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**NEEDLE STICK INJURY AND THE PERSONAL EXPERIENCE OF
HEALTH CARE WORKERS**

by

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DECLARATION

I declare that NEEDLE STICK INJURY AND THE PERSONAL EXPERIENCE OF HEALTH CARE WORKERS is my own work and that all the sources used or quoted have been indicated and acknowledged by means of complete reference.

C. Kieser-Muller

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SUMMARY

This study describes the personal experience of health care workers after a needle stick injury. The process of enquiry is embedded in a post modernistic ecosystemic perspective to elicit common themes in the health care workers' (HCW) experiences of a Needle stick injury (NSI). Themes that emerged related mainly to the participants experience after having had a NSI. In the HCW environment HIV/AIDS is very well known disease. It is ironic that the HCW system at large is in denial regarding the dangers which the HCW's face on a day to day basis working in a 'mine field' where every patient is a potential life threat to the HCW. From an ecosystemic stance one can clearly see the ecological principle at play. The HCW system seems to be stuck in a negative feedback process as the status quo is maintained by the defence/coping mechanisms. Adaptation seems to be limited. This inability to compensate leads to the disillusionment of the HCW who has to use 'acceptable' defence/coping mechanisms to deal with the trauma of being threatened by HIV/AIDS. The researcher found it constructive to use psychodynamic language, as defence mechanisms are psychodynamic concepts, to describe the process of the HCW system. As Keeney (1983) said that we are not surrounded, in a world of opposition, but rather in a realm of both/and dichotomies. The one cannot exist without, nor be discarded for, the other. Therefore, it could be suggested that an understanding of both systems and

psychodynamic concepts may be a helpful tool in understanding and describing the processes of human interaction within an ecosystemic framework.

KEY WORDS

HIV/AIDS, Needle Stick Injuries, Health Care Workers, Post modernism, Ecosystemic, Systems theory, Apprehension, Repression, Suppression, Denial

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CHAPTER 1: INTRODUCTION

The theme of HIV/AIDS is a requirement of the Psychology department of the University of Pretoria Mamelodi Campus. Within this limit I was drawn to investigate the common ground in the experiences of the doctors and nurses, having friends and family who have had needle stick injury (NSI) working in various hospitals in South Africa. To date no such study from a psychological perspective could be found in SA or internationally. This study is significant for all the health care workers (HCW) their family and friends to be given the opportunity to find out if they can relate to the experiences that are described in this study.

This study looks at the experiences of the HCW from a post modern stance. The aim of this study is to describe the experiences of the HCW and the impact on the family and health care systems that they form part of.

This research study is underpinned by the post modern way of thinking and individual psychodynamic experiences. More specifically the ecosystemic method of interpreting social experiences will be used. A view that language has a fixed meaning and mirrors reality is replaced by a view that meaning is changeable (Becvar & Becvar, 2000; Durrheim, 1997). The observer is not capable of value-free observations, therefore can only be subjective. Therefore

truth is in essence really just a matter of perspective which, in turn is said to be a product of communication, relationships and other forms of social interaction within a specific context (Gergen, 1999). The implication thereof is that it is impossible for the researcher ever to be completely objective and that the researcher's findings can never reveal an absolute truth since people attach different meanings to their experiences. Objectivity is seen as an illusion to the truths that people share. These subjective realities are expressed in shared language (Kvale, 1992).

Keeney (1983) suggests that we cannot attempt to understand a system by dividing it into its parts nor can we view a person in isolation from his or her environment. The person is rather viewed in context so that the relationships that exist between parts become important to understand differences. We are not surrounded, according to Keeney (1983), in a world of opposition, but rather in a realm of both/and dichotomies. Therefore, it could be suggested that an understanding of both first and second-order cybernetics may be a helpful tool in understanding the processes of human interaction. The one cannot exist without, nor be discarded for, the other.

By being exposed to a 'new' way of approaching research I became convinced that a past modern research approach is a more respectful way of interacting with others in an attempt to gain some understanding of the meanings attached

to their experiences and realities, and for this reason, my research will be based on its assumptions.

CHAPTER 2: EPISTEMOLOGY

It is important and necessary before embarking on any study to give a description of the author's epistemology. The way in which we choose to understand our worlds has a great influence on how we gather and interpret knowledge. Keeney (1983) argues that it is impossible not to have an epistemology, and that those who claim that they have no epistemology have a bad one. Auerswald (1985) defined epistemology as the expression of knowledge that depends on a process of thinking. From this another way of defining epistemology would be thinking about thinking.

Because everyone has an epistemology, it is important to be aware of one's own epistemology and how it affects the way one interprets the world. In our time there are two prominent epistemological approaches namely modernism and post modernism. This research study is underpinned by the post modern way of thought and specifically the ecosystemic method of interpreting social experiences.

POST MODERNISM

Post modernism encapsulates thinking around cultural and intellectual phenomena. The main phenomenon that this kind of thinking questions includes the notion that suggests that science is built on observable facts, which implicates our view of knowledge as hierarchical and universally applicable, in opposition to locally based knowledge. Another post modern phenomenon is that there is a shift from logo centricism (words) to icon centricism (image).

Post modernism surfaced in reaction to modernism, and seeks to challenge the modernist style of scientific reasoning. Post modernism challenges views of objective knowledge and absolute truth through concepts of subjective 'reality' and multiverses (Becvar & Becvar, 2000). Durrheim (1997) sees the post modern critique of modernism as being focused on its claims to objectivity, representation and truth. Gergen (1999) considers that a post modern view offers alternative visions of knowledge, truth and the self. Post modernism challenges the modernist belief in the possibility of objective knowledge and absolute truths. In a post modern view reality is subjective, and our worlds are multiverses, which we construct through observations. A view that language has a fixed meaning and mirrors reality is replaced by a view that meaning is changeable (Becvar & Becvar, 2000; Durrheim, 1997). The observer is not capable of value-free observations, and therefore can only be subjective.

Post modernism questions the linear thinking of scientific reasoning that of cause and effect, underpinned by modernism. Post modernism rejects the modernism notion of an objective and universal truth, but by shifting our way of seeing the world we expand our knowledge of the world. Therefore truth is in essence really just a matter of perspective which, in turn is said to be a product of communication, relationships and other forms of social interaction within a specific context (Gergen, 1999).

The implication thereof is that it is impossible for the researcher to ever be completely objective and that the researcher's findings can never reveal an absolute truth since people attach different meanings to their experiences. Objectivity is seen as an illusion to the truths that people share. These subjective realities are expressed in shared language (Kvale, 1992). To conduct research is to describe. To describe a person's behaviour, feelings, emotions and experiences, it is necessary to use the principles of language. Language according to the postmodernist view is always subjective and relative to the context in which it was created.

A post modernistic position highlights the importance of language as it is connected to the relationship between meaning-making and the contexts in which these realities are formed. The modern epistemology is a worldview where the individual is seen as an isolated, objective entity and through the post modern worldview as one of meaning-making through relations. By being

exposed to a 'new' way of approaching research I became convinced that a post modern research approach is a more respectful way of interacting with others in an attempt to gain some understanding of the meanings attached to their experiences and realities. For this reason, my research will be based on this assumption.

ECOSYSTEMIC PARADIGM

The ecological model

According to the ecological model, a community can be described as an ecosystem with subsystems which stand in relation to one another to create homeostasis (Mann, 1978). This ties into the conceptualisation of cybernetics as a science of patterns and organisations where change in one part of the system produces change in the whole system. From a second order cybernetics perspective, the psychologist becomes an integral part of the community and the researcher comes to know the resources of a whole system only by interacting with it. The researcher is part of a cybernetic circuit of social interactions. The researcher's reactions are part of the feedback process (Keeney, 1979). Meaning is co-created and each part of the system can influence the outcome of intervention in various ways. Kelly (in Levine and Perkins 1997) has developed four ecological principles of intervention.

Ecological principles of intervention

Interdependence

The concept of interdependence maintains that subsystems in a community assume different roles and that change in one part of an ecosystem produces change in other parts of the system. Consequently there are potential implications when one enters a system as an outsider to do research. The system does not remain the same, therefore if one wishes to conduct positivistic research in order to establish the truth about a system, the entrance of the researcher into its boundaries already changes the system's structure. From this perspective, modernist research could be difficult. Therefore a post modernistic research stance is more favourable for this particular research study.

