strategies as well as the country's participation in sustainable development and disaster relief interventions (Yong, 2013:6-7). However, the country is still notably faced with extensive developmental challenges that hinder the successful and confident achievement of growth, adaptation and the overall well-being of citizens (Møller, 2013:918-920). Such is consequent of poverty, low levels of education and high levels of unemployment, lack of safety and security as well as poor health and living conditions (Møller, 2013:918-920). The complexity of such conditions sees young people being more reliant on their peers and the community for trusted knowledge on phenomena rather than on the system. Moreover, it is most common in South Africa for young people from different cultures to sit together and form special bonds where they end up considering one another as family (Potgieter-Gqubule & Ngcobo, 2009:10-11). Although not necessarily related by blood, this family is then referenced in individual decision-making instances where the values and culture of the entire group then influence the ultimate perception of the world and its processes for the individual (Graham *et al.*, 2019:12). In a country where community and living interdependently is upheld, it is not surprising that such affiliations have such deep influences on the perceptions or attitudes of people living in these environments. The importance of engaging youth in DRR provides the opportunity for youth-led and advocated research and decision-making (Haynes & Tanner, 2013:356). Which in turn counters the dismissal of youth as complaisant sufferers of disaster

impacts. Haynes and Tanner (2013:356) further note that youth are more flexible in knowledge sharing as well as influencing social change within communities. The section below highlights the urgency to giving more regard towards young people in the process of disaster risk reduction.

2.7.1. Young people as capable decision-makers and agents of change

“Mainstream approaches and theoretical debates in disaster management tend to ignore the role of children and young people as communicators of risk and as facilitators of disaster risk reduction (DRR)” (Mitchell *et al.*, 2009:6).

There is general acceptance that decisions about disaster risk reduction and management have been largely unilateral judgments dependent on people with the highest rankings in government organisations, focusing on the elderly and subsequently expecting collaboration from them to carry out the targeted goals successfully (Mitchell *et al.*, 2009:3). Today’s youth are anchors of the future society, rightful leaders and occupants of their various environments; thus, investment in positively educating them and promoting their successful growth today is an initiative not a day too soon (Bamber, 2012:3). Furthermore, such this further promotes the opportunity for building environmentally conscious and disaster resilient populations (Bamber, 2012:3). Young people deserve a centre role in any conventions aimed at disaster reduction or management. Given the chance, youth participation can provide innovative perspectives that could be used to work towards a framework of disaster risk reduction that is effective and targets collective action where it is most effective (Swanepoel, 1997:13).

The youth makes up an integral part of almost all societies and are active contributors in development activities and where when allowed the opportunity, can actively help in minimising vulnerabilities and risks of suffering the adverse effects of hazards as they face them (UNICEF, 2011:2). A youth-centered approach to disaster risk reduction is an opportunity to empower youth, develop their abilities and show regard for their well-being, allowing them a chance for survival should a disaster strike and for them to be more than submissive victims of the devastating events (Antonowicz *et al.*, 2010:3). Furthermore, the Plan International publication prepared by Antonowicz and colleagues (2010) makes a reflection on some of the key pursuits declared in the Hyogo framework for Action (HFA) strategy with regards to the inclusion of young people in disaster risk reduction conventions. In the Plan International programme, specific reference is made to the HFA aims quoted below to convey the importance of young people’s inclusion and participation in the process of developing resilient societies. a) Involve children and young people to identify, assess and monitor disaster risks and enhance early warnings. b) Use knowledge, innovation and education to build a culture of safety and resilience at all levels, because children are our future. c) Involve children and young people to reduce the underlying risk factors. In

relation to the HFA aims listed above, the social settings of families are said to play a significant role in the determination of action towards different risks perceived that could affect the traditional functioning of the family (APA, 2002:12). For instance, a family that inhabits a neighbourhood that is at risk of experiencing industrial events such as factory explosions that result in the loss of lives and livelihood may be less concerned with other potentially adverse disasters such as influenza outbreaks. In such conditions, the prime function of the family is to protect its members against any real adversity. Thus, teaching the youth to explicitly analyse and respond to perceived risks and by getting them aware and educated on the issues that threaten the family's safety. According to Morrow (1997:114), families are a very important sources for conveying information about perceived disaster risks. During times of adversity, the family is the most important source which provides physical, emotional and material support to assist one another in regaining stability and bouncing back to normal functioning.

2.8. Conclusion

This chapter focused on the theoretical perspectives of disasters as well providing a historical basis for the development of disasters. In addition, factors of disasters, including; vulnerability, hazard and risk perception were also looked at to provide a holistic understanding of disaster risks. This chapter further made use of the cultural theory (CT) to try and explain how contextual factors such as cultural norms and values influence the perceptions of youth on disaster risks. From the cultural theory, reasoning based on cultural biases is used to emphasise perception with a focus on individual characteristics, perception of hazard characteristics, perceived effective responses to risk, distinctive social pressures to process the information about risk, the adequacy of information, individual learning capacities and beliefs about the usefulness of the information relating to the risk.

The chapter further touched on the high demand for actively engaging young people in activities and plans for disaster risk reduction/disaster risk management with consideration from multiple contexts in order to drive comprehensive disaster risk reduction. How youth perceive disaster risk factors will inform decisions on how to inclusively reduce and manage risks in both current and future time scales. When disasters happen, they affect large numbers of people through shared environments and youth are among the most vulnerable groups that are disproportionately affected by disasters especially in poor countries. The involvement of youth in risk reduction has been highlighted as an effective strategy to equip societies with skills, tools and other relevant means to withstand, recover from disasters, as well as flourish. The following chapter provides an orientation of the meaning of family on a theoretical as well as contextual scale, as well as how the interaction of such relations influences young people's regard of exposure to disaster risk and the vulnerability thereof.

Chapter 3: The role of family in perception formation using the systems and social learning theories

1.1. Introduction

The previous chapter provided an overview of various theoretical perspectives on the concept of disaster risk and its constituents. The chapter also demonstrated how the existence of such theories have influenced contemporary conceptualisations of disaster risks and vulnerability. This chapter outlines the theoretical perspectives of *family* as a contextual reinforcer of perceptions among youth in South Africa. The theoretical perspectives applied include the family systems theory as well as the social learning theory, which are used as a premise to explore the basis of cultural and environmental factors that contribute and relate to the formation of perceptions. The current chapter addresses the second objective of the study which is explaining the role of family in perception formation using mainly the systems theory. The chapter begins with providing a definition of family followed by the two theoretical approaches used to highlight the dynamics and influence of family and overall social relationships: the systems theory and the social learning theory.

1.2. Defining family

The World Health Organisation (WHO, 1978:5) defines family as “a distinct social organisation that are intended to hold people together for many years either by lineage or by fellowship or fraternity”. However, the definition by WHO is founded on the cultural basis to which people individually belong. As a result, the meaning is then derived from a system of characteristic norms and beliefs that apply to each person individually or a collective society (WHO, 1978:8). Definitions could range from simple considerations of immediate parents and siblings, to more complex structures including nuclear, distant, to none-blood-related family relatives. The general belief is that the true meaning of family can only be determined through the social structures within which this meaning is sought (Gubrium & Holstein, 1999:4). Traditionally, family could be defined as *nucleus* which consists of the couple and their children (Hodgson & Birks, 2002:2). More recent conceptualisations of family define it respective of the different circumstances or contexts that enable its formation. Accordingly, family can be regarded as “a group of people held together by birth, marriage, or adoption or by common residence or close emotional attachment” (Enrique, 2007:1).

Notwithstanding the intense biological foundation involved in the development of families, each family is different and the differences are framed as a result of the individuals who possess unique personalities, characters, ideals, physical and intellectual capacities (Samuelsson & Kaga, 2008:13). As each family grows, interactions among its members form identifying patterns with which the family can be associated and which exert considerable influence on all members of the

family (Cutter *et al.*, 2003:248). On a more developmental note, there is mounting research proposing that consequences of early familial relationships such as “affection, expressiveness, and conflict” play a significant role in the achievement of positive physical and psychological well-being from early adulthood, throughout life (Berger & Font, 2015:155; Fauth & Thompson, 2009:7; Basson, 2008:27-28). This is particularly because families are constantly responding and adapting to changes in their environments in order to develop and promote the well-being of its members. Berger and Font (2015:155) further assert this notion by confirming that family dynamics are largely a function of public policy aspects. Anyon (2014:4) provides an example of “macroeconomic policies regulating wages, jobs, tax rates, federal transportation, health services and affordable housing” as aspects of public policy that influence familial structures. However, this effect can more intimately be observed through financial security and the provision of basic care within the family itself. Variables at family level, including the home environment, parental styles and expressed emotions of the parents, are attributed as familial circumstances that have a direct relationship with both the positive and negative results of young people’s cognitive functioning (Peris & Hinshaw, 2003:1177). The above is symbolic of the interconnectedness of contexts and how they have far-reaching impacts in people’s lives. Smetana (2011:107) however warns that, although certain speculations can be made, judgements and behaviours displayed by different people need to be described on individual basis and not general attributes.

The said contextual interrelationship is then maintained by family involvement and practices, which in return create a directive cultural basis that determines subjective and objective behavioural outcomes for the individual concerned (Kordi & Baharudin, 2010:218). Therefore, the impact of social and economic conditions affects and can be assumed to determine the structure and functioning of the family, thus indirectly conditioning family members to develop and hold certain perceptions about the world, their place in it and their vulnerability to conditions that render them further disabled to protect themselves against disasters. Authors Holstein and Gubrium (1990) bring to light the distinction between family and *the* family, the former referring to the nuclear and stem family while the latter regards “experiential states” (Gubrium & Holstein, 2005:X; Riedmann, 1991:1111). Different cultures have different personalised conceptualisations of family. For instance, western cultures who are more individually-oriented prefer to associate particularly with the nuclear or immediate family, whereas most African cultures are collectivistic and prefer inclusion of the extended family for affiliation (Shi, 2015:50). While some people are strong believers in privacy and freedom and believe that one should be independent and free to construct their own opinions of the world and live by their own beliefs, others uphold a culture of oneness and believe that the world can be viewed from a collective point of view (community, society, tribe, race and believes) (Shi, 2015:51).

1.3. Family ecology: an overview of the systems theory

Ecology refers to a “stream of biology which studies systems of living beings and their relationship to one another as well as the environments which they occupy” (Schmitz, 2007:7). The family ecology theory subsequently looks at the functioning of the family through its domestic operations as influenced by extraneous surroundings (Bronfenbrenner, 1986:723). This perspective proposes that, in order for the conceptualisation of perception to be near accurate, all environments surrounding and influencing the family must be studied (Lamanna *et al.*, 2016:23). Such environments include the opportunities and misfortunes that take place within the family system itself as well as in the external but related systems (Lamanna *et al.*, 2016:23).

The family ecological perspective strives to relate the attitudes and behaviours of individuals to the interaction that the family sustains with their physical context. Whether the family relations are formal or informal, their networks play an equally important role on influencing the family member’s outlook of the world (Morrow, 1997:113). The family ecology theory adopts Bronfenbrenner’s (1979) contexts or systems that he identifies as potential sources of weight on the development and functioning of the family and young adults (Swick & Williams, 2006:371). The contexts are used to assess people in relation to their “social, environmental, and mental wellness, and the interaction of the individual with their community and its constituents” (Swick & Williams, 2006:371).

The systems theory can, in the most general form, be described as a technique to learning which focuses on the integration of singular components and the relationship between aspects of a system (Laszlo, 1973:674). Using the systems theory within the socio-ecological perspective allows for a provision to be made on the abstractness and flexibility of concepts while still considering their relativity to one another (Kull *et al.*, 2017:5).

Within context, disciplines that are actively interested in the management of social and ecological problems have sought various ways to create a logical understanding of environmental crises that directly and indirectly affect the successful functioning of human life and vice versa. The Person-In-Environment (PIE) tool is one of the most useful tools that can be employed in social and ecological systems research (Karls & Wandrei, 1994:3). The PIE tool is used to help conceptualise a person in relation to their activity within and interaction with their contextual environments (Karls & Wandrei, 1994:x). The tool works on the assumption that people can be enabled to become resilient to socio-ecological risks by enhancing their coping capacity and reducing exposure to risks by targeting their individual physical as well as mental strengths in relation to the harmful conditions of the environment they are faced with (Karls & Wandrei, 1994:x). Boulding (1956:197) states that the systems theory uses multiple scientific deductions to study phenomena and conceptions by drawing from the different relationships and processes investigated in factual and probable observations. In addition, the systems theory and the

relationships it comprises is one that has a continuing influence on human development and provides advantages and disadvantages to the success of this development. As a result, the pursuits of the family, its beliefs, goals, structure and functions play a role in the development of a young person and act in a way that shape their viewpoints and understanding of the world.

1.4. Systematic approach to families

Family systems are complex to analyse and describe. For this reason, the systems theory was used to provide an extensive understanding of these complexities on broad and definite terms (Coetzee & Van Niekerk, 2012:2). The systems theory was used to indicate how the intricacy of family dynamics and affiliative structures, including culture and contextual aspects, can influence a person's perceptions, decisions and behaviours towards multiple aspects of life, including those that would determine their safety and well-being. The core assumption in this regard is that social units are most effective when acting collectively and not as individual parts (Bowen, 2007:115).

Families are made up of individuals who collectively and interdependently identify with and subscribe to ways of thinking and behaving that are distinctive to the entire family (Mari, 2018:53-61). These tendencies can be transferred through cultural and institutional teachings and be expected of all members of the family to show adherence to (Geertz, 1973:14). The family systems theory helps in developing an understanding of all the familial factors that influence the attitudes and behaviour of young people towards, in the case of this study, environmental problems that have disastrous outcomes (Hooper, 2007:220). Since the core proposition of the systems theory is that behaviour can be understood only through studying the entire 'system' in relation to its environment, the family was therefore treated as a representative contextual frame of reference to explore interactions and related other aspects that influence young people.

