CHAPTER 6

EMPIRICAL RESEARCH FINDINGS

1. Introduction

The problem of youth substance abuse has existed from time immemorial. This is reflected in publications by such authorities as Flisher, Ziervogel, Chalton, Leger and Robertson, (1993) as well as Terblanche and Venter (1999: 161). In fact, the physical and psycho-social consequences of youth substance abuse make it imperative to implement intervention programmes to combat these problems. Such programmes, however, should be supported by research-based information.

In a contributory attempt for prevention of youth substance abuse in South Africa, the researcher formulated the goal of this study:

> *To develop, implement and evaluate a substance abuse prevention programme for early adolescents in KwaZulu Natal.*

Accordingly, study objectives included:

- *To conduct the investigation within a theoretically founded reference frame by undertaking a relevant literature study of the phenomenon of substance abuse, substance abuse among early adolescents and substance abuse prevention among the youth.*

- *To identify the nature and prevalence of substance abuse as a problematic human condition among early adolescents in KwaZulu Natal.*
- *To undertake a critical review of the state of existing substance abuse prevention programmes for early adolescents in KwaZulu Natal.*
- *To develop a substance abuse prevention programme for early adolescents in KwaZulu Natal.*
- *To implement the substance abuse prevention programme among early adolescents in KwaZulu Natal.*
- *To evaluate the substance abuse prevention programme for early adolescents in KwaZulu Natal with a view to recommend further utilisation in practice.*

Against this background the following research questions were formulated:

- *What is the nature and prevalence of substance abuse among early adolescents in KwaZulu Natal?*
- *What is the state of existing substance abuse prevention programmes for early adolescents in KwaZulu Natal?*

The researcher continued by moving from this exploratory and descriptive study organised around the above-mentioned research questions to more definite, hypotheses-testing research.

The following hypothesis was thus formulated:

If early adolescents undergo a school based substance abuse prevention programme then their attitudes, knowledge and skills towards substance abuse will be influenced in a positive way.

From this, three sub-hypotheses was worded:

- *If early adolescents undergo a school based substance abuse prevention programme then their attitudes towards substances and substance users will be influenced in a positive way.*
- *If early adolescents undergo a school based substance abuse prevention programme then their substance specific knowledge will increase.*
- *If early adolescents undergo a school based substance abuse prevention programme then their personal and social skills will be enhanced.*

The selected research approach was the combined quantitative-qualitative approach and in the context of Cresswell's three models of combination the dominant-less-dominant (i.e. dominant quantitative and less dominant qualitative) design was used.

Quantitative data was gathered by means of a group administered self-constructed questionnaire, and qualitative/quantitative data respectively through (a) Internet access to the data of SACENDU, and (b) structured interviews with a schedule.

In this chapter the researcher presents dominant quantitative findings (Section B) based on the evaluation of the self developed substance abuse prevention programme for early adolescents in KwaZulu Natal (i.e. Project Skills Development), combined with qualitative/quantitative findings (Section A) from the review of the state of existing substance abuse prevention programmes in KwaZulu Natal.

The chapter is thus set out in terms of two objectives, i.e.:

- To undertake a critical review of the state of existing substance abuse prevention programmes for early adolescents in KwaZulu Natal (Section A, page 253), and
- To evaluate the self developed and implemented substance abuse prevention programme for early adolescents in KwaZulu Natal (Section B, page 288).

The primary aim of this chapter is to present, analyse and interpret the qualitative and quantitative data respectively collected by structured interviews with a schedule and questionnaires. Pie charts, bar- and column graphs as well as tables have been utilized for the presentation of data.

2. Qualitative findings based on the nature and prevalence of substance abuse among early adolescents in KwaZulu Natal

The magnitude of substance abuse among early adolescents in KwaZulu Natal was discussed in the last part of Chapter 2 (page 129). However, to examine and answer the research question that was formulated as follows: *"What is the nature and prevalence of substance abuse among early adolescents in KwaZulu Natal?"* the researcher accessed the research data of the South African Community Epidemiology Network of Drug Use (SACENDU). SACENDU is an alcohol and drug surveillance system that is operational in KwaZulu Natal. As SACENDU had all the necessary statistics and information at their disposal, the researcher accessed their research findings that are available to the public, on the Internet (http://www.mrc.ac.za). The available data confirmed that alcohol

was still the most popular legal drug among the youth in KwaZulu Natal with cannabis the most popular illegal substance.