Cycling of resources

The second principle, cycling of resources, "concerns the way resources are created and defined as well as how they are distributed" (Levine and Perkins, 1997, p.124). The concept of needs and resource assessment becomes a crucial part in understanding a system. Since the researcher becomes an integral part of the system he or she is involved in, the researcher's needs are as important as those of the other members of the system. Once again, a

system is a co-creation of both needs and resources in and amongst all members of the system.

Adaptation

The principle of adaptation implies that the resources available in the environment would impact on the way that we behave. Levine and Perkins (1997, p. 125) describes it as “the process by which organisms vary their habits or characteristics to cope with changing of available resources”. Adaptation brings to mind the cybernetic concept of feedback in systems (Watzlawick, Bavelas & Jackson, 1967). These authors suggest that positive feedback provides information back into the system. This prompts the system to change in order to survive, while negative feedback serves to maintain the status quo. Therefore adaptation will take place by either behaving in a way that causes the system to remain as stable as possible, or to accept change within a system to be suitable for survival.

Keeney (1979, p.120) suggests that “symptoms” are metaphors for relationships, it is a way of communicating about the relationship. If symptoms serve a communicative function within a system, it implies that any behaviour that deviates from the norm, serves a higher order function to deal with that which life has dealt them (adaptation). This opinion also shifts the blame away from the symptomatic person to the system in which he or she plays the role of

scapegoat or stabiliser. Relationships therefore seem to play a role in facilitating processes of stability or change.

Succession

The last principle is that of succession (Levine & Perkins, 1997). It states that environments are not static and that new roles are assumed, as a result of change in order to obtain a new level of dynamic equilibrium. This implies that it is possible for people to take on new roles in an environment that promotes change in that direction. In this light, systems intervention from an ecological perspective could be therapeutic if members are given the opportunity to change the meanings of their roles, and therefore, their identities.

Kelly's ecological principles are very useful to position ourselves before entering a system and understanding the processes that may unfold during interaction (Levine & Perkins, 1997). It is, however, important to consider systems theory and cybernetic principles that underlie this way of understanding human interaction.

Systems theory

The modernist approach to intervention would view an individual in isolation and ascribe pathology to causes in a linear fashion. The focus would be on the

past in order to remedy the causal factor implicating the problem (Keeney, 1983). On the other hand, systems theory does not focus on the individual and the problem in isolation, but rather on the relationship between individuals. The focus is on interconnectedness of the parts, so that the whole rather than the parts becomes important (Becvar & Becvar, 1996). The emphasis is on reciprocity, recursion, shared responsibility and the processes and contexts which give events meaning so that objectivity is impossible (Becvar & Becvar, 1996). From this perspective, the here and now is important in healing. Healing becomes possible by considering the existing patterns of interaction that uphold the status quo, and by facilitating change in these relational patterns. Furthermore one must note the importance of considering both / and dichotomies and the contextual value of each side of the coin (Becvar & Becvar, 1996). It is in the process of contrasting, that difference can be noticed and the meanings of both sides understood. Therefore conclusions that we make about what we consider being good or bad are only relative to the context (Becvar & Becvar, 1996; Keeney, 1983).

First-order cybernetics

The “black box” metaphor

From the first-order cybernetics perspective an observer looks at a system from outside the system. The system can be described as being like a “black box” that receives and delivers inputs and outputs, almost like a camera. These

inputs and outputs are perceived by the observer in order to understand the patterns, to formulate an idea of what is happening in the system since he or she only has the inputs and outputs to draw on. Since the researcher does not consider him or herself to be part of the system, first-order cybernetics could be viewed as modernistic in its approach. Reality is also seen as operating according to principles of recursiveness and feedback (Keeney, 1983).

Recursion

Systems theorists are less concerned with discovering the cause of a problem, but rather see people in mutual interaction and/or reciprocal causality. We are constantly in relationship with each other so that each interacts and jointly influences the other. This concept relates to the principle of feedback (Becvar & Becvar, 1996).

Feedback

Feedback is described as being the process of recursion involving self-correction. Information about past behaviour is fed back into the system so that the system adapts or remains the same in order to survive. Positive feedback would imply that change is accepted by the system while negative feedback indicates that the system has maintained the status quo. A system would respond in order to change or remain the same in a process to increase

the likelihood of its survival. The context would dictate the goodness or badness of the feedback process (Becvar & Becvar, 1996; Keeney, 1983). This principle could be expanded on when the principles of morphostasis and morphogenesis are considered.

Morphostasis and morphogenesis

Morphostasis is the term that indicates a system's tendency towards stability in the context of change. Morphogenesis refers to the process in which the system increases behaviour that allows for growth or change in a context of stability. Whether or not a system will undergo change or remain the same depends on the rules and permeability of the boundaries that contain the system (Becvar & Becvar, 1996).

Rules and boundaries

Rules dictate that there are appropriate behavioural roles within a system and it also serves to form boundaries. Rules are the implied patterns of behaviour, while the boundaries serve as a buffer for information between different levels of interaction with other supra- and subsystems so that the system can preserve its identity and values (Becvar & Becvar, 1996). The amount of information that a system would permit depends on the openness and closedness of its boundaries.

Openness and closedness

The principle of openness and closedness indicates the degree to which a system screens out or allows new information into the system. The context is important to indicate the goodness or badness. Entropy is the term describing extreme openness or closedness while negentropy indicates the balance between being both open and closed, whichever suits the context in order to promote continued existence of the system (Becvar & Becvar, 1996).

Equifinality and equipotentiality

Equifinality is the term referring to the way in which we have the tendency to move toward a characteristic final state from different initial states. This principle speaks about redundant patterns of behaviour, habitual interactional patterns that tend to be repeated. It is often these redundant behavioural patterns that keep the system stuck in the sense that the processes in use are not effective any more. Equipotentiality means that different end states are possible from the same initial conditions. Therefore, the outcomes of intervention for example, cannot be predicted. Since a system could become stuck in a cycle of redundant patterns of behaviour, it may need new information that provides an understanding about the context and patterns of

behaviour and communication that maintain the problem (Becvar & Becvar, 1996).

Communication and information processing

Keeney (1983) and Becvar and Becvar, (1996) describe three basic principles underlying communication and information processing.

- It is impossible not to behave.
- We cannot not communicate
- The meaning of behaviour and not the “true” meaning of the behaviour, is true for the person giving it a specific meaning. Reality is subjective and a function of one’s frame of reference.

Additionally, three modes of communication can be distinguished, namely verbal (digital) communication which is the spoken or written word, non-verbal (analogue) communication, and the context. Verbal communication relies heavily on the content, on what is spoken, while non-verbal communication on its context. It determines the rules of relationships and is seen as the most powerful aspects of communication since they determine how we relate in the process. If we communicate congruently, there is a match between content (what is said) and process (how it is said) so that our relations are understood.

Incongruent communication may cause confusion and be the cause of many interrelational problems.

Relationship and wholeness

A basic rule underpinning systems theory is that the whole is greater than the sum of the parts. Therefore two individuals plus their interaction equal three. If more individuals are involved in a system, it means that there is potential for a greater number of relationships. This principle of relationship implies that if there is change in one part of the system, the whole system is affected (Becvar & Becvar, 1996; Keeney, 1983).

Goals and purposes

The idea of having a goal is linear. Causal thinking is not congruent with the systems perspective. However, according to simple cybernetics, the observer of a system could imply the purpose or goal of a system according to his or her subjective reality. Hence, the concepts of equifinality and pattern imply that the system becomes its own best explanation. On the level of first-order change, change occurs in a system according to the rules of the system. This means that the content of the behaviour merely changes, which is often superficial and not lasting. When we include the observer as part of the system and the

context, the concept of second-order cybernetics comes into play, which is a more post modern way of systemic thinking. The concept of second-order cybernetics will be explained in the remainder of this chapter.