Hooper (2007:225) further speaks of the "culture and idiosyncrasy of the family" as pivotal to the identity of the family and family efficacy. Idiosyncrasy is a term that refers to "a style of behaviour or way of thought distinctive to an individual or system" (Abid, 2008:73). According to proponents of social cognitive psychology, people adjust their conduct based on what they believe they can manage and achieve, a concept referred to as efficacy (the belief that one can achieve their wilful outcomes and goals) (Caprara *et al.*, 2004:247). For example, if the family to which one belong held the belief that they were vulnerable to certain potential disaster events, every member could be assumed to hold the same perspective. This would have them act accordingly to regulate their actions and ways of thought to protect them against potential harm and furthermore to learn alternative ways of managing harm and minimising the extent of its adversity. On the other hand, if the family believed that they were equipped with all the necessary resources to successfully handle the potentially harmful challenges, their attitudes and actions would evidently differ compared to those of a family that has a lower sense of efficacy. In summary, family systems ensure that members belonging to the specific family will exhibit behavioural patterns that relate

to the efficacy or perceived efficacy of the family and that these beliefs can be attributed to perceptions of vulnerability or perceived resilience to challenges (Cavallo & Ireland, 2014:7-8). The systematic approach to family contends that behaviour can be understood by exploring people's fractional interactions with their physical world as well as their dependence on the environment for survival (Klein & White, 1996:5).

1.5. Family as a system

Interaction and association start at a substantially early age in a person's life during which time a person comes to adopt appropriate cultural norms, beliefs and customs of those with whom they associate and are intimate (Sáez-Martí & Sjögren, 2006:76); (Vorobej, 2011:708). Reitz and colleagues (2014:3) note that "a broad range of people who surround a person in everyday life from early childhood until old age, are an extensive facet of human life and their influence significantly shape the development of personality". Thus, it is important in socially orientated research to study people within their interactive environments as systems and not in isolated contexts (Karls & Wandrei, 1994:X). In this regard, consequences of connections between people as well as how they affect one another can be conceptualised (Reitz *et al.*, 2014:3). Broderick (1993:6-10) lists 'group loyalty, identity and morale' as distinctive features that result from familial interactions, which he terms 'functional requisites'.

Notwithstanding personal characteristics, factors such as collective norms supposedly mould individuals' perceptions of the world by altering one's initial beliefs, complementing them, or opposing the norms (Tucker, 2011:147). Subsequently, the outcome will see the concerned individual restructuring their views to firmly refuse the group norms that have no appeal to them. Presumably, emotional arousal takes place during instances of interaction among people and resultantly propel the outcome of constructive or destructive decision-making and behaviour (Gardner & Steinberg, 2005:625). Similarly, young people are believed to conform to ideas and behaviours most likely common to those of their friends and family members (Tucker, 2011:147). This in turn plays a somewhat determinant role with regard to risk taking, risk identification, risk judgment and actions that follow thereafter (Tucker, 2011:147).

1.6. The socialisation process

This section elaborates on the influence interactions between individuals and their surroundings have and how such interactions affect the overall development of the individual. Figure 3.1 below illustrates Bronfenbrenner's different levels of the Ecological Model, which is used for describing the socialisation process between individuals and their environments.

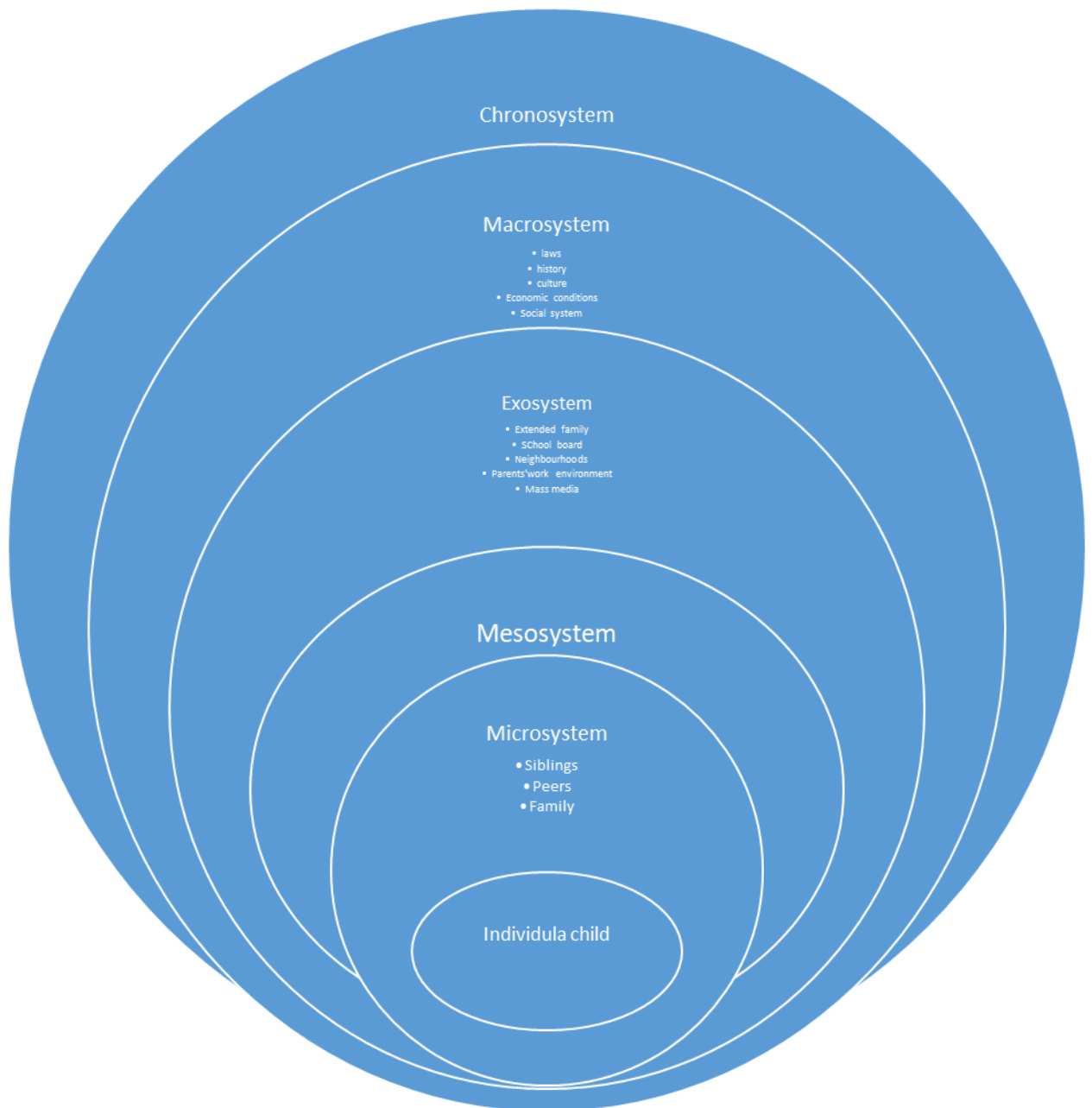


Figure 3.1: Family Ecological Model. Adopted from: (Niedere *et al.*, 2009:3).

The socialisation process according to the systems theory happens based on the compounding concepts of humans and their environments, as well as the exchanges that take place between the two. Such interactions are explained below through a number of various settings or contexts referred to as systems.

1.6.1. The Microsystem

The microsystem represents the immediate environment within which people exist and come to learn about the world from a young age (Bronfenbrenner, 1979:3). Like Bronfenbrenner, other authors who have written about the systems theory such as Berk, back in 2002, as cited in

Paquette and Ryan (2001:1), indicate that the microsystem is an environment closest to the young person and comprises structures which the young person has direct interaction with. This context includes a person's home, school, or workplace and is a place of interaction with close relatives (Bronfenbrenner, 1979:3). The microsystem can be regarded as an environment where a young person's learning can be influenced to make them trust or mistrust the world, therefore shaping their regard for safety in later life. Paquette and Ryan (2001:1) further state that, within the microsystem, relations directly affect the young person's beliefs and behaviour.

1.6.2. Mesosystem

The mesosystem is a context that connects the constituents of the person's microsystem to other systems which are all interacting with one another and have a direct influence on the young person's life (Betancourt & Khan, 2008:2). This environment should therefore be a supportive, educational and constructive environment which helps the young person's successful development, especially cognitive development. This will in turn allow the individual to analyse complex situations and calculate risks accurately as well as develop appropriate reactions to events threatening their safety in the world.

1.6.3. Exosystem

According to Marshall (2004:165), the exosystem is the larger context within which the microsystem and mesosystem exist. The exosystem comprises factors that influence an individual's life but are not directly related to the person. According to Swick and Williams (2006:372), even though the individual may have no direct physical relation to the exosystem, they are still psychologically connected to it and as such can promote successful development, or be unfavourable to positive developmental outcomes. Marshall (2004;166) further makes an example of government policies as a component of the exosystem that has significance in the young person's life by affecting their quality of life socially and economically, as well as with regard to safety and security.

1.6.4. Macrosystem

"Macrosystems ecology is the study of diverse ecological phenomena at the scale of regions to continents and their interactions with phenomena at other scales" (Heffernan *et al.*, 2014:5). While the exosystem incorporates the microsystem and the mesosystem, the macrosystem comprises the broader context (Betancourt & Khan, 2008:2). The macrosphere focuses on an all-embracing arrangement of "cultural beliefs, values, and ideologies, as well as historical and political trends" that affect societies and individuals who constitute them (Betancourt & Khan, 2008:2). Such components serve as explanations for the networks and interconnected movements that take place in the other systems that are internal to the overarching macrosystem (Eamon, 2001:261).

In summary, the above information can be used to signify that a developing person is subsequently shaped by the different settings of the systems that surround them. As a result, any ideals they hold about aspects such as disaster risks and vulnerability will accordingly be the result of the overall systems' influence on the person's place in the world.

1.6.5. Chronosystem

The settings of the microsystem, mesosystem, exosystem and macrosystem change with time and as a result, family processes also change as they are influenced directly by the changes and processes occurring in the related systems (Aemon, 2001:262). Such changes could relate to changes in environmental conditions, economic capacity, the family structure itself or global conflict (Aemon, 2001:262).

The chronosystem respectively provides a platform that enables the individual study of factors and processes that happen externally and beyond the individual. The chronosystem emphasises events happening at family, community, cultural and global levels but have outcomes that pulsate through these structures to affect the awareness of and resilience to hazards and disaster risks by the young person (Betancourt & Khan, 2009:3). This view can also be useful in the assessment of the different ways in which individual families respond to stressors and how these stressful situations affect their lives, such as the consequences of living in areas prone to hazards (Swick & Williams, 2006:373). In addition, this view extends to how these consequences in turn influence their outlook on the world and on their vulnerability to environmental conditions that predispose them to suffer harm from such conditions (Swick & Williams, 2006:373).

1.7. The advantages and disadvantages of the systems theory

One of the advantages of using the systems theory in studies concerning family structures and functions are broadly to understand the ways in which individuals interact with their primary environment as well as the processes that take place for interactions within such contexts to function and adapt to changes to improve their well-being and ensure survival. The systems theory comprehensively addresses breaking down the interactions that individuals have as well as the influences of such interactions within different contexts.

The use of the systems theory is also helpful in determining the ways in which an individual's immediate environment, such as family, contributes in the allocation and management of resources in order to cater for their needs and goals, as well as how such actions affect the quality of life for the individuals and their families as a group. Furthermore, understanding can also be obtained in terms of how human development can be affected by the interaction between the different types of contexts and the changes they undergo. This also creates a platform to determining the possibility of managing and improving environments by reducing life-limiting conditions to better the quality of life for humans and conserving the environment and resources

essential for life. The systems theory can also be used to understand those changes that are necessary to improve human lives as well as to determine how families contribute to such processes.

Other authors such as Raišiene (2011:32) indicate that the systems theory is also advantageous in:

- Identifying interdependencies and inter-relationships between various parts of a system and helping to get a holistic view of interactions.
- Reflecting on the adaptability of an individual to environmental changes.
- Focusing on multiple dimensions of social interaction and the influences they impose on the individual.
- Emphasising on the role played by the environment.

A disadvantage of the systems theory is said to be that of emphasis on homeostasis and no account for radical changes that may put the system out of balance (Raišiene, 2011:33). The environment as a harmoniously functional unit is not always possible as everyday life is subject to a variety of changes and interventions.

1.8. Social learning theory

The social learning theory (SLT) is a theory based on the idea that people learn new information and behaviours from their interactions with and observations of others in a social context (Nabavi, 2012:4). SLT is further characterised by observational learning to form an understanding of and influence human behaviour and it describes the process of learning as a constant change in the behaviour and knowledge of an individual as a result of interactions with one's social surroundings (Nabavi, 2012:3). Such learning is said to happen mainly from people whom one admires or has high regard for to motivate active participation.

The core proposition in the social learning theory is that the behaviours and attitudes of people are shaped by their observation and imitation of others as well as the imitation of these behaviours which are influenced by various psychological and contextual factors that interact with each other (Lenono, 2007:15). In SLT, people's perceptions about specific events or phenomena are seen as the outcome of reinforcements or benefits for them holding such beliefs (Rosenstock *et al.*, 1988:176). The social learning theory further asserts that behaviours displayed by people is a result of learning from the social environment within which they exist, which happens by way of direct personal experiences reinforced in different ways and indirectly by way of imitating others, as well as by individual awareness levels (Leonard & Blane, 1999 :106).

Youth as a developmental stage is referred to by some academics as a stage that is characterised by a prolonged period of dependency on family and/or parental figures for support and guidance on societal expectations (Smetana, 2011:120). In a South African context, what constitutes social

support for young people in most cases is not by necessity parental figures or cognate family and although there are formal blood-related family structures, young people may be more inclined to seek advice from and adopt the worldviews and behaviours of their closely related peers.

1.8.1. General principles of SLT

Learning occurs in three different ways in the social learning theory, which is a theory that grounds on interpersonal social communication. These are observational learning, indirect learning and learning through modelling.