As mentioned before a more detailed discussion of these important findings is contained in Chapter 2 (page 129) of this report.

3. Section A: Qualitative/Quantitative findings based on the review of the substance abuse prevention programmes for early adolescents in KwaZulu Natal

The need for comprehensive and effective prevention programmes for adolescents within South Africa cannot be overstated. Morojele, Knott, Myburg and Finkelstein (1999: 46) note: "Despite the presence of a range of disparate prevention programmes operating in South Africa, there is no clarity on the number of such programmes, their approaches and activities, the extent of their coverage of all areas of need, and their potential appropriateness and effectiveness." Yet, international and regional calls for preventive action have intensified (Rocha-Silva, 1999: 1).

In an effort to synchronise prevention efforts in South Africa, a National Strategic Action Plan (NSAP) for the prevention of substance abuse among the youth was developed by the South African Alliance for the Prevention of Substance Abuse (SAAPSA), and set in motion at a national forum during March 1999. The aim was to encourage networking amongst all organizations – government and civil society – concerned with preventing substance abuse in South Africa, and in this way promote peace and development in South Africa. Currently, the National Strategic Action Plan serves as a framework or point of reference for the implementation of primary prevention projects and

actions at national, provincial and community level. Providing a basis for local and international preventive agents to communicate with one another democratically and inclusively, and for new initiatives in South Africa to systematically link with and build on existing preventive efforts. (Compare Brewis, 1999: 5; Network of Practitioners and Researchers on Drug and Other Social Issues, 2001: 1-2.)

Prevention programmes covered in this section will thus strongly lean, on (a) information provided by the National Strategic Action Plan (Brewis, 1999), and (b) empirical data collected with a schedule, during structured interviews with 8 representatives from 8 core Social Welfare organizations in KwaZulu Natal.

3.1 Research methods

3.1.1 Respondents

The respondents were 8 representatives from 8 core Social Welfare organizations in KwaZulu Natal, namely: Department of Social Welfare and Population Development, Department of Education and Culture, South African National Council on Alcoholism and Drug Dependence (SANCA), South African Police Service: South African Narcotics Bureau (SANAB) and other Social Welfare Non-Governmental organizations (i.e. Durban Children Society, "Natal Christelike Vroue Vereniging" and "Christelik-Maatskaplike Diens") in KwaZulu Natal. All the named organizations were put together by means of availability sampling, i.e. a non-probability sampling technique that selects available elements, which contain the most typical attributes of the population for the sample. In other words the 8 representatives were mainly selected on grounds of their availability, from the Social Welfare sector in KwaZulu

Natal. Other aspects taken into consideration included: (a) probability of rendering substance abuse prevention services to early adolescents in KwaZulu Natal, (b) accessibility, and (c) interest to participate in the research study.

The study was explained to each of the representatives. Participation was voluntary and data was gathered during structured interviews with a schedule.

3.1.2 Structured interviews with a schedule

Structured interviews with a schedule were used to review al the available substance abuse prevention programmes for early adolescents in KwaZulu Natal. The interview guideline (schedule) contained questions on the following:

- Identifying particulars
  - Name of representative
  - Occupation (e.g. social worker, nurse or teacher)
  - Represented organization
  - Substance abuse prevention programme name (e.g. Lion's-Quest Skills for Adolescence or Life Orientation)

- Critical review of the presented prevention programme(s)
  - Programme setting (location and geographic setting)
  - Programme respondents/target group (age range, gender, race and special characteristics e.g. conduct disordered children)
  - Underlying programme theory (prevention strategy and prevention model)

- Programme structure (type of prevention service provided, frequency of prevention service within a period of one year, length of each service, duration of each service, method of delivery for each service, group participation in the programme and measurement/evaluation of programme success)

- Implementation problems and programme changes

- Programme staff (programme staff qualifications and staff satisfaction with the programme)

- Programme effectiveness

- Additional information

(See Appendix 2, page 396 for the complete schedule used as guideline during the structured interviews.)