Second-order cybernetics

An epistemology of participation

Second-order cybernetics is an epistemological change in thinking about relational processes that cannot exclude the observer from the system that he or she is observing. Therefore, the observer becomes part of the observed so that the system includes the observer and the “black box”. The understanding is that the participant-observer projects his or her own reality on the world to create a subjective experience thereof (Becvar & Becvar, 1996; Keeney, 1983).

Self-reference and multiple realities

Reality is self-referential. This implies that there is no absolute truth. That we live in a multiverse, of many equally valid observer-dependant realities (Becvar & Becvar, 1996).

The system as closed

Since the observer is part of the system, there cannot be reference to the outside environment. From this perspective, the system is closed with unbroken boundaries which ties into constructivist ideas about people as closed entities (Becvar & Becvar, 1996).

Autonomy: Organisational closure

The notion that a system is closed creates a situation where the system operates in a way to preserve itself. Positive feedback is associated with change and is therefore just part of a higher order negative feedback process. Recalibration is the term used to describe this step-functional change to a new level of function which would ultimately lead to autonomy (Becvar & Becvar, 1996).

Autopoiesis: self-generation

Autonomy is seen as the highest level of feedback or recursion (Becvar & Becvar, 1996). At this level organisational closure is reached and the system functions to develop and maintain its own organisation, called autopoiesis.

Structural determinism

Since the structure is closed, the emphasis is on the internal structure. Interaction between the identities of the parts that constitute a whole is

important. These relations between parts are part of recursive compensation processes. Since feedback loops are closed and no input or output is experienced from the outside world, the system feeds upon itself. Furthermore, a system is structurally determined, meaning that the system determines the range of structural variations acceptable without losing its identity. So, systems are limited by their structure in terms of what it can or cannot do. From this perspective, the environment can act as a perturbing agent, providing the context for the occurrence of what the system's structure determines it can do (Becvar & Becvar, 1996).

Structural coupling and non-purposeful drift

Systems, including their observers, do not exist in isolation. Structural coupling refers to the extent in which systems are able to mutually co-exist. Although systems are closed, other systems may act as perturbing agents on their stability. If a system is able to adjust structurally, structural coupling takes place. Change is therefore a process of structural transformation in the context of organisational consistency. The inability to compensate leads to dissolution. This brings us to the concept of non-purposeful drift. We do not move towards a specific truth or progress, but we move towards new ways to coordinate our actions with others to survive (Becvar & Becvar, 1996).

Second order change

In the spirit of cybernetics, one can make a full circle and return to the concept of feedback. Where there is feedback, mental processes are at play. As a result the focus of intervention would be on the underlying patterns of feedback processes. Therapists would therefore act as a muddler activating second-order change, a change in the rules of a system, in the process (Becvar & Becvar, 1996). Therefore second order change is profound since it implies a insightful change, an altered way in terms of assumptions and way of thinking.

Keeney (1983) suggests that we cannot attempt to understand a system by dividing it into its parts nor can we view a person in isolation from his or her environment. The person is rather viewed in context so that the relationships that exist between parts become important to understand differences. We are not surrounded, according to Keeney (1983), in a world of opposition, but rather in a realm of both /and dichotomies. Therefore, it could be suggested that an understanding of both first and second-order cybernetics may be a helpful tool in understanding the processes of human interaction. The one cannot exist without, nor be discarded for, the other.

The meaning of community

There are various definitions of community. These include meaning around community that consider it as locality, a collective political power and as a relational construct (Heller, 1989). Furthermore, community could be seen as

ecology of interrelations in which people can assume new roles within a context of belonging that allows for such shifts. It is important to explore the meaning of the term “community” and its implications.

Community can be defined as a term describing either geographical locality, the qualities of human interrelations to form networks, or community as a collective political power depending on the approach one chooses. The ecological model takes a rather different approach to the concept “community”. Community is described as an ecosystem with subsystems that stand in relation to one another at one level or the other to create homeostasis (Mann 1978). Heller’s (1989) definition of community is that community is characterised by the social cohesion that develops with close personal ties. Community could also be described as a system, meaning that communities have unity, continuity and predictability. Subgroups within a community are interdependent. Meaning that the individual part of a subgroup is part of a larger organisation and therefore ultimately part of the larger society. This means that community serves as a medium through which the individual could act on the world, but it also implies that the world transmits norms and values on the individual. Therefore this definition of community indicates that people within a community have direct and/or indirect impact on each other. Viewing the individual in isolation does not make sense from this perspective.

CHAPTER 3: NEEDLESTICK INJURIES AND HIV/AIDS

Needle Stick Injuries

An overview of the current status of NSI in South Africa will be discussed. It will also be indicated why it is important to know the experience of HCW and that the experience of HCW should be researched.

HIV/AIDS can be described as a monster or beast called the Raka that suddenly emerges from the dark and slimy depths of the brooding jungle. This monster is out to threaten the existence of that community. The metaphor of the Raka, used by Van Dyk (2001), to describe the threatening presence of the monster in the community can be superimposed on the medical community and how this HIV/AIDS monster has come to invade their workplace filling it with its deadly presence and constant fear that will never leave that community again. Van Dyk (2001) goes further describing the draining effect on the caregivers of HIV/AIDS patients. The caregivers, including the medical staff, are faced with the ever present underlying issues such as vulnerability to infection by the virus when taking care of and attending to patients' whose HIV status is known, as well as the underlying danger of not knowing the patients' HIV status.

On 10 March 2004, the website <http://www.redribbon.co.za> indicated that the number of HIV/AIDS infections worldwide stood at 56 364 930 and counting. Of these, more than 29 million people infected with this virus, live in Sub-Saharan Africa. Two out of every three new cases worldwide is found to be in this region. Botswana and South Africa have by far the highest infection rates. In South Africa alone, the rate of infection is estimated to be in excess of 1 700 new cases per day. It is predicted that by the year 2010, 27% of the total population of South Africa will be HIV-positive.

As the number of HIV/AIDS infected people increase, so does the probability / possibility of having a NSI from a needle used by a patient whose HIV/AIDS status is positive therefore increasing the chances of contracting HIV/AIDS. Therefore South Africa is facing a crisis of enormous proportions. At the heart of this crisis, lies the vulnerability of so many HCW who dedicate their lives to helping others. The impact of the experience of being pricked by a used needle may have far reaching psychological and other consequences.

The challenges associated with HIV/AIDS go beyond the medical diagnosis and treatment of the infection. It also extensively affects the psychological and social realities of any person touched by the virus. The shock and devastation of an HIV-positive diagnosis is huge. Individuals infected with the HIV virus also frequently experience anxiety due to the uncertain prognosis and course of this illness, as well as the threat of a premature death. Disclosure or lack

thereof, of a NSI, causes a sense of huge apprehension, as it could affect relationships with the spouse and/or family as well as co-workers. Worry over children possibly affected also contributes towards extreme psychological discomfort. There are issues of stigmatisation, leading to the isolation of the infected person and a resultant lack of social and emotional support (Evans, 2001).

The most typical psychological outcome that people with HIV/AIDS face is depression as stated by Sikkema, Kalichman, Hoffmann, Koob, Kelly, & Heckman, in Evans (2001). Depression may include feelings of lack of control over one's fate, changes in a person's self-image (from being healthy to being sick), worry over the implications on personal relationships, exposure to stigma, and a sense of loss, maladaptive coping and reduced resilience. Local research has drawn attention to the frequency of attempted and completed suicides, as well as suicide tendencies and thoughts (Evans, 2001). According to Evans (2001) data has become known which indicate that the psychological and emotional consequences of being diagnosed with the HIV/AIDS virus are qualitatively different from other forms of loss.

Differentiating factors seem to be the social stigma attached to HIV/AIDS, the multiple deaths experienced in the community of HIV/AIDS sufferers, the relative youth of those infected and often this multiple nature of the bereavement of being diagnosed as 'positive'. Therefore the threat of being

infected is also qualitatively different from the threat of being infected by other blood borne pathogens. As stated above, there is now substantial evidence that the incidence of HIV/AIDS is widespread and that the problems in respect of coping and anxiety are also so. These are often severe and of considerable significance for the mental health of the individual.