1.8.1.1. Observational learning

Observational learning contends that people, especially young people, can watch other people behaving in certain ways and then they internalise the observed behaviour and duplicate it at a later stage (Giovazolias & Themeli, 2013:71). In this sense, people are said to determine their own conduct as well as regulate the conduct based on what he or she had observed in others. Accordingly, observations of behaviour are followed by reinforcement or punishment of the response that results from the information obtained by the observer. As a result, behaviours that are displayed by people surrounding a young and growing person have great power in the learning process of the particular young person. In addition, SLT indicates that the acquisition of behaviour does not require for an individual to have direct experiences for learning to take place and sources of input such as social media, television and peers become extremely influential in the learning of new behaviours and attitudes (Fryling *et al.*, 2011:192). The theory further states that, while people are undergoing the process of observation of other people's experiences and results, such people go into a state of emotional conditioning and display the observed behaviours in comparable situations (Jenkins *et al.*, 2018:2). The advantage of this type of learning is that, through the behaviours or experiences of other people, an individual is able to observe both positive and negative outcomes without them having to directly experience any of the consequences.

1.8.1.2. Indirect learning

Individuals observe the outcomes of other people's behaviours and learn from them as though they were happening to them instead. Although a part of an individual's learning is based on learning through direct participation in processes or actions, in indirect learning, the individual is not directly involved in the process but rather learn from the outcomes of those who are. Such learning happens when actions are being reinforced through rewards or when the said actions are responded to with punishment (Fryling *et al.*, 2011:193). According to the contention of SLT, people have different levels of capabilities of indirect learning and it takes different efforts in observation for people to learn behaviour. The results that are learnt through observation (whether through direct or indirect experiences) require a certain process, since learning takes place over

a period of time (Nabavi, 2012:6). Like learning through modelling, indirect learning is dependent on four important processes, namely paying attention, retention, creating behaviour and motivation (Horsburgh & Ippolito, 2018:8).

1.8.1.3. Learning through modelling/ learning from examples

Modelling is a process that describes exemplary learning from others who are highly esteemed or respected and can influence individuals by their words and actions. Such people are modelled or taken as examples for behaviour and attitudes and are included throughout the lives of those who are learning from them from childhood to old age. The three types of modelling that the social learning theory provides which were looked at in this study include:

- Live models: live models include people who are closely surrounding the learner. Such people engage on interactions with the learner on a daily basis and include relationships such as those between parents and siblings within a household, relatives, neighbours and friends within the community (Jenkins *et al.*, 2018:5).
- Symbolic models: such models can be explained as those who influence their followers through the media and other communication channels. Symbolic models usually include famous people such as “famous sportsmen, singers, and presenters of TV programs, artists, film or novel characters and actors” (Nabavi, 2012:4).
- Verbal instructions: verbal instructions refer to directives on behaviour which are inferred by society instead of being influenced by a single particular model. Behavioural outcomes in terms of verbal instructions can result in reinforcement or punishment, which essentially determines the type of behaviour or attitude that will be upheld.

The social learning theory further asserts that people will idolise those who look like themselves as models and adopt their behaviours. During this process, of great importance is the observer’s “capacity of perception, level of readiness, cognitive structure and skills, tendencies and physical capacities to enable the learning process” (Nabavi, 2012:8). Of further importance is the interaction between the learner and their model as this interaction, although dependent on some basic components such as age, gender, race and status, determines what behaviours observed will be modelled. According to SLT, learning through modelling results in people who play the role of the observer gaining from the model, amongst other things, “new cognitive and psychomotor skills; learning social norms and prohibitions, learning values and beliefs” (Nabavi, 2012:4).

1.8.2. Cognitive feature on social cognitive learning theory

The basis of learning theories is of the idea that cognitive processes as well as emotional and social behavioural outcomes are the results of different forms of treatments, the concept of nurturance surpasses that of natural developments (Bandura, 1977:191). According to such theories, people come to know what they know and believe from learning from the viewpoints of

others of the same age as well as authority figures in case they are children and come to model these beliefs and behaviours (Foster *et al.*, 1988:5). The outcomes of *behaviourism* are used by proponents within this perspective to explain concepts such as the ideation of fear and the ways of confronting it and from the broad context of the learning behaviours theory, two sub-contexts of learning can be derived, namely the classical conditioning and operant conditioning theories (Woolfork & Perry, 2012:39-40). As with the other theories that have already been mentioned, contextual and dynamic theories are not theories of perception in principal, yet they provide a framework within which the development and prevalence of perception can be derived. Two of the most prevalent concepts within contextual and dynamic theories are: the sociocultural approach, which highlights context, history and culture as sources and tools of psychological development and the fact that a person came to see the world the way they do as a result of influence from the person's surroundings (Woolfork & Perry, 2012:50-51) and the bioecological model which explains development using the theory of systems and takes into consideration the environmental aspects within which a person exists, such as their; culture, religion, family, community, institutions and cognitive processes (Bronfenbrenner, 1994:38-41).

The social cognitive feature of the social learning theory posits that learning is a dynamic and reciprocal interaction of a person, the environment and behaviour in a social context (Jenkins *et al.*, 2018:2). Attitudes and behaviours are largely attributed to internal and external social reinforcement. According to the SLT, past experiences influence reinforcements, expectations and expectancies which determine whether a person will engage in a specific behaviour as well as the reasons why a person would engage in that behaviour (McLeod, 2016).

1.8.3. Strengths of social learning theory

The main strength of the social learning theory in the context of this study is indicated to lie in the modelling process where it is believed that, when the model displays actions that are positive, such actions will be rewarded and mimicked by those who are observing. If, on the contrary, the actions of the model are potentially harmful or negative, such actions will result in punishment. Accordingly, when models within households and communities are portraying commendable behaviours and attitudes in front of young people, the product of such actions will be learnt and mimicked by the young people observing. In general, the social learning theory is esteemed for being "concerned with important human social behaviours within the natural environment" (Nabavi, 2012:5). This is particularly important for this study as the study objectives rest on the social interactions between people as well as between their environments to determine the social implications of such interactions and how they can influence perceptions regarding certain issues in the environment. The social learning theory provides a platform to focus on important theoretical issues such as the role of reward and punishment in learning and how these influence

the behavioural outcomes of young people. According to literature, other strengths of the SLT include the following:

- Comprehensiveness in addressing complexities of human behaviour in learning
- Accumulated an impressive research record
- An evolving theory that is open to change
- A reasonable view of people and concern with the social implications of the theory

In summary, the social learning theory is a theory that explains the learning process as well as how behaviour and attitudes are formed as a result of social interactions that people become engaged in. Behaviours are sustained or altered as a result of reward or punishment that follows provided the behaviour is deemed negative or positive. For the said behaviour to be performed covertly, psychological processes such as those of paying attention, retention, reproduction and motivation take place in order for the behaviour to be recognised in the first place. Accordingly, behaviours from those surrounding a young and growing person are observed, internalised and mimicked by the young person as the observer and thus propel the process of learning which results in either punishment or reward.

1.9. Conclusion

This chapter focused on the systems theory and the social learning theory as propositions through which cultural and environmental contributors to perception formation were determined. The systems theory was presented under the ecological theory as it is a derivative which was respectively used to provide a systematic approach to families. The systems theory provides that perception forms as a result of social exchanges that take place among people and between people and their respective environments. This theory further states that the individual exists within different contexts that overlap and influence the life of the individual directly or indirectly through different ways, such as cultural norms, beliefs, cultural obligations and prohibitions. In conjunction with the systems theory, the social learning theory was used as a theory of learning processes and social behaviour which proposes that new behaviours can be acquired by observing and imitating others within natural environments. When such learning takes place, aspects such as behavioural norms and cultural preferences are transferred from people of influence, referred to as models and are then mimicked by observers.

The two theories referred to in this chapter were further used to outline the role of family and community and the influence the two structures have in an individual's life. It was stated in this regard that family forms part of the immediate structure, especially in a young person's life. Accordingly, a wide variety of people who surround a person in everyday life from early childhood until old age, were identified as an extensive facet of human life with influence that significantly shapes the development of personality. Family as a contextual source of influence has a stake

on how the youth develops and maintains perceptions of disaster risk factors. Hence, understanding youth's perception which is dependent on family and understanding how family and community bring about those youth's perceptions, is paramount to disaster risk reduction and management. Furthermore, while households and individuals are important to consider for disaster risk reduction and management, disasters are gauged on their impacts on communities at large. Because dealing with human lives on a large scale has multiple complexities and requires critical consideration, it is therefore necessary to adopt an all-encompassing approach which integrates the multivariate dimensions and stakeholders.

Young and developing people are at the peak of their physical performance with their cognitive capabilities maturing and at a more developed stage- they have a better understanding of the world around them as they learn faster and have more resources at their disposal to minimise life-limiting conditions and ensure survival. According to the two theories, the systems theory and the social learning theory, such learning comes from the interactions they have amongst other people within their circles as well as their interaction with their overall environments. Therefore, to understand what influences young people to think and behave the way they do, it is important to consider not only cognitive drives, but to also highlight social and environmental factors at play. The following chapter is based on the empirical findings of this study as well as the steps that were taken to acquire these findings.

Chapter 4: Empirical findings: data analysis and presentation

4.1. Introduction

The previous chapters (Chapters 1 to 3) provided an overview of the study and various theoretical frameworks, including conceptualisation of disaster risk and vulnerability within DRR and the role of family in perception formation. In Chapter 2, the frameworks focused on the history and prevalence of disaster risks over the years as well as the theoretical perspectives that had been employed by populations in order to understand disasters. Chapter 3 highlighted theoretical perspectives of family and employed the systems theory and the social learning theory to indicate the role of family and community in the acquisition of behaviour and attitudes, as well as how cultural norms and behaviours could be modelled to youth as observers so that the intended actions may be mimicked.

With this chapter, the researcher aims to primarily analyse, present and discuss findings from the data gathered from respondents through which the study's research questions were answered. The research objective addressed by this chapter is objective three, which is with regard to establishing the extent to which contextual and familial factors influence young people's perceptions of disaster risk, vulnerability, as well as their developmental outcomes. The structure of the chapter starts with outlining the introduction and overview of the study in order to re-orientate the reader on key factors highlighted in the earlier chapters. The overall research method employed in this study was broadly discussed in Chapter 1, however, for the purpose of completeness, all the practical steps that have been undertaken for data collection and analysis are tentatively touched on again, including details on the sampling technique employed. The following section focuses on a presentation of findings through the established themes and the final section is the conclusion of this chapter.

4.2. Overview of the study location(s)

The chosen study area was Pretoria, which is in the Gauteng Province. The criteria used in selecting Pretoria as a study area were based on convenience as the researcher was based in Pretoria. Also, Pretoria is where the National Disaster Management Centre is situated in order for the researcher to have easy access to respondents who are working in the field of disaster management.

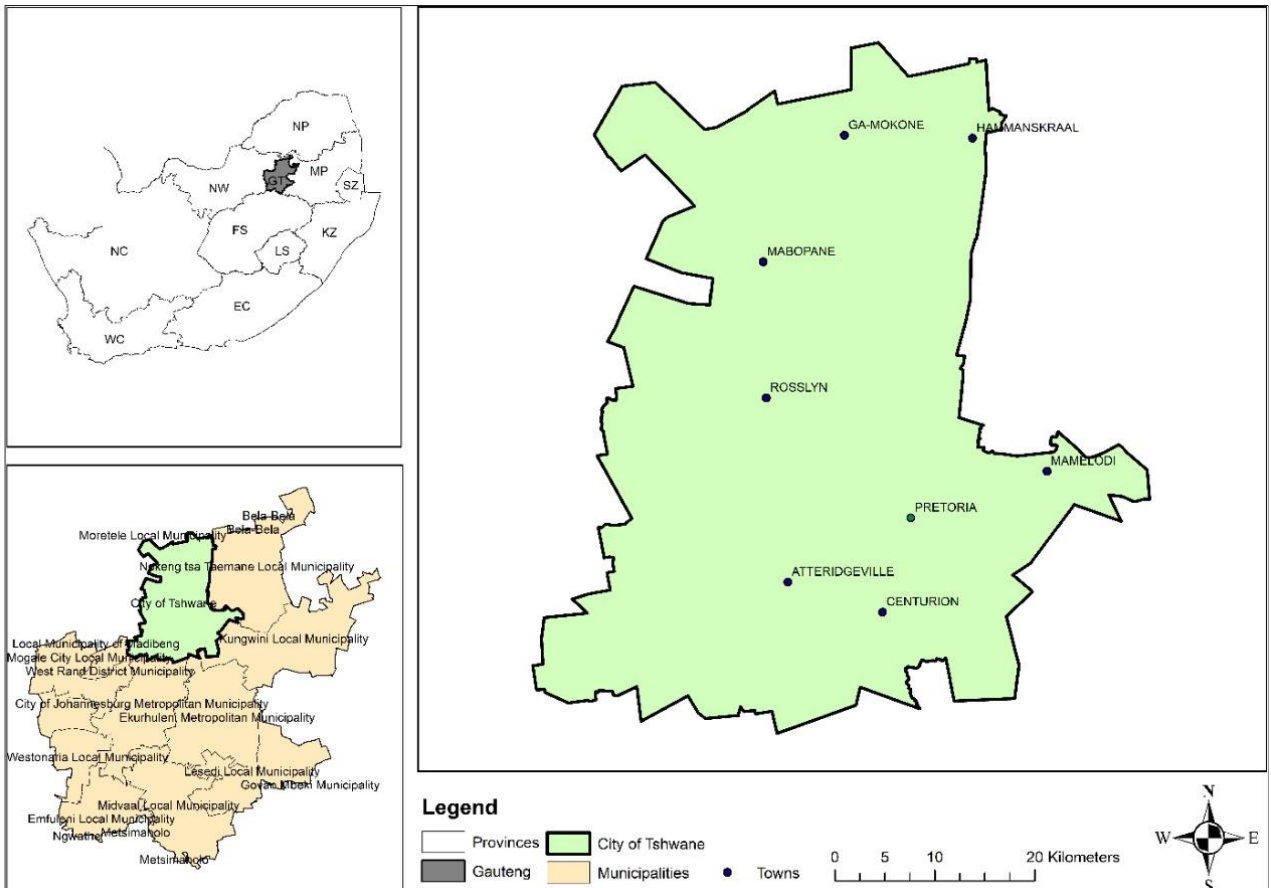


Figure: 4.1. Map of Pretoria and the Tshwane Metropolitan Municipality

4.3. Sampling and data collection

This section provides an overview of the information on the tools and measures used in the collection of data and further entails sampling methods applied in the study (see section 1.8 and 1.9).