The researcher completed the schedule during an interview with each representative. All information on the schedule was treated with confidentiality.

3.2 Data analysis and interpretation

Analysis of the qualitative/quantitative data was done by means of:

(a) A description of the available prevention programmes (qualitative), and

(b) An evaluation of the latter according to the National Institute on Drug Abuse's (2001) prevention principles (quantitative). (See Chapter 4, page 216.)

Validation of the qualitative descriptions of the available prevention programmes for early adolescents in KwaZulu Natal were executed against Guba's model of trustworthiness. (Compare De Vos, 1998: 348.) This was achieved by applying the following criteria to the assessment of qualitative data, i.e. truth- value, applicability, consistency and neutrality. This model is now set out.

3.2.1 Truth value

According to De Vos (1998: 349) truth value asks whether the researcher has established confidence in the truth of the findings for the subjects or informants and the context in which the study was undertaken. It establishes how confident the researcher is with the truth of the findings based on the research design, informants and context. Within this context the researcher considers the qualitative part of the study credible as it presents with accurate descriptions of the relevant substance abuse prevention programmes in KwaZulu Natal, so that other social workers in the alcohol and drug field would immediately recognise these descriptions.

3.2.2 Applicability

Applicability refers to the degree to which the findings can be applied to other contexts and settings or with other groups. It is the ability to generalize from the findings to larger populations (De Vos, 1998: 349). The researcher concurs with Guba's (1981) perspective on applicability in qualitative research by referring to fittingness, or transferability, as the

criterion against which applicability of qualitative data is assessed. In this study the criterion is meet as the descriptions of the substance abuse prevention programmes are enforceable and transferable into contexts outside the study situation.

3.2.3 Consistency

The third criterion of trustworthiness considers the consistency of the data, i.e. whether the findings would be consistent if the enquiry were replicated with the same respondents or in a similar context. De Vos (1998: 350) explains: "It is the extent to which repeated administration of a measure will provide the same data or the extent to which a measure administered once, but by different people, produced equivalent results". In this study, the descriptions of the available substance abuse prevention programmes can vary from informant to informant. Yet, programme contents should remain unchanged. If one assumes, however, that there are multiple realities, the notion of reliability is no longer as relevant.

3.2.4 Neutrality

The fourth criterion of trustworthiness is neutrality, i.e. the freedom from bias in the research procedures and results. Neutrality refers to the degree to which the findings are a function solely of the informants and conditions of the research and not of other biases, motivation and perspectives. In qualitative research the emphasis of neutrality is shifted from the researcher to the data, so that rather than looking at the neutrality of the investigator, the neutrality of the data was considered (De Vos, 1998: 350). Confirmation is thus the criterion of neutrality and this was achieved in this study when truth value and applicability were established.

In summary, according to Guba's model the presented descriptions of available substance abuse prevention programmes are trustworthy.

3.3 Review of the substance abuse prevention programmes of 8 core Welfare organizations in KwaZulu Natal

Next, the content of the substance abuse prevention programmes from the Department of Social Welfare and Population Development, Department of Education and Culture, South African National Council on Alcoholism and Drug Dependence (SANCA), South African Police Service: South African Narcotics Bureau (SANAB) and other Non-Governmental organizations in KwaZulu Natal are reviewed.

Table 13 presents a summary of important aspects regarding the empirical data collection method, according to the study's objective and selected research approach.

