AN EXPLORATORY STUDY INVESTIGATING THE VIEWS AND PERCEPTIONS OF LEARNERS WITH REGARD TO HEALTH AND HYGIENE

MINI-THESIS

In partial fulfilment of the Master in Public Health (MPH)

Student: **Delia Corinne Engle**

Student No: **9779577**

Department: **Public Health Programme**
University of the Western Cape
South Africa

Supervisor: **Doctor Mickey Chopra**

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(17,160 words)

SUMMARY

The Western Cape Education Department has introduced a new curriculum 2005, which aims to empower children to become more actively involved in the learning process. There is however, a shortage of culturally sensitive teaching material, for teachers to develop appropriate learning activities to meet the needs of learners in the area of health and hygiene. It is important to gain insight into children's perceptions before health promotion material is developed.

The aim of the study is to explore the knowledge and perceptions of learners in health and hygiene related issues and to make recommendations.

A qualitative, descriptive exploratory study was conducted in six schools in the Western Cape. Data was collected by using a child-friendly technique, the draw and write exercise as well as focus group discussions. The study population was Grade 1 to 7 learners at six primary schools in the Western Cape. Random sampling was done of 40 learners at each school for the drawn and write exercise, and purposive sampling of six learners per school for the focus group discussions. The draw and write exercises were manually analysed. The focus group discussions were categorized into the following themes: hygiene, healthy behaviour, unhealthy behaviour and availability of resources.

This study have shown that learners have a fair amount of knowledge regarding things that could keep them healthy: fruit and vegetables, trees, clean water, as well as things which causes illnesses/diseases such as smoking, unhealthy diet, substance abuse and dirty water. Despite these perceptions, the majority of learners focused primarily on health and unhealthy food, which was not always available or accessible in their communities.

The enthusiastic attitude of children towards the exercise does indicate that they were keen to participate and find out more. It is recommended that a working group, consisting of the relevant role-players, explore the issues that emerged in order to develop a strategy designing health and hygiene learning material relevant to the context in which the learners live, and in line with Curriculum 2005 learning areas.

CHAPTER 1

1. INTRODUCTION

Health is related to social, cultural, economic, biological and environmental factors, which include the availability of resources such as potable water and sanitary facilities. According to the WHO (1993) communities stays healthy or suffer from ill health as a result of their own behaviour. However, South Africans have been confronted with key determinants of inequality such as poverty, unemployment, bad housing, social isolation, malnutrition, pollution, ethnic minority status and gender issues which ultimately reduces the quality of life of many communities(Reid, 1997; Steyn et al, 1987).

According to the WHO(1996) many learners suffer from easily preventable, curable or manageable health problems that interrupt their ability to learn, develop normally and enjoy their schooling. However, children can also be seen as active risk assessors and problem solvers who develop strategies to survive hostile environments (Davis and Jones, 1996).

It has been estimated that more than 800 million cases of diarrhoeal diseases occur every year in developing countries causing approximately 3,3 million deaths of children (Pegram et al, 1998). Non-diarrhoeal related conditions such as scabies and helminthiasis have also been related to water and sanitation conditions (Esrey et al,1986). A third of the world's population is infected with parasitic worms with poorer communities more at risk if they reside in crowded, unhygienic surroundings which

facilitate the spread of faecal-oral pathogens (Curtis et. al, 1997). In South Africa 20% of all deaths in the one to five year age group is as a result of diarrhoea caused by poor access to water and sanitation (Kibel & Wagstaff, 1997; Pegram et al, 1998).

Diarrhoea can be transmitted through poor water quality, direct contact with contaminated water sources, transmission via hands, food, eating utensils, insects, contaminated soil together with contact with an infected person (Pegram et al, 1998). It has also been found that people's hands are often contaminated with potential harmful bacteria such as Salmonella and Escherichia Coli which can cause infection of the skin, open wounds, urinary tract and gastrointestinal tract (The Dettol Papers,l998). Diarrhoeal diseases impact on nutrition, reducing immunity to other diseases and affect the cognitive development of children. These type of diseases also lead to discomfort, pain for the victims and families; social disruption, lost economic opportunity and increasing health costs for individuals families and societies, resulting in long-term impact on infant mortality as well as health and education strategies (Ebrahim, 1982).

During previous years, infectious diseases such as diphtheria, measles, mumps, rubella and whooping cough were regarded as a major health risk among children in the Cape Metropole. Improved hygiene in the form of safe water supply, sewage disposal, and food hygiene have been directly linked to a decrease in infant and child mortality since the mid 19th century (Ebrahim, 1982). It was found by Esrey et al (1986) that health benefits due to water and sanitation improvement were dependent on behavioural patterns coupled with appropriate intervention (Esrey et al, 1986; Esrey et al, 1988). Many studies have indicated that the most effective methods of preventing diarrhoeal diseases are: provision of clean drinking water, proper hand washing, good home and

environmental hygiene and sanitation, avoidance of potentially harmful substances and contaminated foods, improving communication and education systems as well as effective public health programmes and availability of treatment (Waldman, 1993). A positive impact on diarrhoeal morbidity was noted in a study undertaken by Pisani (1994) when hygiene practices were improved. Communities with improved water supply and/or sanitation accompanied by education and income are less affected.

The Convention on the Rights of the Child, ratified by South Africa in 1995, the Ottawa Charter on Health Promotion as well as the Jakarta Declaration on Leading Health Promotion into the 21st Century have provided a framework for children's participation as partners in health (Maternal and Child Health, 1999). Therefore, targeting children of school going age could impact on an important section of the population (Taylor et a, 1999).

Children spend approximately 25% of their time at school, therefore schools have the ideal setting to plan and implement health intervention programmes to minimise illness among learners (Haynes, 1997). Furthermore schools should provide learners with the following: safe water and sanitary facilities and protection from infectious diseases so that staff and learners are able to take health education seriously and practice healthy forms of behaviours (WHO, 1996). However, many schools are unable to fulfil this function due to lack of resources.

If schools do not deal with children's health by design, they deal with it by default – (Marx, Wooley, Northrop, 1998). If schools do not build health promotion programmes into the curriculum they will have to deal with the consequences afterwards. It is therefore important to gain insight into children's perceptions before health promotion

material is developed.

This study investigates the views and perceptions of learners with regards to health and hygiene, identify gaps and make recommendations to the Western Cape Education Department for the development of adequate learning materials and activities.

1.2. PROBLEM STATEMENT

The Western Cape Education Department has introduced a new Curriculum, 2005, which aims to empower children to become more actively involved with the learning process. However, there is a shortage of culturally sensitive teaching material, for teachers to develop appropriate learning activities to meet the needs of learners in the area of health. There is also a lack of information about children's perceptions of health and hygiene to inform curriculum development.

1.3 SIGNIFICANCE

The information gained will be utilised to make recommendations to the Western Cape Education Department for the development of culturally sensitive health education material in the learning area, " life orientation" regarding water, sanitation and hygiene programmes.

1.4 DEFINITION OF TERMS

Curriculum is defined as those teaching and learning activities including experiences, which are provided by schools.

Curriculum 2005 – The new curriculum that was introduced by the Department of Education.

Draw and write exercise- A qualitative data collecting method used to gain insight into children's health perceptions.

Learners – Children who attend school.

Urban areas - Areas with some form of local authority, as well as areas of an urban nature without any form of local management. All other areas are classified as non-urban. Residents of informal settlements immediately adjacent to the boundaries of a town are counted as non-urban (Statistics in brief,1997).

HPS – Health Promoting Schools.

Gardia and Cryptosporidium are waterborne parasites, which have been identified throughout the world as the most frequently occurring intestinal parasites and as the most common causes of water-related diarrhoea. They cause acute, sporadic gastroenteristis in otherwise healthy people, particularly children, in both developed and underdeveloped countries as well as in travellers, and can be potentially fatal in immuno -compromised persons.

Drinking water- The end product of water purification works where raw water is treated to provide clean and healthy drinking water.

Health categories – Health issues mentioned by the learners which have been categorised such as healthy behaviour, diet, exercises and unhealthy behaviour such as smoking, poor diet and dirty water.

1.5 Ethical Considerations

Permission to conduct the study requested from the Western Cape Education Department as well as the schools who participated in the study. Verbal permission was requested from the parents and they were allowed to put forward any objections forward.

Process

Children who participated were assured that the information obtained would not be used against them.

Confidentiality

The identities of all participants were protected to ensure anonymity.

CHAPTER 2

2.1 LITERATURE REVIEW

South Africa is a multi-cultural society with different socio- economic strata, the majority of the population of whom come from the lower socio-economic class. Historically, under the Apartheid Laws and Bantustan scheme of H F Verwoerd, the Western Cape was classified as a Coloured preference area, Blacks were forbidden to settle in the region because the homelands were created according to the Natives Urban Areas Act of 1923. Influx control together with the pass system was practised. However, Coloureds and Indians were forcibly removed and relocated far from their places of work. This together with the Group Areas Act (repealed in 1991), resulted in enormous disruption of families and the growth of densely packed townships and informal settlements (Warden et al, 1996; Joyce, 1990).

Resources such as money, skilled labour, employment, services and basic needs are scarce. Rapid urbanisation has also led to overcrowding, overburdened resources and changes in cultural practices to the extent of undermining family stability in particular Black families (Steyn et al, 1987). Disadvantaged communities, especially when women suffer with fatigue, become demoralised and emotionally withdrawn, resulting in neglect of the children. The afore-mentioned issue have direct influence on the health, social and environmental perceptions of children; it affects stress, social support and have an adverse effect on their development (Kibel and Wagstaff, 1997, Steyn et al, 1987). In the Western Cape, the Cape Flats has been plagued by an increase in crime, urban and gang related violence as well as an increase in the unemployment rate. Many killings

involving innocent children and bystanders have taken place (Die Burger 15 June 1999, 14 June 1999). These issues impact on the behaviour of learners resulting in symptoms of bullying, lack of discipline, violence, low self esteem, distrust, high dropout rate, disrespect, depression and truancy which compromise the teaching process as well as extra-mural activities (Stoffels, 1997; Van Niekerk, 1990).

The Western Province has experienced the effect of strong cut backs in central government to normalise inequities, resulting in shrinking academic, health and educational services and mass retrenchment every year. The transition has taken it's toll on personnel who suffer with low morale as result of the problems experienced with the reconstruction (Wescor, 1997).

The South African Bill of Rights guarantees all South Africans the right to an environment that is not harmful to their health and well-being, the right to have the environment protected for the benefit of present and future generations (MCH, 1999). Despite the above-mentioned Bill, many South Africans have been confronted with key determinants of inequality such as poverty, unemployment, bad housing, social isolation, malnutrition, pollution, ethnic minority status and gender issues (Reid, 1997; Stein et al, 1987). Alongside these issues were the failure of the previous government to link health goals with broader social policies (Reid, 1997). One example of this failure is the present water and sanitation provisions for many disadvantaged communities.

The right to dignity was infringed upon by the failure of the previous government to provide sanitation and clean accessible water for basic human needs to many citizens.

Many people in South Africa have access to clean safe water by simply turning on a tap in their own homes. Sadly, there are many including school children, who do not have easy access to water and therefore rely on rivers, dams, buckets and village pumps for their daily needs (Department of Water Affairs and Forestry, 1999).

The main sources of domestic water according to the October 1995 census were the following:

- Running tap water in dwelling 51,4%;
- Running tap water on site 20,2%;
- Tap water from communal tap 11,1%;
- Borehole/well 7,1%;
- River/dam/spring 9,8%;
- other 0,5%.

Sanitation services were as follows:

- Flush/chemical toilet 59,7%;
- Latrine with bucket system 4,9%;
- Pit latrine 27,6%;
- No facility 7,7%.

Refuse removal:

- By local authority 58,0%;
- Communal refuse dump 3,6%;
- Own refuse dump 25,7%;
- None 12,7%.

Some informal settlements that do not have taps are supplied with mobile water tanks by the nearest municipality. Chemical toilets sponsored by private companies are also supplied. Still, there is no water nearby for residents to wash their hands; they have to go to their homes to wash their hands. The above-mentioned scenario has an impact on the prevention and control of diarrhoeal diseases in communities. The nature and transmission routes of diarrhoeal diseases have implications for the type of health, educational, social and infrastructural interventions necessary to combat it. According to a study undertaken by Pegram (1998) in Kwa Zulu-Natal, approximately 14% of children < 5 and 28% of children between the ages of 5-16 years were affected by diarrhoea, resulting in 43 000 deaths and lost productivity of 3, 200 000 school children and 18, 000 000 adult victims as well as caregivers. Up to 15% of South Africa's health budget is spent on addressing diarrhoeal disease, resulting in a total cost of approximately 1% of the GDP (R3.44 billion)(Pegram et al,1998).

An adapted table from Pegram(1998) displays the estimated costs and loss of productivity per day in South Africa:

Table 1

South Africa	Diarrhoea
Total number of cases(incidents/yr)	24 000 000
Required treatment (incident/yr)	2 800 000
Mortality(deaths/yr)	43 000
Lost productivity (d/yr)	
Adult victims and care givers	18 000 000
School children	3 200 000
Health system (#/year)	
Health care visits/year)	4 000 000
Hospital (d/yr)	4 900 000

From this table it becomes clear that Intervention in water and sanitation infrastructure in line with the RDP Community Water supply and Sanitation programme needs to be implemented, accompanied by hygiene education, extension of primary health care service within an integrated multidisciplinary framework which include the Education Department, Environmental Services and Health Sectors (Pegram et al, 1998).

A comparative study was conducted in Bangladesh to determine hygiene behaviour that caused diarrhoea infections in children on two different families. A household with the highest number of diarrhoeal infections and a household with the lowest incidence was compared to ascertain which was more likely to be associated with high rates of diarrhoeal diseases. Mothers were asked to mark episodes of diarrhoea on special calenders. Researchers found that in the household with the higher incidence of diarrhoea, the mother did not wash her hands before preparing food, infants were

allowed to defecated in the family living area, and household waste was left uncovered in the living area.

Health messages were then designed to improve hygiene behaviour such as hands washing before food preparation, encouraging children to defecate in a latrine or special site and safe disposal of garbage and infant faeces. A follow-up study revealed that the health messages yielded positive results by reducing the number of diarrhoeal infections especially among the two and three year olds (Clemens and Stanton, 1991).

Promoting improved hygiene behaviour has been shown to halve the rate of diarrhoea infections. According to Huttly(1997), 10 studies aimed at improving hygiene practices, all yielded a positive impact on diarrhoeal morbidity in young children indicating a median reduction of 33% with a range of 11-89%; hand washing studies which focused on hand washing yielded a median reduction of 35% with other behaviours a reduction of 26%.

The results of these studies indicate that greater health impact could be achieved if a single behaviour was targeted and not if too many messages were being promoted.

In a study conducted in Zimbabwe by Gwatirisa(1991) it was found that the provision of latrines do not necessarily change hygiene practices. People agreed in principle to make use of the latrines but their work areas were far from their household toilets resulting in them having to waste time by walking back and forth to use a toilet. However, they decided to bury faeces in small pits near their gardens. Hence, behavioural studies carried out before an intervention can reveal what people think and

do about hygiene, why they act in a specific way. Practices responsible for transmitting infection vary from household to household. Monitoring and evaluation of behaviour after water and sanitation programmes have been implemented, can provide useful information for identification of barriers.

Both infrastructure improvements and changes in hygiene behaviour are required to reduce the incidence of diarrhoeal diseases in communities.

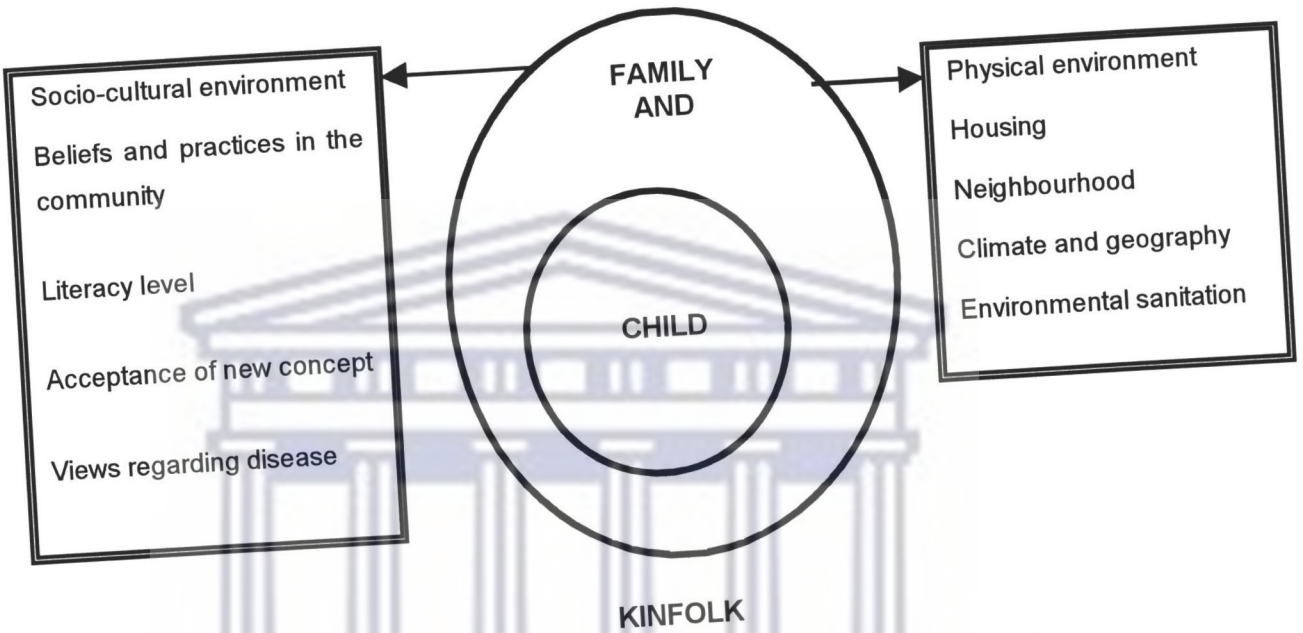
Values are beliefs and standards shared by people in a community or school community but also differ from one to the other. They could be useful or harmful, but difficult to challenge. Traditional beliefs often conflict with good health practice (Young & Durston, 1993). Knowledge gained from information provided by teachers through health promotion programmes at schools may fade unless it is reinforced through community practices, such as parents, friends, health personnel books and newspaper and personal experiences. A large portion of our society's way of life, its values and behaviour patterns are the product of a distinct cultural system.

Children's perception depends on their understanding of significant issues in the environment. They rely on their five senses to gain information about the outside world, which forms the foundation for learning (Winkler et al, 1998). Language skills are very important for communication and critical thinking. If children struggle with language used in the classroom they might experience difficulty with learning. It has been found that mothers play an important role in the psycho-social development and support of the child (Ebrahim, 1982). Learning how to be healthy and to enjoy life is an attitude. It has been a known fact that negative feelings impact on the physical performance persons

therefore children need to learn positive values and self respect by example (Dyer, 1987; WHO, 1993; Barnett et al, 1994;Van Niekerk, 1990).

Behaviour should also be understood within the context of growth and development of the child (Kibel & Wagstaff, 1997; Van Niekerk, 1990). Children enter school with many ideas picked up from home resulting in "school knowledge" being kept for school and "home knowledge " for the home (Young & Durston, 1993; Ebrahim, 1982). Teachers provide a planned environment laying the foundation for the development of hand-eye co-ordination, develop spoken language and balance. In a study conducted by Tizard et al, (1984) at a pre-school on how children learn. The school curriculum was found to be narrower than the home's because a smaller range of topics was covered. Children had to learn a new code of behaviour at school. Some forms of behaviour that were insisted on at school were regarded as much less important at home and visa versa. At home the child has to deal with family relations, domestic matters and social world (Tizard and Hughes, 1984). This scenario becomes more complex by the continuous change that health education and promotion are undergoing with new developments in health and medical information (Young & Durston, 1993).

Figure 1 **"Environmental influences on child health" as illustrated by Kibel and Wagstaff (1997).**



According to the Appropriate Health Resources and Technologies Action Group Ltd, (1991), hygiene behaviour that influences diarrhoea transmission in communities are:

Areas of defecation;

When and how hand washing is done;

Disposal of babies' feaces;

Water use and storage;

Food preparation;

Personal and domestic activities.

Intervention into diarrhoeal diseases fail if it has not been appropriately designed or put

into practice which could be due to a lack of understanding about what people think about hygiene or why they behave in a certain way or if the wrong behaviour is targeted. An understanding of existing hygiene behaviour is important for appropriate behavioural change. People may know about the safest practice but could be limited by certain constraints (Huttly et al. 1997).

It has been noted that in many communities especially among older people, it was not appropriate to discuss hygiene issues (AHRTAG, 1991). In Papua New Guinea, a study conducted with mothers to determine what they believed about babies faeces and the spread of infection, it was found that those who believed that infant faeces were not a source of infection's children were more likely to have diarrhoea. An observational study conducted in Bangladesh on water use, revealed that although people replied that they had access to clean water from hand pumps and when questioned replied that they used clean water researchers found that they also made use of contaminated pond water for household purposes. It is evident that education must be based on a deep understanding of how people think about hygiene and what they do (AHRTAG,1991).

Curtis (1997) has identified crucial questions that need to be investigated regarding hygiene practices,

1) those that put children at risk of infection,
2) priority intervention methods,
3) target groups,
4) channels of communication,
5) resources as well as,
6) how to build on positive perceptions, knowledge and practices to motivate people to

change their behaviour (Curtis et al, 1997; Young & Durston,1993).