In this study, a qualitative research design was applied. The research design was chosen in order to solicit personal experiences and views of respondents as stated in section 1.6. A qualitative design is the method of investigation described as a systematic form of inquiry that supports social and behavioural sciences through exploring people’s interpretation of subjective meaning and personal experiences of the world (see section 1.7). Using this method, the findings are presented in a narrative manner in the latter section of this chapter.

A total of thirty (30) respondents, purposefully selected, participated in the study. Fifteen (15) of these respondents worked in the field of and had studied disaster risk management and were expected to have specialist/expert knowledge on the subject of the research. The other 15 respondents were youth who were considered to be part of the general public and did not have

experience working in disaster risk management or any prior theoretical specialist knowledge of disasters. A breakdown of the conducted interviews is illustrated in Table 4.1 below.

Table 4.1: Sample composition

FOCUS GROUPS	INDIVIDUAL INTERVIEWS
Four (4) groups	Fifteen (15) respondents
Total	Thirty (30) respondents

4.4. Data analysis

Data analysis is described as the process of minimising and evaluating data using specific tools that allow for the data to be presented as logical and usable information (Hammon *et al.*, 2003:31). In this study, data is analysed according to a delineation of steps for analysing and interpreting data, as provided by Creswell (2009:197) (see section 1.6.2.4). The collected data is presented thematically and the themes for this study were developed by considering categories of similar aspects created from the transcribed data. Interpretation is a process that follows analysis and regards the process of explaining research results and placing meaning in the results to answer research questions (Bhatnagar, 1982:774). The above-mentioned data analysis steps were subsequently followed and the resultant findings are interpreted and presented in the proceeding section.

4.5. Presentation of findings

The section below presents the findings of the study as derived from interactions with respondents through face-to-face interviews and focus-group discussions. A summary of themes and sub-themes that emerged from the study is presented in Figure 4.2 below.

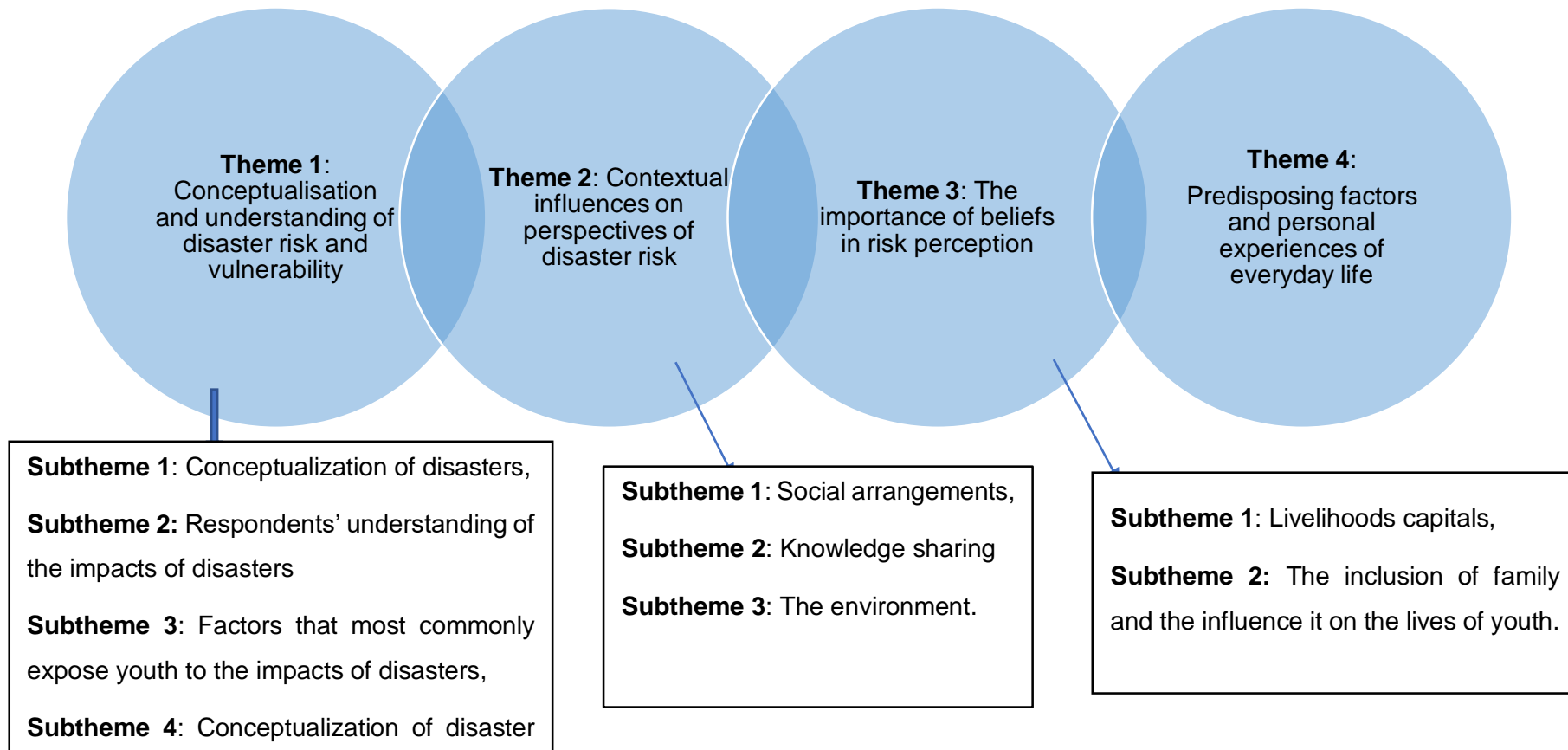


Figure: 4.2. Thematic areas

4.5.1. Conceptualisation and understanding of disasters, disaster risk and vulnerability

A large majority of respondents showed to have a good understanding of disasters as well as vulnerability. These respondents provided definitions that they felt described disaster, including the impacts of disasters, factors that made them vulnerable and their capacity to cope with such conditions.

4.5.2. Respondents' understanding of disasters and the impacts of disasters

Most of the respondents who had indicated that they had the power of choice when deciding what information was important for them or not were noted to be respondents who had limited knowledge of disaster. These respondents also did not work as officials in disaster management and were not enrolled in any institutional programme that provided or focused on disaster management. Additionally, these respondents showed a better understanding of disasters as a concept compared to those who had a professional background in the discipline. The significance in noting this is that, counter to the general belief that persons working within the field of and have studied disaster risk management would have better understanding of disasters, those who did not work in this field or study disasters showed a better understanding of what a disaster is.

The following example was made with regard to waste disposal where it was indicated that people have a choice to litter or not to: "...*someone who is not educated on the impacts of climate change and the human actions that cause it- could just throw litter on the ground and not in a designated area and say that they are helping with job creation for people who get paid to clean the land...*". This was said to be because with the little knowledge people may have, they would justify choosing not to litter merely based on something as simple as one wanting to keep the environment around them clean, whereas, someone with better knowledge about the concept of disasters would have the same choice based on their knowledge that littering will cause pollution and contribute to climate change. The above is in line with section 2.5.1.1 where it was emphasised that, when people have no expert knowledge, they are propelled to form their understanding on limited information and are often faced with the obligation to weigh up uncertainties and probabilities in order to plan their responses. Other examples made in this regard include the following: "*we have other issues to deal with that are more important, like sleeping on an empty stomach or having no roof above your head. We don't pay too much attention to disasters*". Accordingly, this implies that people respond to situations based on their estimate of how they imagine and believe they will become affected in the end.

The same can be deduced in relation to people's background knowledge about disasters and disaster risks. Most of the factors which literature identifies as relating to disaster risks (such as sudden urbanisation, poverty and unemployment, as mentioned in sections 2.3 and 2.4.3) were

identified by those respondents who had no particular background in disaster management as disasters and were from personal experiences. On the other hand, respondents who worked within or were enrolled in disaster management training programmes relied largely on their professional experience and used field-based examples to make the distinction. Notwithstanding individual judgements, biases as well as personal characteristics, some similarities could be drawn from the definitions provided on the concept of disasters. While the respondents who were considered ordinary members of the public relied on personal experience and general knowledge, the rest relied on their expert knowledge to give definitions with the descriptive words provided in Table 5.2 below. In this regard, the expert knowledge refers to professional training as well as academic expertise within the field of disaster risk management. Such persons are considered to be experts in the country.

Table 5.2: Disaster descriptive words

Respondents <i>without</i> expert knowledge in disaster management	Respondents <i>with</i> expert knowledge in disaster management
<ul style="list-style-type: none"> • Life-changing event • Destruction • Catastrophic consequences • Damage to land and property • Unforeseen • Unplanned • Natural or man-made disasters • Affects a large number of a population • Loss of lives and belongings • Life-threatening • Inability to cope • Mess • Traumatic experience • Has undesirable outcomes 	<ul style="list-style-type: none"> • Major event • The affected are unable to cope • Mass destruction • Injury • Loss • Unforeseen event • Great-scale destruction • Terror • Danger • Affects a large number of people • Alters ones living conditions • Death • Chaos

Respondents from both groups noted that disasters were events characterised by a great deal of disturbance which leads to the affected communities experiencing great loss and damage. This makes the finding that even though respondents’ perspectives of disaster may come from different backgrounds, an understanding of what a disaster is for both groups is still characterised by undesirable outcomes. Furthermore, irrespective of experience and knowledge of disasters, both these groups indicated that a disaster was an event where one could not cope with the aftermath, which places their understanding correctly within what a disaster is considered to be according to the country’s legislation as well as by some international entities.

Surprisingly, respondents who didn't have a background in disaster management (i.e. professional or academic expertise) seemed to be more familiar with the topic on disasters and factors associated with disasters in general. This can be attributed to aspects such as having time to watch more television and movies as well as having easy access to other sources of online information, thus enabling them to give a concise definition most of the time. This was despite the general belief or expectation that people who are directly involved in the field of disaster risk reduction are considered professionals and therefore are expected to be more knowledgeable about the concepts than ordinary people.

The majority of these respondents indicated that they had learned about disasters from internet articles and videos, social media and movies on television while some of them had read about the phenomenon in books. For example, some respondents expressed that young and growing people have a dependency on the internet and tend to believe everything that comes from the internet. On the contrary, the respondents who had a background in disaster management appeared to be less informed compared to their counterparts. This was evident, as the said respondents appeared to be struggling with answering conceptualisation questions while indicating in some occasions that the subject and the questions posed were difficult to understand and answer.

In relation to this finding, section 2.5.2 indicated that individuals are different and rely on different mechanisms to make judgements and in taking measurements on the likelihood of events taking place. Subsequently, where emotions and feelings are involved, personal judgments and attitudes are inherently used to form an understanding about phenomena. However, it is understandably difficult to gauge a person's knowledge when they rely on personal meaning to selectively attend to information that they feel individually affects them or is more important to them. Resultantly, answers differed from one respondent to the next. This does not however render these opinions non-factual on the basis that the meaning provided is subjective.

The United Nations International Strategy for Disaster Reduction (UNISDR) proposes a definition for disaster, as seen in Chapter 2, section 2.2. In this sense, respondents demonstrated possession of varied levels of the understanding of disasters, which can be verified with some of the most popular definitions of disaster such as that provided by the UNISDR. The differences in the definitions by the respondents with or without expert knowledge in disaster management can further indicate that each group understands the phenomenon as it relates to or affects their lives.

While respondents provided an understanding on disasters and substantiated this understanding with examples such as heavy rains, strong winds and flooding (to name a few), it became apparent that the respondents were unable to separate the meaning of a hazard from that of a disaster. Contrary to the actual nature of disasters, some respondents showed to regard disasters only as something that happens suddenly without warning. In this regard, section 2.5.1.1 stated

that people will behave in ways based on whether they believe they have the capacity to successfully handle an issue or not. Both groups of respondents in this regard did not indicate the need to use available signs and engage in behaviours to prevent disasters from happening, prepare ways to deal with the impacts as well as establish healthy ways to live with the conditions upon occurrence, as they believed disasters were unpredictable and uncontrollable. A general belief by a majority of respondents was that disasters were unforeseen or unexpected events/incidents. However, few of the respondents, particularly those who possessed no background in disaster management, indicated that some disasters such as an earthquake can be detected beforehand using technological tools such as the Richter scale. Of noting in this regard is that some respondents with disaster management background were the only few who recognised drought as a hazard, even though it is of a slow onset, while most of the respondents only understood disasters as something that happen rapidly. In line with the UNISDR terminology for disaster as stated in section 2.2 of Chapter 2, while defining disasters, responses differed amongst respondents although the main indication was that disasters were generally events that result in undesirable outcomes and often leave the affected people unable to cope with the disruption to their lives. Therefore, in this regard, data shows that most respondents did understand disasters and their impacts, although the understanding was subject to individual factors.

Some respondents further indicated that disasters are usually events that change the normal way of everyday life since they are categorised by negative outcomes such as loss, damage and chaos. Other respondents alluded to how disasters upset not only the environment and make people lose their possessions, but also interrupt the economy and people's physical and psychological health. For instance, one respondent stated that "*a disaster is an unpredictable and undesirable event that causes distraction on a great scale and has effects that terrorize people's lives as well as the economy*". Such an outlook is again noted to be in line with the definition of disaster as provided by the United Nations International Strategy for Disaster Reduction (UNISDR) which relates a disaster to a state of disruption, widespread losses and impacts which exceed the ability of the affected community or society to cope using its own resources (as indicated in section 2.2).