Table 13: Empirical data collection – Structured interview with a schedule

Objective	Target group	Number of representatives	Data collection method	Research approach
Review the state of	Department of Social Welfare and	1	Structured	Qualitative/

Objective	Target group	Number of representatives	Data collection method	Research approach
existing substance abuse prevention programmes for early adolescents in KwaZulu Natal	Population Development • Newland Park Rehabilitation Centre	1	interview with a schedule	Quantitative
	Department of Education and Culture	1		
	South African National Council on Alcoholism and Drug Dependence (SANCA)	1		
	South African Police Service: South African Narcotics Bureau (SANAB)	1		
	Other Non-Governmental organizations			
	• Durban Children Society	1		
	• NCVV ("Natal Christelike Vroue Vereniging")	1		
	• CMD ("Christelik-Maatskaplike Diens")	1		
	Total	8		

Evaluation of the effectiveness of each programme is done according to the basic prevention principles of the National Institute of Drug Abuse (2001: 1-3).

These principles are as follows:

- Prevention programmes should be designed to enhance protective factors and move towards reversing or reducing known risk factors.

- Prevention programmes should target all forms of drug abuse, including the use of tobacco, alcohol, marijuana and inhalants.

- Prevention programmes should include skills to resist drugs when offered, strengthen personal commitments against drug use, and increase social competency (e.g. in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use.

- Prevention programmes for adolescents should include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone.

- Prevention programmes should include a parent or caregiver component that reinforces what the children are learning – such as facts about drugs and their harmful effects – and that opens opportunities for family discussions about use of legal and illegal substances and family policies about their use.

- Prevention programmes should be long-term, over the school career with repeat interventions to reinforce the original prevention goals. For example, school-based efforts directed at elementary and middle school students should include booster sessions to help with critical transitions from middle to high school.

- Family-focused prevention efforts have a greater impact than strategies that focus on parents only or children only.

- Community programmes that include media campaigns and policy changes, such as new regulations that restrict access to alcohol, tobacco, or other drugs, are more effective when school and family interventions accompany them.

- Community programmes need to strengthen norms against drug use in al drug abuse prevention settings, including the family, the school and the community.

- Schools offer opportunities to reach all populations and also serve as important settings for specific subpopulations at risk for drug abuse, such as children with behaviour problems or learning disabilities and those who are potential dropouts.

- Prevention programming should be adapted to address the specific nature of the drug abuse problem in the local community.

- The higher the level of risk of the target population, the more intensive the prevention effort must be and the earlier it must begin.

- Prevention programmes should be age-specific, developmentally appropriate, and culturally sensitive.

- Effective prevention programmes are cost-effective. For every dollar spent on drug use prevention, communities can save 4 to 5 dollars in costs for drug abuse treatment and counselling. (See Chapter 4, page 216.)

The following discussion summarizes and elaborates on the findings of the study.

3.3.1 Department of Social Welfare and Population Development

This section discusses some of the youth oriented substance abuse prevention services provided by the Department of Social Welfare and Population Development, mainly focusing on KwaZulu Natal as Provincial Department, without losing sight of the wider context within which the Department of Social Welfare and Population Development renders substance abuse prevention services in South Africa.

Indeed, in KwaZulu Natal various initiatives for countering substance abuse among the youth exist. Table 14 provides an overview of some of these services provided by the Department of Social Welfare and Population Development, KwaZulu Natal.

Table 14: Substance related services engaged in by the Department of Social Welfare and Population Development, KwaZulu Natal

Nr.	Name of Department	Number of representatives	Range of services being rendered	Substance abuse prevention
1.	National and Provincial Department of Social Welfare and Population Development	One	School based education	"I am addicted to life"
2.	Provincial House of Delegates and House	None	○ Provision of social work services at schools	Substance abuse

Nr.	Name of Department	Number of representatives	Range of services being rendered	Substance abuse prevention
	of Representatives (School social work services)		○ Provision of drug counselling services to learners and their families ○ Referrals to appropriate resources, e.g. SANCA. ○ School based education	education
3.	Newland Park Rehabilitation Centre	One	Treatment/rehabilitation services	None
4.	Provincial Department of Social Welfare and Population Development	One	○ Treatment/rehabilitation services ○ Community education ○ School based education	Drug abuse prevention programme (DAP)

Using the table above as broad guideline, the different prevention initiatives of the Department of Social Welfare and Population Development in KwaZulu Natal is now briefly discussed.