Sikkema, et al. (in Evans, 2001) says that the inevitable exposure to multiple, ongoing loss and stories of loss in this environment, has enormous implications for the person living with HIV/AIDS, as well as the HCW who works with HIV/AIDS infected people. The multiple deaths and stories of death intensify the sense of despair and hopelessness, causing acute, enduring distress. Demoralisation, sleep disruption, affective disturbance, intrusive thoughts, maladaptive coping and the use of both illicit and prescription drugs increase proportionately with the number of AIDS-related deaths experienced.

This proposed study is about the health care workers' experience when personally confronted with the HIV/AIDS disease, due to their chosen career and the accidents that happen within their working environment. The first case of NSI transmitted HIV was reported in 1983 in the United States. NSI account for the majority of cases of occupational infections among HCW. Accidents continue to happen in the health care setting despite technological improvements such as "needleless" systems and various gadgets to conceal exposed needle tips (Ferreiro and Sepkowitz, 2001 & Kanter and Siegel, 2003).

HCW are frequently exposed to the danger of infectious agents through NSI. Needles were found to be the most common source of injury at 92% (Peate, 2001; Orenstein, Reynolds, Karabaic, Lamb, Markowitz and Wong, 1995). NSI are a known source of exposure to blood borne pathogens for HCW. In the US over 800 000 NSI occur annually that can lead to serious or fatal infections from HIV/AIDS to hepatitis B and C viruses. It is also indicated that 80% of work-related exposure to HIV is through NSI (Peate, 2001; Orenstein, et al., 1995).

In a study done by Garb (2002) on post-exposure prophylaxis, it has been found that regardless of the mechanism of exposure, there was no significant difference in amount of cases between physicians or nurses in the taking of HIV post-exposure prophylaxis. Exposure to blood borne pathogens poses a serious risk to HCW. In the United States sharps injuries play havoc with HCW's lives and are called the 'silent epidemic'. Pearce (2001) says that once you hear how these injuries affect the HCW's lives, one will understand how important it is to work towards preventing them.

In Baltimore, Maryland and Washington DC, in the United States of America a study on HCW's experience with post exposure management of blood borne pathogens concluded that additional studies are needed to assess the impact of exposure incidents on HCW health and well being. This was done by a survey with an open-ended section that covered the impact that the incident

had on the HCW's psychological well being and on their families (Gershon, Flanagan, Karkashian, Grimes, Wilburn, Frerotte, Guidera and Pugliese, 2000). Many of the participants in the study reported psychological symptoms that they attributed to the exposure incident. Symptoms that were reported were among feelings of anxiety, insomnia, depression, loss of appetite, sleepiness and frequent crying. Many of the HCW in this study felt that they never had achieved adequate closure to the incident. Learning that the source patient was negative was not enough and they also reported feeling that the event would "never be over", because the exposure incident haunted their thoughts. Another experience reported was that some HCW felt that the experience made them more careful. The study showed that the impact on the HCW's families is also profound. Results of a study done in France indicated that HCW who had exposure incidents reported feelings of depression and insomnia as well as modifying behaviour regarding sexual habits. One HCW underwent a therapeutic abortion in the 14th week of pregnancy (Gershon, et al., Pugliese, 2000).

It is clear that we are far from grasping the extent of the experiences of the HCW's trauma. In South Africa thousands of HCW's are working with patients without knowing the patient's HIV status while NSI's continue to occur. Research about this phenomenon with its shared, as well as individual experiences can make a fundamental contribution to the medical community who are faced on a day to day basis with the potential danger and latent subsequent traumatisation. It is in this context that central themes of the

HCW's experience may include those of loss, uncertainty, negative beliefs, identity and (loss of) meaning. This study aims to provide HCW's with a means to be heard, and to gain a better understanding of how exposure to HIV/AIDS through a NSI affects the HCW.

This study may have significant benefit for many South African HCW's who have had a NSI accident. It is hoped that the experience of the HCW's who participate in the study will enhance the psychological, emotional well-being and the coping strategies, as well as lower the levels of stress of the participants. Finally, it is further hoped that this intervention will be applicable and indeed of value to other health care workers. The processes and systems in place to assist HCW's who experience NSI could be reflected on and recommendations could be made if necessary.

HIV/AIDS

The virus

The etiologic agent that courses HIV/AIDS is the HIV virus. A unique characteristic of the infection is the long asymptomatic phase which can be as long as ten to fifteen years. The virus can be transmitted during the asymptomatic phase (Antonie, Schneiderman, Fletcher & Goldstein, 1990). It is a chronic illness, because the development of the illness is characterised by an

ongoing qualitative and quantitative deterioration of the immune system. It leaves the infected person vulnerable to many opportunistic infections. The most common infections include pneumonia, meningitis, Candida infections of the mouth throat and air ways as well as Herpes simplex.

Potential means of HIV/AIDS transmission.

- During unprotected sexual intercourse. The presence of other sexually transmitted diseases (STD's) makes the transmitting of HIV/AIDS easier due to the ulcers and open sores.
- When infected blood enters the body by for example through blood transfusions, open wounds or NSI's.
- From mother to child during pregnancy through the placenta and breast feeding.
- Sharing of sharp instruments by drug users.

The risk of contracting HIV/AIDS is greater during the following phases after a once off exposure:

- During the 4-8 week period after infection
- When there is a high HIV/AIDS virus load in the blood.
- During the later stage when symptoms of HIV/AIDS are present (Evian, 2000).

The virus is unstable and does not survive for long periods outside the human body. The viral concentration is not high enough to be transmitted. The HIV/AIDS cannot be transmitted by a cough, sniff, laugh speech, or kiss neither by bed linen or cutlery (Evian, 2000).

Signs of early primary HIV/AIDS infection

During the first 4-8 weeks after infection follows a 1-2 week illness which is characterised by serum change. The symptoms are fever, tiredness, skin rash, sore throat and aching joint as well as swelling of the lymph nodes. This usually happens during the time that the HIV/AIDS antibodies change from negative to positive. For the first 5 years after infection a positive test can be the only indication of the infection. The latent phase can even be 10 years. The virus can be transmitted during this period (Evian, 2000).

High risk groups

Previously high risk persons were seen as those people who due to negligent behaviour and ignorance contracted the virus. This included sex workers, persons who engage in unprotected sex, homosexual males, drug users who share instruments and street children who are involved in similar practices. HCW's are becoming a lot more anxious about the increasing danger that they face by working with this deadly virus and the increased risk of getting infected

by a patient through a NSI. The effects of the risk of contracting HIV/AIDS are extensive and affect families and dependants.

The effect of HIV/AIDS infections on the immune system

The way the virus works

This chronic illness tackles the immune system gradually over a period of time and in such a way that the patient is left exposed and vulnerable to opportunistic infections. The breaking down of the immune system affects the functioning of three main components thereof, namely the hormonal, cellular and the natural immunity. The cellular (T-cells) and hormonal (B-cells) systems are known as the specific immunity. The specific immunity must first have experience of the pathogen to produce anti bodies, which are very pathogen specific. The natural immunity consist of the 'natural killer' cells, which is non specific and therefore are the first line of defence in the body's defence system. It protects the body against malignant cells, parasites, viruses and other pathogens.

The primary target of the HI virus is the T-helper (CD4- / T4-cel). The T4 cells play a central role by functioning and regulating immune reactions. The virus binds with the surface receptor of the CD4 cell, where after it dies and the virus begins to multiply by dividing itself. The proportion of T4 cell to T8 cell is

normally 1.6-2.0: 1. With HIV/AIDS patients the T4 cell count is drastically lower, which leads to the invert ration between the T4 and T8 cells.

After the HIV/AIDS virus bind with the T4 cell:

- it serves the T4 cell as a production plant for the HIV/AIDS virus
- the effectiveness of killing the antigen decreases
- it shows a decreased ability of active B sells to respond to the antigen
- the ability of IL-1 (interleukin) decreases. This has the effect of a lowering of the production of other interleukins and chemical modulators of the immune system.

Due to the above mentioned changes in the T cell, the B cells secrete immunoglobuline which is non-specific and which does not attack the HIV/AIDS virus. Therefore the humeral immune system does not function optimally any more.

Social consequences

Social support

The process of social support is described as a trade of resources between two individuals perceived by the provider or the recipient to be intended to improve the well-being of the recipient (Duffy & Wong, 2000).