A number of respondents who originated from rural areas in other provinces or had family members originating from the Eastern Cape, KwaZulu-Natal and Free State made reference to the flooding events which took place around April 2019 and resulted in losses of lives and property. These respondents were able to highlight the devastation caused by the flood incidents but also recalled how families and community members had helped the situation by coming together to help people who had been affected. Section 3.2 indicated that, amongst other factors, the community as well as the familial settings are contexts which encourage development and social cohesion for the achievement of positive outcomes in any given situation.

For instance, one respondent expressed that they experienced the impacts of a typhoon which took place in Japan while the respondent was in China. The respondent remembered this experience to have been extremely scary as there had been heavy winds and excessive storm water everywhere which prevented people from leaving their homes. In this regard, fear pertaining to the danger posed by the situation was a motivating factor for the respondent to develop their understanding of disasters and use the experience as their reference. This notion is supported by section 2.5.1.1 which highlighted dread as the most relevant factor linked to feelings associated with perceived risks since people are believed to be more inclined to respond to risks when their perception thereof elicits emotions of strong apprehension.

Another respondent also related their experience of an earthquake that took place in Centurion, Pretoria in 2014. The respondent explained that, although the earthquake was not a major event that resulted in physical damages, the fear of having a bigger and more aggressive earthquake became prevalent following the experience. Some other respondents indicated that they lived in places that had been declared dolomite areas as a result of mining activities and that they lived in constant fear of collapsing into sinkholes where their lives would be affected and their property would be destroyed. The significance in noting this is that the said respondents indicated acknowledgment of their identified risks and understood that impacts of such risks have potential to be disastrous, although they might not be in a position to seek alternative residential areas that posed little to no disaster risks. Thus, the impacts of disasters identified by the respondents may include death, injuries, disease and other negative impacts on human physical, mental and social well-being and these are similar to those stated in section 2.1. For instance, some of the respondents were able to quantify the impacts into incurred losses stemming from hazards such as poverty, floods and social unrest. Reference in this regard was made as follows: *“a lot of houses lost to landslides as a result of flooding incidents, especially for people who have homes where building is not suitable for human settlement”*. In addition, the said respondents mentioned that, during a disaster, a worst-case scenario is fatalities (i.e. KZN floods resulted in 70 fatalities) and some related to social unrest that led to major genocide by police (i.e. the Marikana incident in 2012 that resulted in 34 fatalities). While these respondents mentioned fatality as the worst-case scenario during a disaster, other qualifying statements made references to losses of lives and/or prolonged genocide resulting from social unrest within communities, which could also potentially lead to civil or international wars.

4.5.1.2. Factors that most commonly expose youth to the impacts of disasters

The following factors were identified as factors that most commonly expose youth to the impacts of disasters:

- Alcoholism and substance abuse amongst youth

- Unemployment, teenage pregnancy, child-headed households and increasing crime rates
- Poverty
- Pollution
- Lack of education
- Lack of, or minimal access to basic services
- Motor vehicle accidents
- Social unrest

The above listed factors were noted and expressed by some respondents as some of the root causes and hazards which aggravate the impact of disasters, particularly for youth. In the premise of disasters having a human element in them, the above demonstrates the interaction of social and economic aspects that make communities and individuals vulnerable to hazards. For instance, a disease outbreak would more adversely affect people who have a lack of, or minimal access to basic health services as understood by respondents from both groups.

4.5.1.3. Conceptualisation of disaster risk

Most of the respondents struggled with the conceptualisation of the concept of disaster risk, as well as the distinction between disaster and disaster risk. However, some of the respondents who were mainly within the field of disaster management by profession and through academic training understood disaster risk to refer to the probability of a disaster occurrence. The hazards listed below were respectively mentioned as some of the hazards known to manifest into disasters and affect people on a larger scale as they are believed to have elements of causing distraction that could result in the affected not being able to cope with the outcomes and experiencing loss of property and life:

- Shack fires
- Floods
- Hailstorms
- Drought
- Strong winds

Although the respondents without disaster risk management training and background or those who were not disaster risk management experts and were part of the general public could define disasters easily, providing a conceptual definition of disaster risk was not easy for them. In this section, respondents, particularly those who were considered to have a background in disaster risk management, only identified the hazards in the list as disasters and not as factors that make people vulnerable to disasters. Furthermore, respondents could not provide any substantial

information linking elements of disaster risk such as severity and frequency, nor coping capacity to the hazards provided in the list.

4.5.1.4. Conceptualisation of vulnerability

In section 2.4.3, hazards and disasters were viewed through the vulnerability of communities. Section 2.4.3 identified characteristics that influence vulnerability as, amongst other factors, commercial and industrial development, residential property, rural or urban habitation, infrastructure, family structure, population growth, education and social needs. These factors interact with existing unfavourable conditions to render communities more susceptible to harm.

The concept of vulnerability was discussed by some respondents who were disaster practitioners as *"being exposed to the dangers in one's community such fires, floods, and thunderstorms"*. While the respondents without disaster management background showed a better understanding explaining the concept of disasters, it was noted that difficulties were experienced when these respondents attempted to provide a conceptual definition of vulnerability. However, using examples of hazards they believed to commonly affect youth and attaching personal meaning through experiences proved to be easier. Therefore, some of these respondents who had some understanding of vulnerability indicated that vulnerability could be associated with being exposed to danger where one is not particularly guarded against emotional or physical danger. Examples were made relating to substance use and misuse such as the use of drugs and alcohol as well as increased crime rates. The theme from respondents in general however confirmed that vulnerability was a certain extent of exposure to some kind of harm or danger, or having weak defences towards situations with harmful consequences. In disaster management, vulnerability refers to the set of characteristics and circumstances of an individual, household, population group, system or asset that makes it susceptible to the damaging effects of a hazard, as cited in section 2.2. Furthermore, circumstances involved in the dynamics of vulnerability could be physical, institutional, political, cultural, social, environmental, economic and human related. One of the examples that was provided with reference to youth vulnerability was regarding the state of safety for women in South Africa at the time, where the respondent presented their understanding as follows: *"I live in fear and I cannot in my clear state of mind walk even a short distance from my house just to take a walk after a certain time because I could go missing and get killed for absolutely no reason"*.

In section 2.3, it was acknowledged that South Africa, due to the interaction of different social and economic backgrounds, is rather faced with more socio-economical hazards than the number of natural hazards being experienced. Therefore, youth is regarded as more vulnerable to hazards, especially because of pre-existing conditions such as unemployment and poverty. Most of the respondents expressed that people are always vulnerable to disasters more especially because they happen suddenly, which denies people enough time to plan for them. However, some

respondents were able to appreciate the fact that not all disasters happen rapidly since some hazards such as drought manifest gradually. The importance of determining whether the concept of vulnerability is well understood was to establish the extent to which respondents believed risks existed as well as whether they believed they would also be affected by such risks. The next theme speaks to contextual factors of influence and focuses on social arrangements and the environment as sub-thematic areas.

4.5.2. Contextual influences on perspective of disaster risk

Section 1.2 referred to Levinston (2003:54), who describes context as “an approach that comprises beliefs, and assumptions about temporal, spatial, and social settings; prior, on-going, and future actions (verbal, non-verbal), and the state of knowledge and attentiveness of those participating in the social interaction at hand”. Contextual influences in the most basic sense define settings through which interactions take place which possess the ability to affect the character, development, or behaviour of someone. From the data, two aspects of contextual influences emerged, namely a) social arrangements and b) environmental context. These two aspects are discussed and analysed below based on respondents’ perspectives.

4.5.2.1. Social arrangements

According to the systems theory, as stated in section 3.3.2, social arrangements are a platform for learning through integrated environments. Moreover, social structures such as family and the community are the closest to the individual and resultantly present as preliminary sources of influential learning through observation or reciprocal action with others. In addition, such social arrangements represent institutional organisations where people live together and interact as outlined in section 3.3.4.

Most respondents indicated that their surroundings comprised of close relationships that were categorised not only by their immediate blood-related family members, but also included friends and members of the community. These respondents also expressed that conditions qualifying one to form part of the close-knit circles depended on other factors such as giving strong support, having good intentions and exerting positive influence on one another. From the data, respondents expressed that, amongst friends, parents and siblings and neighbours within social areas, the sharing of knowledge and experiences happened almost naturally as such settings are characterised by caregiving, love, loyalty and a basic inclination towards survival. Accordingly, statements such as the following were presented: *“communicating with people who are meaningful in your life actually makes you learn more from them about what is going on around you and in the world. Especially learning about what is happening around your community. The more you reach out and speak to people is the more you become open to learning about what is happening around you”*.

Another caption which can be used to capture the opinions of most of the respondents is as follows: *"...to me it's not only my girlfriend and unborn child, but my family at work, my colleagues, my friends, because people you have close relationships with, care for, help you when you are in need and you learn all you need to learn from them"*. In this sense, all the activities that take place within the social setting teach youth all there is to know in life and these are surroundings comprising relationships that are not limited to blood-relation.

In the same sentiment, further reflections with regard to the significance of social arrangements were made: *"to me, a structure like family is about loyalty and people you would make a lot of sacrifices for. It's not exclusive based on biological relatedness, but includes everyone you share loyalty with and people you can count on in times of need"*. Other respondents held opinions which could be represented as follows: *"everything that I learn I learn from people around me. So, it affects the way I see the world because if I grow up exposed to a certain opinion, that's the opinion that will be stuck in my head and become my belief as well"*.

The discussion above reflects the acknowledgement that, within the social setting, there are people that one may not be related to by blood, but may be sharing knowledge and resources with in order to make life better. The general argument by all respondents was that learning in these contexts becomes easy because communication with people whom one trusts and loves makes one more open to take lessons from the said people. It can thus be said in this light that, if aspects such as love and trust, amongst others, are not present in the relationship or structure, then the influence the structure or setting has will be less on the recipient.

Based on the data, respondents indicated in different ways that, within social settings, the concept of social learning is prevalent and can be attributed to institutional convictions such as cultural beliefs, social cohesion and/or religion. Accordingly, statements such as the following were mentioned during discussions with respondents: *"family plays a huge role in sensitising young people about disasters and disaster management, because a young person's first point of reference is the immediate family around them, and by immediate I don't mean biological, immediate family to me is everyone who is very close to me and shares a bond that yields positive results in my life"*. While others made mention of statements such as this: *"we are Africans. We may not be from the same house, but our lives are basically the same because we go to the same places and even experience some things in life the same way"*. Section 2.5.1 asserted this notion by relating people's learning and decision-making to thinking and reacting to certain conditions as largely influenced by people's personal values, social behaviours and customs that are original to each society and shared through social interactions.

A typical, but often neglected factor for social learning methods is the importance of the learner learning to solve a problem by watching it being solved by others (see section 3.4). This subsequently calls for people to have the flexibility to shift between contexts in order for

comprehensive learning to take place. In section 3.5, it was noted that social learning allows individuals to learn about the environment while avoiding the potential costs of individual exploration. Furthermore, social learning is driven by different circumstances, therefore, aspects such as those determining when, what and from whom to learn and exchange knowledge within social arrangements may be shaped by some cultural variants being favoured over others.

To identify immediate influencers, all respondents had to define who or what family meant to them, to which most from both groups alluded to the expression of family as a group of people not limited to biological relatedness as well as a structure that provides support, protection and guidance. In line with the section above, the family ecology theory stated in section 3.3.2 expresses the prime function of the family structure as protection of its members against any adversity. The same section further indicated that families are made up of individuals who collectively and interdependently identify with and subscribe to ways of thinking and behaving that distinctively guide each family.

While family was highlighted in this section as a strong source of social learning, the community has also been identified as forming a significant part of an individual's overall environment through which the individual is linked to different but interconnected contexts that have a direct impact on the individual's life (section 3.3.2). Most respondents expressed a positive relation with their respective communities and statements such as the following were mentioned: *"after you've lost everything to a disaster, you can get help from friends and the people in your community to start afresh"*. While the respondents with disaster management background viewed the community as a structure that encourages rebuilding and regrowth, their counterparts regarded the community as a structure that plays a role that is more important than that played by one's biological family. The following statement was made in this regard: *"in most cases you find that those people in your community mean more as family to you than your actual blood relatives"*. Moreover, the community can be regarded as a knowledge structure that has a direct influence on what people learn about the world from a young age. Accordingly, literature in this study indicates that communities provide for an extended learning environment through which knowledge can be transferred via customs and traditions, as well as through designated programs availed to the community at large (see section 3.3.5).

Based on the data, when it comes to the level of influence a social structure has on youth in general, blood relation in its solitude was not regarded as a factor by most respondents from both groups. More than half of all the interviewed respondents expressed that the compounding markers of influence in such structures or any familial relationship are loyalty and love, together with caregiving as indicated in section 4.5.2.1. In support of this finding, reflections from respondents are presented as follows: *"to me, someone you live with, your friends, and people you are connected to by blood are your family. We create our own families; it's not just bound by blood"*. Given statements such as the latter, it was discovered in this study that the word family

had been adapted by respondents to refer to close relationships with people of similar interests and does not merely mean a biological family in its true sense. The following is representative of views by the majority of those respondents who were not associated with disaster risk management: *“for me, family is a bond and it is beyond people that live together or are related by blood. It’s more of a connection that will last a lifetime and it can be with a friend, or it can be relatives”*.

Based on the above discussion, influence does not automatically relate to specific societal structures like family or community but rather to those enabling aspects present within a structure for youth to accept the influence the structure bears. In contrast with the enabling factors expressed by respondents, literature indicates that love and caregiving often play no major role in the context of social arrangements and their influence, but rather that these structures are characterised mainly by group loyalty, group identity and group morale as functional requisites for the relationship (see section 3.3.4).