In May 1995 the National and Provincial Department of Social Welfare and Population Development embarked upon a national school-based education initiative "I am addicted to life," aimed at teenagers between the ages of 11 and 20 years. It has been evaluated by the Department of Communication and will soon be continued in a reformulated format and with greater applicability to rural youth (Brewis, 1999: 28). This, however, is a programme that merits recognition for its high quality and solid efforts at intense programme evaluation. It is well worth implementing in KwaZulu Natal and throughout South Africa.

School social work services in the House of Delegates and House of Representatives was terminated in 1997 thus, discontinuing a drug-related preventive effort that was part and parcel of the school system, whilst working closely together with health, and welfare agencies in the government and non-government sector. In short, a decision representing a retrogressive step in (a) the early prevention, identification and insurance of youth substance abuse intervention, and (b) optimal use of existing infrastructure.

Also, data obtained from the representative of Newland Park Rehabilitation Centre indicates that the primary thrust of services appear to be counselling or treatment/rehabilitation of substance abusers. Consequently all efforts to drug education and prevention services are referred to the Provincial Department of Social Welfare and Population Development in Durban.

In fact, the Provincial Department of Social Welfare and Population Development prioritised substance abuse prevention among the youth, as one of KwaZulu Natal's most serious social-health challenges. However, focussing on prevention services to early adolescents only, the investment in a preventive initiative, called "Drug Abuse Prevention Programme" (DAP) is satisfying.

The Drug Abuse Prevention Programme (DAP) addresses a healthy lifestyle by relying on the provision of factual information about the adverse consequences of substance use/abuse and attempting to foster the development of self-esteem and responsible decision-making. DAP is a primary, school-based substance abuse prevention programme in KwaZulu Natal that targets all school going adolescents, typically in the school classrooms. The goal of the programme is to prevent substance use/abuse among early adolescents. The

programme consists of substance abuse related information for continuous school-based substance abuse prevention services to early adolescents. The two major content areas are general social skills and drug information.

The underlying rationale of this initiative is based on the premise that preventing substance use with younger populations will ultimately reduce the prevalence of drug use among these same individuals as they become older.

DAP programme material consists of a guide for the presenter, i.e. the social worker, only. The programme is designed to be delivered in 1-6 sessions of more than 90 minutes each. The entire programme is conducted on consecutive weekdays. In addition, service providers in as many fields as possible (especially those in primary health care, in generic welfare services and in specialized drug-related and treatment/preventive services) as well as (where feasible) those who have recovered from drug-related problems are involved in didactic instruction to the youth.

Programme success is determined or measured by one variable only, i.e. a decrease in the amount of children that drop out of school because of substance abuse. At the moment no formal form of evaluation exists. Yet, so far, no problems were encountered whilst implementing the DAP programme in various primary schools in KwaZulu Natal. The programme staff describes (a) their satisfaction with the programme, and (b) the children's involvement and participation in the DAP as good.

Finally, programme effectiveness of DAP is addressed.

Table 15: Programme effectiveness – Drug Abuse Prevention Programme (DAP)

Nr.	Question	Yes	Uncertain	No
1.	Is the prevention programme designed to enhance protective factors and move toward reversing or reducing known risk factors?		X	
2.	Does the prevention programme target all forms of drug abuse, including the use of tobacco, alcohol, cannabis and inhalants?	X		
3.	Does the prevention programme include skills to resist drugs when offered?			X
4.	Does the prevention programme strengthen personal commitments against drug use?		X	
5.	Does the prevention programme increase social competency (e.g. in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use?	X		
6.	Does the prevention programme include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone?			X
7.	Does the prevention programme include a parent or caregivers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects?			X
8.	Is the prevention programme(s) long-term, in other words implemented over the child's school career with repeat interventions to reinforce the original prevention goals?			X
9.	Is the prevention effort family-focused, i.e. focused on both parents and children?			X
10.	Is the prevention effort focused on parents only?			X