In a study done by Pearlin, Lieberman Menaghan, and Mullan (Gotlib & Colby, 1987) it was found that an individual's levels of self worth or self esteem are in direct correlation with the individual's social support. The support enables the person to better manage the impact of a stressful event. The conclusion that was made was that if an infected person had a close relationship with another individual in a social group the said person would lower levels of stress and consequently depression will not be experienced.

It was also found that with less social support directly after a traumatic or stressful event as well as less support from a life partner that there was a reluctance by a person in such a situation to ask for support due to fear of being shunned. This in total raises the level of anxiety that is experienced and lowers the level of immune functioning (Pennebacker, 1995). The conclusion that can be drawn is that a person can possibly be shunned by a social group in a situation where support is in actual fact of great importance (Pennebacker, 1995).

Social reaction towards infected individual

An aspect of the labelled sick role that one must keep in mind that it is culturally sensitive. Talcott Parsons (Parsons, 1951) indicated that in a western society illness is seen as 'deviant' behaviour, which means that the community will give the individual a chance to recover, but will easily shun the person due to the strain that he or she puts on the community as a whole. This gives the impression that the person may not engage within the community and therefore needs to withdraw from his or her functional role. The individual should not attribute blame towards the community as the condition was brought on him or herself. The community shows increasingly less sympathy with the infected individual.

CHAPTER 4: DESCRIPTION OF THE STUDY

OBJECTIVE OF THE STUDY

The objective of the study is to investigate the subjective personal experience of Health Care Workers (HCW) who has experienced a needle stick injury (NSI).

This study is a **qualitative descriptive type research** with an **ecosystemic paradigm** as the study aims to describe the phenomena of NSI under HCW's. It fits into applied research and interpretive techniques can be used to process the data (Terre Blanche & Durrheim, 2002). From an ecosystemic few the end goal is to arrive at more than the individual experiences and fit these experiences into a responsive, dynamic system. The ecosystemic paradigm emphasises the influence of interdependence of systems on one another and is also interested in trying to understand the phenomenon in terms of its contexts. The experiences are an integral part of the systems, it is caused by aspects of the systems involved and in turn preserve aspects of the system. The aim of the research is to describe the way in which the phenomena of NSI operate within various systems of the HCW (Terre Blanche & Durrheim, 2002). In this study the qualitative research approach will give an insider perspective on the subject. The qualitative research approach refers to research that obtain

participants' picture of meaning, experiences or perceptions in their own words, therefore it the identification of the participants' beliefs and values that underlie the phenomenon. The aim of qualitative research is to investigate human behaviour "...to study a social setting to understand the meaning of participants' lives in the participants' own terms" (Denzin & Lincoln, 1994, p. 210).

Qualitative research aims to:

- understand the phenomenon from the participants' viewpoint / experience, although the researcher is involved in interpreting the data;
- describe the participants' context in such a way that their views are not seen out of context;
- understand the thoughts, feelings and behaviours of the participants. The captured data is not presented in a static, reductionistic and decontextualised manner.

The research will be conducted in a relatively unstructured manner. Prior research and theory are not relied on to guide the research process (Struwig & Stead, 2001).

CONTEXT OF THE STUDY

In the present climate of HIV/AIDS within South Africa, the South African government as well as hospital managements are aware of the inherent danger of contact between HCW and their patients as can be seen in South African laws concerning HIV/AIDS and infection control policies in private and state hospitals. Laws as well as infection control in hospital policies are foreseeing the prevention and handling of the spreading of the virus. There is already an awareness of the virus and the risks associated for the HCW.

HIV/AIDS crosses the social, physical, and cultural, cross cultural, ideological, economical and international borders. The disease does not discriminate to specific socio-economic, racial, and ethnic groups. The paradigm of this study is that of an ecosystemic approach that emphasises the influence of interdependence of systems on one another. According to this paradigm, the individual is viewed a sub-system within bigger systems (interpersonal, family, household of small groups, community / organisation, culture). It is also conceived that there are sub-systems within the individual consisting of physiological, intrapersonal, non-verbal behaviour, and verbal behaviour, physical, mental and spiritual dimensions.

An individual is not an object that is extradited to its environment, but has subjective experiences of the environment and gives certain individual meaning

to those experiences. Therefore, the environment of the HCW can therefore be potentially traumatising, the individual's trauma can be internalised by him or her, eventually exerting influence in a negative or positive way. The HCW who has had a NSI may have traumatic experiences and in the handling thereof will go through various psychological processes to come to terms with it. Together with the individual's intra-psychological impact which is associated with such an incident, a ripple effect of the possible consequences into other systems of the HCW such as family, friends and work can be experienced. The HCW is confronted with continuously changing health risks in our country as well as in their profession. The HCW became a high risk population due to the HIV/AIDS epidemic worldwide and the contaminating / transmitting / spreading possibilities through contact with the HIV/AIDS patients blood (by NSI). These are people whose professional aim is to save lives and to improve quality of life, but in the context of their work in a high HIV/AIDS risk environment, now find their own lives being threatened in the process. This paradox has the potential to install conflicting emotions within the person. The context of this study is specific the subjective experience of the HCW regarding the NSI. Moreover it is geographically bound to the Pretoria region, Gauteng, South Africa.

THE SUBJECTS

The recruitment of participants can be facilitated through purposeful sampling due to the need for information-rich participants. In this study the sampling strategy will be the selection of an initial sample of 4 HCW who have had NSI. The data collection will be through in-depth, one-on-one, semi-standardised interviews that will be held with the participants. This technique will allow for multiple detailed responses as well as an opportunity for the participants to discuss issues beyond the question's restrictions. The interviews will be recorded in order to be transcribed afterwards.

PROCESS OF INQUIRY

Research question:

What is the subjective experience of HCW's with regard to having had a NSI and the possibility of contracting HIV/AIDS due to NSI? Consequently the aim of the study is primary investigative, explorative, descriptive. A logical conclusion is that an in-depth investigation needs to be done to get as vivid as possible an image of the meanings attached to the NSI and the consequential experiences.

Previous research methods dictated the field of psychology on how and what could be researched. In reaction to these constraints search for alternative methods to incorporate “objectivity” and subjective experiences as well as the content of the experience began. Du Toit (2003, p36) languaged it as follows: “to believe that my experience doesn’t count, amounts to believing that my existence doesn’t count. I couldn’t, or anyone else for that matter, dismiss my experience – even if I wanted to.”

The qualitative method enables the researcher to get a lot closer to the reality of the case than any other research approach. Qualitative research aims to investigate through an ‘insider’ view. Qualitative research aims to study human behaviour from the perspective of the participants, to understand the meaning of the participants’ lives in their own language.

Setting

The study will be conducted at the University of Pretoria, Faculty of Health Sciences, Pretoria. Gauteng, South Africa.

Permission / Consent

Permission to conduct the study will be obtained from the University of Pretoria, Pretoria. Gauteng, South Africa. The purpose of the study will be discussed

with the healthcare workers after having been described in writing and the voluntary nature of their involvement will also be explained. Confidentiality will be addressed by assuring the participants that they will remain anonymous in any reports associated with the study.

In view of the fact that tape recordings and transcripts of interviews will be used as sources of information, permission to use such material will also be obtained from the participants. These transcripts and their interpretations in the form of the final report will be made available to the participants and the HCW.

See Appendix A: Participant Consent Form

Sample

Samples are selected purposefully due to the need for information-rich participants. These participants have certain characteristics that the researcher is interested in. The sample is not drawn in advance as in the case of quantitative research. In this study the sampling strategy will be that an initial sample of 4 HCW who have had NSI will be selected.

Data collection

In-depth, one-on-one, semi-standardised interviews will be held with the respondents. This technique will allow for multiple detailed responses as well as an opportunity for the respondents to discuss issues beyond the question's restrictions. The interviews will be recorded in order to be transcribed afterwards.

PROCESS OF ANALYSIS

Data analysis and interpretation

First themes in each interview protocol will be identified. "Cleaning-up" of the seemingly overwhelming and unmanageable data will be done by some editing where necessary to make the identified themes in the field notes and transcripts readily retrievable (Creswell, 1998).