Health education on water, sanitation and hygiene should aim to provide children with the necessary learning experiences to encourage them to practice good hygiene at school, in their community and in later life.

The "Notes and News" Magazine on School Sanitation (1995, no. 1) enumerates the importance of health education on water, sanitation and hygiene as follows:

1) children are vulnerable to water and sanitation-related diseases;
2) they are more open to new ideas than adults;
3) they try out new things more easily;
4) they pass on knowledge and experience to parents and siblings;
5) often students have little access to health services due to poverty and busy parents; and
6) They will become better parents and health activists in their community.

In addition a report by the WHO (1999), suggests that schools are economically efficient with potential to provide sequential programmes, experienced teachers are available, schools have credibility with parents and community members' short term and long-term evaluation can be done (WHO Technical Report,1999).

It should be acknowledged that although health education is a powerful tool, it cannot reduce disease and inequalities on its own. It must be accompanied by major efforts to reduce social, economic and political ills. (Reid, 1997; Kibel and Wagstaff, 1997; Steyn et al, 1987). Many professionals involved with health promotion throughout the world

have acknowledged that effective intervention, which involves behavioural change, requires careful and well-planned groundwork (Curtis V et al, 1997). In spite of this, human behaviours need to be a health risk as well as highly prevalent to warrant large scale intervention. According to Monte (1994), who conducted a study on weaning food hygiene amongst mothers, suggested that the key was to find out which harmful practices can be changed and how to change it. Hence, the focus was on priorities identified by the mothers themselves that included common unhygienic practices (Monte, 1994).

Barnett et al(1994) suggest that the health education curriculum should operate through other processes as well, amongst others:

1) School Health Services;
2) Health Promotion Models
3) Water and sanitation initiatives through active contact between schools and community (parents) and non-governmental organisations.

School health services have played an important role in the promotion of healthy behaviour and prevention of major health related conditions amongst learners through health screenings, building inspections and by conducting of health education programmes at schools (Kibel & Wagstaff, 1997; Marx et al, 1998; Barnett et al, 1994).

Common ailments detected amongst learners were dental caries, skin conditions, asthma, influenza, ear infections, diarrhoea and vomiting and visual defects. Social-emotional issues range from abuse, poor personal hygiene, smoking, substance abuse to teenage pregnancies (Engle, 1997, unpublished paper; Western Cape School Health

Reports,1996).

The launch of Health Promoting Schools initiative introduced a new approach to health promotion at schools. School nurses as part of a district health team have been encouraged by the Western Cape Forum for Health Promoting Schools to make the introduction of HPS a priority (Kibel and Wagstaff 1997; Health Promoting Schools Workshop proceedings; 1997). Further developments in child health services in the Western Cape have been the devolvement of the Red Cross Children's Hospital services to the districts, followed by the introduction of comprehensive free child health services at district level. This process of integration has made health services more available and accessible for children in the districts.

Overall school health services in this country, as in many other African countries, have not been very effective due to a lack of national policy with clearly defined roles and responsibilities at all levels of the health component (WHO,1999). Which, indicated that a new approach to School Health was necessary.

According to Hubley (1998) a working definition of school health promotion should comprise the following elements: school health services, school environment and school health education. School health promotion can therefore be considered to be the overall purpose of a school health programme and health education is one of the mutually reinforcing components (*Ibid.* 1998).

One of the most effective participatory methods is the **Child-to-child** programme, which originated in response to the International Year of the Child in 1979 (Guthrie, Hawes and

Morley, 1978). The initial emphasis was on developing ways through which the older child in school can take care of the younger child within the family, but the concept has become much broader. It now includes children working to promote good health with their peers, their families and their communities (Hawes, 1990). Hawes and Scotchmer, (1993) state that *children can act as the conscience of a community'*.

The Child Resource Centre, a Non-governmental Organisation based in Salt River, Woodstock has initiated Child-to-Child activities at a few schools and aftercare centres in Khayelitsha. This Centre focuses on issues such as personal hygiene where less privileged children are given parcels that contain items such as soap, a face cloth, toothbrush etc. Children are also taught responsible behaviour such as taking care of their own bodies(Western Cape Health Promoting Forum Workshop Proceedings, 1999).

The concept of a health promoting school has emerged from work carried out in the United Kingdom. Three core elements were emphasised by Hubley(1998): the school curriculum, the school environment (hidden curriculum) and the school interaction with the home and the wider community (school outreach) – (Hubley, 1998). The World Health Organisation supports this concept which has been drawn from many other health promotion models and encourages such initiatives throughout the world.

In South Africa, Health Promoting Schools have taken off very well in the Western Cape since it's introduction in 1996. Initially overburdened health and education professionals perceived it as additional work being forced upon them. Gradually, the enormous potential of the model for developing communities was realised by health and education experts. There were many projects in existence at schools, which were very often

uncoordinated and isolated as well as dependent on individual motivation, a teacher at school and funds. Shortage of funds and mismanagement often led to disintegration of projects, or teachers who have received specific training regarding a project leave the school.

Currently, more than 60 schools (rural and urban) have adopted the concept using various health and/or social issues as entry point for example self-awareness, nutrition, safety, discipline and helminth infections. A recent study conducted in Kwa Zulu Natal on helminth infections has concluded that HPS would support, reinforce and sustain helminth control programmes in the schools. (Taylor et al, 1999). Significant progress was made when the National Office for Health Promotion adopted HPS as policy. It is also in the process of being adopted by the Education Department as National Policy. Funds will be allocated to support HPS initiatives. Other provinces have also been encouraged to adopt the concept and learn from the Western Cape experiences (The South African National Health Promotion Workshop, 1998). Inter-provincial networking have already been initiated through meetings and introductory workshops with representatives from both the Health and Education Department.

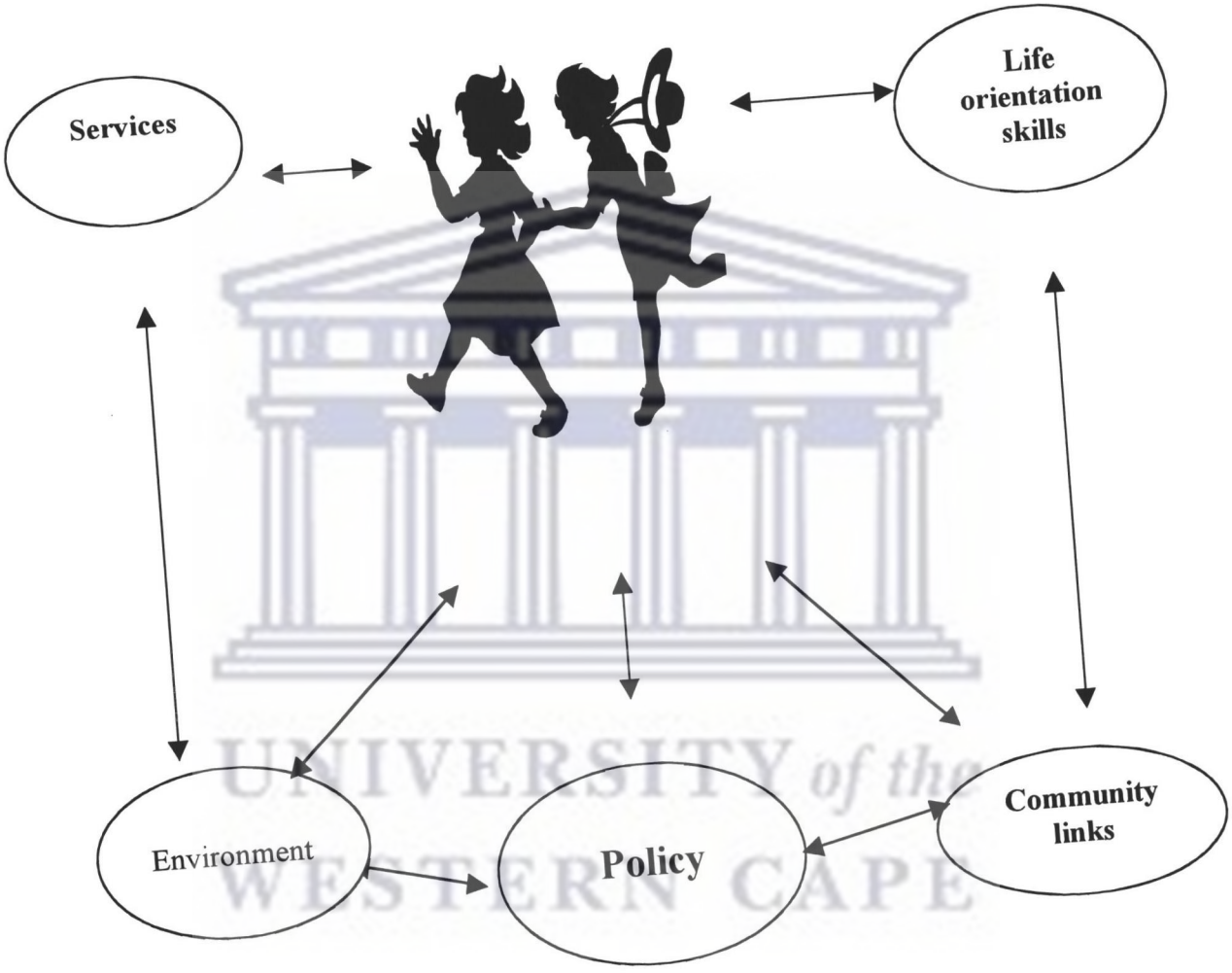
A success story, which has received much media attention, is the Eastville Primary School Project, which was initiated in 1994/95 by three Eastridge community members with the purpose of creating a healthy environment, promoting development and creating economic opportunity amidst **challenging circumstances**. Eastridge is a residential area situated in Mitchell's Plain Health District, a community of low socio-economic status on the Cape Flats confronted daily with gangsterism, crime and violence. At present the school has a flourishing vegetable garden and provides daily employment for

community members in need. Teachers have also initiated Child-to-Child activities, which have been integrated into the curriculum, covering topics such as balanced diet, growth monitoring, treatment of diarrhoea, positive self-image and environmental conservation including water auditing.

Sales from the vegetables are reinvested into the project as well as group development initiatives. Both children and parents are benefiting as they are exposed to gardening, employment opportunities, nutrition and a well developed school premises which they are part of. Long-term sustainability has been encouraged through the Health Promoting philosophy networking and reaching out to other schools (Summary of Health Promoting Schools Working Group Meeting Mitchell's Plain, 1999).

The components of a Health Promoting School are illustrated in figure 2:

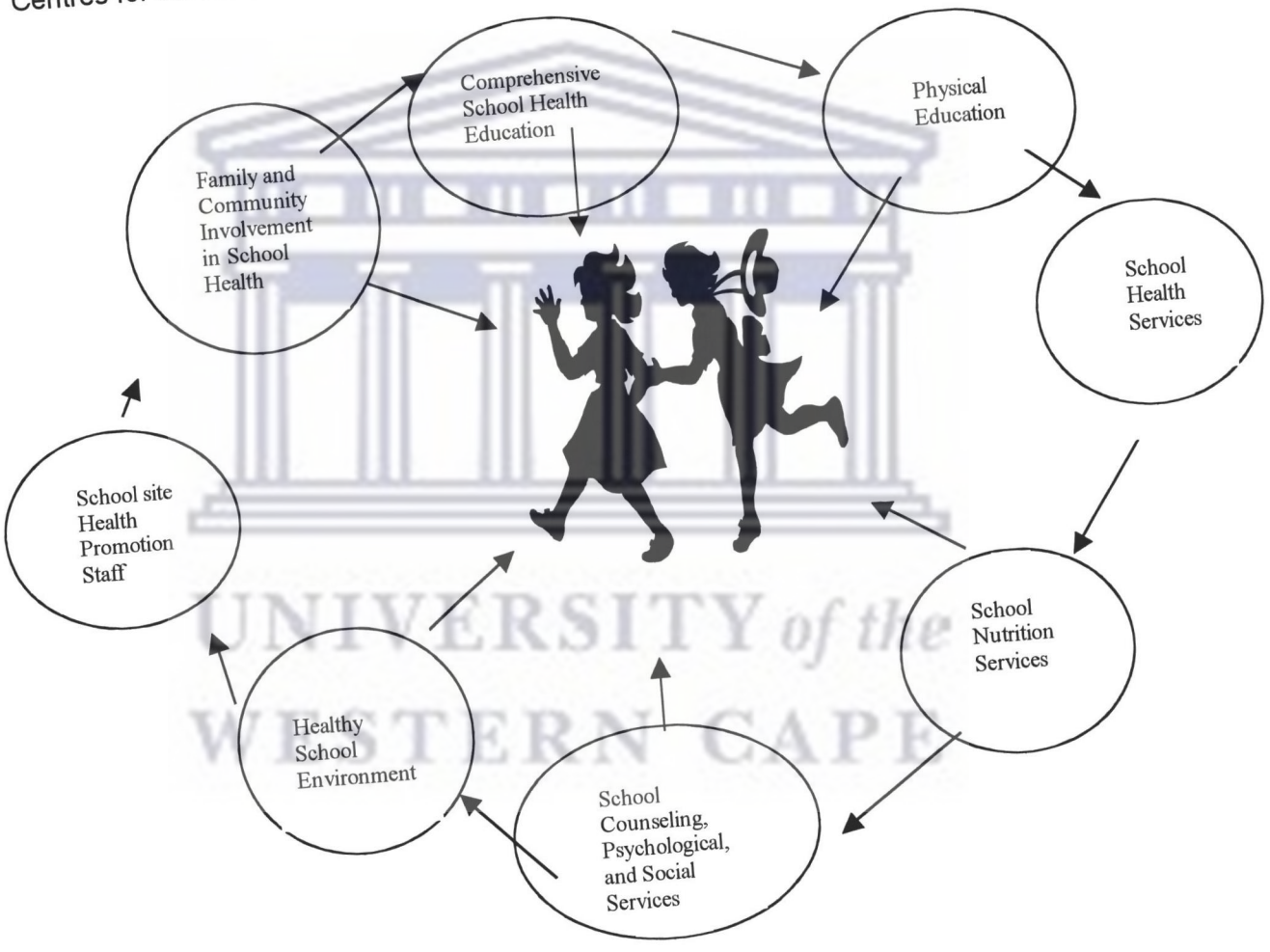
Figure 2 The Health Promoting School Model in South Africa (Health Promoting Schools Workshop Proceedings, 1998).



The Health Promoting Model of restructuring school health has much in common with the comprehensive School Health Program proposed by Allensworth and Kolbe (1987)

in United States figure 3 below (Marx et al, 1998). The Comprehensive Health Model requires commitment and continuous involvement of school and community professionals including community members, learners and family members.

Figure 3: **A Co-ordinated School Health Model** (Marx et al, 1998 as adapted from the Centres for Disease Control and Prevention)



Implementation of the above mentioned model faces challenges very similar to the

Health Promoting School concept such as, lack of co - operation and co-ordination, lack of funds, fragmentation of services, conceptual an physical barriers, and in the Western Cape, lack of resources and the low priority of HPS due to the rapid changes that have taken place in the Education System (Swart & Reddy, 1999).

The variety of health promotion models cited, reveal many commonalties with each other and can be integrated where possible. However, concerns and challenges have been discussed in a recent WHO(1996) report.

Theories and frameworks for an integrated approach appear to be relatively sophisticated, their application and adaptability to different nations and cultures including evaluation have not been completely developed. Policy development, intersectoral collaboration and frameworks, administration and financial support remain a problem. Evidence of successful interventions have been noted but only specific health problems have been addressed, practical guidelines on implementation were lacking, although many models exist, information on a truly comprehensive approach to school health is limited (WHO, 1999). The concept of Health Promoting Schools has been well received by the Departments of Health as well as Education due to its comprehensive approach and similarities with outcome-based education. Continued development, implementation and evaluation of projects need to be encouraged on a regular basis which have much in common with outcome based education.

Curriculum encompasses aims and objectives of the Education System, subjects, programmes and syllabuses, relationships between teacher and learner, assessment and evaluation (National Education Co-ordinating Committee, 1992). In South Africa the

NECC (1992) argues that implementation of "curriculum in use" is affected by resources and texts, which support the teaching/learning process, experiences of disruption or continuity, quality and morale of teachers, in service training and knowledgeability of teachers (Ibid, 1992).

According to the NECC (1992) no core curriculum existed for South African schools but, approximately 1400 core syllabuses were registered and strict subject content for the various standards and phases governed the schools (NECC, 1992). Schooling was divided into four phases (see appendix 2):

1) Junior and Senior Primary phase, where subject content covered a wide field which included compulsory subjects such as health education and environmental studies which integrates history, geography, science and health education,

1) Junior and Senior Secondary, junior phase with compulsory subjects such as environmental studies and health education. The curriculum was divided into headings namely the child, my family, my home, my school and my community. Guidance notes were provided with skills required or to be acquired including examples of activities that teachers can use to enhance learning and initiate learner participation (Western Cape Education Department's Instructional Programme for Environment Studies). The Senior Secondary phase included health education and family guidance; career guidance as non-examination subjects thus depending on individual motivation and teacher initiatives.

After 1994 the new government instituted procedures to deal with inequalities, which had a major impact on the structure of schools (NECC, 1992; Steyn et al, 1987). The previous South African curriculum favoured white school students whereas the majority

of non-white students experienced low progression rates, disunity, inequality based on racial and gender, language culture, religion, regional differences and resources. There was a low participation education with a high drop out rate among the black learners (NECC, 1992). Rote learning was encouraged and overemphasised while critical thinking, reasoning, reflection and other conceptual skills were neglected. There was a lack of developmental and psycho-educational perspective in the health education curriculum.

Health education has been taught in schools as a separate subject (Barnett et al, 1995). Broad content areas were covered such as: Personal health; Family health; Community health; Growth and development; mental and emotional health; injury and safety; nutrition; prevention and control of disease; sanitation, pollution, prevention of substance use and abuse (Marx et al, 1998; Barnett et al, 1994). These subjects are broadly according to WHO recommendations and forms part of curriculua globally (Barnett et al, 1995). Dyer (1987) argues that materials displayed a lack of involvement or participation by other role players such as learners, teachers and parents and primarily focused on transfer of knowledge or health facts from educator to learner only. Concerns such as relationships with parents, friends, teachers, personal and political issues were not touched upon (Barnett et al, 1994).

However, learning and teaching approaches have changed. There has also been a gradual change in the understanding of how children learn. They need to be empowered to become actively involved in constructing knowledge, understanding and skills as well as apply what they have learned in a real life situation and maintain healthy behaviours (Marx et al, 1998). Especially the adolescent needs to develop a sense of

independence and emancipation and techniques for dealing with complex personal, national and world problems (Magoon, 1973). Furthermore, feelings, (the affective domain) which is a significant part of life, have been ignored due to an overemphasis on the acquisition of knowledge (cognitive domain), at home and at school (Dyer, 1987). Constructivists argue that learning consists of building on what the learner brings to the situation and restructuring that knowledge in widening and intersecting spirals of increasingly complex understanding of their environment (Marshall, 1994). Diverse processes and methods to build knowledge should be encouraged within a meaningful and integrated context. Both the teacher and the learner can assume multiple roles of generating knowledge, challenge the thinking of others and assume responsibility for their continued learning. Teachers must expand their knowledge and modify their teaching practices to acquire a deeper understanding of what children know and understand and how learners can be encouraged to realise that having the correct answer was not sufficient evidence of learning (Marshall, 1994).

Yet, understaffing, lack of skills, overcrowded classrooms together with an overcrowded curriculum resulted in core subjects taking up most of the teachers' time with subjects such as health education, career guidance and life skills being neglected (NECC, 1992). Teachers have undergone in service training regarding Aids, HIV and Sexuality but very few schools have implemented life-skills as a subject due to uneasiness with subject content, lack of experience and staff shortages (Personal communication with school psychologists).

Curriculum 2005 (Appendix 2) came about as a result of the need to transform education from a teacher centred to outcome–based education for many reasons; the previous

system of education did not encourage children to make sound judgements in a rapidly changing world (Heinemann, 1997). Furthermore, education could be regarded as a life long process that begins before birth and ends only with death. (British Council, 1998).

Seven critical cross-curricula outcomes have been identified which consists of eight learning areas as the foundation of education in South Africa. One of these learning areas is life orientation, which encompasses health and hygiene (life skills). For learners this implies that learning and teaching should be focused on a holistic, integrated development of the person. Learners should be able to apply what they have learned in real life situations and take responsibility for their own health. Children can learn more effectively if they are provided with rich learning experiences to actively build up their own understanding (Heinemann, 1997).

Implementation of Curriculum 2005 has taken place in Grade 1 at a selected number of schools in the Western Cape in 1998, (See appendix 3). Currently, Grade 1and 2 teachers have completed their training and Grade 3 teachers are still receiving training in Outcome Based Education which will be followed by implementation at the Primary Schools. Those teaching the higher Grades have to integrate the thematic approach into their syllabus. (See appendix 4) This process will be followed annually until all 12 Grades have fully implemented to the new curriculum (White Paper for Education, 1995).

The participatory approach of Curriculum 2005 have much in common with the Health Promoting Model whereby learners, teachers as well as community members are actively involved in the learning process. According to Marshall(1994) the curriculum is that which is constructed by teachers, learners and texts in the process of interaction.

Various elements influence the selection and implementation of instructional tasks such as the,

1) nature and structure of knowledge,
2) what is worth knowing,
3) how a teacher thinks learners learn, and
4) the repertoire of strategies a teacher can use.

These elements continuously interact with each other. This process also involves the relearning of both teachers and learners (Marshall, 1994).