Nr.	Question	Yes	Uncertain	No
11.	Is the prevention programme focused on children only?	X		
12.	Is the prevention programme developmentally appropriate?	X		
13.	Is the prevention programme culturally sensitive?	X		
14	Is the prevention programme(s) cost-effective?	X		
	TOTAL	**6**	**2**	**6**

The Drug Abuse Prevention programme (DAP) seems reasonably effective as it conforms to 42.8% of the above mentioned substance abuse prevention principles that are based on the work of the National Institute on Drug Abuse's prevention principles (2001: 1-3). Herewith it is noted that the goals for this programme are clear and based on the theoretical prevention strategy of information dissemination. The researcher also found the programme materials well matched to the intended audience. However, the programme could possibly engage the learners more actively by using a wider variety of teaching tools, strategies and reinforcement activities rather than just engaging in didactic instruction. The programme shows much strength, of which the focus on social skills is very prominent. The evaluation methodology can, however, be formalised.

3.3.2 Department of Education and Culture - Life Orientation (Curriculum 2005)

Schools have served as the primary locus of substance abuse prevention efforts for several decades (Botvin, Schinke & Orlandi, 1995:

169). Although there has been considerable debate about whether schools should provide programmes dealing with health and social problems, particularly at a time when there is renewed concern about academic standards, the simple truth is that schools offer the most efficient access to large numbers of children or adolescents (Gonet, 1994: 89). Moreover, many educators are gradually recognizing that problems such as substance abuse are a significant barrier to the achievement of educational objectives. Thus, despite their traditional educational mission, schools have been asked to assume responsibility for a variety of social and health problem, int. al. substance abuse. Accordingly, South Africa's, Curriculum 2005, i.e. an outcomes-based curriculum, includes Life Orientation as core subject within the prescribed learning areas/fields of knowledge (i.e. Languages; Mathematics; Natural Sciences; Technology; Social Sciences; Arts and Culture; Economic and Management sciences; and Life Orientation).

Wherein the phrase Life Orientation captures the essence of what this learning area aims to achieve. It guides and prepares learners for life and its possibilities. Life Orientation equips learners for meaningful and successful living in a rapidly changing and transforming society (National Curriculum Statement, 2001: 63). More specifically, "Life Orientation" can be understood as "skills, insight, awareness, knowledge, values, attitude and qualities that are necessary to empower individuals and their communities to cope and engage successfully with their life and its challenges in South Africa" (Louw & Amorim, 1999: 77). Life Orientation is thus central to the all-round development of learners as it is concerned with the social, personal, intellectual, emotional, spiritual and physical growth of learners, as well as the way in which these facets are interrelated.

The Life Orientation Learning Area Statement (2001: 63) develops skills, knowledge, values and attitudes that empower children to make informed decisions and take appropriate actions regarding:

- Health promotion, i.e. nutrition, environment health, diseases including HIV/AIDS and Sexually Transmitted Diseases (STD's), safety, abuse, violence and substance abuse.

- Social development. This focus area covers belief systems, religious and constitutional rights and responsibilities, relationships and cultural understanding.

- Personal development. Children are given the opportunity to develop life skills, and reflect on and understand their emotional development, spiritual awareness, self-knowledge, self-concept and self-worth.

- Physical development and movement, i.e.: (a) fine and gross motor development, (b) games and sport, (c) physical growth and development, and (d) recreation and play.

- Orientation to the world of work, i.e.: (a) career information gathering and planning skills, (b) personal evaluation skills, and (c) a positive attitude to work and work ethics (National Curriculum statement, 2001: 14-15).

These five focus areas of the Life Orientation curriculum address the human and environmental rights outlined in the South African Constitution.

3.3.2.1 Unique features and scope of Life Orientation (Curriculum 2005)

- Life Orientation focuses on the holistic development of children, and makes a unique contribution to General Education and Training (GET) as it:

  (a) Enables learners to make informed decisions regarding personal, community and environmental health promotion.