The general assessment according to the majority of respondents is that context plays a vital role in learning for youth in total. In this regard, the following was a statement made with regard to the familial context and learning: *“...Everyone you interact with teaches you something every day, but for people that you share a bond with, you become more receptive to learn from them. For example, I didn’t learn about keeping the environment clean from my parents, but from people around me in my community”*. This was corroborated in section 1.2 where attribution was made to the environments within which people live and how they contribute as input that can be translated into different meanings. For most of the respondents from both groups, context encompassed the primary environment within which the respondents and their social circles existed (see section 1.2, for the definition of context as well as its specific meaning for this study). Accordingly, such environments present enabling circumstances for people to exchange knowledge, beliefs and attitudes on matters. For example, respondents stated that the role of family was being there for someone or someone being available for their family regardless of what the circumstances were and regardless of whether a biological relation existed or not. The following was further shared by respondents in support of the argument above: *“if we can help each other through difficulties, then the bond becomes strong enough for me to consider you as family. From where I’m standing, my family and I are trying to survive, so we share resources and knowledge to help one another out. After a disaster for instance, after you’ve lost everything, you can get help from friends and the people in your community to start afresh”*.

While respondents indicated the importance and dynamics of social structures, the aspect of availability and provision of simplified, easily understandable information was also expressed as necessary for ordinary members of the public to be able to, in their own capacities, use the information to better protect themselves from harm. This was attested by the respondents as they referred to the importance of disseminating disaster risk related knowledge within their social

circles to provide one another with information and experience that educate about disasters and safety. In this case, it was acknowledged by some of the respondents with expertise in disaster management that some people who experience disaster impacts are subjected because they don't have a choice, but others suffer because they don't have enough knowledge to protect themselves. While these respondents were able to elaborate on the matter, the rest of the respondents only acknowledged that there was a need for people to be made aware of potential threats and for warnings to be issued in ways that will reach everyone should there be a threat or a need for preparedness.

4.5.2.2. Knowledge transference and information dissemination

Knowledge is a pivotal tool to the concept of disaster risk reduction as it has potential to influence social and behavioural change within communities (see section 2.7). It was found that respondents strongly believed that the lack of or insufficient knowledge about disasters amongst people contributed to making people vulnerable to disasters. Reference can be made to statements such as the following: *"some people who experience disaster impacts are subjected because they don't have a choice, but others because they don't have enough knowledge to protect themselves"*. Literature in this regard indicates that, for communities to be regarded as protected against disaster risk(s) and disaster impacts, they are required to be able to identify risk factors, predict impacts and organise response and adaptive behaviours based on lessons learnt from past and recurring disasters. The above statement highlights the importance on the production and implementation processes of knowledge as recognised by Weichselgartner and Pigeon (2015:106). Data about disaster risk is important in informing policy and frameworks that are aimed at reducing disasters and helping people bounce back. However, the majority of respondents expressed that, although it is important for useful knowledge and information to be shared within their respective communities, they don't have the kind of resources where young people can be empowered with knowledge. This is especially true for information that is related to disasters or disaster management as both groups of respondents indicated that they had never heard of any programmes within their different communities which were focused on disaster awareness and particularly targeting youth with such programmes.

Although some of the respondents who worked within or had training in disaster management indicated that they got information about disasters in their workspace, those without such a background indicated schools or the internet as sources of their disaster information. In both cases, emphasis was made on the family structure as a source through which extensive learning and the sharing of acquired information to a wider group takes place. Bearing in mind that, to the respondents, family is not limited to blood relatives but extends to the community and friends, the following quotation was expressed by a respondent: *"You learn through your family, how to stay*

safe, how to be caring, and how to be thoughtful. Basically your family teaches you almost everything you know in life". In this regard, family is tasked with the role of ensuring survival and support to one another through lessons learned and shared in order for persons to stay alive and safe. This was further expressed by other respondents in statements such as the following: *"my family customs don't affect anything in a negative way, but help me learn a few lessons"*. In addition, respondents were also recorded to be of the belief that what their families teach them lasts, even if there may be some sort of separation. Such teachings are characterised by guidance and coping strategies that have been instilled and are believed to prevail because the teachers have influence in one's life in terms of moral support, providing guidance and keeping one generally informed.

In literature, other factors at play regarding contextual influences include cultural reinforcement or different cultural transmissions which are carried through a set of attitudes, values, traditional beliefs, ceremonies or rituals and behaviours shared by a group of people as stated in section 3.3.2. Such cultural transmissions are said to influence the development of the youth in general. Despite this belief however, some respondents in this study explicitly stated that culture played little to no role in their views about the world around them. In an attempt to discard cultural reinforcement as a factor on behaviour and knowledge, some respondents expressed that most people subscribe to similar cultures or cultural expectations and obligations, but still exhibit different behaviour and have different personal convictions and different perceptions of the world. While this was the declaration by respondents, more than half from both groups admitted that the culture and values of the families they were part of had automatically shaped their ways of life. It can thus be observed that, although the process of influence and behavioural change may not be overtly visible, this does not eliminate its existence. For instance, the respondents may not be openly aware that their familial culture exerts a certain level of influence on their perceptions of the disasters and the world in general, however, the influence is in fact taking place.

Other respondents who were aware of the role culture played in their lives indicated that, since they come from traditional backgrounds, there were certain behavioural obligations and beliefs they had to uphold. For instance, of these respondents, some indicated that, even though they personally believed that family only refers to people a person is related to biologically, the culture within their respective households obligated them to regard community members as part of family as well. This familial relation is said to extend to other people beyond the immediate community, provided they are of the same race and speak the same language as the respondent. This is confirmed by the views of some respondents as the two expressed below where they stated that they were guided by their morals and ethics that they learned through cultural prescripts from their families. One of these respondents referred to religious beliefs as part of their guiding principle and coping mechanism during times of adversity, while the other alluded to the use of indigenous knowledge as a tool for learning. The following was the first statement made: *"Family*

is there to inform you. My family is made up of strong Christians, we attend church every Sunday and believe that whatever danger that we may be in, God will intervene. That support gets us through everything we may be faced with". The other statement was as follows: "I have incorporated some of my family's practices into my own lifestyle on preventing disasters from affecting my household. I learnt how I would go about applying indigenous practices in mitigating disasters which has helped my family for generations. For example, to avoid my house being struck by lightning, I know that when there's thunder and lightning I need to cover up the silver pots and mirrors and not be in contact with liquid milk for the duration of the storm".

The above examples can be linked to the process of collective influence through knowledge transference and information dissemination. Social norms are known to be explicitly influential in shaping human behaviour and the examples above show the role of institutionalised versus casual ways to transfer knowledge as well as the effect of both mechanisms. The essence of this section is to show that, whether vividly aware or not, cultural roles or expectations of behaviour within a cultural or social group can encourage specific ways of life or worldviews as well as influence the way one responds to certain situations in life.

4.5.2.3. Environmental context

In this regard, the environment not only refers the physical environment where one resides, but also encompasses other non-physical aspects such as behavioural patterns, attitudes, beliefs, feelings (to name a few) which play part as shaping context.

The Person in Environment (PIE) approach is a concept that was marginally introduced in section 3.3.2 and is a guiding principle in social studies that is aimed at viewing a person in relation to their environment and not as an isolated entity. PIE views the individual and his or her multiple environments as a dynamic, interactive system, in which each component simultaneously affects and is affected by the other. This approach can be closely related to the systems theory also outlined in section 3.3.2. In this study, Person in Environment will hereon be used to refer not to a theoretical perspective, but the literal respondents within their interactive respective contexts.

Although factors that are making youth vulnerable to disaster risk(s) are mostly social, economic and political in nature, they become present and expressed in the physical environment. The environment then becomes the arena within which other contexts reciprocate in favour of or against the young person. Based on the discussions with the youth, acknowledgement was expressed several times of issues in the environment which make people more exposed to the impacts of disasters. Reference was mainly made in terms of floods and how people building in flood plains are mostly affected. Respondents understood that poor settlement choices such inhabiting floodplains are some of the factors that make people vulnerable to experiencing adversity during rainy and flooding seasons. Moreover, other issues that were also mentioned as exacerbating consequences resulting from limited knowledge on issues that could lead to

disasters were social issues of drugs and substance abuse by youth who end up abandoning school and leading risky lives. The relevance in considering issues such as the plight of drugs highlights how exposure to vulnerabilities, even in the social dimension, can contribute to and amplify the impacts of disasters. The following were statements made as respondents showed understanding and acknowledgement that in South Africa there are more socially driven challenges that interact and present themselves as disasters in the physical environment than there are natural hazards: *"In my community, there's a lot of drunk people with no education nor jobs, and some of them may have proper education but they can't get jobs because there aren't any available. Once again, people in such situations find alternative ways to survive and deal with life, which isn't always the legal way"*. The respondents further elaborated that such conditions were gateways to other opportunistic social ills such as the plight of drugs and the following was stated: *"This opens up the door to drug dealing and substance abuse, which we know kills our society. A country with a stagnant youth is not a growing country. Who will be our ambassadors in the future then if the future is not in a position to take care of things? The issue has escalated to a point where society started treating it like it's a norm. Some of us who are not suffering from the plight of substance misuse are too depressed about being unemployed to do anything productive in life"*.

In light of the above, the aspect of personal relevance was also noted in this section in relation to how social pressures influence the formation of attitudes and behaviours towards disaster risk and its aspects. For instance, respondents from both groups indicated that the number of everyday issues in society keep them preoccupied to an extent where potential disasters seem trivial and less urgent to be given much attention. Essentially, perceptions in this regard are shaped by prevailing circumstances. Some respondents believe that ignorance is another major contributor to youth being exposed to disaster risk and having to experience disaster impacts and blame society for permitting the ignorance. Additionally, society further influences these concerns by amplifying the extent or assumed extent of disaster risk and vulnerabilities. Where society placed more emphasis on the issue of drugs and alcohol abuse for instance, other risks such as that of residing in dolomite areas or floodplains may become ignored, giving way to additional impacts. With socially amplified risk however, it is difficult to quantify personal preferences, while the evaluation of social effects is also absent from individual decisions.

According to section 2.4, it is generally accepted that populations with limited economic means tend to be more exposed to disaster risk(s) and the adverse impacts of disasters. The same can be said for youth as an officially vulnerable group. For most of the respondents, the overarching factors in this section included unemployment, limited financial means, as well as a limited access to basic services which predetermine how everyday life unfolds and thus how one responds to risks or threats around them. These factors were seen as life-limiting conditions that, under normal

circumstances, prevent people from achieving certain goals relating to obtaining life necessities and further exacerbate the impact of disasters on the affected people.

4.5.3. The importance of beliefs in risk perception

To get an indication of how the respondents perceive risks, respondents' beliefs about being at risk or not, as well as beliefs about the risk itself and how much one believes they have the capacity to control it- are used to guide the conceptualisation of their risk comprehension.

Kouabenan (2009:770) describes risk belief as 'beliefs about the risk' and it encompasses the following characteristics; 'its familiarity, its probability of occurring, its controllability, its perceived utility, its catastrophic potential (number of people affected), the nature and severity of its consequences (immediate or delayed effects), whether or not it is reported in the media and whether it is voluntary or imposed, natural or technological'. In this sense, the perception of risk to disasters is determined by whether the respondent believes he/she will individually be affected negatively by the potential disaster or not. In this study, it was found that most of the respondents were of the belief that they were not as guarded from disasters as they would otherwise prefer to be. They believe they have little to no control over prevailing risks, lacking in capacity to overcome the risks, as well as being potentially exposed to adversity that may result from the risks. The following is one of the relevant statements which were provided relating to beliefs about the way the youth are at risk and to what:

"Other issues we have to deal with include the lack of rainfall/insufficient water or the drought that's happening across the country. People in my home province are still trying to find ways around the situation, luckily I left home when I was young".

The above quotation is a qualifying statement indicating that to a certain extent, respondents do consider the threats around them and are aware of the risks they are either directly or indirectly faced with. This understanding and awareness of the identified risks was prevalent where respondents were able to assess the extent of their situations and state how much they believed they are or would be affected by such conditions. This was reflected in statements such as the following: *"...there is no employment for youth. Some of us come from the Eastern Cape and came here because of jobs in mines. When they close down, most of us will suffer from job losses, and the unemployment rate becomes higher. It's difficult to put life back together after the worst has happened because we are never prepared for any of this"*. In addition to the abovementioned, the degree to which the respondents had acknowledged the identified risks was also reflected in the conclusions they had drawn from their respective situations where some of the respondents indicated what actions they take or would take in order to keep safe.

While all respondents used various examples of risks, some of them were able to substantiate with actions they recommended as protective to employ when faced with given risks. Since most

of the issues that had been identified by youth indicated inadequate education on issues relating to disasters, most of the recommendations in turn highlighted a need for the improvement of education for youth and awareness building through different platforms that can reach the young audience. Communication channels such as the internet, social media, community participation youth programmes, community newspapers for youth, as well as school subjects were some of the suggestions made by youth as recommended platforms or mechanisms to inform the youth on disaster issues. In this realisation, some respondents further expressed concerns regarding the state of youth readiness with regards to future disaster risks. Such concerns were indicated to be risks that impact on youth on a wider scale and the following statement such was made in this regard: *'Imagine a country where its whole youth is stagnant and they think about nothing else except immediate gratification? Who will be our ambassadors in the future then and who will be our next ministers to take care of the country?'*

The most outstanding findings within this theme were with regards to respondents showing a common regard for some of the risks which they had identified as affecting youth such as those of inadequate education, unemployment and substance misuse as reflected in the previous themes on the conceptualisation and understanding of disasters, disaster risk and vulnerability. Although most of the issues raised were social in nature, some of the respondents from both groups made references to other hazards that are not social in nature and indicated how exposed they were to such. For example, some respondents mentioned that they experience strong winds, flash floods and severe thunder storms almost every year, yet because they feel that their households have the financial capacity to deal with the possible impacts, such respondents expressed that they are therefore not at risk. Other respondents who come from areas prone to flooding also indicated that their households have not yet personally had to experience physical consequences such as fallen houses or landslides, therefore they believe that they are not too exposed to the impact of disasters. The second of the major findings is that emerged in this theme was that of a lack of or inadequate education about disasters targeting youth in order to have youth make informed decisions when addressing potential risks as well as when responding to risks at hand.