In the describing, classifying and interpreting stage regularities in the responses of the various participants will be noted, thereby enabling the researcher to identify the salient, grounded categories of meaning held by participants in the setting. The data will then be classified into these categories (Creswell, 1998). Interpretations allow the researcher to make sense of the data. The data will be interpreted in terms of ecosystemic systemic paradigm. While interpreting the data, the beliefs, values, and the meanings attached to

the views of the participants will be taken in to consideration. At the end the researcher will step back and form larger opinions of what is taking place in the system (Creswell, 1998).

CHAPTER 5: THE INTERVIEWS

In this chapter various themes that emerged during the various interviews will be looked at. It is important to note that the themes are interrelated and weave into each other, therefore the purpose is not to dismantle, but rather to gain an impression of the nuances presented within the texts. Each interview will be discussed separately. In Chapter 6 the impact on the system will be discussed.

THEMES FROM THE INTERVIEW WITH RESPONDENT 1

Meaning of occupation

One of the main themes in the interview with Respondent 1 (R1) was the meaning or purpose of being in the medical field. She questioned whether she had done the right thing to study medicine and if it was worth the risk, several times during the interview.

Somewhere at the beginning of the interview she said:

R1: “While I was standing in the queue at the emergency room I wondered if it, this is really worth it...what I meant was being a doctor worth it?”

As the interview continued:

R1: “directly after the incident I wondered for the first time in five years if being a doctor was for me...The incident opened my eyes and made me think about HIV. I had to think about how willing I was to put my own life in danger, and yes, even now I want to go and specialise in surgery, one of the highest risk fields in medicine, but one cannot run away.

Denial

Denial is an unconscious defence mechanism used to reduce anxiety by denying thoughts, feelings, or facts that are consciously intolerable and a disbelief in the existence or reality of a thing (Steinmetz, 1998). Denial is a prominent theme in this interview. Denial of the existence of HIV/AIDS as well as the dangers of being a HCW.

During the interview she said:

R1: “The incident opened my eyes and made me think about HIV...I was a bit anxious, but kept busy...I never thought it will happen to me. It can make one worry, but you cannot always live in fear. To live in South Africa is a risk...”

At the end of the interview she reflected:

R1: “I am not negative, funny enough I am positive. I am willing to put my life in danger. I never thought about it before – I had to think about it first. I thought it will never happen to me. It can make one worry, but one cannot live in fear one’s whole life. To live in South Africa is a risk, not only being a doctor.”

Secrecy and Isolation

Secrecy as well as emotional isolation due to the secrecy stood out during the interview with Respondent 1. I got the feeling that it was not okay to talk about NSI’s and be open about the shock, trauma and impact that it has on the HCW as well as on his or her system.

Respondent 1 languaged it as follow:

R1: “I have a lot of questions about confidentiality...the Prof especially wanted to know who I am going to tell. I live at home so I cannot hide it...Maybe it is better to tell people, then they can understand better.

The incident also affected her social life in a negative way. She withdrew and isolated herself.

R1: “I was not in the mood to socialise. I just hung around and did not care about anything...I rather went to bed.

Change in motivation

The respondent described her experience regarding her motivational level after the incident as follows.

I picked up that she had a hard time to cope emotionally and had even suicidal thoughts although she found it hard to admit. It seems as if emotional support was very limited.

R1: “I was very negative directly after the incident...I was angry at everybody and irritated with everyone and saw all the patients as HIV+...I was tired and depressed, it took me months to get out of it. I did not attend the afternoon classes and my motivation dropped, so did my marks...for a few months after the incident.

Further in the interview:

R1: "...I thought about it, but did not have any plans. I did not want to do it to the people around me. It is not the answer to one's problems..."

THEMES FROM THE INTERVIEW WITH RESPONDENT 2

Juxtaposition of priority

Juxtaposition of priority is one of the most prominent themes that stood out during the interview with Respondent 2 (R2). The question of who's safety is the priority during a medical procedure: the patient or the HCW attending to the patient?

R2: "It was rather shocking. I only realised it later...I only helped out...the consultant was in a hurry and he let a needle slip and it hit the clinical assistant...I never realised that I was hit as well...only after the operation I realised that I was hit as well."

He continued:

R2: “My first thought was that I need to go and wash my hands now and need to get other gloves...but I can't because they cannot carry on with the operation without me...so I can't think about myself. There are other people that I need to think about as well.”

His answer on “what did you do then?” was:

R2: “we finished the operation and then I attended to myself...”

Apprehension

Apprehension, the not knowing became a prominent theme during the interview. He described his experience as follow:

R2: “I work for private pathologists, and you are always as careful as possible. I have never had an incident there during the year and a half that I have worked there, but still – you never know... there is a percentage that they do not know how it is transmitted. You are just scared. A lot of the time you are in contact with open wounds etc. and often unintentionally, blood on your hands. So you do stress.”

Later in the interview he continued:

R2: “For sure, if you know you know. It is not the fact that the patient is negative or positive that is so bad, more the tension of what is it going to be. Do I need to take the medication or not. It is basically 28 days of taking poison.”

Anger and Blame

His anger and blame of what happened came forth as follow:

R2: “...O, the consultant did not even apologise to me. It was as if, quite frankly, he could not give a damn...I had to go through it all by myself...I did not get support and had to do it all by myself...it was not even my fault...I know what to do to prevent a NSI...and then it happens to me and it is not even my fault!”

Later in the interview he also said:

R2: “...it was not the patient’s fault, so I cannot be angry at her. I did not prick myself, so I cannot take it out on myself. I am angry at the consultant because he did not even apologise, even though it was an accident. I was angry at his

reaction – he could have been a bit more human. He was so absolutely blazé about it, so above it.”

Suppression & emotional isolation

The respondent experienced a suppression of his own emotional trauma as well as emotional isolation probably due to the suppression of his own experience of the NSI.

R2: “In the back of my mind I still know that the patient was HIV+... I need to wait 6 months ...it does not matter how many times people tell you that the chance of getting it are slim if you have taken the meds...I had a reminder on my cell phone to drink the meds...there is still a chance.”

R2: “I did not feel any relief by telling someone about what happened. My friends were very concerned about me. They were in absolute shock. It was as if reality hit them in the face – hey this thing really happens...but I was alone in this.”

He was not satisfied with the pre- and post test counselling and voiced his experience:

R2: “It was good to talk to someone who works with it everyday and knows the statistics and the chances of contracting HIV/AIDS through a NSI...at the emergency room they only asked me if I know what it is and well of course I know because I give pre- and post test counselling to others in the hospital. They were very focused on the facts that I already knew. I feel that maybe they had to get in a Psychologist – even if the patient is negative and you are negative – just to have a session or two...for the emotional part although ‘nothing’ happened.”

Somewhere at the end of the interview he described how taking the anti retro viral medication was a constant reminder of the NSI:

R2: “...I became very sick due to the meds and also experienced insomnia. The side effects were like a constant reminder of what happened. You try to process what happened, but for 28 days you need to take a pill and then you are reminded of what happened.”

Ignorance

His family came across as ignorant regarding HIV/AIDS and the how, and wherefore there of it.

R2: “I phoned my mother and told her about the incident. She was absolutely terrified and my sister was in tears. They did not know what was going to happen and in the end I had to comfort them. It was exactly what I did not want. I wanted to handle the situation – I knew that they were ignorant and did not understand what was going on and what it all entailed. They were upset and that upset me...you only need one person to overreact and the rest of them will run with it.

THEMES FROM THE INTERVIEW WITH RESPONDENT 3

Denial & projection

The respondent's unconscious defence mechanism, namely denial, used to reduce anxiety by denying thoughts, feelings, or facts that he could not consciously tolerate, was more apparent in what he did not say than in what he said. Only once during the interview, when specifically prodded, he suggested that the experience was traumatic to him. He also used projection as defence mechanism by projecting his own trauma onto his family and friends

The respondent described how traumatised his family and friends were and how they “flipped out”:

R3: "...she flipped and called the whole family and every doctor that she knows. She even phoned the university...my father reacted just as badly...actually no one took it in a good way..."

His response to the question whether maybe they only looked more traumatised than him, the respondent who, kept things inside was:

R3: "Yes, the first day I was traumatised by the incident, and I think before my first blood test I was a little bit scared, but after that I thought that the whole ordeal was over."