It is therefore very important that views and perceptions of learners be sought before health education materials are developed.

Hygiene and Sanitation initiatives in South Africa

Many township renewal projects have been initiated by the Reconstruction and Development Programme (WESCOR,1997) as well as hygiene and sanitation projects by other government and non-governmental organisation throughout the country. A brief review will be done of existing hygiene and sanitation initiatives in South Africa.

The South African School Hygiene Education Project (SASHEP)

This project aims to develop a child-oriented sanitation and hygiene education curriculum "*that is informed by the perceptions of children and adolescents in primary school*". Aleobua, (1998**):** It is a multi-phase research still currently underway in three provinces of South Africa. The methods that have been used to investigate the learners'

perceptions of water, sanitation and hygiene practices are 'draw-and-write' (younger learners) and focus group interviews (adolescents). Very few studies have looked at Child-to-Child initiatives in South Africa.

The Vision 2020 Schools Project

This is a national programme on the awareness of the conservation of water, run by the National Water Conservation Campaign launched in October 1995. South Africa is a water-stressed country and might be water scarce by the year 2020. The programme aims to bring about a change in the attitude to water usage by having school children transfer knowledge to their home setting and into the community in which they live. Learners are taught how to conduct a water audit in order to increase the awareness about water consumption.

The Schools Groundwater and Environmental Awareness Project

The objective of this project is the protection of South Africa's groundwater resource from pollution and optimal management of the resource in order to ensure its preservation for future generations.

One example of South African activities is that of the Schools Water Action Programme. Their activities include the development of low cost water test kits to measure the chemical, physical and biological quality of local water sources, and the printing of resources for learners for example workbooks on how to conduct water audits in school or at home (Schreuder, 1997). The above-mentioned initiatives are excellent projects

for motivated school personnel to implement.

Issues regarding water, sanitation and hygiene – studies conducted elsewhere

Schools require clean water for drinking and washing of hands, well kept school environment with bins provided for refuse, clean conditions for food preparation with proper supervision and clean toilets that are properly maintained (Hubley, 1994).

Despite all good intentions by Local Authorities, for many schools in the Western Cape these requirements have not been realised. Hubley (1998) suggests that although it is 'difficult to generalise from published studies of health education in developing countries on the ingredients that contributed to success or failure [of programmes]... the following appears to be important: an *initial needs assessment* which takes into account and involves teachers, parents and children; *training of teachers*, *follow-on support* of teachers and community-based activities (*Ibid. 1998*).

Various studies regarding hygiene knowledge and practices were conducted elsewhere. In a study conducted in Leeds, United Kingdom, the hygiene knowledge of pre-school learners was assessed by means of story telling (Kalthenthaler, Elsworth, Schweiger, Mara, and Braunholtz, 1994). When asked why hand washing was important, 175 (33%) said it is to remove germs, 56 (10%) said to remove dirt, 291 (54%) said they did not know why, and 15 (3%) said because their mother said they have to. An association was found between each child's hygiene knowledge score and faecal contamination on the child's hands. The following issues were considered important from interviews conducted with teachers, caretakers and nursery nurses:

1) Lack of supervision in the toilets

2) lack of hygiene knowledge in children and no back-up from home and

3) inadequate provision of soap, hand towels and toilet paper in some schools.

Sörensson (1995) reported on a study conducted in India on school water, sanitation and hygiene education of 22 schools in Madras. He argues that the state of water and sanitation in schools depends on the attitudes of individual teachers, since a positive attitude strongly influences the other staff and children. In 1983, in Uganda, less than 7 percent of its people had access to safe water supply and approximately 8 percent had sanitary latrines. At the time, unsafe water and sanitation-related disease was the second leading cause of death among infants (16% of all deaths). In a study conducted by Black (1981) in day care centres, it was found that staff training in hand-washing and hygiene coupled with regular monitoring resulted in a decrease in infant-toddler diarrhoea. Esrey (1996) found that improved water and sanitation combined were synergistic in the improvement of diarrhoea and anthropometric factors (Esrey, 1996).

In Kwa Zulu Natal a study was conducted to investigate risk factors for geohelminth and schistosomiasis infections in learners. The survey included focus group discussions with 179 learners in 9 Primary Schools and questionnaires completed by 730 learners from Grade 3-7, 93 parents and 82 teachers as well as local clinic nurses. It was found that 88,9% had toilets at home, 29,9% were motivated to use the toilets for faecal disposal (predominantly rural), 92% understood the importance of washing their hands after using the toilet however, many schools did not have water. Despite health education programmes by teachers and nursing staff, no behavioural changes could be observed (Taylor et al, 1999).

Based on the PRECEDE Health Promotion Model of Kreuten and Green (American School Health Journal, 1999), The *Predisposing factors* revealed that the course of helminth infections were unknown to communities, *Reinforcing factors*, were the inadequate toilet facilities at home and school, lack of recreation facilities, *Enabling factors* were the observance of health seeking behaviour among community members (Taylor et al, 1999).

Draw and write studies

Write and draw is regarded as an innovative way of exploring participatory approaches in health research and has gained much popularity as a powerful data gathering method due to its potential to reveal excellent data for improvement and development of a culturally relevant curriculum. (Pridmore and Lansdown, 1997). It could also be seen as a participatory method of learning, moving away from a top-down to a bottom-up approach and of breaking down barriers as well as allow learners to express emotions especially amongst those who cannot express themselves verbally. If used as an entry point for involving children in participatory learning action, wider dialogue should take place on the complexities, sensitivities and limitations of involving children including special concerns which adults face when working with children (Ibid 1997, Pridmore and Bendelow, 1995).

The draw and write technique as a data collection tool for in-depth studies to obtain an overview of health concerns with regard to water and sanitation of children, has not been used in South Africa for curricula development before, although it has been used extensively in the UK and elsewhere (Health education Journal, 1997). Linley, (1989)

an artist, describes children as natural, uninhibited and more observant than they are given credit for. Hence, by allowing children to express their health and hygiene perceptions through drawing, valuable information can be obtained.

Drawing techniques have been used in the past as a powerful, effective diagnostic and therapeutic tool by psychologists whereby a family or its members are enabled to come into contact with their emotional experiences, a visual spatial metaphor, associated with the right hemisphere function, the holistic, intuitive and creative processes of the brain (Venter, 1993). The therapist who interprets the sketch by asking the person questions regarding the "Gestalt" or wholeness of the sketches, space and location can do interpretation of family therapy drawings. Secondly, the person is asked to identify the most prominent features in the drawing. In health research no symbolic meaning is attached to drawings although some of the methods of introducing the technique and analysing it were borrowed from psychology such as asking children to draw their own perceptions and not someone else's (Venter, 1993).

A study conducted in London to explore the idea of whether involving the children in drawing and writing were more beneficial than just writing alone. Three methods were used namely, draw-and-write, write only and label and write. Significantly, write only identified categories quicker, draw-and-write revealed how issues were interlinked where as label and write revealed signs of physical health or ill health. The children's drawings clarified poor handwriting. Pridmore & Lansdown (1997) suggest that no single method can be promoted. Both drawing and writing can be combined to balance the strength of ach technique used.

Health perceptions of children at three primary schools using the draw and write method revealed that the major categories identified from the children's draw and write exercises were: healthy diet, exercises, good hygiene, avoidance of smoking, substance abuse, taking care and avoiding disease (Pridmore and Lansdown, 1997). A healthy diet included cleaning teeth, washing, showering, bathing and washing clothes. Unhealthy categories focused on unhealthy lifestyles, poor diet, lack of exercise, lack of sleep, poor hygiene, smoking, substance abuse.

A small exploratory study was conducted at a primary school in Kraaifontein, Western Cape with 26 Grade 7 learners to determine their health and hygiene knowledge using draw-and-write technique. Interestingly, despite regular encouragement throughout the exercise, the majority of learners preferred to write down their perceptions instead of drawing and writing, which raises the question of whether draw-and-write should be used with older learners. Categories that emerged from the question "things that make you healthy" were: hygiene, healthy diet, safety, avoidance of risky behaviour, traditional medicine, conservation of the environment; for "things that do not make you healthy": poor hygiene, unhealthy eating habits, risky behaviour, relationships with adults, environmental pollution (Dreyer-Skei & Engle, 1998: unpublished paper). The technique was complemented with an additional writing exercise using the "Hands up for Hygiene" teaching package from Leeds Health Education Service to determine hand washing practices. The learners' response to "When to wash your hands were as follows:

before eating or touching food 88%,

after using the toilet 61%,

after touching pets 50%,

after playing outside 46%,

after one has been working 27%,

after handling poison 19%,

after working in the garden 19%,

other times 42%.

Bility & Fietje, (1997) investigated the health and illness perceptions of high school adolescents using focus group discussions in a peri-urban community in the Western Cape. Findings were similar to the draw-and –write studies conducted in primary schools however, the older learners described risky behaviour more extensively and gave more suggestions for improving health promotion at schools. It was suggested that family and community instability together with negative environmental influences made it difficult for adolescents to put their knowledge into practice (Bility & Fietje, 1997;Barnett, et al, 1994).

William, Wetton and Moon (1995), conducted a similar study using the draw-and-write exercise for the Health Education Authority in the UK with a sample of 9,584 children aged 4-8years. The researchers investigated the health and ill health perceptions related to their own lives.

Five key areas were drawn out namely safety, relationships, eating, drugs and exercise/rest. Beliefs about health, illness and cancer was investigated in urban and suburban areas of South East England using the same technique, once again their response centred around diet, healthy food, fruit, vegetables, exercise, sport, hygiene, not smoking and lack of sleep. Responses to what makes them unhealthy were smoking, diet, environment, violence, hygiene, alcohol, medicines, illness. Similar

responses were echoed by children from a study conducted in Botswana on beliefs about health, illness death in Primary Schools among the Bushmen (Pridmore and Bendelow, 1995).

The draw and write technique has many characteristics of a rapid assessment technique and researchers should guard against using the technique with older learners whom often prefer to write, younger learners who are unaccustomed to drawing freely and using this method in isolation of other methods to gain insight.

In summary, there are many aspects that have to be taken into consideration when a study of this nature is being undertaken. Various issues such as current socio-economic-political climate, background to the new curriculum, behavioural influences, health resources, health promotion models, as well as water and sanitation initiatives impact on the water and sanitation curriculum currently in existence at schools in South Africa. These issues have a major impact on the health and hygiene perceptions of children however, very few studies have explored children's perceptions using the draw-and-write technique to inform curriculum development.

2.2 AIM

To explore the knowledge and perceptions of learners regarding health, hygiene and ill health and to make recommendations for curriculum development.

2.3 OBJECTIVES

2.3.1 To determine the health concerns of learners.

2.3.2 To describe the views and attitudes of learners with regard to health and hygiene.

2.3.3 To make recommendations to the Department of Education for curriculum development.

CHAPTER 3

3. METHODOLOGY

3.1 SETTING

In the Greater Cape Town, the metropolitan area stretches from Kommetjie near Cape Point to Atlantis in the North has an estimated population of 4118 000 approximately 10% of South Africa, an urban population of 89,9 %, with a literacy rate of 71,9% (Joyce, 1998). Learner enrolment in 1998 was, 1 910 000 which includes public, ordinary, private and special schools (Personal communication with Western Cape Education Department). The number of schools in 1995 were approximately 1743, learner; teacher at the public school are approximately 25,000 which included primary and secondary schools (Statistics in Brief, 1997).

3.2 STUDY DESIGN

A qualitative study using rapid assessment procedures to explore the views and perceptions of learners in a visual way through a child-friendly, innovative data gathering method, the draw and write exercise.

Secondly, focus group discussions were held with 6-8 learners purposefully selected from Grade 3-7 learners to gain deeper insight into their perceptions as well as to clarify their own drawings which were unclear to the researcher.

3.3 STUDY POPULATION

Grade 1 to 7 learners from the following six government primary schools in the Western Cape. Three of the schools were classified as urban schools within a predominantly lower socio economic class namely, Ukhanyo Primary School, situated in an informal settlement and Marine Primary in a Township near Oceanview respectively. Lwazi Primary is situated in Gugulethu and Klipfontein Primary, is a government -subsidised school situated in a peri-urban setting in Phillippi. De Tuin Primary is a rural school and Petra Gedenk Primary a farm school both situated in Worcester.

3.4 SAMPLING

In order to describe the views and perceptions of learners in the Western Cape, a convenience sample of six schools has been used. Convenient sampling of each school in the following categories has been done: three urban, one rural, one farm and one peri-urban. The majority of schools were in an urban setting due to the fact that 89% of schools are situated in urban areas (Census, 1995). The total sample consisted of 215 learners.

3.5 DATA COLLECTION

Two methods of data collection were used as follows:

3.5.1 Draw and Write exercise

Within each school, random sampling of learners from Grade one to seven were selected, using class registers. Three boys and three girls were randomly chosen from the class register using random numbers. The fact that the activity was not an exam was emphasised throughout the exercise. Learners were continuously encouraged to illustrate their own perceptions as well as to ask if they needed clarity regarding the exercise, the teachers were requested not to be present or influence the learners in any way. Learners were placed in an adequately available class room separate from each other and invited to draw pictures related to their perceptions and views about health and ill health and to write down the meaning of their drawings, or label it or ask an adult to assist them with the expression of their thoughts in a language they were comfortable with (See appendix C). They were also discouraged from looking at each other's drawings, discussing or asking a teacher for help. This exercise lasted for approximately one hour. The teachers were reminded not to influence learners with health information immediately before the exercise and to remove health posters from their walls if possible. Fieldworkers also reassured teachers that information gained would not be used against them. After completion of the exercise the children were thanked for participation and enthusiasm. Learners were also encouraged to discuss their feelings and reactions about the exercise before they left the classroom.

3.5.2 Focus group discussion

After completion of the exercise, six to eight learners from Grade 4-7 were selected after permission was obtained from them to participate in the focus group discussion to gain additional information and a deeper understanding. Guiding questions that were discussed included issues such as: what makes them health, what prevents them from being healthy, availability of water and sanitation resources.

The younger learners were not included in the focus group discussion due to concerns about them feeling intimidated by older learners. Field workers made use of notes and tape recorders to collect information.

3.6 DATA ANALYSIS

Draw and write analysis was done by hand. Each school's drawings were looked at individually to get a sense of the whole. Common topics, issues, thoughts and feelings illustrated by learners were listed, grouped and manually calculated. Similar categories and sub-categories were clustered together. A mean response rate of health categories were manually calculated per school. Thereafter, a mean was calculated of all six school combined (Table 2 &3) (Cresswell,1994). Due to the differences noted among the type of schools and areas located, the draw and write exercises were analysed per school and tabulated.

The focus group discussions were transcribed and translated into English. Common themes and categories that emerged were grouped and coded. An attempt was made to group categories similar to those identified in the draw and write illustrations. Subsequently, data was combined.

CHAPTER 4

4 RESULTS

The total number of schools who participated in the Western Cape were six, sample size n (215) learners. A total number of 215 learners were included in the study. Both boys and girls from 6 primary schools were studied.

Table (2) displays the characteristics of the sample used for the study.

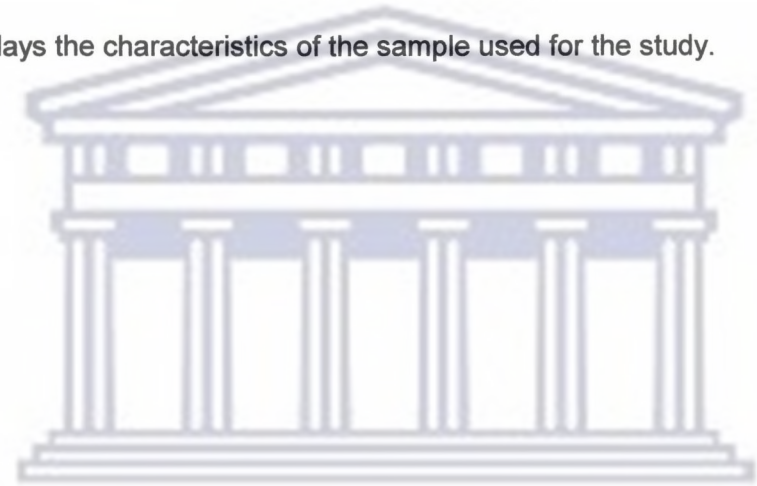


Table 2. Characteristics of the sample.

Areas	Primary Schools	School population	Total no of teachers	Learner teacher ratio	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Total	Girls	Boys
Urban	Ukhanyo Primary	728	19	38:1	4	2	6	7	6	5	6	36	20	16
Urban	Lwazi	1010	24	42:1	2	2	4	7	5	5	6	31	-	-
Peri-urban	Klipfontein	472	11	43:1	4	2	8	9	5	2	5	35	23	12
Rural	DeTuinen	1078	27	40:1	4	2	1	9	3	7	10	36	17	19
Farm	Petra Gedenk	146	6	24:1	-	-	-	-	-	-	-	39	19	20
Urban	Marine	1120	30	37:1	2	5	8	4	7	7	5	38		
	Total	3576										215		

Table 3. Issues mentioned by learners in reply to the question:" WHAT KEEPS YOU HEALTHY"

Health issues 17 Categories	Lwazi Primary (Urban)	Ukhanyo Prim.(Urb)	Marine Prim.(Urban)	De Tuinen Prim.(Rural)	Petra Gedenk Prim.(Farm)	Klipfontein Prim.(Peri-u	Average
Sample size 215	(n) 31	(n) 36	(n) 38	(n) 36	(n) 39	(n) 35	
Fruit and vegetables	87%	80,5%	33,3%	36,1%	46,1%	28,5%	50%
Food	25,8%	36%	25%	2,7%	2,5%	5,7%	16%
Trees	0%	8,3%	38,8%	8,3%	64,1%	17,1%	24%
A clean house with electricity	0%	2,7%	38,8%	0%	28,2%	0%	12.5%
Exercises	16,1%	30,5%	8,3%	0%	7,6%	7,6%	11.6%
Do not waste water	0%	0%	0%	0%	0%	8,57%	1.4%
Clean water	48%	25%	5,5%	8,3%	8,3%	5,7%	16%
Toilet	0%	0%	19,4%	13,8%	7,6%	37,1%	13%
To drink your medicine	0%	0%	0%	0%	0%	17,1%	3%
Don't smoke near children	0%	0%	0%	5,5%	0%	2,8%	1%
To bath and brush your teeth	19,3%	22,2%	33,3%	0%	12,8%	25,7%	19%
Running water	0%	2,7%	0%	0%	2,5%	20%	4%
Go regularly to the toilet	0%	13,8%	0%	0%	0%	0%	2%
Wash your hands after using the toilet	0%	8,3%	2,7%	0%	0%	2,8%	3%
Tap	0%	0%	0%	0%	5%	14,2%	3%
Wash animals regularly	0%	0%	2,7%	2,7%	7,6%	0%	2%

Table 4. Summary of general health concerns mentioned by the learners "What prevents them from being healthy"

21 Categories	Lwazi Prim. Urban school	Ukanyo Prim. (Urban)	Marine Prim.(Urb)	Petra Gedenk Prim(Farm)	De Tuin Prim.(Rural)	Klipfontein Prim.(Peri-urb)	Mean
Sample size 215	(n)31	(n)36	(n)38	(n)39	(n)36	(n)35	
Drinking dirty water	9,6%	0%	5,5%	33.3%	25%	11,4%	14%
Drugs	11,2%	0%	5,5%	2,5%	13,8%	34,2%	11%
Alcohol abuse	64,5%	0%	11.1%	0%	16,6%	22,8%	18%
Eating poison	3,2%	0%	0%	0%	11,1%	0%	2.3%
Too much sweets and chips	25,8%	0%	16,6%	0%	0%	0%	7%
Smoking	70,96%	2,7%	30,5%	5%	63,8%	51,4%	36%
Aids	0%	8,3%	0%	0%	0%	0%	2.5%
Guns	0%	8,3%	0%	0%	0%	0%	2.5%
Knives	0%	11,1%	0%	2.5%	0%	0%	2.3%
Drinking and driving	0%	13,8%	0%	0%	0%	0%	2.3%
Coffee	0%	8,3%	0%	0%	0%	0%	2%
Rape	0%	2,7%	0%	0%	0%	0%	0.4%
Snakes	0%	11,1%	0%	0%	0%	0%	2%
Bad food	0%	0%	16,6%	10,2%	2,7%	0%	5%
Rubbish	0%	0%	5,5%	0%	5,5%	11,4%	4%
Air pollution	0%	0%	2,7%	2,5	5,5%	45,7%	9.29%
Water pollution	3,2%	0%	0%	15,3%	16,6%	0%	6%
Dirty toilet	0%	0%	2,7%	10,2%	5,5%	0%	3.2%
Domestic animals	0%	0%	22,2%	11,1%	0%	8,57%	7.3%
Dirty house	0%	0%	0%	10,2%	0%	0%	2%
Road safety & car accidents	0%	0%	11,1%	0%	11,1%	20%	7%
Sun	0%	0%	2,7%	5,5%	2,7%	0%	2%

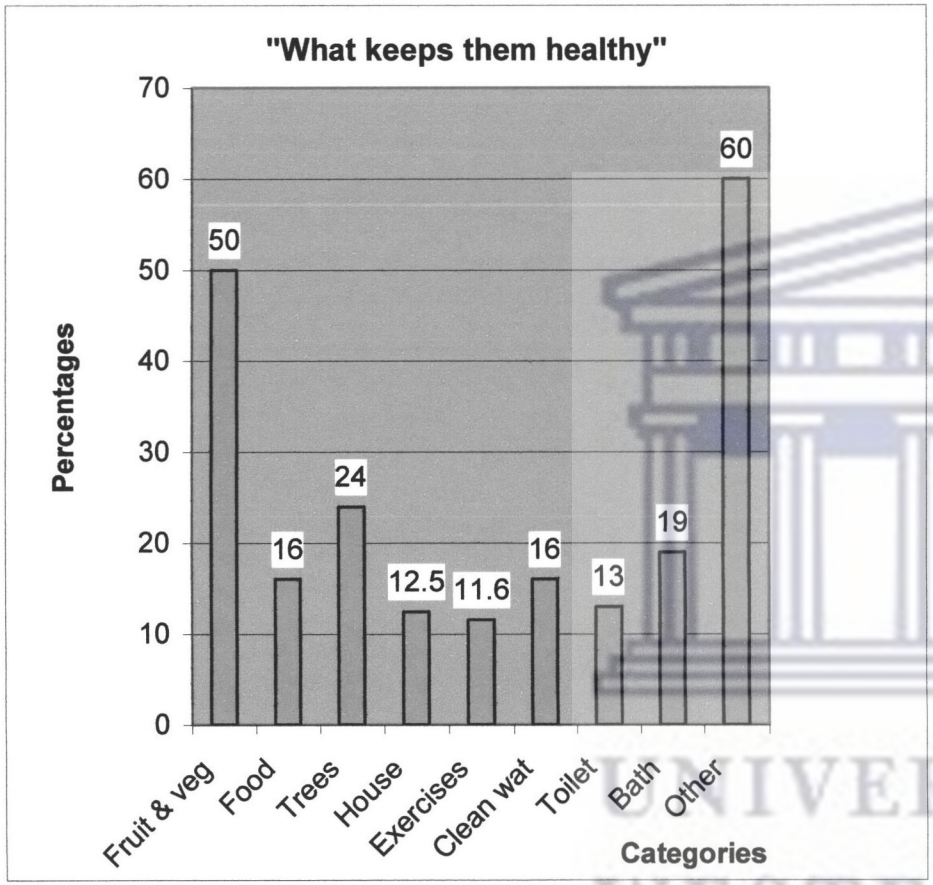


Figure 4 A The mean response rate of learners "what keeps them healthy". See appendix 5.