  (b) Enables learners to form positive social relationships, respect different worldviews and exercise their Constitutional rights and responsibilities.

  (c) Empower learners to achieve and extend their personal potential to contribute positively to society and cope with and respond to the challenges in their world.

  (d) Promotes physical development as an integral part of social, cognitive and emotional development form early childhood through the General Education Training band.

  (e) Develops a positive orientation to study and work, and the ability to make informed decisions regarding further study and careers (National Curriculum Statement, 2001: 64).

- The learning outcomes (i.e. what – knowledge, information, skills, attitudes and values - learners should know and be able to do at the end of a grade) of Life Orientation equip children to live productive and meaningful lives in a transforming society. The focus is the development of self-in-society. The features of contemporary South Africa and the nature of the personal challenges children encounter within this society, consequently guide the choice of the content of this learning area.

- South African society is characterised by socio-political change. Implying that we have to develop ways of living together in an emerging democracy and to realise the civil and human rights and responsibilities, which are not yet widely evident. Prejudice, often in the form of racism, is still present in post-apartheid South Africa. In addition, the country faces the challenge of socio-economic development, which includes an increasingly global economy, unemployment and environmental degradation. The learning outcomes of Life Orientation empower the youth to find a place for themselves in a world increasingly different from that in which their parents lived and worked.

- Environmental issues are affecting communities' well being' yet an awareness of these issues and how to address them is largely absent. Despite political change, the world in which the children live is often harshly challenging. Crime and violence affect virtually every school, community and individual child. Within such contexts Life Orientation enable children to develop a sense of confidence and competence in order to live well and contribute productively to the shaping of a new society (National Curriculum Statement, 2001: 65).

3.3.2.2 Learning outcomes of Life Orientation (Curriculum 2005)

(a) The learner is able to make informed decisions about personal, community and environmental health.

(b) The learner is able to demonstrate an active commitment to constitutional rights and social responsibilities and show sensitivity to diverse cultures and belief systems.

(c) The learner is able to use acquired life skills to achieve and extend personal potential to respond effectively to challenges in his/her world.

(d) The learner is able to demonstrate an understanding of and participate in activities that promote movement and physical development.

(e) The learner is able to make informed choices and decisions about further study and career choices (National Curriculum Statement, 2001: 67).

Curriculum 2005 therefore makes a unique contribution to (a) general Education in South Africa, and (b) to substance abuse prevention, as the latter is included in health promotion and personal development (life skills) as an important part of the school curriculum (Brewis, 1999: 28).

Hence, Life Orientation's effectiveness is addressed by means of Table 16.

Table 16: Programme effectiveness of Life Orientation (Curriculum 2005)

Nr.	Question	Yes	Uncertain	No
1.	Is the prevention programme designed to enhance protective factors and move toward reversing or reducing known risk factors?	X		
2.	Does the prevention programme target all forms of drug abuse, including the use of tobacco, alcohol, cannabis and inhalants?	X		
3.	Does the prevention programme include skills to resist drugs when offered?	X		
4.	Does the prevention programme strengthen personal commitments against drug use?	X		
5.	Does the prevention programme increase social competency (e.g. in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use?	X		
6.	Does the prevention programme include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone?	X		
7.	Does the prevention programme include a parent or caregivers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects?	X		
8.	Is the prevention programme(s) long-term, in other words implemented over the child's school career with repeat interventions to reinforce the original prevention goals?	X		
9.	Is the prevention effort family-focused, i.e. focused on both parents and children?			X
10.	Is the prevention effort focused on parents only?			X

Nr.	Question	Yes	Uncertain	No
11.	Is the prevention programme focused on children only?			X
12.	Is the prevention programme developmentally appropriate?	X		
13.	Is the prevention programme culturally sensitive?	X		
14	Is the prevention programme(s) cost-effective?	X		
TOTAL		11	-	3

Life Orientation as core field of knowledge and skills seems highly effective as it conforms to 78.5% of the above-mentioned substance abuse prevention principles.