4.5.4. Predisposing factors and personal experiences of everyday life

Over the years, disaster occurrences have increased in terms of the prevalence and intensity, a trend which has been realised in South Africa as well. For the youth living in this country, the reality of such is noted through every day struggles such as limited access to services, unemployment, poverty and diseases, as stated by respondents.

4.5.4.1. Livelihood capitals (social and financial resources)

Respondents acknowledge that natural hazards such as tornados, floods, drought and strong winds exist to some extent, although they pose only a minor concern to individuals in comparison to the social factors experienced in everyday life which render people more susceptible to the harmful impacts of other occurrences. This was substantiated by respondents with statements such as the following: *"...in South Africa we have different issues, I've only heard of a tornado though I've never seen one, but issues of unemployment and poverty I see every day"*.

Furthermore, it was expressed by the respondents that those who have limited financial means tend to have less capacity to successfully address activities that shape their everyday lives. As a result, such people further lack capacity to prepare for large-scale events and tend to be more vulnerable to natural hazards and disasters general. In this regard, the views of respondents were represented with a statement such as one presented below: *"most of the time it's the social impacts that we see where people lose their property and there are losses of life even. People become injured and can't work, then there are economic impacts where people lose their assets, their homes and belongings"*.

Respondents who hold this view further refer to everyday predisposing factors (such as difficulties in accessing healthcare facilities such as clinics, as well as difficulties in accessing basic educational programmes) as well as past experiences to qualify context as influencer of one's views of the world around them and all that takes place in it. Such circumstances have an impact in the normal functioning of life. The statement above is an indication of the understanding on the intricacies of predisposing factors to disasters as well as how some respondents understand the phenomena of disasters in general. Some respondents further narrowed this view down by noting the lack of having financial resources as a factor which inclines people to have specific attitudes, hold specific views and be disposed to certain conditions. It was indicated in this regard the lack of financial resources as a vulnerability often leads to poverty, which results in disasters for humans and the actual environment. The belief is that if people had enough financial resources to cater for all of their needs, they would be able to take better care of themselves and their respective environments without any exploitation. *"When people are not able to put food on the table I feel like that is a disaster because there's actually people who die from starvation and opportunistic illnesses as a result of malnutrition. Poverty is a circumstance, however, it also has its circumstances"*.

In other examples, respondents referred to people who live in shacks or informal settlements that become subjected to heavy rainfall and get washed away. *"People lose their homes and belongings, which could be a disaster because financially these people are already struggling to make a living and having to start building from scratch and organising resources sets them back far more than an ordinary person who is well-off and well established"*. These respondents further

mentioned, as part of predisposing factors that, for people living in places like Gauteng where there are a lot of factories and mines, it is often found that there is a great combustion of fossil fuels which results in the disturbance in the ozone layer. This was said to be a problem since people who tend to live in places around where factories are placed are often those with limited financial or livelihoods capacities and who are already vulnerable to any conditions that may alter normal functioning. Part of the reasons further stated in this regard were that there are young children who grow up with respiratory problems from the results of the air pollution caused by industrial work and most of the people who are mostly affected are from poor households who cannot afford the type of care that the conditions require of them.

To further understand the theme on everyday life factors which influence the ways in which youth perceptions of disaster risk are compounded, the aspect of interpersonal exchanges was also interrogated. In this regard, it was sought for all respondents to indicate what kind of influence the interactions they have within their close social circles has on their lives in general. To this, the general opinion for both groups of respondents was that people learn to be mindful of their surroundings which includes learning to help others and showing compassion. The above can be summarised in the following statement which further qualifies the next section of this theme: *“When it comes to disasters, my family taught me about Ubuntu, which explains how we are connected to other people’s lives”*. The concept of Ubuntu is one which explains a culture of compassion and humanity.

4.5.4.2. The inclusion of family and the influence it has on the lives of youth

For some respondents, a predisposing factor was indicated to be the inclusion of family and the influence it bears in each person’s life. For instance, some respondents expressed that the way they think is as a result of the influence borne by their family or social circle on their paradigms. This in turn was demonstrated as playing the leading role on influencing the way one makes decisions as well as perceptions about everything. *“Family influences how you think and interact with the world around you in general. Your culture, values and beliefs form and shape you into what is socially acceptable”*.

It was also indicated by the respondents that the attitudes and behaviours displayed by youth (including children, adolescents and young adults) are merely a mirror of attitudes and behaviours of those around them who have capacity to exert some form of influence. *“My family serves as a source of learning for me because we believe in rituals as Africans, and young people copy the behaviours of people around them in the family and the community”*.

The respondents further expressed that everything that they learn they learn from people around them as they haven’t been alive long enough to have experienced everything in the world themselves, whether good or bad. The effect of which is directly on the way in which one views the world. *“...if I grow up exposed to a certain opinion, that’s the opinion that will be stuck in my*

head and become my belief as well. My biological family is Christian, so we identify with the Bible and it provides us with certain values that we use as guidelines on how we do things in our lives”.

During disasters, people tend to look for various ways to minimise the impacts of an impending situation where different coping mechanisms are used. Based on the extraction in the verbatim quote highlighted above and the one indicated below, it can be drawn that some respondents rely on religious beliefs as a means to give meaning to their experiences of disasters as well as create own understanding of the concept of disasters. *“My family teaches me things I don’t know. Some people in the community care enough to talk to us about disasters, but most people are not concerned. So, we rely on our families to stay informed. We are Christian at home, so we believe in God and learn from the Bible. Our families are like lecturers; they are always warning us about how things should and should be done in life”.* The family system on everyday life and experiences can be regarded as a channel through which shared views and mutual reinforcement among people take place. The result of which can be seen through common views or perceptions about phenomena.

4.6. Discussion of main findings

The first theme documented the conceptualisation of disaster terminology, specifically, disaster, vulnerability and disaster risk and inherent factors as provided by the respondents. In this theme, all of the respondents showed detailed understanding on some of the terms relating to disaster and its variables. Relevant examples were provided to qualify the understanding where in some of the examples, respondents used experiences from their personal lives. In general, it was noted that respondents who have had training in disaster risk management or are working within this profession, when compared with those who did not have such a background, had a difficult time responding to questions even though they were expected to be more knowledgeable on the subject. The respondents who didn’t have disaster management background used examples from their everyday lives for explanations. Respondents further determined what vulnerability to disasters meant for them as youth, including highlighting their understanding of the impacts of disasters in their lives respectively. The main finding in this theme is that all the respondents were conceptually familiar with what disaster meant although other related terms such as disaster risk might have been a challenge. One of the recommendations that were emphasised by respondents within this theme is with regards to the strengthening of awareness and educational programmes on disaster risk management that will be targeting the reception of young people across the country.

Theme two, drew on the establishment of context as an influencer of behaviour and attitudes which focused on social arrangements, knowledge sharing, as well as the environment as indicators of change. In this regard, respondents were asked to give personal descriptions of family, through which it was discovered that more than half the respondents regarded their family

members to include not only blood-relatives but also compounded members of society which special relationships were shared with. Respondents further displayed that these relationships possess a degree of influence which potentially shapes the way in which one looks at the world and understands its processes. Equally, the social and natural environments were discovered to play a vital role in tuning the outlook respondents had on life in general, as well as their outlook and understanding of disasters. These environments and the relationships that take place within them were identified as arenas for youth to learn and model the behaviours of those around them. This theme demonstrated the importance of context as an influencer on how young people collect external information around them and use to form meaning about the world. A recommendation in this theme is for the surroundings of young people to be equipped with the necessary tools, including knowledge and capacity, so that they may be used to accurately inform youth and further be used to buffer from disaster risk factors and impacts of disasters.

The third theme centred on the comprehension of risk perception. The main objective of this theme was to get an indication of the perception of risk by respondents and establish whether with the risks they had identified as most prevalent in the country, they regarded themselves as personally affected or exposed to such risks. This was done in order to establish where in the greater scheme of things respondents saw themselves, as well as to stimulate discussions around how respondents can use available resources to their disposal to employ beyond the scope of this research to better equip their lives and surroundings to mitigate disaster risks. As suggested by respondents, it is thus recommended that more effort is placed on channelling the understanding and views of young people in relation to disasters in order to promote a culture of safety towards disasters.

The final theme identified in this study was with regards to factors of everyday life that either predispose youth to disasters or provide them with the necessary tools to be better prepared to deal with short and long-term disaster risks. In conjunction with predisposing factors, personal experiences of disaster risks were also used in the investigation. In this regard, the concept of "person in environment" was used, which draws focus to looking at an individual holistically with their immediate environment as part of who they are and not in isolation. It was found that the views held by respondents regarding disasters and risks were mainly the function of the influence created by all that existed within their environments. In this theme, respondents advised that when viewing perceptions of people about risks, it should always be considered that these perceptions will be compounded or altered by challenges that people experience on a daily basis which will either cause hyper-focus or ignorance of some of the factors that can affect people's lives. Therefore, such circumstances should also receive comprehensive attention in order to obtain in-depth insights into the dynamics of risk perception.

4.7. Conclusion

This chapter provided and analysed the findings of the study based on the views of the selected respondents. The chapter is structured in such a way that it provides a consolidated overview of the study, including its main objective. An overview of the study location was also provided. Furthermore, the analysis process was also touched on, including the sampling techniques that had been used select suitable target respondents.

A total of four (4) themes were identified, with some consisting of sub-themes where it was necessary. The created themes were established as informed by the research findings that were based on analysed data. Recommendations were made by respondents throughout the thematic areas, as presented in the discussion section of the chapter. The next chapter will provide conclusions on the study as well as the summary of the findings. Moreover, the chapter will demonstrate the ways in which the research questions of the study, provide recommendation as well as recommendations for future research.

Chapter 5: Conclusions and recommendations

5.1. Introduction

The main aim of this study is to, determine the role that family and the community play in the process of forming the views, idea and understanding of disaster risk and vulnerability among young people in South Africa. This is done to identify whether South African youth conceptually understand what disaster risk and vulnerability are and the extent to which family, space and the environment influence these perceptions of disaster risk and vulnerability in and within their respective communities. This aim was broadly addressed by exploring the influence of family, as well as the community on youth perceptions of disaster risk and vulnerability. The interaction of youth with family and community-based institutions; and what the consequence of such interactions have on the perceptions of youth with regards to disaster risk and vulnerability was explored. From the voices of youth in Gauteng, South Africa, the significance of family and community in shaping views and behaviours towards disaster risk and vulnerability for youth was explored.

In disaster risk management, disaster risk assessment processes encompass, amongst other things, the assessment of people's perceptions towards disaster risk in order to establish situation-appropriate measures for disaster risk reduction. Accordingly, people respond to disaster risk and unexpected events based on how they perceive their potential loss or how much they believe the danger will affect them. Exploring perceptions of disaster risk and vulnerability is therefore important to understand since perception is said to have an observable correlation with the role played by dread, beliefs of control, individual responsibility, protective and adaptive behaviours and response to threats (Sayedin *et al.*, 2019: 14). The significance of family as a contextual frame of reference has been accepted in social studies as a remarkable source of influence for optimal development for young and growing people. Moreover, families as constituent structures within communities are the closest to the individual and serve as mediation between external associations and the young person and often take on the buffering role against certain risk factors.

The previous chapter presented and analysed empirical data collected for this study. The main purpose of this chapter is to summarise and assess the level of achievement for each objective as well as provide conclusions and recommendations for future research on the subject. The following section provides a general review of the previous chapters that have been presented in this study as to help reorientate the reader on the highlights of each chapter and how they contribute to the main topic as well as the findings.

5.2. Summary of chapters

Chapter 1 provided an introduction and overview of the study and also outlined the problem under investigations. The highlight of this chapter is the rationale and significance for undertaking this inquiry. The pursuit in this study is to investigate youth perceptions of disaster risk and vulnerability, with a particular focus on young people and young adults in Gauteng, South Africa. This focus of the study is further prompted by the urgency of recognising youth as important human capital in which greater investment should be made towards with regards to interventions for the reduction of disaster risk and the management of already existing disasters. This chapter further pronounces the contention on which this study is based, which implicates the role and function of family as a contextual component that influences well-being and positive development of youth in general. Methods and tools which were subsequently used in the development of this study were also highlighted in Chapter 1. The chapter also provided the research questions and objective of the overall study.

Chapter 2 provided a general understanding of disaster risk and vulnerability within disaster risk reduction, which is done by exploring past and currently used theoretical perspectives on disasters in general, disaster risk, as well as contributing factors of disaster risk. While disasters and disaster risk are presently believed to be a function of social constructs interacting with pressures from the environment, other explanations were attributed to divine powers of God. Other explanations included those that attributed disasters to being solely because of processes taking place in nature and without any human interference. The ultimate theory that was emphasised in this chapter is one that highlights linkages between human activity and consequential responses from the environment. This line of thinking was supported by literature as the most prominent theory currently used in disaster management and was used throughout the study in the effort to understand how interpersonal relations and other human activity contribute to the understanding and regard by youth towards disaster risk and vulnerability. Also explored in Chapter 2 as one of the aspects of disaster risk was the dynamics of vulnerability, including its different types as well as how they each manifest and interact with circumstantial pressures to influence the overall outlook of young adults on disaster risk.

This chapter went on further to provide understanding on the importance of undertaking a multidisciplinary approach in Disaster Risk Reduction (DRR) with a focus on community-based DRR. On the one hand, the aim of disaster risk reduction is to minimise the frequency and extent of disaster impacts by addressing different types of hazards and vulnerabilities on the grounds that if not lessened, they could lead to disasters and loss of lives and livelihoods. On the other hand, community-based disaster risk reduction is accepted as a process that promotes DRR measures to be planned with inclusion of populations at a grass-roots level (Forbes-Biggs, 2011:6). This is in line with some of the findings of this study which indicate an urgent need for community engagement, particularly to favour the safety and successful development of youth.