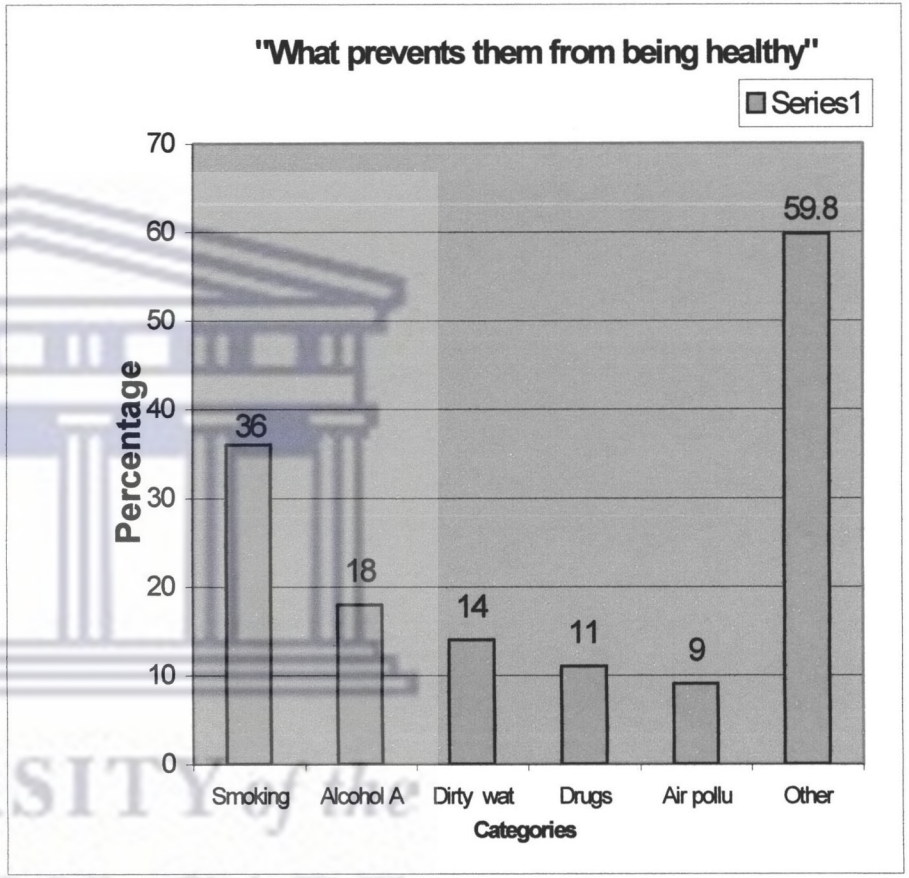


Figure 4 B Mean responses of learners "what prevents them from being healthy".

The following themes emerged from the data collected. Each theme had subcategories according to what learners wrote and drew. (Table 3 and 4)

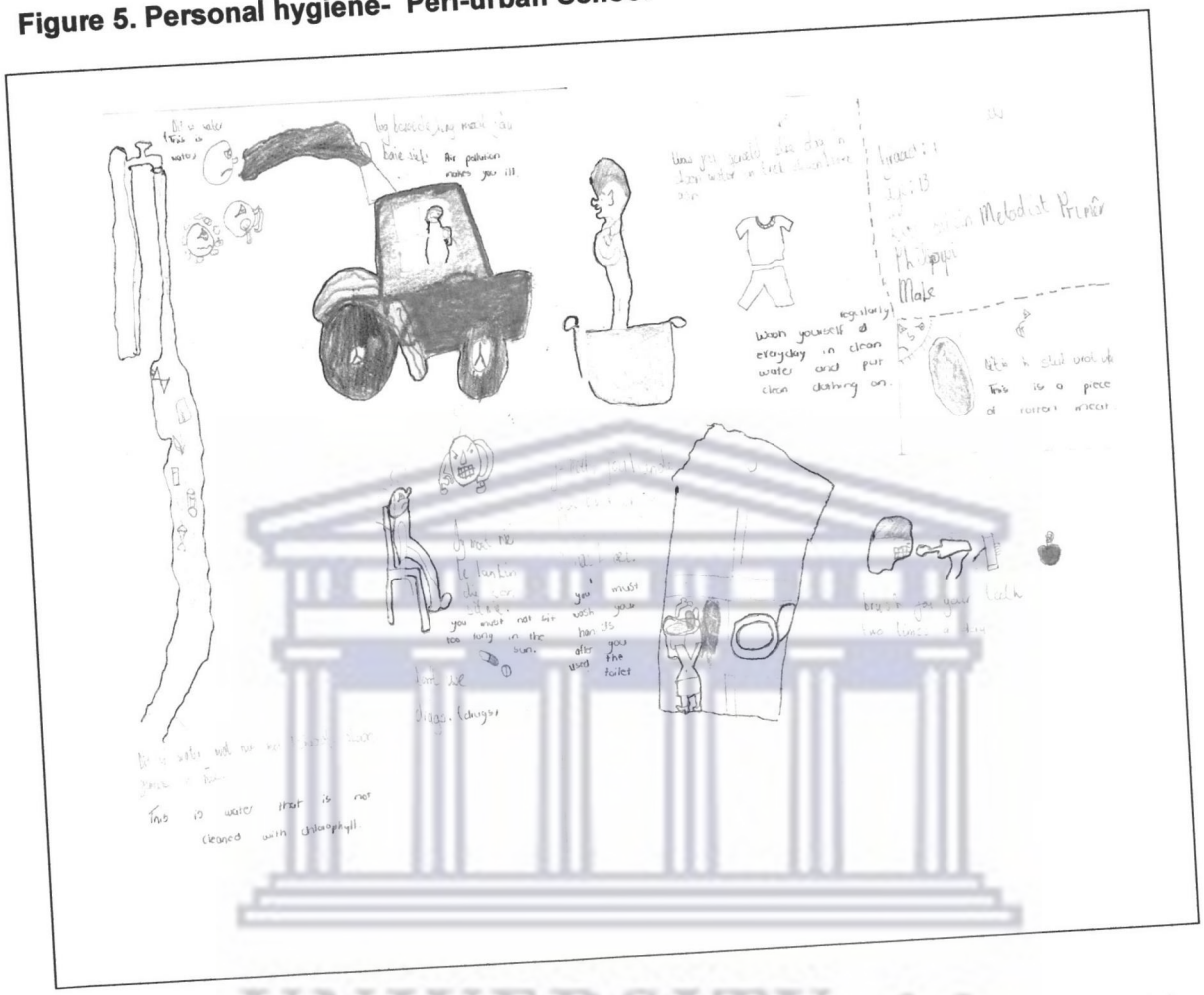
- Hygiene
- Healthy behaviour
- Unhealthy behaviour
- Availability of resources

HYGIENE

During focus group discussions, learners mentioned washing of their bodies when they get up in the morning and the importance of keeping your body clean, brushing your teeth and washing your hands after using the toilet. The following descriptions accompanied their drawings: *"wash up, you don't want your body to smell, and use roll on, wash your teeth with Colgate and a toothbrush."*

However, at the farm school during focus group discussions learners mentioned that poor personal hygiene was a common problem and children who did not wash were publicly shamed. Older children were instructed by their teachers to undressed the children with poor hygiene and scrub them down in the toilets. *" White medicine"* was used to wash their hair if they had nits and lice. Their clothes were also washed.

Figure 5. Personal hygiene- Peri-urban School



Learners are taught from Grade one and onwards about personal hygiene which is depicted by a child washing in a bath: "wash yourself regularly and put clean clothes on and brush your teeth twice a day", also stating that "you must wash your hands after using the toilet". He also noted polluted water that "was not cleaned with chorophyll". No bathroom has been illustrated.

- **Removal of rubbish**

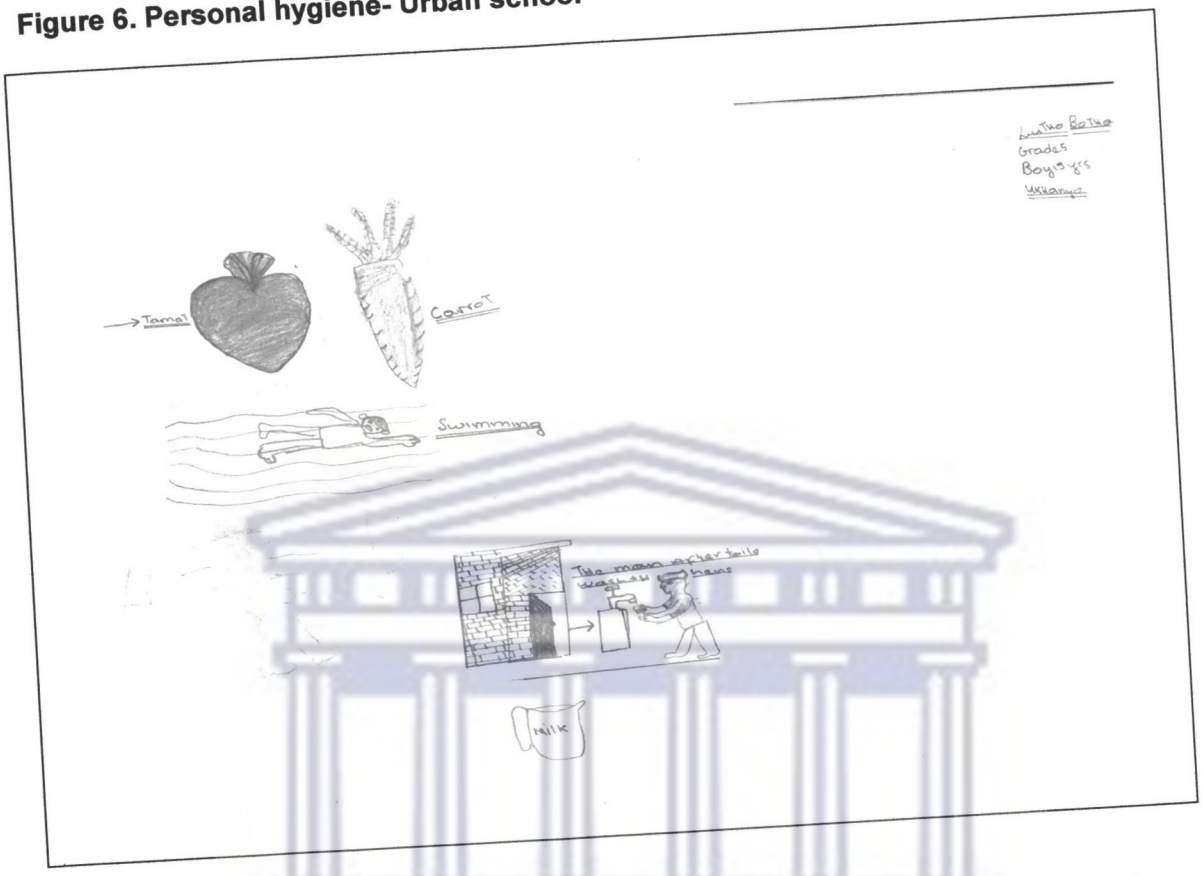
Learners comments during the focus group discussion at the peri-urban school were that the caretaker removes waste/rubbish dig a hole and buried it. Learners at the other schools did not raise this issue. Some of the drawings of the older(4 -7 learners had illustrations of rubbish bins.

Learners mentioned that cleaning of classrooms were mostly done by the girls on Fridays. This included sweeping, washing and polishing of the floors.(FGD)

- **Domestic animals**

A Grade 6 learner described her concern about domestic animals: "*sometimes when a cat or dog have some kind of sickness, children kiss them then the children also get sick*". Learners also saw dogs licking on the taps.

Figure 6. Personal hygiene- Urban school



This drawing by a 15 year old learner illustrates one of the basic hygiene practices "*this man washes his hands after using the toilet*" with a tap visible outside the toilet.

Learners described the importance of personal and environmental hygiene in both the focus group discussions and the draw and write exercise however their views often differed from their practices in that the girls toilets as well as the school premises were very often untidy and younger learners sometimes forgot to wash their hands after using the toilet(Personal observation and communication with teachers).

- **What they learn at school**

Learners said that they have learned how to be healthy, personal hygiene and to wash their hands. The majority of drawings and labelling focused on the same issue. Handbooks were also made available; videos were shown on Aids and sexuality this was a comment(FGD) from one of the urban schools. Learners felt that they get enough health education; one mentioned "*Aids*" as her favourite topic.

Projects done at school included science, "*where water comes from, what it is and saving of water*" and irrigation of plants. Parents also teach them at home to" *drink from glasses and not from taps*"(placing their mouths to the tap).

- **Suggestions for improvement if "learners were in-charge of the school"**

At one of the urban schools learners suggested that toilets be tiled, flush toilets, toilet paper, new sinks, locks on doors painting of walls, fences and night security to guard against burglaries and regular cleaning of toilets as well as regular inspection. Learners who scratched on walls should be placed in detention. Children must wash toilets. Spanking and scrubbing of walls should be used as punishment for offences committed. Cameras should to be placed in the toilets to " *catch the culprits*".

HEALTHY BEHAVIOUR

Many of the younger learners(Grade 1-3) illustrated "feeling healthy" as a happy, smiling person with faces of girls and boys as well as the sun with a smile.

Healthy eating habits and regular exercises were also regarded as important. Learners from the urban schools drew food, fruit and vegetables; "*eat healthy food, like fruit and milk*", "*Veg is good to eat everyday*" and "*milk is good because it gives all people power*" as the most important aspects of staying healthy as compared to the one rural and remaining urban schools who focused on the environment, trees, sunshine and pollution.

An interesting statement was made by this 13 year old learner about traditional remedies and modern medicine ; "*drink the tablets that the doctor gives you*" and " *herbs are very good for people who suffer with sugar*". Many communities practice alternate forms of medicine. In the past health care has focused mostly on curative care; hence this learner realises the importance of using prescribed medication regularly.

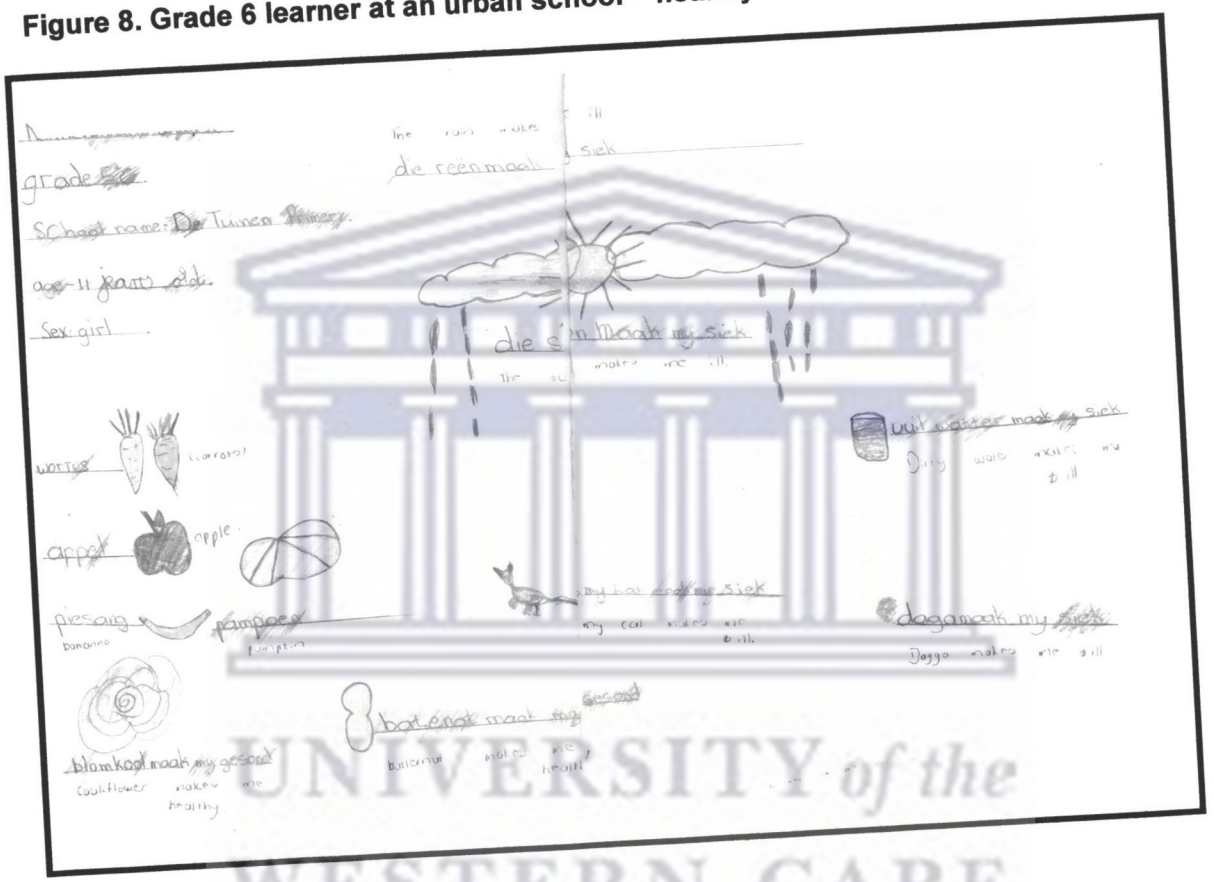
Figure 7. Grade 3 female learner- healthy behaviour

This drawing displays a combination of positive as well as negative health issues: A girl, as well as the sun with a smiling face. Younger learners very often linked health with happiness. Fruit and vegetables which they learn about at school, a clean house with electricity and a tree. It appears as if a motor vehicle accident with people that were "hurt and damaged" injured was witnessed with a car that did not stop

Interestingly, one of the children drew and wrote that it was difficult to eat fruit everyday. A comment made by a learner from Marine Primary describes this problem:

"I visited a place called Albertinia and I saw that some toilets are outside and some people doesn't have electricity or water it must be difficult for them to stay clean and healthy."