Apprehension (worry / anxiety / stress / trauma / fear)

Apprehension can be defined as the anticipation of adversity or misfortune; suspicion or fear of future trouble or evil. The respondent languaged his apprehension in NSI experience as follow:

R3: "the scariest part was when I had to wait for the first blood test and the patient's status. First she did not wanted to be tested...but she did eventually...only after I got the patient's test results and saw that it was HIV+...yes then I ...stressed. Oh, I just want it all to be over. It will put my

mind at rest once the 6 month test is also over...when I am tested and I can put the whole ordeal behind me.”

Ignorance

Respondent 3 (R3) experienced ignorance of his family regarding HIV/AIDS. He felt that his mother’s reaction made it worse for him but explained that she did not have any knowledge about HIV/AIDS and could not understand that the medicine would be effective. According to him she immediately expected the worst:

R3: “the biggest mistake that I could have made was to tell my mother. I wanted to keep it a secret from her...she would not understand. I told her by accident due to the bad side effects that I experienced...she wanted to know why I was feeling sick. Then she totally flipped...called the whole family and every doctor that she knows. She even phoned the university...if it happens again I will not tell my mother. My father’s response was equally bad, but maybe he also did not understand everything that clearly.”

THEMES FROM THE INTERVIEW WITH RESPONDENT 4

Suppression

Suppression is the conscious inhibition of an impulse. The respondent tried to suppress her emotional experience and trauma:

R4: "...I tried not to think about it, what if I am HIV+...I did not want to talk about it.

When I asked her how she felt talking about it now she responded:

R4: "I thought it would not do anything, but it feels weird. I prefer not to talk about it. I am scared that it will happen again."

Apprehension (worry / anxiety / stress / trauma / fear)

The respondent's experience of what happened the apprehension and the possible implications and consequences came forth as follow:

R4: "I started to cry. All that I could think about was that I do not want to die like this."

Somewhere in the middle of the interview she said:

R4: “I got a scare and began to cry and thought about the unfairness of it and was very angry.”

Juxtaposition of priority & Meaning of occupation

One of the prominent themes that stood out in the interview with Respondent 4 is how her meaning of becoming and being a HCW changed after the NSI incident. Her view of the patients was also changed by her NSI experience. She languaged it as follow:

R4: “I feel harder towards HIV/AIDS...my view changed...it is as if now I judge a patient even before I know his HIV/AIDS status...I think studying to become a doctor changed my personality.”

She reflected on the meaning of being a doctor:

R4: “Does one get enough work satisfaction to die from HIV/AIDS?...I feel good to be a doctor – a safe one. You must look after yourself first, then after a patient. Now I am more focused on my own safety. To put your life in danger is not worth it. I want to have passion for my work but now it is about other

stuff...It is as if I underwent a paradigm shift: medicine is not the most important thing in my life anymore...My heart is not in it as before...”

CHAPTER 6: DISCUSSION AND INTEGRATION

In this chapter, the collective themes that have been identified in the previous chapter will be discussed. Ways in which the themes tie in with each other will be explored and integrated with the theory.

REFLECTION ON THE THEMES

First we will deal with looking at various themes that permeated through all the interviews. Experiences of emotional isolation, apprehension, juxtaposition of priority and ignorance was themes that of experience described by the respondents. Defence mechanisms that were used mainly to deal with the trauma of the NSI were denial, repression and suppression.

Juxtaposition of priority

Juxtaposition of priority is one of the most prominent themes that stood out during the interviews. The question of whose safety is the priority / comes first during a medical procedure: the patient or the HCW attending to the patients. After a NSI respondents were faced with making the decision of tending to themselves or tending to the patient, not really knowing what to do and feeling obligated to attend to the patient's needs above personal needs eg. not attending to a NSI wound. This can lead to emotional complications or issues

that will need to be worked though later on. I wonder if this kind of decision should be made before hand and not in the heat of the moment in the operating theatre, examination room or ward. Then again it is a personal issue and in a way a constitutional right that a doctor in actual fact can not be forced by protocol if he or she wishes to discontinue attending to the patient after a NSI incident with that patient.

Meaning of occupation

Tied closely to the grappling issue of juxtaposition of priority, in other words the patient-HCW priority, is the question of meaning of one's occupation and the motivation that goes along with it. How the meaning of becoming and being a HCW changed after the NSI incident and the way in which patients were perceived changed, positively for negatively, after the NSI experience. Questions that were asked were whether it was the right thing to study medicine and whether it was worth the risk? The incident opened most of the HCW's eyes and made them really think about HIV/AIDS and how willing one must be to put one's own life in danger by being a HCW. It appeared as if most of the respondents were confronted with the reality of being a HCW and not just the "glamour" or status that comes from being in the health care profession. Regarding the motivational levels, it dropped after the NSI, but was viewed by the respondents as mainly due to the side effects of the anti retro viral medication. Most of them were more motivated and had a more realistic

view of what a HCW can encounter and importantly that HIV/AIDS is not out there but “alive and kicking...”

Apprehension

According to the Webster's unabridged dictionary apprehension is an active state of fear, usually of some danger or misfortune (Steinmetz, 1998). As stated previously apprehension is described as the anticipation of adversity or misfortune; suspicion or fear of future trouble or evil. The respondents languaged their apprehension after the NSI experience through thoughts of worry, anxiety, stress and fear. The 'not knowing' was also a prominent theme during their interviews. The prospect of potentially contracting HIV/AIDS through a NSI is a traumatic experience. Feelings of worry, anxiety, stress and fear are to be expected after a traumatic and potentially life treating incident. In some cases the apprehensions were a prolonged state that bordered on anxiety. It seemed as if the respondents coped with the prolonged apprehension / anxiety by using repression and suppression as coping mechanisms to deal with the dubious uncertainty, suspicion as well as uneasiness after the NSI.

Denial

Denial is a very prominent theme which permeated through all the interviews.

Denial is an unconscious defence mechanism used to reduce anxiety by denying thoughts, feelings, or facts that are consciously intolerable and a disbelief in the existence or reality of a thing (Steinmetz, 1998). Denial as defence mechanism is hard at work in the health care system. HCW's are hit with the reality of this destructive disease only after a life threatening incident such as a NSI and when the HCW can no longer deny the existence, impact, and reality of HIV/AIDS.

Denial is a prominent theme in this study. Denial of the existence of HIV/AIDS as well as the dangers of being a HCW working in this mine field is typical. The NSI incidents opened the HCW's eyes and made them think really seriously about HIV/AIDS for the first time in their lives. I got the impression that previously if you do not think about it as people around you do not talk about it; it just does not exist in your reality of the world until you are forced to do so. The problem then is most people around you are still in denial and you need to face the music alone. This isolation is a well known process that occurs within the world of HIV/AIDS sufferers.

After a NSI and denial as defence mechanism becomes not functional in order to cope another defence mechanism had to take over for the HCW to cope and

stay functional. The HCW's who were interviewed mainly used repression and suppression to deal with the challenging circumstances after the NSI.

Repression

Repression is a defence mechanism that functions to protect an individual from ideas, impulses and memories which produce anxiety, apprehension or guilt when they become conscious. Kaplan and Sadock (1998) describe repression as the expelling or withholding of an idea or feeling from the conscious to defend the individual against the derivatives of affect or drive.

Primary repression is the curbing of anxiety producing ideas and/or feelings before they attain consciousness. Secondary repression excludes from awareness that which was once experienced at a conscious level as anxiety producing ideas and/or feelings. They continue by stating that the repressed is not really forgotten, as it may still be present in symbolic behaviour. Therefore only the conscious perception of feelings is blocked (Kaplan & Sadock, 1998).

This way of handling the traumatic experience and dealing with the apprehension is common amongst HCW's. Very closely linked to repression is suppression.