For instance, in one of the findings, there is indication that there is little to no DRR consultation with communities in order to fully understand their concerns and needs and how strategies can be formed to advance the participation of youth in DRR.

Chapter 3 outlined some applicable theoretical approaches that are usually used in family studies where family is referenced as a contextual reinforcer of behaviour and attitudes. This chapter referred to the embeddedness of context with interpersonal learning as the arena through which knowledge and consideration towards disaster risk is shaped. The importance of this chapter was to elucidate the importance and functioning of family for the development and welfare of youth through disaster risk reduction.

Chapter 4 presented the empirical findings of the study, along with the analysis process. In this chapter, findings were organised into themes relating to the information gathered in the findings to determine the influence of family on youth's perceptions of disaster risk and vulnerability in South Africa.

Chapter 5 summarises the study. The chapter further summarises the findings of the study, provides major recommendations and identifies recommendations for future research. This following section provides evidence on how each research objective was addressed in order to meet the overall objective of this study and is followed by recommendations of the study.

5.3. Achievement of each study objective

This section elaborates on how each research objective of this study was addressed.

5.3.1. To explore theoretical perspectives on disaster risk and vulnerability

The first research objective was addressed in **Chapter 2**, which provided the theoretical perspectives on disaster risk and vulnerability within disaster risk reduction. Several literature documents were consulted to identify previous and currently held theories regarding disaster risk and vulnerability. It was discovered that several ideas had prompted the different beliefs about disaster risk and most of which were from limited scientific knowledge and as a result of ordinary people who had been personally affected by disasters and sought to make sense of the phenomena. Evidence in the literature points to the fact that different dimensions of vulnerability and exposure to hazards interact to create disaster risk, which can mostly be attributed to human activity. According to this notion, even if the disaster risk manifests into a disaster event, the root causes and perpetuating factors can still be traced back to social constructs and thus discarding preliminary beliefs which implied disasters to be natural events. It is accepted however, that some hazards are natural in nature, but become exacerbated by socially life-limiting conditions which leave populations vulnerable to the overall outcomes which may result in a disaster.

5.3.2. To explain the role of family in perception formation using the family systems theory.

Using the family systems theory elaborated in **Chapter 3**, family is said to be a paramount determinant of perceptions pertaining to safety and exposure to external risks and the ability of the family members to cope with the said risks as a collective. This is because the family structure comprises characteristics that enable influence to be exchanged between and among members, which ultimately determines the identity and culture of that particular family. Youth are then enabled to actively adopt attitudes and actions that sustain a given culture. The systems theory uses different contexts used in the ecological model to explain the extent of influence a person's external world contributes in their life. The different contexts include:

- a) A context that emphasises events happening at family, community, cultural and global levels but have outcomes that pulsate through these structures to affect the awareness of and resilience to hazards and disaster risks by the developing person (i.e. chrono-environment).
- b) The broader context at the scale of regions and other larger environments which affect an individual indirectly (i.e. macro-environment).
- c) The larger context within which the two environments stated in point d) and e) exist (i.e. exo-environment).
- d) A context that connects the constituents of the person's immediate environment to other environments which are all interacting with one another and have a direct influence on the developing person's life (i.e. the community/meso-environment)
- e) The immediate environment within which people exist and come to learn about the world from a young age (i.e. the family/micro-environment).

In terms of the above contexts, the two that are most relative regarding the influence of perceptions of youth are point c and d, the community and the family environments. In this regard, family serves as the immediate context through which developing people can filter their knowledge and understanding as inferred by society at large. As stated by respondents reflected in Chapter 5, such a context not only includes the biological family, but is selective of people who contribute positively to one's life whether they are members of the community, friend, colleagues, or even teachers at school. Respondents indicated that exchanging lessons and beliefs within the family structure becomes successful because relationships within such a structure are mutually beneficial and positive to each member, which is what qualifies such relationships to be regarded as family.

Family and the community influence the views of youth directly as they cater for support and education of the developing person. In this regard, it was discovered that youth learn everything they know from the people closest to them, particularly those regarded as family. The word family

was personalised for almost all the respondents to refer to those people or a person with whom one shares a quality relationship with, learns from and associates with in terms of values, beliefs and morals. The influence of such relationships was thus found to be extensive with regards to influencing how youth see disasters, their opinions of disaster risk, as well as of vulnerability. The research question was thoroughly investigated and the objective adequately achieved.

5.3.3. To investigate the extent to which contextual and familial factors influence young people's perceptions of disaster risk, vulnerability and their developmental outcomes.

This objective was discussed in the chapters four. The objective was meant to establish whether family or the community play any substantial role in the development and sustenance of perceptions youth have in relation to disaster risk and vulnerability. The themes that emerged in the findings chapter included the following:

Theme 1: This theme was based on how respondents understood and conceptualised disaster risk and vulnerability. Respondents further elaborated on impacts of disasters, which contributed as an indication of the extent of youth's knowledge and understanding of the subject.

Theme 2: The second theme which unfolded from the findings chapter was with regards to contextual influences on perspectives of disaster risk. This theme reflected how social arrangements as well as knowledge sharing and one's environment contributes to their perspectives about the world around them, particularly regarding disasters.

Theme 3: Theme 3 emerged as a result of highlighting the importance of beliefs in the formation and maintenance of risk perception.

Theme 4: The last theme which emerged in chapter 4 comprised predisposing factors and personal experiences of everyday life which were found to largely influence how people think about and see the world around them. Aspects of this theme which were addressed included people's livelihoods capitals, as well as how daily interactions with family influence the lives of young people.

5.3.4. To make recommendations and conclusions on the influence of family on disaster risk and vulnerability perception in the opinion of young people and young adults in South Africa.

Recommendations and conclusions are addressed chapter 5 of this study. The chapter provide evidence of how each research objective was addressed. The chapter further summarises the major findings of the study, provides recommendations and identifies recommendations for future research.

5.4. Summary of Major findings

It has been found in this study that for young people in South Africa, family does not mean only biological relation, but mostly refers to social relationships which are characterised by common goals and shared identity. One of the purposes served by such relationships is that of protection through the transference of knowledge and sharing of information. In terms of disaster risk and vulnerability perceptions among youth, family as well as the community act as a frame of reference for young people to base their views.

While family and community as social structures play a vital role in teaching and learning about the world, television and movies, social media, the internet, as well as books also play a major role in informing youth about disasters, even if they do not have professional or academic background in disaster risk management. Some of the intricacies of disaster risks such as the thread between economic incapacity, lack of quality education, diseases and poverty were easily understood by respondents who only learned about disasters from experiences not related to academia or professional jobs. Accordingly, these respondents were more comfortable speaking about their awareness in terms of the overlap of root causes, risk factors and overall impacts, while on the contrary, those with academic and professional backgrounds in disaster management only acknowledged that disasters were a complex phenomenon.

5.4.1. Theme 1: Conceptualisation and understanding of disaster risk and vulnerability

With regards to the conceptualisation and understanding of disaster risk and vulnerability, the major finding in this theme was that respondents who had no academic or professional background in Disaster Risk Reduction (DRR) had better understanding and articulation of disasters compared to those who had such a background. This was in spite of the expectation that persons who are working within DRR or have an academic history in DRR would have expert knowledge regarding disasters and other concepts related to disasters such as vulnerability, coping capacity and disaster risk.

5.4.2. Theme 2: Contextual influences on perspectives of disaster risk

Contextual aspects such as a person's biological family, friends, colleagues at work, neighbours and community members and the actual physical environment that surrounds a person were found to play a vital role of influence in how young people viewed the world around them. It was further found that for young people in South Africa, family isn't just comprised of blood relatives, but was considered as a structure that was based on compounding factors of trust, love and loyalty.

5.4.3. Theme 3: The importance of beliefs in risk perception

It can be concluded for this theme that; most of the respondents were well aware of the risks around them and understood how they could get affected should these risks manifest into disasters. It was also found that most of the respondents believed that they were at risk of being affected by disasters since they were faced with other underlying conditions such as unemployment and poverty.

5.4.4. Theme 4: Predisposing factors and personal experiences of everyday life

The major finding in this theme was that people's perceptions about disasters were influenced by seemingly unrelated factors of everyday life such as the availability of financial and physical resources that enable people to successfully deal with adverse conditions. It was also found that the decision for people to maintain close relations with their family members played a major role in how people viewed risks and responded to incidents since the family structure was said to also take on the role of teaching and guidance.

5.5. Recommendations of the study

The significance of this study is to highlight the importance of youth in DRR through the lens of extreme challenges that hinder positive human development and ultimately disturb the successful implementation of disaster risk reduction. Youth experience disaster impacts more adversely compared to certain other groups as indicated in the previous chapters. However, most research conducted in this regard is contextually generic and as a result leaves certain gaps in adequately representing the needs of South African youth and their role in DRR.

South Africa is notorious for high rates of youth unemployment, low rates of youth with tertiary education, HIV and other restrictive secondary challenges such as poverty, crime and mental and physical ill-health to name a few. Under such circumstances, it becomes difficult to sustain a positive outlook on life and behave in accordance. This further perpetuates risk drivers and the resulting impacts as youth become psychologically and physically more deprived of enabling

resources to help positive development and functioning. It is therefore recommended that more focus is directed towards:

- **Involving youth in Disaster risk preparedness activities:** Focusing on youth for Disaster Risk Reduction has great potential for improving the effectiveness and success of DRR in the country. The essence of such understanding is to promote disaster risk awareness and a culture of safety by appropriately shaping patterns of thinking, attitudes, as well as behaviours towards disaster risk, vulnerability and other unexpected events related to the phenomena which disrupt the normal functioning of populations.
- **Strengthening the role of youth in DRR as reliable agents of change in policy-making.** Youth are capable decision-making agents who are often well receptive of changing environments. This was verified during interviewing as young people showed a dynamic understanding of concepts they did not possess any particular expertise or professional background in. For future research, it is worthwhile to consider that for the purpose of Disaster Risk Reduction, society has to be flexible to adapt to changing environments. Since youth makes up the majority of the population in South Africa as well as in the world at large, strengthening the role of youth as active decision-makers during policy-making in relation to disaster management needs to be further probed into.
- **Exploring the potential impact of having disaster risk reduction as part of the school syllabus.** During interviewing, most of the respondents indicated a need for substantial education on disaster risk reduction for youth and within communities. Research should be conducted to explore how the possibility of incorporating disaster risk reduction in the educational system can improve disaster awareness, preparedness, adaptation and resilience building.
- **The significance of strengthening disaster risk reduction awareness programmes within communities.** Most of the respondents expressed that they had no awareness programmes, particularly on disaster risk reduction within their respective communities and stated that this may be the reason many young people are not well informed about disasters. As a result, a research exploration on the usefulness of such programmes will prove their worth and usefulness in contributing to the lives of youth. Furthermore, it is recommended for practitioners in DRR to get regular training and re-education on theoretical aspects of DRR in order to keep their knowledge relevant.

5.6. Conclusions

This chapter provided a summary of the comprehensive study as well as the conclusions and recommendations in relation to the research objectives set out in Chapter 1. Based on the literature, young people account for the largest part of the human population across the world and are one of the groups that are mostly affected by disasters. From the findings, it was found that young people are receptive and open to change and learning, which becomes an opportunity for imparting knowledge about issues such as disaster risk and vulnerability. The vulnerability of youth towards disasters and disaster risks was mainly attributed to a lack of knowledge about disaster risks, however, youth have the advantage of flexible learning through their respective interconnected contexts. Of these contexts, family and the community are regarded as the closest to the growing individual and serve as the most prominent sources of input. The family and the community structures can therefore be further used through disaster risk awareness programmes as frames of reference to carry out disaster risk management by transferring information and teachings to young and growing people. Such will contribute in the formation of perceptions by young people and will ensure that the correct ideals are held in order to promote a culture of safety.

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Annexure A: Interview questions

Biographical information

Please state your: Gender, age, level of education, number of years living in the area where you live and what type of settlement it is (eg, rural, urban, peri-urban)

1. What is your understanding of the term disaster and disaster risk?

1.1. What do you understand the term disaster to mean? Provide an example of a recent disaster that has affected your community or the country.

1.2. What is risk according to you? Provide an example of a risk in your community

1.3 Differentiate between disaster and disaster risk?

1.4. In your own words, explain what you understand of the term vulnerability?

1.5. What does the term hazard mean to you?

1.6. What is your understanding of the coping capacity?

2. What is your understanding of the issues/ things (elements) that lead to disasters?

2.1. Explain in detail the potential hazards/threats you are (the community) facing that may result in disasters?

2.4. What would you describe as **common/main** risks that could result in disasters here in your surrounding community?

3. What is your perception of risk?

3.1. What situations make you feel exposed to risks of disasters in your community?

3.2. Tell me about the impacts of disasters in your area?

3.3. How safe are you from disasters?

3.4. How often do the disasters you experience happen?

4. What does family mean to you? Please explain

4.1. Do you consider your friends and other members of the community as your family? Please explain.

4.2. What is the influence of family (family that you have identified above) on how you as a young person understand disasters and disaster management?

4.3. What role does your community play in how you perceive disasters, and disaster risk management?

4.4. What do you and your family do to deal with risks and incidents of disaster when they happen?

4.5. What community awareness programmes and projects are usually implemented in your community regarding disasters and risk?

5. In what ways does your family customs affect the way you view the risk of disasters and how they affect you?

5.1. In what ways does your family customs affect the way you perceive risk/threats in your community/household?

5.2. In what ways does your culture influence your understanding of disasters and disaster management?

5.3. What strategies would you recommend your family or community use in ensuring youth understand disasters, risks and hazards?

5.1. Whom or what are the most important sources of information to you relating to disaster risks?