Figure 8. Grade 6 learner at an urban school – healthy and unhealthy behaviour



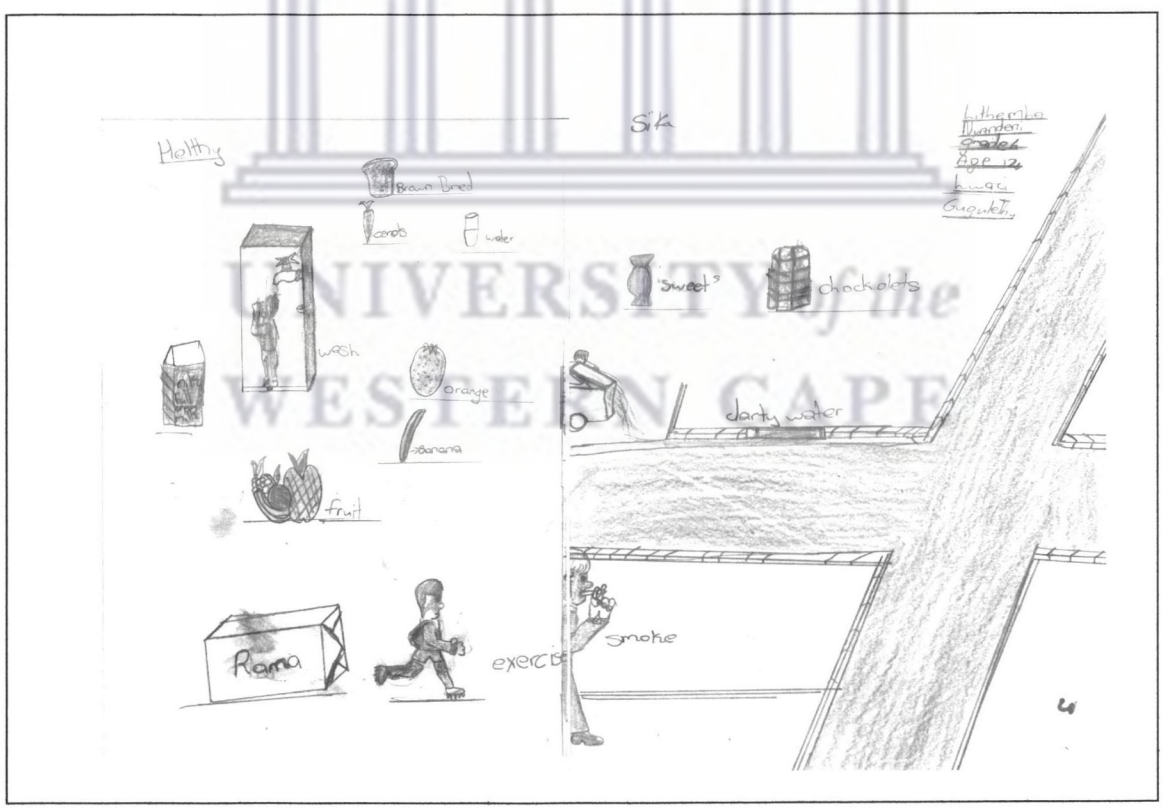
This Grade 6 learner decided to divide her page and clearly distinguish between "what keeps you healthy" and "what prevents you from being healthy". Healthy food and behaviour such as brown bread, water, fruit and vegetables, milk and exercise which the majority of learners have expressed as well as a person in a shower.

- **Clean and healthy behaviour at home**

Comments during the focus group discussion were that the family divided the chores between the girls who cleaned on the inside and boys the out side of the house. Vandalism displayed at school in the form of graffiti on toilet walls messing in the toilets does not occur at home. When learners were asked whether they repeated the negative behaviour at home, the majority replied "*no*".

A few of the Grade 6 and 7 learners illustrated household detergents and insecticides as poisonous substances.

Figure 9. Healthy and unhealthy food, Grade 7 learner



Unhealthy food in the form of sweets, chocolates and unhealthy behaviour is illustrated as well as a boy smoking. This sight is a common appearance among teenagers and adults in the Western Cape. Interestingly dirty water, which runs into a street drain, has been noted by this learner.

UNHEALTHY BEHAVIOUR

In the focus group discussions learners described unhealthy as well as unacceptable behaviour observed among their peers: spitting, not flushing the toilet due to the cistern being to high or broken or forgetting, littering in the classrooms and graffiti on the walls and "*children who live on the street don't wash their hands*". The above-mentioned behaviour was described as "*dirty and rude*" and would not be tolerated at home. These statements clearly described the fact that learners were aware of the differences in their behaviour at home and at school.

Some learners described a sick person as" a person who *sleeps a lot and looks tired*" the drawings showed a person lying down with a doctor standing beside him/her.

- **Unhealthy Food**

Selected drawings displays unhealthy food such as sweets, chocolates, ice cream, and coffee with comments such as (Grade 4 learner) " *sugar can make some people sick and, you should not eat food that was on the table last night and eat it the next day*".

- **Smoking and Substance Abuse**

The majority of learners in both the FGD and draw and write exercise regarded cigarette smoking as a major cause of ill health: *"People that smoke cigarettes get cancer it packs on your lungs"*, was a comment made by a Grade 6 learners (12yrs).

Substance abuse as negative behaviour were illustrated by learners in the higher grades, as stated by a Grade 7 learner " *don't used drugs, syringe, beer*".

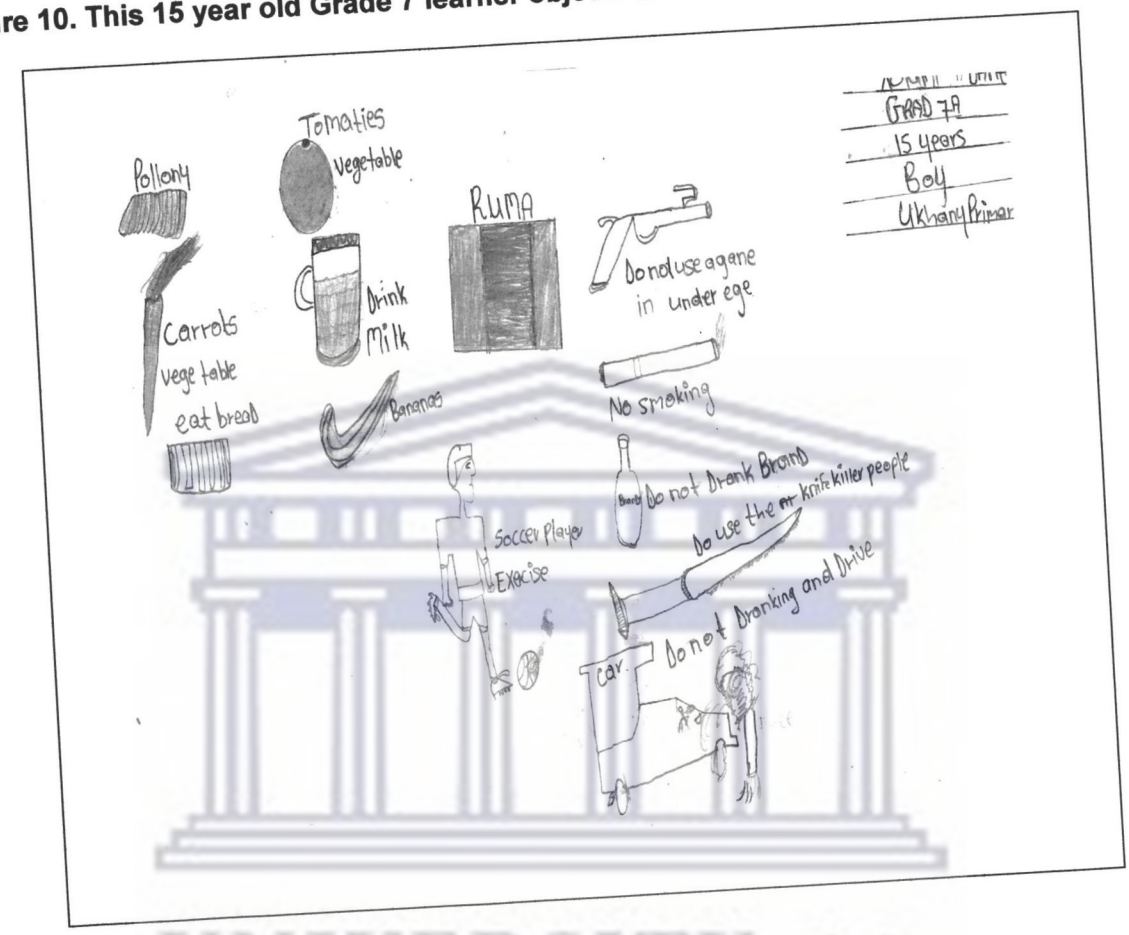
A Grade 5 learner wrote: "*Smoking is not good, and drugs and wine*" Drinking and driving issues were raised " *some people drink beer and wine and cause accidents on their way home*", *"don't use drugs*" one of the problems of this specific community is alcohol and drug abuse. Alcohol and drug abuse are on the increase especially amongst learners in the Western Cape (Die Burger, 15 June 1999).

An illustration of a boy and girl kissing with the writing: "*Aids*" was done by the same learner which indicated that some of them were aware of issues regarding sexuality.

- **Violence**

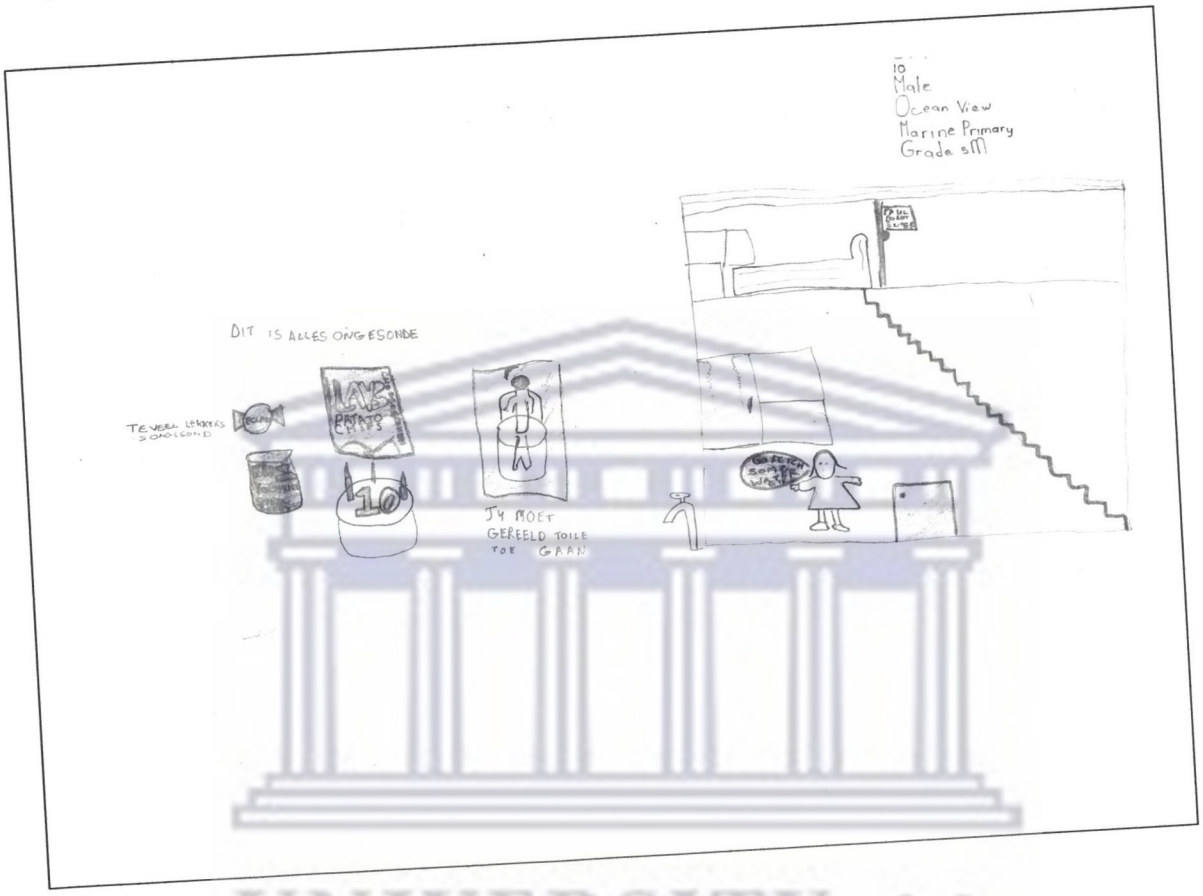
Objects that can lead to violence were illustrated; knifes and guns " if a *knife hits you, you can die*".

Figure 10. This 15 year old Grade 7 learner objects associated with violence



This learner drew issues associated with health such as carrots, tomatoes, milk and a sport commonly played by the boys; soccer. He also illustrates a major concern in the Western Cape namely, a gun with the message:" do not use a gun if you are under age" also a knife,"do not use a knife with people" as well as a car with the caption:" do not drink and drive".

Figure 11. An urban school – Availability of water



Some of the urban lower socio-economic areas have taps outside their houses which is clearly illustrated in this drawing of a two storey home with a bedroom upstairs and the mother telling the "child to fetch water". Learners expressed their concern about taps being outside the house and difficult to reach at times. The water was stored in a bucket and kept on top of a table inside the kitchen. Regular visits to the toilet is also mentioned, which is appears to be located outside the house.

- **Environmental issues**

Perceptions of pollution came through in many drawings especially the Klipfontein Primary school learners *"People burn tyres than it smokes and pollutes the air,* by a Grade 6 learners (12yrs), a Grade 7 learner drew and wrote*" factory smoke that pollutes the air , fish in dirty water."* Grade 7 learners at the farm school drew a river full of rubbish that leads to a farm school, a river full of cans, *"We must protect our clean earth and not pollute the air; " Tree is good for air*". These issues were not mentioned in the focus group discussions.

AVAILABILITY OF RESOURCES

- **Water**

Learners commented during the focus group discussion that there was no need for them to bring water to school for drinking or washing of hands learners. The majority of children mentioned or illustrated that they obtained water from a tap inside the classroom, inside or outside their homes. At the peri-urban school it was mentioned in the focus group discussion that water was collected from the taps by the women and stored *" on top of the table and they also cover the water, we drink and cook food from that water"* a drawing of a Grade 4 learner illustrated a girl being told by her mother to go and fetch water, a Grade 6 learner wrote "*the tap is out side the house we cannot reach it".*

A few learners wrote: *"Dirty water can make you ill",* (a 12yrs Grade 4), putting their mouths to the tap "*which is bad because of germs*" when they drink water (FGD). Other concerns depicted in the drawings about ill health were raised by a Grade 4 learner, "*If*

the tap runs, the ground becomes wet than there are mosquitoes, people become ill". A Grade 7 learner drew a tap running with the writing *"it is water that was not cleaned with chlorophyll"* also" *school children don't drink dirty water it can make you die".*

- **Wastage of water**

Learners were aware of wastage of water. In the focus group discussion they mentioned that taps were left open and leaked everyday, children played with the water if the hose pipes were left on; leaking taps were not repaired. Drawings from Grade 7 learners mentioned *"we must not waste water, also we use water to wash and to drink"*. Five grade 5 learners drew a tap with running water.

- **Cleanliness of toilets and toilet use**

Learners expressed their dissatisfaction with the shortage of toilets and the teacher's toilets being supplied with soap and paper and being much cleaner that theirs during the focus group discussion.

Toilets were not used if there were faeces all over, "*black worms*" in the toilet or some were blocked, urinals were not working for a couple of weeks and it was stinking. A learner mentioned in the focus group discussion that girls were "*more untidy then boys especially when they menstruate*". Some girls preferred not to use the toilet.

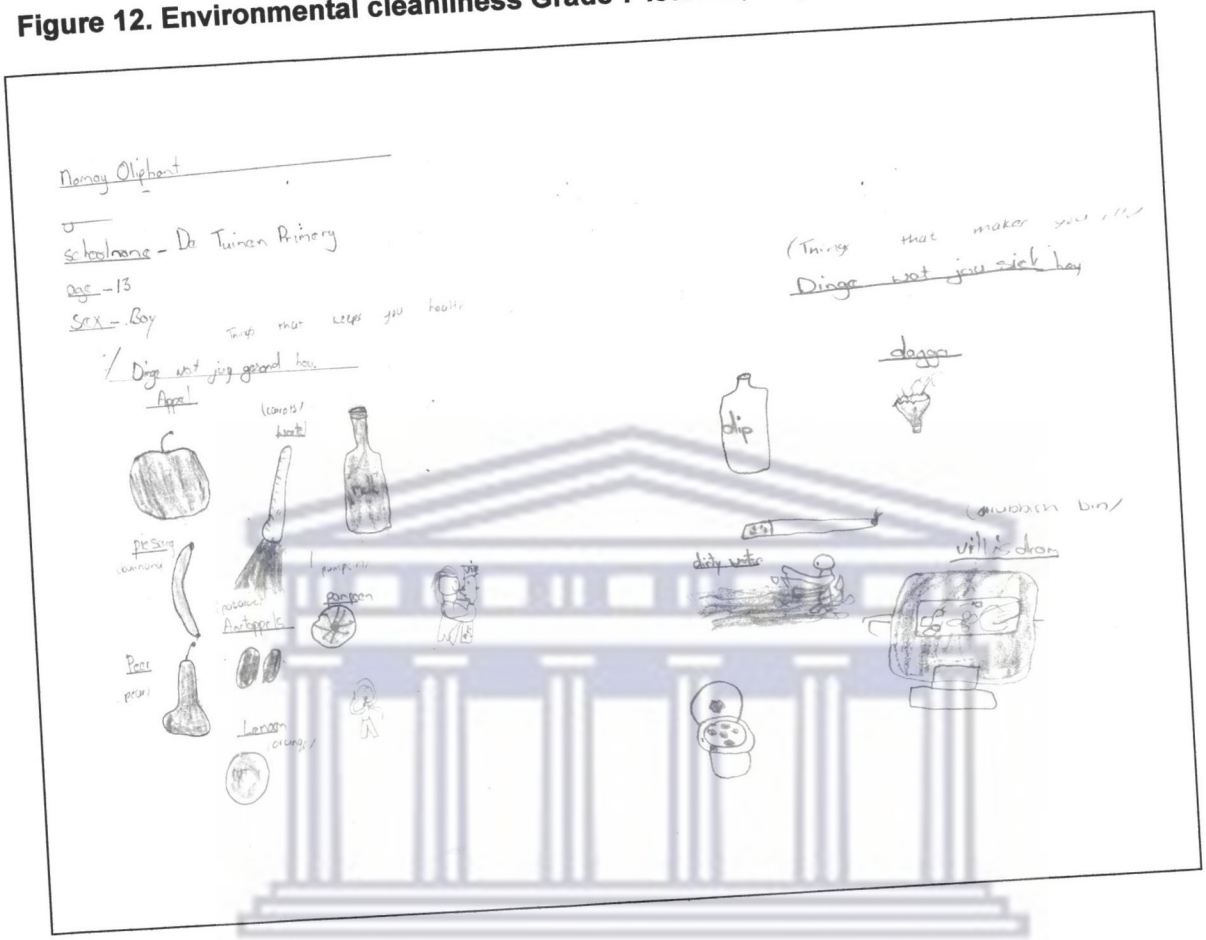
Toilets were cleaned by the caretaker with the hose pipe and jeyes fluid but according to learners from the peri-urban school they "*did not do a good job*"; they just clean the floors and throw in that lovely stuff with a great smell but "*the toilet pots were not*

cleaned". Learners who were detained had to clean the toilets using a brush, jeyes fluid or Handy Andy as punishment on Fridays, under the supervision of the teachers.

At another urban school learners mentioned during the focus group discussion that the caretakers cleaned the toilets every day. Boys who were to lazy to use the toilets *just "leaned any where outside"* although the toilets were not far from the classrooms. Learners were aware of the health risk that "*lots of flies*" and not "*flushing the toilet*" posed. Blocked toilets due to not flushing it was not always reported according to a learner at the peri-urban school because the principal would ask them to clean it. Girls' toilets were not provided with sanitary bins.

No soap or toilet paper was available in the learner's toilets. Over crowding of toilets, a shortage of small toilets for the younger children was a concern raised. They have to ask their teachers for toilet paper and soap or bring their own. If none was available they used rough paper which had to be made soft, newspaper, grass or stones, which was painful to use. The latter was just thrown away after use. Toilet paper was kept in the classroom for better control and to avoid wastage.

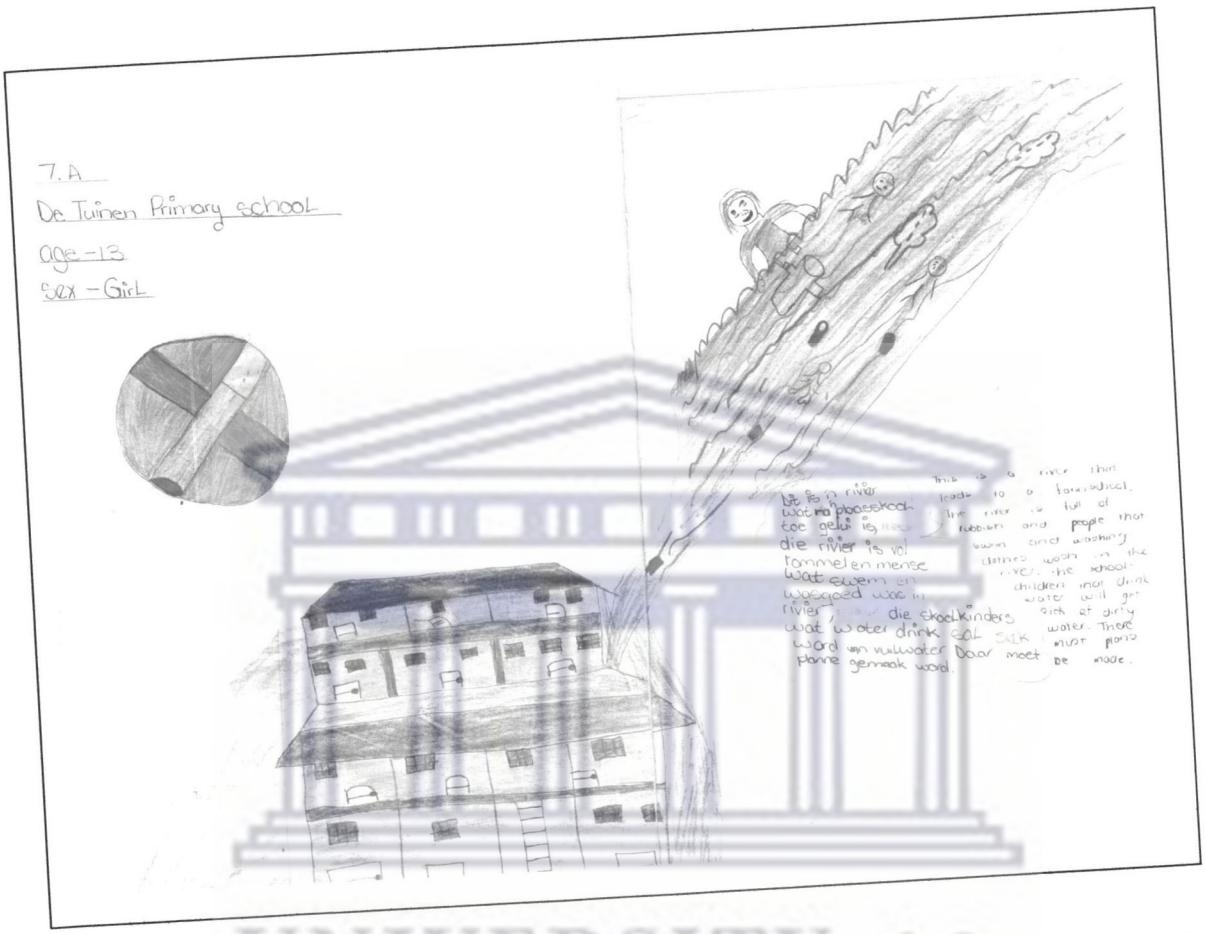
Figure 12. Environmental cleanliness Grade 7 learner, 13 years old



A clear distinction is made between sources of good health and ill health in the social and physical environment. This learner at the rural school illustrated similar sources of good health as learners at the urban and peri-urban schools; fruit, vegetables, milk and a girl and boy hugging with Aids written on the one person.