Suppression

Suppression is defined in the Penguin dictionary of Psychology and the Webster unabridged dictionary as the conscious, voluntary elimination or inhibition of some behaviour or idea (Steinmetz, 1998 and Reber, 1995)

During the interviews I got the distinct feeling that there is a uneasiness to talk about the NSI and the impact that it had on the individual as well and his or her environment. Talking about the shock and trauma experienced was as if a secret is shared. The emotional trauma and isolation experience had to be suppressed because it seemed as if the HCW system is not willing to be open about the impact that the NSI and potentially HIV/AIDS has on the individual and the surrounding systems. A lot of the time the respondents voiced that they just want to forget about what happened and continue as if nothing changed, but it was hard to suppress these feelings due to the constant reminder when seeing patients showing typical symptoms of full blown HIV/AIDS and the daily reminder of taking their anti retro viral medication. The medication's side effects were also a subconscious reminder of what had happened as well as the possible fatal consequences. The medical system as well as the family and friends system supported this suppression so as to urge the HCW's to continue life as before and not really acknowledging the traumatic impact of a NSI on the individual. They would rather not know about it, and then there is no threat for them. Denial by the bigger system as

previously described is kept in place by the suppression and repression of the NSI experience by the HCW themselves.

As already stated, the division of themes into is somewhat arbitrary, as all deal with coping with the trauma of being threatened by HIV/AIDS, are interconnected, and have many overlapping features. All the participants developed ways of keeping themselves emotionally safe by either using repression or suppression. Most of the respondents experienced emotional isolation and apprehension. The above themes in general present a picture of people who are apprehensive and traumatised.

REFLECTION ON THE IMPACT ON THE SYSTEM

The researcher will step back and form a larger opinion of what is taking place in the system. However, this study there will only focus on the HCW system, although from an ecosystemic stance we know that there are other systems at play as well.

Being in the HCW world / community / system

The HIV/AIDS dilemma is a world wide epidemic because people are increasingly infected and there is no vaccine or cure to prevent the spread of

the disease. It is more than eighteen years since HIV/AIDS was first described. Since then millions of people have been infected and affected by the virus. HIV/AIDS has become the most contaminating health care problem in the world. South Africa as part of the Sub-Saharan region in Africa has one of the most acute HIV/AIDS epidemics in the world (Evian, 2000). HCWs who accidentally have a NSI can potentially be exposed and infected by HIV/AIDS if the blood of the patient is contaminated. The incident had the possibility that the HCW can be infected with HIV/AIDS.

The medical system in South Africa is directly affected by this crisis, due to risk factors in the environment which is a threat for the HCW's health, quality of life and in the end survival.

From an ecosystemic stance one can clearly see the ecological principle as previously discussed in Chapter 2 at play. The HCW system seems to be stuck in a negative feedback process as the status quo is maintained by the defence/coping mechanisms namely denial, repression and suppression. Adaptation seems to be limited.

In the HCW's environment HIV/AIDS is a very well known disease. It is ironic that the HCW system at large is in denial regarding the dangers which the HCW's face on a day to day basis working in a 'mine field' where every patient is a potential life threat to the HCW, and because accidents although not intentional happen on a daily basis. In this system HIV/AIDS is not talked about

on a non professional level. In a sense the existence thereof is totally denied, contrary to their professional knowledge. This silence is only shattered for the individual when he or she is disillusioned by an incident like a NSI. Then denial as a defence mechanism against the anxiety provoking thought attributed to HIV/AIDS is no more functional. This interference in the ecosystemic harmony moves towards obtaining some sort of new equilibrium which is accepted by the current rules of the system. Repression and suppression are commonly used as coping mechanisms by HCW who have had a NSI. This seems to be accepted by the system due to the nondisclosure of the traumatic experiences and the HIV/AIDS infection threat. The nondisclosure of experiences such as anxiety, apprehension, juxtaposition of priority and the question of meaning reinforce the discourse of denial in the system. It seems like a vicious circle that keeps reinforcing the rules of the system, therefore maintaining the status quo regarding the way in which HCW deal with the trauma after a NSI. This confirms the notion that this system is closed therefore creating a situation where the system operates in a way to preserve itself. From this perspective, the system is closed with unbroken boundaries. This inability to compensate leads to the disillusionment of the HCW who has to use 'acceptable' defence/coping mechanisms to deal with the trauma of being threatened by HIV/AIDS.

CONCLUSION / A FINAL REFLECTION ON THE RESEARCH

Looking back at all the interviews it seems to me that the process affected everyone, some more profoundly than others. If nothing else, our sense of awareness may have been raised. My experience is that the process indeed became an exploration of new meanings and understandings. A traumatic experience was revisited and the tentacles of the traumatic experience were examined and can now be shared with others that walked and are going to walk the same path of being exposed the HIV/AIDS through a NSI. It seems impossible not to be affected. My concern remains that the experience be of benefit to the respondents and to the HCW community at large, if not now, then in the future.

The reality is the HIV/AIDS is a constant threat in the health care environment. It seems to be necessary to address the issue of NSI and the consequently traumatisation of the HCW's. Therefore it is recommended that the protocol regarding NSI and related incidents be readily available and revised. It is further recommended that at the beginning of each year and even during the year the existing protocol be discussed with all the HCW's. Input from the HCW's who have had a NSI could also be of great value when the protocol is revised yearly to include their suggestions.

Psychological support, counselling and therapy for students and staff need to be provided through an independent professional psychologist. This is necessary in order to create a climate of confidentiality and a safe space to voice experiences without fear of being judged. This need for an independent psychologist resides in the fear of the respondents that their lecturers / supervisor's will not be able to remain objective in his or her evaluation of the HCW's performance.

It should be noted that further research on how the discourses of secrecy, silencing and isolation are maintained due to the denial of the reality of HIV/AIDS, still needs to be done.

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APPENDIXES:

APPENDIX A: Participant Consent Form



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Participant Consent Form

Research title:

The experiences of HCW who have had a needle stick injury.

Project leader: Surname: Kieser-Muller
First name: Christel
Address: 461 Fehrsen Street, Brooklyn, Pretoria
Telephone no.: (012) 348 1011

I appreciate your willingness to be interviewed for this research project.

The purpose of the study is to obtain an understanding of the personal experiences of HCW's in the event of receiving a needle stick injury in the course of their work.

Your participation will entail an individual semi-structured interview with myself. The interview will be recorded to allow for an accurate analysis of the conversation at a later date. No person other than myself will have access to the interview.

I shall contact you to arrange for a time for the interview to take place.

Your involvement in this study is voluntary, you are not obligated to divulge information you would prefer to remain private, and you may withdraw from the study at any time. The information you provide will be treated as confidential. You will not be identified in any documentation, including the interview transcripts, by your name. You will be referred to in the documentation under a code name.

It is expected that research about this phenomenon with its shared, as well as individual experiences can make a fundamental contribution to the medical community who are faced on a day to day basis with the possibility of needle stick injuries. This study aims to provide Health Care Workers (HCW) with a

means to be heard, and to gain a better understanding of how exposure affects the HCW.

There are no perceived personal risks attached to your participation in this study. However, if for any reason you wish to follow up on any issues which emerge for you during the interview, you will be referred to an appropriate professional mental health care worker for follow up consultations, if you so wish.

The research findings will be made available to you, should you request them.

I am willing to be interviewed for this research project. My involvement is voluntary. I understand that my participation is, and that all information divulged by me will remain confidential. I understand that I may withdraw from the study at any point should I wish to, with no further obligation on my part.

.....

Signature

APPENDIX B: Semi structured interview

Biographical information:

1. How old are you?
2. Relationship status? Single, married, divorced, steady relationship etc.?
3. Are you sexual active?

Information regarding the Needle stick injury (NSI):

4. Tell me about the NSI what happened
5. Can you describe your emotional experience just after the incident?
6. What was going through your mind while waiting for the blood test results?
How did you feel?
7. How does it feel now talking about your experience?
8. Who supported your during the process?
9. What was your experience regarding your colleagues?
10. Whom did you tell about what happened?
11. If there is a next time, whom will you rather not tell and why not?
12. Did this incident and the experience thereof influence your ability to work?
13. Did the medication have any side effects on you?

14. Did the NSI experience influenced or change your view or behaviour regarding your patients?
15. In what sense, if any did the NSI incident and the experience thereof have an influence on your social life and relationships?
16. How do your feel about the protocol on handling the injuries on duty by the health care workers in the hospital setting?
17. What was your motivation to study medicine?
18. How was the interview for you?