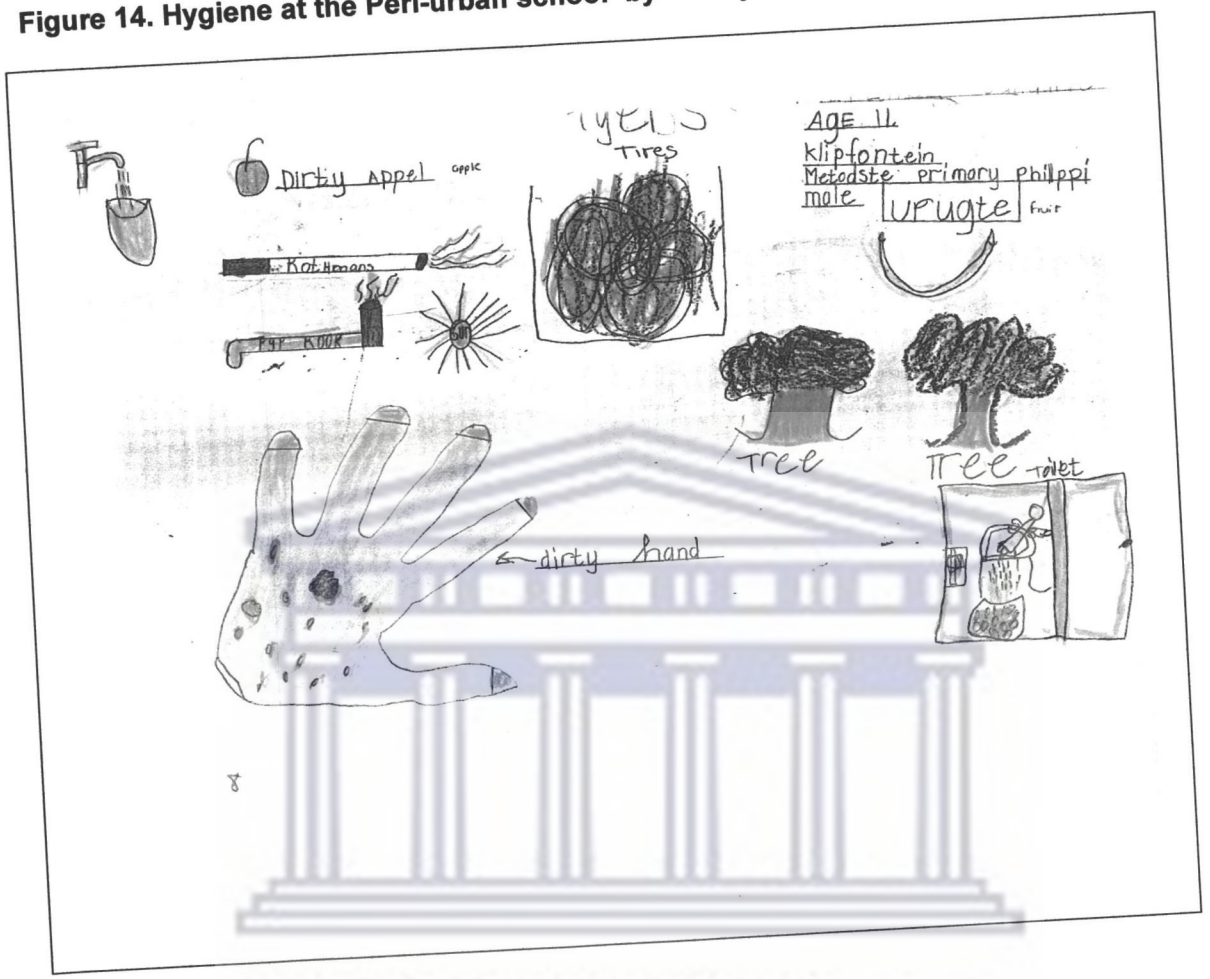
Things that can cause ill heath is illustrated as a full rubbish bin, detergents, dirty water, a dirty toilet, dagga and smoking.

Figure 13.Rural school – Environmental concerns



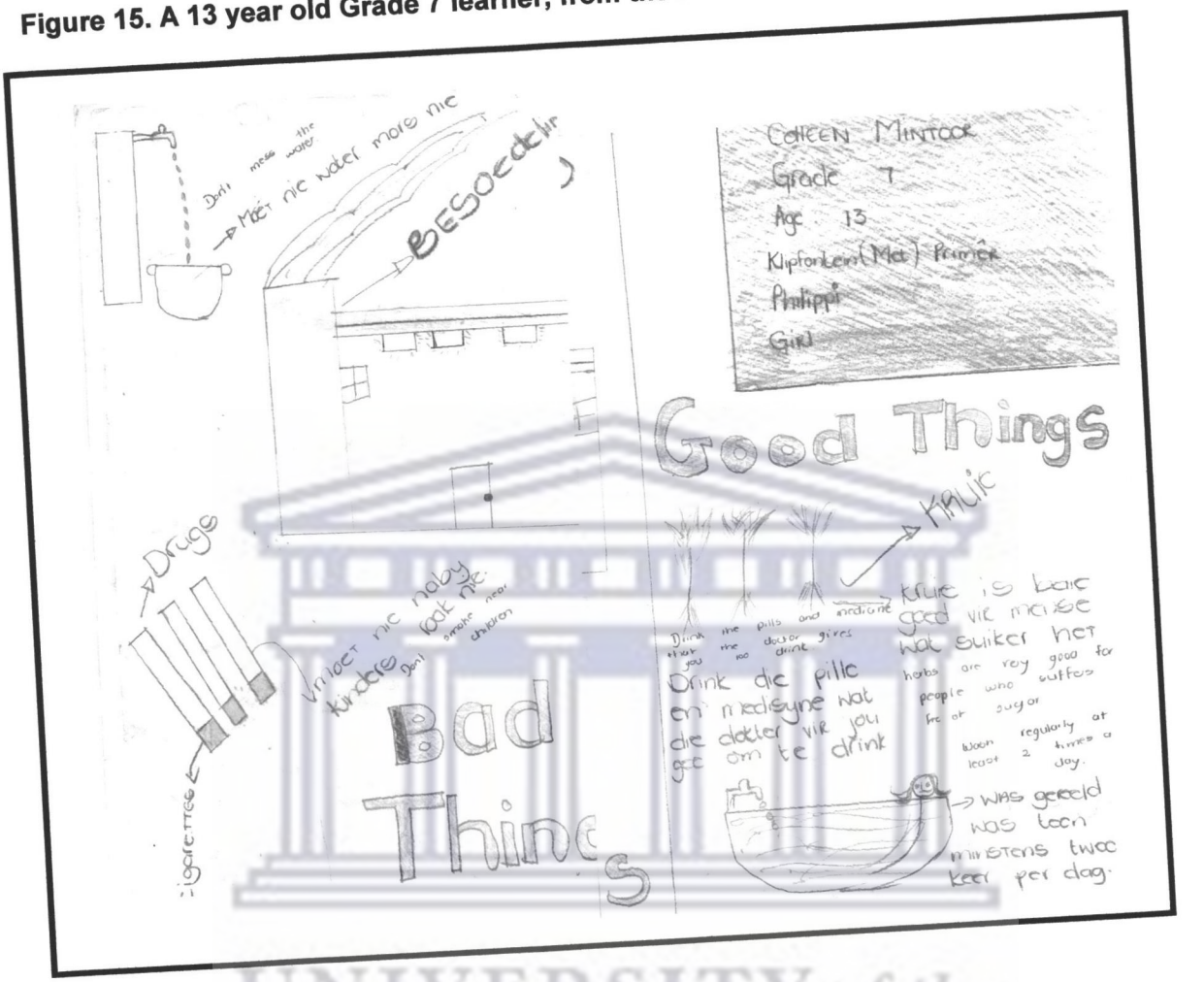
A clear illustration and description is done by this 13 year old learner at the rural school of a polluted river that leads to a farm school and a no smoking sign. An explanation is given by this learner of how people in the community are littering and doing their washing in it. She gave deeper insight into the issue of health and clearly understands as well as expresses her feelings(affective domain) although she appears happy, about the issue; what the consequences(cognitive domain) could be for school . " Children who drink dirty water:" They will become sick. Plans must be made".

Figure 14. Hygiene at the Peri-urban school by an 11year old learner.



This drawing depicts a brief insight and description of the community. Important concerns are illustrated in this drawing which are dirty hands, air pollution caused by members of the community burning tyres, a pit latrine and a tap with running water.

Figure 15. A 13 year old Grade 7 learner, from the Peri-urban school.



This learner illustrates another aspect of health; alternative medicine and prescribed medication, the use of herbs which she describe as "herbs are very good for people who suffer from sugar" and "drink the tablets and medicine that the doctor gives you". Other important concerns illustrated are the" wasting of water" also " do not smoke near children".

CHAPTER 5

5. 1 DISCUSSION

This study has found that learners have distinctive views of health versus ill health which has interesting implications for learning material.

Lack off or dirty, inaccessible water and toilets were observed by learners but not regarded as a priority concern. This could be due to the nature of the topic or the fact that it is genuinely not perceived as a major problem in these communities, or that the condition has been prevalent for so long that it has been accepted as part of living. It also highlighted the fact that children and parents have been receivers of health information and not necessarily partners in health (Barnett et al., 1995). Participants in this process need to guard against loss or distortion of information along the way. Whilst acknowledging the limitation of teaching resources, a lot more work needs to be done by the Education Department through a collaborative approach to improve health promotion in the schools and teacher training institutions (Myeni and McGrath, 1990).

Although half of the sample of children, described fruit and vegetables as healthy the availability of fruit on a daily basis needs to be questioned in lower-socio economic families. This issue was described by a Grade 3 learner from Marine Primary wrote that it was difficult to eat fruit and vegetables everyday which appears to be a reality for poor communities. It does appears as if health education primarily focused on healthy food (fruit and vegetables) and unhealthy food (sweets, chocolates and chips food) although it is not quite clear whether learners actually practice these healthy eating habits.

Many schools sell sweets, chips, chocolates and soft drinks at their tuck shops. Working parents very often send their children to school with no lunchbox but money to buy a snack with at school (Personal communication with teachers). It does suggest that children have a fair amount of knowledge about things that make them healthy but availability and accessibility appears to be a problem. The results once again displays what they have learned and not necessarily what is being practices in daily life (Barnett et al, 1995).

Exercises were also illustrated as important for health and physical development of the child, however at some schools it has been neglected especially the high schools if there were no teachers available or the principal and staff were not motivated. Understaffing and an overcrowded curriculum took up most of the teachers' time (NECC,1992).

A similar situation has been observed with personal hygiene. Both the write-and-draw as well as the focus group discussions mentioned washing and using a shower everyday . However, in reality some children from poor communities have to carry buckets of water home for domestic use, the probability of them having a bath, shower or wearing clean clothes everyday is very unlikely. Poor personal hygiene among the children from the lower socio-economic families was observed by the school nurses as well (Personal communication with school nurses; School Health Workshop Reports, 1996).

At the farm school learners described how harshly they dealt with poor hygiene during the focus group discussions. Children were stripped naked and made to bend down and where then scrubbed down by older children. They had shampoo at school for the nits and lice. Pediculosis were noted as being fairly common among school children in the Western Cape and elsewhere (Engle, 1998,unpublished). Availability of water, and easy

access to water points were often a problem in rural areas (Department of Water Affairs and Forestry, 1999). Hence, alternate methods of dealing with poor personal hygiene should be looked at. Making children clean toilets should not be used as a form of punishment.

Younger learners whom are more able to express creativity and fantasy, (Kibel & Wagstaff, 1997) drew clouds, birds, flowers and smiling faces or suns. Suggesting that they relate health more to happiness (See appendix B) which is what they are currently being taught at school with environmental studies. According to their syllabus (NECC,1992; Appendix A) much emphasis is placed on environmental studies during this schooling period.

The majority of learners (36%) mentioned smoking as a source of ill health. It has been estimated that adolescents are the fastest growing group of new smokers in many countries (WHO, 1996). The anti-smoking campaign has therefore been very effective although it was not quite clear where learners received their information or whether behavioural change has taken place. Teachers and parents should be role models in promoting health. For example with smoking, it is senseless to motivate children not to smoke when there are many adult smokers around them. The availability of cigarettes to learners should also be carefully monitored.

Learners from the urban schools drew taps leaking and confirmed in the focus group discussions, the visibility of taps inside or outside their home, or a communal tap. However very few of them described or illustrated hand washing as a form of healthy behaviour. Huttly (1997) found that to target a single behaviour such as hand washing could be very effective in reducing diarrhoeal infections. Provision of resources alone

does not necessarily lead to positive changes in behaviour (Gwatirisa,1991). It has to be coupled with adequate health education and reinforced through community practices (Young and Durston, 1993). Very few of the learners have described regular washing of hands as important for good health. More emphasis could be placed on hands washing before eating, food preparation, after using the toilet, after playing with animals and after working with garbage.

Very few of the houses in the lower socio economic areas have bathrooms inside. However, some learners have illustrated and confirmed in the focus group discussion that personal hygiene can be maintained irrespective of the lack of facilities.

The draw and write exercises revealed many problems that were unique to specific communities. Learners illustrated objects associated with violence by drawing scenes of rape, knife and guns. These psychosocial issues were frequently noted among the Grade 4-7 learners' at these Lwazi Primary School and Klipfontein Primary. Gangsterism and vandalism at schools were a reality for many communities on the Cape Flats according to many newspaper articles (Die Burger 14-25 June, 1999). Learners at Klipfontein Primary also illustrated and mentioned environmental pollution: the burning of tyres. The community might be unaware of the children's feelings about the burning of tyres even though adults feel it is a necessity. This is an environmentally harmful practice, which might be difficult to change and has to be seen In a much broader context; the lack of employment resulting in adults selling the steel in old tyres for an income. Unemployment is on the increase in the Western Cape. Some health and hygiene issues could be addresses as a Child-to-Child learning activity where learners are taught to investigate sources of ill health and come up with possible solutions (problem solving skills).

Road accidents have increased in South Africa and children were aware of the consequences thereof. Some learners from Marine Primary illustrated the results of reckless driving.

Very few of the learners at Lwazi and Ukhanyo Primary mentioned or drew environmental issues such as houses, trees and flowers; they focused more on food and the older learners on substance abuse and issues of violence drugs 11% & alcohol abuse 18% table 3). Some of the learners at Marine Primary drew houses with lights and taps on the outside due to the fact electricity had only been installed in some of the homes recently (Personal communication with school staff).

A few learners wrote AIDS on their drawings and mentioned in one of the focus group discussions that it was one of their favourite topics. Some even mentioned that they received enough health education. However, many teachers have undergone in service training regarding Aids, HIV and sexuality very few have implemented it due to lack of experience or staff problems (Personal communication with teachers and psychologists). In the past health education was also taught as a separate subject with a lack of involvement by other participants or integration with other subjects (Barnett et al, 1995).

Many communities practice alternate forms of medicine, which was an issue raised in the draw and write exercises at Klipfontein Primary. In the past health care has focused mostly on curative care; hence learners realises the importance of using prescribed medication regularly.

A few learners gave suggestions on how to improve their situations in the drawings. Only one learner from the farm school wrote that plans need to made regarding pollution. It could possibly suggest that further probing on this specific issue was needed or that toilet use and sanitation was not a topic that can be discussed easily with outsiders. It might have been regarded as a private and personal matter, which often involves cultural practices. In many communities especially among the older people it was not appropriate to discuss hygiene habits (AHRTAG, 1991). It was found in a study conducted in Bangladesh that people do not necessarily disclose all their habits when they are interviewed. When they were observed during their daily routine, they made use of contaminated pond water for domestic use (AHRTAG , 1991).

The enthusiastic attitude of children towards the exercise does indicate that they were keen to participate and find out more. Taylor et al (1999) noted enthusiastic health-seeking behaviour among the school communities in Kwa Zulu Natal as well. Children need to be taught to live with choices they have made with the assistance of an adult (Van Niekerk, 1992).

The drawings clearly displays the lack of psycho-educational perspective such as relationships with parents, friends and teachers as well as personal and political issues being addresses in the curriculum which is similar to what was found by Barnett, et al.(1994). Adolescents need to develop a sense of independence and techniques for dealing with complex problems (Magoon, 1973). Broader issues should be addressed such as lack of resources, employment, finance, facilities, responsible behaviour, problem, self-awareness, problem solving, conflict management, communication and parenting skills (Van Niekerk, 1992; Steyn et al, 1987). Many learners live in

surroundings plaqued with destitution, malnutrition as well as over population, which are not conducive to sound education for children (Cape Argus August 20: 1999).

Comments by learners during the focus group discussion as well as the write and draw exercises displayed many commonalities such as key categories on health perceptions; healthy diet, exercises, good hygiene, avoid smoking, substance abuse with similar studies that were conducted elsewhere by Pridmore & Bendelow, (1995) and Pridmore et al(1997). It also showed many similarities with WHO curriculum guidelines for health education in the schools such as personal health, community health, growth and development, prevention of substance abuse, nutrition sanitation and pollution amongst other (Barnett et al, 1995). Illustrations also displayed the thoughts and perceptions or cognitive knowledge of the children and not necessarily the availability of resources or their actual practices. All classroom activities in the past were guided by the teacher in a didactical manner and rote learning was encouraged free expression was very often discouraged. It does suggest that more creative expression through art should be encouraged amongst learners, which can assist with improving self-esteem. Children are much more observant than what they are given credit for. (Dyer, 1987).

Many other factors constrain behavioural change such as: lack of resources, conflicting messages, cultural issues, blaming others and choices to value other aspects of life above health eg. enjoyment of smoking yet the person is fully aware of the health consequences (Dines, 1993). Family disorganisation played a big role in the stability of society. Currently, there are many single families in the informal settlements and lower socio-economic housing schemes. (Personal communication with school staff; Steyn et al, 1987).

Such as if children are taught that fruit and vegetables are healthy, the message should be simplified or include developing their own garden if the former seems unobtainable or discussing alternative sources of vitamins, which are available in the community. For instance, many of the underprivileged schools are supplied with peanut butter, bread and soup powder by the Peninsula Feeding Scheme yet very few of the learners mentioned or illustrated that peanut butter was healthy (Personal Communication with teachers).

One of the major challenges in curriculum development it to find the balance between requirements of modern economy, traditional values, morals and social health issues which need to be understood in low levels of participation in public policy making within the school community (NECC,1992) . Curriculum 2005 aims to change teaching and learning approaches by empowering children with problem solving skills. The school curriculum should allow for openness and participation within a framework to make allowance for diversity, promoting regional and local participation, high levels of teacher skill and involvement in curriculum development amidst racial and regional inequalities.

School staff needs to be trained in the use of these methods to enable learners to make responsible choices regarding health and hygiene in their lives. The focus should shift away from health workers being responsible for the prevention of ill health to a positive outlook and role models in communities. Children should be encouraged to develop their own health education material that is both cost effective and realistic for them.

Curriculum developers need to give much thought to the useful information regarding health and hygiene issues in the community that concerns the children.

5.2 LIMITATIONS

Due to vocabulary limitation many learners drew a picture with a label or wrote poorly spelled words. Pridmore and Lansdown, (1997), mentioned the issue of children being unfamiliar to using drawing for the expression of their thoughts as a constraint in this technique. During the focus group discussions it was also noted that the Black learners did not speak out easily possibly due to cultural issues and language barriers – traditionally Black children were taught to respect adult by not making eye contact or speaking to them. (Personal communication with a teacher and nurse). They had to be encouraged continuously by the fieldworkers even though the classroom sessions were conducted in Xhosa. It does suggest that learners might have responded more spontaneously if they were more familiar with the researcher or at least one of the field workers.

Learners were given size A3 paper to do their write-and-draw on however some of them drew very small illustrations, immature which could possibly indicate that they were not used to a large piece of paper or that the exercise of expressing their feelings was completely new to them. Children have to be interviewed regarding their drawings, which makes it a time consuming event especially if the study population is large.

The study was both experimental as well as exploratory. The sample included schools, which had characteristics of the majority of school on the Cape Flats. However, only government schools from the Coloured and Black communities were included in the study therefore results cannot be generalised. Although value information was gained, a rapid assessment technique does not obtain much depth.

Language barriers were encountered due to the three languages used in the schools; English, Xhosa and Afrikaans. The school personnel at Lwazi and Ukhanyo Primary felt that learners understood English well, but it became obvious during the draw and write exercise as well as the focus group discussions that learners were more comfortable with Xhosa. Focus group discussions were held with groups consisting of girls and boys, which influenced the nature of the response rate, especially among the older learners.

The focus group discussions provided valuable insight into perceptions at home and at school although the number of children who participated was few. Some of the learners also lacked assertiveness skills and did not always speak out because they were not used to discussing their views on water and sanitation with strange adults.

5.3 LESSONS LEARNED

Draw-and-write can be regarded as a valuable tool in gaining insight into children's perceptions as well as treating them as partners in health promotion, however it cannot be used in isolation of other methods (Pridmore & Lansdown 1997). School observation, parental and teacher views and the broader socio-political milieu of society are important aspects in a study of this nature for a broad perspective

Some children used the label and write methods, whereas others used narrative sketches and drawing or, drawings only to express their perceptions. According to Pridmore and Lansdown (1997) all three methods are effective in gaining insight into

children's perceptions of health and ill health. Learners were also very eager to participate in the draw and write exercise although some drew all over the page provided while others (older learners), divided their page in half and drew things that make them healthy on the one side and things that prevent them from being healthy on the other side.

5.4 CONCLUSION

Children are enthusiastic about learning healthy behaviour however, the learner's perceptions clearly suggests that what they learn at school is theoretically correct however, it is not always applicable or reinforced by positive behaviour within their own communities. Some aspects of the knowledge that emerged were vague with lack of deeper understanding of source of ill health. Consequently they had very little insight into the link between health and hygiene practices or did not always regard it as important. Lack of resources was not regarded as a major problem in the schools but the use and responsibility towards it. Many similarities and differences were noted amongst the schools that can provide useful information for the development of health and hygiene learning materials that is contextualised.

South Africa faces a major challenge in the education system, which could be both daunting but exciting. Curriculum 2005 requires a paradigm shift of both the teacher and learner from teacher centred to outcome based learning. Thus creating the opportunity for the contextualization of health promotion within local real life situations through a collaborative approach in the schools and teacher training institutions (Myeni and McGrath, 1990). This study will be able to inform curriculum development by providing information that can be used to create health and hygiene learning activities, which are

based on local needs, culturally sensitive and educationally sound. Finally, it is essential that the role that the learner can play as a partner in health promotion be fully explored.

5.5 RECOMMENDATIONS

It is the responsibility of all health and education professionals to create a school climate, which bring about positive behavioural, academic and social outcome for children. This includes the creation of adequate culturally sensitive teaching material with appropriate learning activities that is relevant to communities in South Africa.

- **A working group should be formed.**

Teachers and relevant role players should form a working which should look at the development and integration of health and hygiene education with regular in service training, networking and continuous support in order to adjust to the new curriculum requirements.

- **All stakeholders should lobby for more supportive legislation** that includes environmental services, health and education departments, community leaders as well as the school community.

- **Using practical examples to teach about health and hygiene**

Practical examples such as demonstrations of hand washing, or a microscope to show learners the type of germs that grow on dirty hands. So that didactic knowledge can be put into practice hence reducing the mismatch that exists.

- **Develop Child-to-Child activities**

An activity such as the Child-to-Child strategy has enormous potential to develop the critical and creative processes of children with regards to health and hygiene. It also creates the atmosphere for adults to listen to children and involve them in decisions

concerning health issues at school. Child-to-Child methods are very similar to 'life orientation" activities recommended by Curriculum 2005.

- **Focusing on health priorities in the development of learning material**

The curriculum should include national health priorities currently effecting children such diarrhoeal diseases, water and sanitation, nutrition, growth and development, communicable diseases such as Tuberculosis which is on the increase in the Western Cape, alcohol and drug abuse etc.

- **Develop effective evaluation and monitoring methods, which should go hand in hand with learning material.**

The school team responsible for health should set measurable objectives and indicators.

- **Teachers and parents should act as role models in promoting healthy behaviour at school.**
- **Develop learning material on water and environmental conservation**

Some learners regarded water conservation as a priority. The reality of the scarcity of water in South Africa has not been emphasised enough. Many activities can be created for effective water management at home and school through collaboration with environmental services, which can lead to financial benefits as well. Learners can also be encouraged to take pride in their sanitary facilities at school and not view it in a negative light; cleaning of toilets are only for those being detained. Discussing practical ways of solving the lack of resources in the learner's toilets with learners. Building on available projects at the schools and integrating health and hygiene practices into activities that children enjoy such as rugby, soccer and cricket which are often played at schools.

- **Learning from previous projects and research done in this area**

There are many environmental projects currently running in South Africa, which can add valuable information.

- **More awareness programmes on substance abuse should be done.**

Creating more time and activities for learners to discuss their concerns regarding smoking, alcohol and drug abuse and supporting efforts to control it among learners with regular programmes on self awareness, personal development, assertiveness and entrepreneurial skills to deal with the issue of unemployment among communities.

- **Encouraging school clustering**

School clustering holds many advantages such as a spirit of caring and sharing amongst the school community.

Further research should be conducted on the perceptions of learners.

More research should be done on the perceptions of children about health and hygiene matters in order to continuously update learning activities.

- **Intersectoral collaboration should be encouraged to reduce the pressure of being put on overburdened teaching and health personnel.**

Exploring ways to involve communities and other resources in the schools such as the **Health Promoting Schools** initiative that has been effectively implemented at some schools. A model for a health promoting school with the focus on health and hygiene according to the five pillars which are life skills, services, environment, policy, and community links. A model for a health promoting schools for health and hygiene promotion could be as follows (example 1):

LIFESKILLS

Health, hygiene and water.

Teachers require life skills training for health and hygiene child centred activities.

The following questions can be asked:

- Why must our hands be clean?
- What type of germs is found on dirty hands?
- Which diseases do we prevent by keeping our hands clean?
- Water: Why is water so important and why should South African's preserve water?
- How do we measure water, what is the price of water?
- How can we save water at home and at school?

Activities could include demonstrations, drama, puppetry, art, Child to Child, etc.

- Demonstrating the proper way of washing hands.
- Simplified drawings of germs as an exercise.
- Poster making by groups of children that can be used in the toilets or classroom with a price for the best group.
- Who will we share our message with at home?
- Why do we need to share the message at home?
- Those that come up with the most creative idea and maintain the behaviour for some time can be rewarded positively.

SERVICES

The school support team could include the local health authorities, health inspector, school nurse, NGO's, Water Works etc. Organisations within reach of the school community who have more knowledge and information on the topic such as for example the Fairest Cape Association.

POLICY

The school health team can sit down and as a multi-disciplinary team decide on policy such as:

Activities, which are flexible but must be part of curriculum.

- To what extend will outside services be involved?
- Decide on a special a health and hygiene day or hour where the class leaders or prefects assist with putting up of posters and that toilet facilities are properly utilized. For example a gentlemen's day for boys and a lady's day for the girls focussing on health and hygiene.
- All activities should be monitored by a team, which should include learners.

- Decisions on who should be who should monitor hygiene in the classroom and the toilets as well as water use.

COMMUNITY LINKS

Inform the parents during a special parent meeting of the health and hygiene health promoting school, the advantages and ask them for ideas as to how they would like to become involved.

Ask for their assistance during the special promotion days. Teach the community about the importance of hygiene and which diseases can be prevented as well as how they can save water at school during parent meetings.

Do practical demonstration with available facilities and resources. (Many people do not have a tap or bathroom in their homes).

EXPECTED OUTCOME:

- Learners who are better able to maintain healthy behaviour and reduce the percentage of diarrhoea diseases caused by poor water and sanitation.
- Schools that are continuously striving to improve their health promoting activities in schools.
- Learners who are able to critically think about hygiene issues integrate it into other subjects and are able to solve problems.

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APPENDICES

A) School curriculum, previous and current framework

B) Guiding questions for draw and write exercise

C) Guiding questions for focus group discussions

D) Draw and write data

APPENDIX A

Curriculum options in South Africa adapted from NECC Report,(1992:20-21).

Primary phase **Compulsory subjects**	**Optional subjects include(subjects)**
JUNIOR PRIMARY (3 YEARS)	
First language	Art/Arts & crafts/ Arts education
Second language	Family guidance
Third language(DET)	Handicrafts
Bible ed./Religious ed./ Right living	Needlework
Mathematics	Youth preparedness
Environmental studies	Media-user guidance
Class music	Gardening
Handwriting	Skills & techniques(DET)
	Library
	Needlework
SENIOR PRIMARY(3 YEARS)	
	Religious instruction/Right living
First language	African language(DEC: Assembly)
Second language	Indian language/Cultural studies(DEC:Delegates)
Third language (DET)	
Mathematics	
History	
Geography	
General science	
Health education	

SECONDARY PHASE

Compulsory examination subjects	**Optional examination subjects(Std 6&7)(2 subjects)**	**Non-examination subjects (4 subjects)**
JUNIOR SECONDARY PHASE(3 YEARS)		
First language	Accounting	Religious ed./ Right living/ bible ed.
Second language	Typing	Class music
Third language (DET)	Home economics	Needlework/Handicrafts
Mathematics	Art	African language
History	Industrial art	(DEC: Assembly)
Geography	Agriculture	Physical ed.
General science	Music	Book ed.//Library/ media guidance

Basic techniques (std 5)		Guidance
Technical orientation(STds 6&7)		Gardening
		Indian language/ Cultural studies(DEC: delegates)
		Youth preparedness
Compulsory examination subjects	**Four examination subjects From the following fields of study:**	**Four non-examination subjects from the following**
SENIOR SECONDARY (3 YEARS)		
First language	General	Physical ed. Guidance
Second language	Human sciences	Youth prep.
	Natural sciences	Religious ed./ right living
	Commercial	Class music
	Technical	Library/Media
	Domestic science	
	Agriculture	
	Art	

DEVELOPMENTAL PATHWAYS

The development of curriculum policy for Foundation phase which is part of early childhood development ECD has been based on the following National Policy Documents;

1. White Paper on Education and Training March 1995.
2. Interim Policy for Early Childhood Development.
3. Curriculum Framework Document.

FOUNDATION PHASE GRADE R TO 3

3 MAIN LEARNING PROGRAMMES.

A. *LITERACY*
B. NUMERACY
C. LIFE SKILLS

The eight learning areas

Life orientation
Art and culture
Mathematical Literacy, Mathematics and Mathematical Sciences
Technology
Language, Literacy and Communication
Natural Sciences
Human and Social Sciences
Economics and Management Science

But only 6 phase organisers.

THE 6 ORGANISERS ARE:

1. Personnel development.
2. Health and Safety.
3. Environment.
4. Society.
5. The learner as entrepreneur.
6. Communication in our lives.

EACH LEARNING PROGRAMME HAS SPECIFIC OUTCOMES.

EACH SPECIFIC OUTCOME HAS ASSESSMENT CRITERIA.

EACH ASSESSMENT CRITERION HAS PERFORMANCE INDICATORS.

LEARNING PROGRAMME STATEMENT:

INITIALLY, LITERACY WAS SEEN AS A COGNITIVE PROCESS THAT ENABLES READING, WRITING AND NUMERACY.

" Literacy", stress the issue of access to the world and to knowledge through development of multiple capacities within all of us to make sense of our worlds through whatever means we have not only tests and books.

Examples are:

1.Language Literacy:
The over-arching goal of language development is effective communication, writing skills, focusing on improving of learners speaking, listening reading,

2. Cultural Literacy
Cultural, social and ideological values, reading.

3. Critical Literacy
The ability to respond critically e.g. messages, reading.

4. Visual Literacy
The interpretation of images signs, pictures and non-verbal (body) language.

5. Media Literacy
The reading of newspaper, television, films as cultural messages.

6. Numerical Literacy
The ability to use and interpret numbers.

7. Computer literacy
The ability you use and to access information from computers.

SPECIFIC OUTCOMES ARE:

OUTCOME 1.Learners make and negotiate meaning and understanding.
OUTCOME 2.Learners show critical awareness of language usage.
OUTCOME 3. Learners respond to the aesthetic, affective, cultural and social values in texts.
OUTCOME 4. Learners access, process and use information from a variety of sources and situations.
OUTCOME 5. Learners understand, know and apply language.
OUTCOME 6. Structures and conventions in context.

OUTCOME 7. Learners use appropriate communication strategies for specific purposes and situations.

LEARNING PROGRAMME STATEMENT:

NUMERACY

The learning programme statement:
1. Nutures continued perceptual, sensory and motor development.
2. Uses the learner's own innate, intuitive and experientially acquired knowledge and ability in number and space as a springboard into continued learning.
3. Ensures the enjoyment of the experiences provided.
4. Engenders confidence in the young learner's own mathematical abilities.
5. Encourages learners to develop their own approaches to working with numbers.
6. Consolidates in learners a necessary efficiency and fluency in the basic operations on numbers.
7. Enables learners to understand and appreciate relations, logic and pattern in numbers and space.

LEARNING PROGRAMME STATEMENT:
LIFE SKILLS

This learning programme deals with the development of a range of life skills to empower the learner:

1. To develop their full personal potential physically, effectively, socially, cognitively and normatively.

2. To participate effectively within their environment and develop scientific and technological process skills.

3. To be an empowered citizen and to prepare them for the world of work..

4. To be a creative learner.

SPECIFIC OUTCOMES: LIFE ORIENTATION

1. Understand and accept themselves as unique and worthwhile human beings.
2. Use skills and display attitudes and values that improve relationships in family, group and community.
3. Respect the rights of people to hold personal beliefs and values.
4. Demonstrate value and respect for human rights as reflected in Ubuntu and other similar philosophies.
5. Practise acquired life and decision making skills.

6. Assess career and other opportunities and set goals that will enable them to make the best use of their potential and talents.

FOUNDATION PHASE: HUMAN AND SOCIAL SCIENCES.

Human and social science contribute to developing responsible citizens in a culturally diverse, democratic society within an interdependent world.
The teacher will equip the learners to make sound judgements and take appropriate action that will contribute to sustainable development of human society and the physical environment.

Human and Social Science comprise the study of relations between people and between people and their environment.
These interactions are contextualised in space and time and have social, political, economic, environmental and spiritual dimensions.
they develop distinctive skills and a critical awareness of social and environmental patterns, processes and events, based on appropriate investigations and reflections within and across.

LEARNING PROGRAM: LIFE SKILLS
PHASE ORGANISER: HEALTH AND SAFETY
PROGRAM ORGANISER: WASHING OF HANDS AND SANITATION

Evaluate and participate in activities that demonstrate effective human movement and development.
There can be no doubt that South Africa's prosperity is dependent upon the health and welfare of its population. There is however, ample evidence to indicate that significant social and health related problems exist among our people. Many of these problems can be associated with the lifestyles adopted by individuals, particularly with respect to diets, physical activity, alcohol and substance abuse and a number of other high risk behaviours.

All learners should be provided with a sound knowledge of the benefits of healthy and safe way of living. As education is a life-long process, sound healhty and human sanitary practices can contribute to the prevention of health -related problems and improve the quality of life of learners.

ASSESSMENT CRITERIA	RANGE STATEMENT	PERFORMANCE INDICATORS
The learners will be able to demonstrate evidence of environment to promote own health are explained.	A range of benefits Improved health. Time management	Describe ways to care for the body when they want to use a toilet urgently. What should they do? Perform various movement patterns(e.g. running, jumping walking

		to toilet.)
Confidence and independence when the go to the toilet. 2. Rehabilitation through creative activities. Wont' wet himself 3. Dignity and self reliance.	Expressing and communicating feelings and opinions.	Enjoy activities such as games and dances, e.g. "This is the way we wash our hands" Handle objects of different sizes shapes e.g. buckets of water, count the buckets. Count toilet doors. Develop language related to washing hands, when where, how Describe ways to care for the body when sitting, standing, walking and lifting objects when you want to wash your hands. Identify changes to their body during physical exercises e.g. body temperatures heart rate, breathing etc. when they have to run to the toilets.
Ability to work with partner.	A range of individual group activities.	compete against partners and in small groups development. Operates with leader or captain who directs actions. Draw faces: How do you feel when you happy, sad and communicate?

SPECIFIC OBJECTIVE 7

Demonstrate the values and attitudes necessary for a healthy and balanced lifestyle.

SPECIFIC OBJECTIVE 2

Use skills and display attitudes and values that improve relationships in family, group and community.

JUSTIFICATION

These specific outcome are based on the conviction that a strong human right culture should form the basis of SA's society in general and the educational environment in particular. Thus, these specific outcomes seek to develop an understanding of the principles of a respect for human rights and their relevance to life. They aim to develop in learners the values, consciousness and competencies that are required for effective participation as responsible citizens of a democratic society.

ASSESSMENT CRITERIA	RANGE STATEMENT	PERFORMANCE
The nature of various relationships, friends, family, groups and qualities of relationships is expressed	Care for and co-operate with others in family, school, group and community	this will be evident when learners; Display knowledge of different kinds of relationships- why they wash hands, Share information with others about dirty toilets or blocked toilets. Who does not wash their hands before and after meals. Should be aware that each person has a number of rules e.g. use clean toilets.
2. Knowledge of when to wash hands	Making and valuing friends Caring when your friend wet himself/herself	Communicate and interact with known persons on how to use a toilet Express feelings and moods appropriately Identifying those values and attitudes which are important to the home, school and community.
3. Knowledge on what to do with a dirty toilet or blocked drain		
4. Evaluate water , evaluate safety in the environment.	Time management	Describe daily routine and give reason for its importance, meals, toilet, washing hands

FOUNDATION PHASE

Human and social science contribute to developing responsible citizens in a culturally diverse, democratic society within an interdependent world.

The teacher will equip the learners to make sound judgements and take appropriate action that will contribute to sustainable development of human society and the physical environment.

Human and Social Science comprises the study of relations between people and their environment. these interactions are contextualised in space and time and have social, political, economic, environmental and spiritual dimensions.

they develop distinctive skills and a critical awareness of social and environmental patterns, processes and events, based on appropriate investigations and reflections within and across related focuses.

SPECIFIC OUTCOMES:

1. Demonstrate a critical understanding of how South African Society has changed and developed.

2. Demonstrate a critical understanding of patterns of social development.

3. Participate actively in promoting a just democratic and equitable society.

4. Make sound judgements about the development, utilisation and management of resources.

5. Critically understand the role of technology in social development.

6. Demonstrate an understanding of interrelationships between society and the natural environment.

7. Address social and environmental issues in order to promote development and social justice.

8. Analyse forms and processes of organisations.

9. Use a range of skills and techniques in the Human and Social Science context.

APPENDIX B

GUIDING QUESTIONS FOR DRAW AND WRITE EXERCISE

STEPS

INTRODUCTION

We are helping the people who are making new learning materials by asking you to share with us what you think and feel about some things. I have come to visit you, who are very important to ask you to draw pictures. Remember that this is not a test because if you need help you can just show me and whisper in my ear. This is not for you teacher's eyes, it is just for your eyes and my eyes. Use the language that is your own. I would like to know what you think and feel, not your friend, mummy or teacher and I love whatever you draw and write.

1. Each learner will be given a sheet of paper. They will be asked to write their own name, age, sex and grade, name of school or town on the paper.

Learners will be asked to think of all the things that they can do to keep clean and healthy and all the things that make it difficult for them to keep clean and healthy. Children will be stimulated to say whatever comes into their minds. There is no right or wrong.

2. Learners will be asked to think of all the things that make it difficult to use a toilet.

The children will be thanked and told that the drawings and writings will help to solve problems and provide information for the people who make learning materials and that the researchers will be back a little later to talk about some health issues.

APPENDIX C

GUIDING QUESTIONS FOR FOCUS GROUP DISCUSSION

OBJECTIVE

Aim:To explore the health and hygiene views, attitudes and practices of learners.

Introduction

I would like you to tell me about your experiences about health, water and sanitation (clarify) at home and at school. Feel free to tell me honestly what you think and remember that I am not here to judge you, everyone's opinion is important.

Health and hygiene

What do you do to stay health and how do you feel?
When do you feel sick?
What do you learn about health and hygiene?
What does your parents teach you about health and hygiene?
What do you wash your hands with?

Toilet facilities

Describe the water and the toilet at school?
How many toilets are there in the school?
Do you have any responsibility in the school in terms of cleaning?
If there is no toilet paper in the toilet, what do you do?
How are the teachers' toilets?
Are there differences between boys and girls?

Water use

Where do you get water from at school?
What do you use the water for?
Where do you store the water?

APPENDIX D

UKHANYO PRIMARY – URBAN SCHOOL-MASIPHULELE

Number of girls: 20,total number of 16 . Sample size n36
Age range 7-15yrs.

Grade 1 (Age range 7-9yrs)		Grade 2 (Age range 8yrs		Grade 3 Age (range 8-10yrs)		Grade 4(Age range 9-12yrs)	
1. Environmental hygiene, cleanliness Drawings: • Sun • a house , • cloud • A tree • car • Bird, flowers	 2 2 1 1 1 1	***1. Environmental hygiene, cleanliness,*** Drawings: A tree House Flower Plant, sun	 1 1 1 1 1	1. ***Environmental hygiene, cleanliness,*** Drawings: Garden with a flower (10) Flower (9) Tree (9) Snake (9)	 1 2 1 1 1 1	1. ***Environmental hygiene, cleanliness,*** None	
2. Personal Hygiene and health Drawings: Fruit (7)(8)(9)	3	***2. Personal Hygiene and health*** Drawings: Food, fruit and vegetables, (8yrs) Ice-cream, boy washing	 1	***2. Personal Hygiene and health*** Drawings: Omo, Fruit (9), Vegetables, a bed (9) Smiling girl, panado, water (9) Ice-cream, milk, water, (10) Toothbrush toothpaste (9)	1 4 1 1 2 1 2 1	***2. Personal Hygiene and health*** Drawings: Food, vegetables lollipop, beer, cigarette (12) man sleeping, hot water, Unhealthy: cigarettes, sweets, coffee (10) beer, wine,	1 1 1 1 1 1 1
3. ***Toilet, toilet use and sanitation*** None		3. ***Toilet, toilet use and sanitation*** None		3. ***Toilet, toilet use and sanitation*** None		***3. Toilet, toilet use and sanitation*** None	
4. Water sources and		***4. Water sources and***		4. ***Water sources and***		***4. Water sources***	

4. Water sources and associated problems Drawing of a river (8)	1	***4. Water sources and associated problems*** None		4. ***Water sources and associated problems*** ♦ Drawing of a river (10) Sea , boat (8)	1 1	***4. Water sources and associated problems*** River-writing –wash	1
5.Writing None		***5. Writing*** None		***5. Writing*** None		***5 Writing*** Two people kissing – writing AIDS	2

Grade 5 (Age range 11-14yrs)		**Grade 6(Age range 13-15yrs)**		**Grade 7(Age range 13-16)**	
Environmental hygiene, Drawings: Tree –tree gives some people air(13) Clouds with rain (13) Fruit tree(13) Sun (14) Snake (13)	1 1 1 1 1	***1.Environmental hygiene, Drawings:*** Flower(14) Sun-sun is a good thing because we get heat from the sun and it also dries our clothes Sea, clean water (15) Sea is good to wash in (13) Tree-tree is good for air (13)(14)	1 11 1 2	***1.Environmental hygiene, Drawings:*** None	
3 Toilet, toilet use and sanitation None		***3.Toilet, toilet use and sanitation*** Drawings: A person washing hands-after using the toilet you must wash your hands (14)	1	***3.Toilet, toilet use and sanitation*** None	
4. Water sources and associated problems None		***4. Water sources and associated problems*** Drawings: The sea (13) River (15)	1 1	***5. Water sources and associated problems*** None	
5. Writings I don't need cigarettes it is dangerous I like milk, it is healthy	1 1	***5. Writings*** Sun is a good thing because we get heat from the sun and it also dries our clothes Tree is good for air Water is good to wash	1 1 1	***5.Writings*** Don't drink and drive Drugs, it kills Don't smoke petrol Don't use a knife Guns ,do not use guns if you are under age	3 1 1 2 1

		Smoking is not good it is very dangerous It is not good to drink beer it is dangerous Sugar is not good to eat Fruit it gives us more vitamins Don't drink and smoke Don't use dagga Ice-cream, it is not good	1 1 1 1 1 1		

MARINE PRIMARY OCEANVIEW –URBAN SCHOOL

Girls 15, Boys 23 sample size n38

Grade 1, age range 6-7yrs		**Grade 2, age range 8yrs**		**Grade 3, age range8-9yrs**		**Grade 4, age range 9-10yrs**	
Environmental hygiene, cleanliness and sanitation Drawings: House, light , tree, smiling girl(6,7) Sun(6)	2 1 1	***1.Environmental hygiene, cleanliness and sanitation*** Drawings: Apple trees Garden with flowers House with people watching TV House Clouds	4 2 2 1 1	***1.Environmental hygiene, cleanliness and sanitation*** Drawings: House Garden, flowers Apple trees Cars Dog, cat Clouds- Stars, moon, sun Robot, car accident	7 5 3 4 5 1 2	***1.Environmental hygiene, cleanliness and sanitation*** Drawings: House House with a light Garden, flowers, trees	3 1 1

Personal hygiene and health None		***2.Personal hygiene and health*** Smiling girl Vegetables	2 2	***2.Personal hygiene and health*** Milk A person bathing, bathroom Smiling person Sleeping person Carrots Unhealthy: Smoking	1 4 2 2 1 1	***2.Personal hygiene and health*** Face cloth Fruit must be rinsed Sugar" some people die of sugar"	1 1
Water sources and associated problems A tap leaking(7)	1	***3.Water sources and associated problems*** Tap with running water Tap leaking	1 2	***3.Water sources and associated problems*** House and a river	1	***3.Water sources and associated problems*** A tap with running water Taps allow bowls to become clean	1 1
4.Toilet use and associated problems None		***Toilet use and associated problems*** Toilet	1	***4.Toilet use and associated problems*** Clean toilet-	1	***4.Toilet use and associated problems*** Toilet-"you must go regularly to the toilet"- A man sitting on a toilet-	1 1
5.Health education Writing None		***Health education Writing*** None		***5.Health education Writing*** None		***5.Health education Writing*** ***Unhealthy*** If you drink dirty Water it makes you ill If you use drugs If you eat out of dirty bowls If your eye are full of black rings	1 1 1 1

Marine Primary (p2)

Grade 5 age range 10-12yrs	f	Grade 6 age range 12yrs	f	Grade 7 age range 13	
3.Water sources and associated problems A boy at tap with a bucket A girl, "go fetch some water" A tap with running water "if the tap runs the ground becomes wet than there are mosquitoes and people become ill"	 1 1 1	***3.Water sources and associated problems*** Tap outside the house "water is outside the house we cannot reach it Tap with running water and a bucket Dirty water	 1 1 1 1	***3.Water sources and associated problems*** It is difficult for people without water to stay clean	1
◆ ***4.Toilet use and associated problems*** ◆ Toilet-"you must go regularly to the toilet" ◆ A man sitting on a toilet	 1 1	***4.Toilet use and associated problems*** Toilet Wash your hands after using the toilet Go regularly to the toilet	 1 1 1	***4.Toilet use and associated problems*** Toilet, people do not flush the toilet when they use it	1
5.Health education Writing When you are ill see a doctor You should not eat old food Do not drink Eat healthy food Be careful what you say You may not smoke it can make you ill Too much sweets is unhealthy	 1 1 1 1 1 1 1	***5.Health education Writing*** Eat healthy food You must stay clean everyday A burger is fatty Don't scratch in rubbish bins Wine can make you ill	 1 1 1 1 1	***5.Health education Writing*** If you use needles it makes you sick Smoking gives you cancer Wash two times a day	 1 1 1

DE TUIN PRIMARY WORCESTER(p1)-

Total number of girls who participated were 17 and boys, 19. Sample n36.

Grade 1 age range 6-7yrs	f	Grade 2 age range 8yrs	f	Grade 3 age range 9yrs	f	Grade 4 age range 10-12yrs	f
1. Environmental cleanliness and sanitation		***1.Environmental cleanliness and sanitation***		***1.Environmental cleanliness and sanitation***		***1.Environmental cleanliness and sanitation***	
House	3	Sun , house and car	2	Grass, apple trees, flowers	1	Clouds, rain	2
Garden, flowers	3					Trees, flowers	2
Sun with happy faces	1					Cat, dog	3
						Dam	1
2. Personal hygiene and health		***2.Personal hygiene and health***		***2.Personal hygiene and health***		***2.Personal hygiene and health***	
Fruit	2	People smiling	2	***Unhealthy:***	1	Fruit, vegetables	3
Unhealthy:		Unhealthy		Dirty water can make you ill		Water	1
Smoking	1	Man smoking	2	Cigarette smoke makes you ill	1	***Unhealthy:***	
						Cigarettes	8
						Wine	1
						Dirty water makes you ill	2
						Dogs, cats make you ill	2
						Condoms, tablets	
3. Water sources and associated problems		***3.Water sources and associated problems***		***3.Water sources and associated problems***		***3.Water sources and associated problems***	
Leaking tap	1	None		None		A tap with water	1
4. Toilet, toilet use and sanitation		***4.Toilet, toilet use and sanitation***		***4.Toilet, toilet use and sanitation***		***4.Toilet, toilet use and sanitation***	
Toilet	1	None		Toilet	1	Toilet with clean water	1
						Person sitting on a dirty toilet	1

Grade 5 range 10-11yrs	f	Grade 6 age range 11-14yrs		Grade 7 age range 12-15yrs	
1. Environmental cleanliness and sanitation		***1.Environmental cleanliness and sanitation***		***1.Environmental cleanliness and sanitation***	
Clouds and rain	2	Dog, car	1	Tree	3
Dam	1	Apple tree	1	Clouds	3
Unhealthy:				A river full of rubbish	3
Cats make you ill	1			Rain	1
Sun make you ill	1			Sun and birds	1
Rubbish bin	1			Dog, a dog can make you ill	1
				Factory smoke that pollutes the air	1
2. Personal hygiene and health		***2.Personal hygiene and health***		***2.Personal hygiene and health***	
Fruit, vegetables	2	Vegetable and fruit	1	Fruit and vegetables	5
Unhealthy:				Water	1
Beer	1	***Unhealthy:***		***Unhealthy:***	
Cigarettes	2	House hold detergents are	7	Cigarettes	6
Drugs	1	poisonous	6	Insecticide	2
		Cigarettes	1	Dirty water can make you die	2
		Dirty water		Girl and boy kissing, Aids	1
				Dagga	1
				Rubbish bin -things that make you ill	4
				Beer and wine	
3.Water sources and associated problems		***3.Water sources and associated problems***		***3.Water sources and associated problems***	
Dam	1	None		Swimming in shallow water	1
Swimming pool	1			School children don't drink dirty water it can make you die	1
Dirty water	1			River full of rubbish, leads to a farm school	1
				People swimming and washing clothes in it	1

3. Toilet, toilet use and sanitation None		***4.Toilet, toilet use and sanitation*** Toilet with germs Clean you toilet with cleaning agents	 1 1	***4.Toilet, toilet use and sanitation*** Toilet with germs	2
Health education Writing ***4.*** Dagga makes you ill. Butternut makes you healthy	 1 1	***5.Health education Writing*** If you smoke it damages your lungs Smoke make others around you ill Look after your pets and drink clean water Fruit and vegetables make you healthy If you drink cleaning detergents, it can make you ill	 1 1 1 2 1	***5.Health education Writing*** Mandrax tablets make you drunk and stupid Apples are healthy, you are still to young to smoke If you drink to much you, you can become ill Smoking near small children is not good	 1 1 1 1
5. Suggestions for improvement None		***6.Suggestions for improvement*** None		***6.Suggestions for improvement*** Plans must be made	1

PETRA GEDENK PRIMARY WORCESTER-FARM SCHOOL

Total number of girls, 19 and boys, 20. Sample size 39.

Grade 1 age range 7yrs	f	Grade 2 age range 9yrs	f	Grade 3 age range 9yrs	f	Grade 4 age range 10-11yrs	f
1. Environmental cleanliness and sanitation Flowers House Trees, sun Pets	 1 3 2 1	***1.Environmental cleanliness and sanitation*** Clean house Trees, with bad fruit	 2 2	***1.Environmental cleanliness and sanitation*** Fruit tree House	 2 2	***1.Environmental cleanliness and sanitation*** Apple tree A clean and a dirty house Sun Truck-pollution	 1 1 1 1
2. Personal hygiene and health Wash and brush you teeth	1	***2.Personal hygiene and health*** Healthy fruit	2	***2.Personal hygiene and health*** Food	1	***2.Personal hygiene and health*** Healthy fruit A smiling girl	 1 1

I wash my cat regularly	1	***Unhealthy:*** Dirty water	1	***Unhealthy:*** Drinking dirty water Washing Long nails A smoking pipe Poisonous apples	1 1 1 1 1	***Unhealthy:*** Rotten apple Drinking dirty water Spitting Flies with germs Person coughing	1 2 1 1 1
3.Water sources and associated problems Pool of dirty water	1	***3.Water sources and associated problems*** To swim in a bath with dirty water	1	***3.Water sources and associated problems*** A container with dirty water	1	***3.Water sources and associated problems*** A dam with dirty water and germs A tap running into a bucket	1 1
4.Toilet, toilet use and sanitation None		***4.Toilet, toilet use and sanitation*** None		***4.Toilet, toilet use and associated*** None		***4.Toilet, toilet use and sanitation*** A person sitting on a toilet pot	1

PETRA GEDENK PRIMARY (P2)

Grade 5 age range 10-11yrs	f	Grade 6 age range 12-13yrs	F	Grade 7 age range 13-15	f
1.Environmental cleanliness and sanitation Clean and dirty house Apple tree Sun smiling Cat, ducks Electricity	8 8 3 2 1	***1.Environmental cleanliness and sanitation*** Fruit trees House, a dirty house is unhealthy Smoke and pollution A dirty pool is unhealthy	4 2 1 1	***1.Environmental cleanliness and sanitation*** House, clean, dirty Apple trees, garden Sun, clouds Car, aeroplane	6 8 1 1
2.Personal hygiene and health Fruit, apple trees Beauty queen A girl swimming A smiling girl A shower ***Unhealthy:*** A sick person in bed	3 1 1 1 1 1	***2.Personal hygiene and health*** Apples and grapes Cut nails regularly ***Unhealthy:*** Smoking cigarettes, dagga Dirty water To eat unripe fruit is unhealthy	3 1 2 2 1	***2.Personal hygiene and health*** Healthy fruit, vegetables Drink water To wash regularly Healthy body, soccer, netball, boxing, exercise ***Unhealthy:*** I may not wash I dirty water Long nails Drinking alcohol The sun is unhealthy for me	4 1 1 1 1 1 1 1

3. Water sources and associated problems Tap and a pump with dirty water Dirty water in a glass	 1 1	***3.Water sources and associated problems*** Taps with bucket Tap with dirty water, it makes you sick	 3 3	***3.Water sources and associated problems*** Bucket of dirty water in the house Dirty swimming pool Polluted water	 2 1 1
4.Toilet, toilet use and sanitation None		***4.Toilet, toilet use and sanitation*** Toilet with flies Dirty toilet that gives germs	 1 1	***4.Toilet, toilet use and sanitation*** Dirty toilet with germs	1
5.Writing None		***5. Writing*** None		***5. Writing*** A person must wash yourself regularly to stay healthy	1

LWAZI PRIMARY SCHOOL GUGULETHU – URBAN SCHOOL

Total number of learners who participated were n31

Grade 1 age range 6yrs	f	**Grade 2 age range 7-8yrs**	f	**Grade 3 age range 8-10yrs**		**Grade 4 age range 9-13yrs**	f
1. Environmental hygiene, cleanliness and sanitation Tree	 1	**1.Environmental hygiene, cleanliness and sanitation** Tree	 1	**1.Environmental hygiene, cleanliness and sanitation** None		**1.Environmental hygiene, cleanliness and sanitation** None	
2. Personal hygiene and health A smiling girl, boy Fruit	 2 1	**2.Personal hygiene and health** Fruit, milk ***Unhealthy*** Cigarettes	 2 1	**2.Personal hygiene and health** Fruit, vegetables, Food Exercises, picking up weights Person lying in bed A girl bathing A doctor and patient ***Unhealthy*** Cigarettes Sweets, cake	 6 4 2 1 1 1 1	**2.Personal hygiene and health** Doctor looking at a patient Fruit, vegetables, food Water Exercises A girl washing herself Smiling people	 5 5 2 3 1 1

3. Water sources and associated problems None		**3.Water sources and associated problems** Tap running River	 1 1	**3.Water sources and associated problems** None		**3.Water sources and associated problems** A pool of dirty water A pool of clean water A river	 5 2 1
4.Toilet, toilet use and sanitation None		**4.Toilet, toilet use and sanitation** None		**4.Toilet, toilet use and sanitation** None		**4.Toilet, toilet use and sanitation** None	

LWAZI PRIMARY

Grade 5 age range 10-12yrs	f	Grade 6 age range 12-15yrs	f	Grade 7 age range 13-15	f
1. Environmental hygiene , cleanliness and sanitation None		**1.Environmental hygiene , cleanliness and sanitation** Rubbish	1	**1.Environmental hygiene , cleanliness and sanitation** Fish in dirty water	1
2. Personal health and hygiene Fruit, vegetables, food ***Unhealthy*** Cigarettes Chocolates, sweets, ice-cream	3 2 2	**2.Personal health and hygiene** Fruit and vegetables Brown bread, water A person showering Exercise` Washing powder ***Unhealthy:*** Sweets, chocolates Cigarettes Beer, drugs	 5 4 2 1 6 5 1	**3. Personal health and hygiene** Fruit gives us energy vegetables, milk We use water to wash and to drink Soap ***Unhealthy:*** Cigarettes Petrol Beer Sweets	7 7 2 5 1 2 5
4. Water sources and associated problems River, pond, dirty water	5	**5. Water sources and associated problems** Dirty water	2	**4. Water sources and associated problems** A river with cans A pond with dirty water and fish	5 1
4.Toilet use and sanitation None		**4.Toilet use and sanitation** a flush toilet	1	**4.Toilet use and sanitation** Clean flush toilet Dirty flush toilet	 1

					2
5. *Writing* None		**5. *Writing*** None		**5. *Writing*** Smoke damages our lungs You can get cancer and other diseases If you eat brown bread you will be good and healthy Drinking makes you feel sick	3 1 1 1

KLIPFONTEIN PRIMARY SCHOOL PHILIPPI, PERI-URBAN SCHOOL

Total number of girls who participated 23, boys 12. Sample size n35.
None of the Grade 2 learners participated in the study.

Grade 1 age range, 5-8yrs.	f	Grade 3 age range 8-12yrs	f	Grade 4 age range 9-12yrs	f
1. Environmental cleanliness, hygiene and sanitation Sun Flowers Cars	 1 2 1	**1. Environmental cleanliness, hygiene and sanitation** Car	 1	**1. Environmental cleanliness, hygiene and sanitation** Smoke coming from a building Trees Sun A tree chopped down Smoke coming from burning of tyres, Cigarette, pipe smoking Car that loads water melons	 1 5 2 1 3 1
2. Personal hygiene and health None		**2.Personal hygiene and health** Apple, food *Unhealthy:* Tablets Girl smoking Drugs, bottle Knife, eyes, teeth, if a knife hits you you go to a doctor	 1 2 3 1 1	**2.Personal hygiene and health** Fruit Bath, brushing teeth Clothes ***Unhealthy:*** Cigarettes Pills and medicine Dirty hands, dirty apples A person who drinks poison	 1 1 1 1 1 2 1
3. *Water sources and associated problems* None		***3.Water sources and associated problems***		***3.Water sources and associated problems*** A tap running – this is dirty stuff in Tap running	 1 3

4. Toilet facilities and sanitation A toilet	2	***4.Toilet facilities and sanitation*** A flush toilet	4	***4.Toilet facilities and sanitation*** A flush toilet	3

Grade 5 age range 11-13yrs	f	Grade 6 age range 12-13yrs	f	Grade 7 age range 12-15yrs	f
1.Environmental cleanliness, hygiene and sanitation Air pollution, tyres burning, rubbish burning Cigarette smoke Sun	 3 1	***1.Environmental cleanliness, hygiene and sanitation*** Air pollution, tyres burning	2	***1.Environmental cleanliness, hygiene and sanitation*** School with smoke Smoke coming from a building A person in a car Smoke	 1 1 1 1
2. *Personal hygiene and health*		***2.Personal hygiene and health*** Cigarettes Wine Drugs	 2 2 2	***2.Personal hygiene and health*** Tooth paste and brush Bad meat , poison and a sick person Someone sitting in the sun Don't use drugs, syringe, beer A person in a bath and clothes Pills and medicine Herbs A person in a bath Cigarette	 1 2 1 1 2 1 2 1
3. *Water sources and associated problems* A bath A tap running	 1 3	***3.Water sources and associated problems*** Water pollution, people washing their clothing and bodies in the dam, they throw papers, tins and other rubbish in the dam, they use if for food, to drink from A person swimming in the dam, they don't have taps to drink from the dam is full of rubbish and they become ill	 2 2	***3.Water sources and associated problems*** A tap running, it is water that was not clean with chlorophyll We must not waste water	 2 1 1
4. *Toilet facilities and sanitation* A toilet	1	***4.Toilet facilities and sanitation*** None		***4.Toilet facilities and sanitation*** Tap running –keep your hands clean A person in a toilet at a wash basin	 1 1
5.Writing We must protect our clean earth	1	***5. Writing*** People smoke and 10% affect their lungs	1	***5. Writing*** Don't smoke you can get cancer Don't drink any tablets	 1 1

And don't pollute the air	1	Some people drink beer and wine and make accidents on their way home	1	Wash in clean water and put clean clothes on	1
Bad things, don't smoke near children				We must not use drugs it is bad for kids	1
Do not waste water	1	Lots of wine makes you become addicted	1	Addicted to life	1
				You must wash your hands after using the toilet	1
				Drink the pills and medicine that the doctor gives you	1
				Herbs are very good for people suffering from sugar	1
				Wash regularly at least twice a day	1

Comments

The children' s concern regarding the air pollution " burning of tyres" in the community and the wasting of water at school was obvious with all the grades. It appears as if taps are not closed properly after usage. The few drawings on toilet use and sanitation indicated that they do have flush toilets at school. Most of the comments made by the children were concern with "unhealthy" social aspects such as smoking and substance abuse.

THE FOLLOW TABLE SUMMARIZES GENERAL HEALTH CONCERNS MENTIONED BY THE LEARNERS

"What prevents them from being healthy"