Focussing on programme quality, the researcher is of opinion that the goals of Life Orientation are (a) clearly focussed, (b) reasonable, and (c) appropriate for the youth of South Africa. The subject content and materials are culturally and ethnically sensitive and encompass urban, suburban, and rural communities. The rationale for the subject (i.e. Life Orientation) is based on the affective educational/social competency model. Herewith, substance abuse related activities highlight the consequences of drug use that are immediately relevant to children whilst avoiding didactic lecturing and scare tactics that might cause learners to avoid or block out the message. In other words, the participatory nature of Life Orientation successfully motivates and engages children in the learning process.

Life Orientation thus provides convincing evidence of a credible and effective life skills programme through (a) extremely well-designed training material, and (b) formal assessment and/or evaluation

methodology. The school curriculum is consequently considered to be the foundation or starting point for the social development of any additional or supporting school based substance abuse prevention effort.

3.3.3 South African National Council on Alcoholism and Drug Dependence (SANCA)

The South African National Council on Alcoholism and Drug Dependence – SANCA – is a Non-Governmental Welfare Organization whose major objectives are to prevent and treat alcohol and other drug dependence. Currently, SANCA Alcohol and Drug Centres are established in all the provinces of South Africa. Treatment facilities in KwaZulu Natal include: (a) Durban Alcohol and Drug Centre/Lulama Treatment Centre, (b) Penthouse Clinic, (c) Zululand Alcohol and Drug Help Centre, (d) Newcastle Alcohol and Drug Centre, (e) Pietermaritzburg Alcohol and Drug Centre, and (f) Nongoma Alcohol and Drug Help Centre.

With prevention (more specifically adolescent substance abuse prevention) as one of the main goals of the mentioned service provider, Louw and Amorim (1999: 81) assert the following: "Specialized treatment providers such as SANCA Alcohol and Drug Centres place a lot of emphasis on peer counselling training, i.e. TADA (Teenagers Against Drug Abuse), the so-called youth-on youth approach." TADA was initiated in 1986 and has since grown so that TADA groups exist in at least half of the high schools in the greater Durban area and in several primary schools as well.

TADA is unique in that it is a teenager-to-teenager campaign. The people who are advocating a healthy lifestyle, free from the abuse of drugs, are not adults, "preaching" to young people, many of who feel that older people no longer have any idea of what it is like to be young. TADA members know exactly what it feels like to be a teenager today, and are faced with the same pressures as any other young person. They have simply decided that abusing drugs can only cause, rather than solve, problems in the long run, and wish to convey this message to their peers.

The TADA programme addresses substance use/abuse by forming a drug abuse movement (i.e. a drug action group) in schools, and among other projects undertook the following:

- Requested, (and received) training from SANCA
- Elected a committee and various sub-committees
- Educated their parents at a special parents' evening
- Decided on the name "Teenager Against Drug Abuse" a slogan: "Bend the Trend: Jol Without Zol" and a logo for the group
- Arranged for T-shirts with the TADA logo and slogan to be printed, and sold these at school
- Visited the grade 7 classes at schools traditionally linked with Girls' College, in order to educate the pupils; and
- Addressed pupils at other schools in order to encourage them to form TADA groups.

The TADA programme sharply focuses on positive peer groups as protective factor against adolescent substance use/abuse. It is a primary school-based substance abuse prevention programme that targets and empowers individuals between the ages of 11 – 17 years old, typically in school classrooms. The type of prevention service that SANCA provide is (a) awareness, and (b) provision of factually correct

information. The method of service delivery is group work sessions executed in 1 – 4 weeks. Measurement of programme success is done by means of the following:

- Requests for more information;
- Early identification of substance abusers;
- Fewer children that drop out of school because of substance abuse;
- More open discussion between children and teachers;
- Increased self-referrals;
- Increased referrals by concerned friends;
- Increased knowledge of signs, symptoms and dangers of substance abuse;
- Increased awareness of community resources that can help them; and
- Awareness of option in dealing with peers, decision making, problem solving and resisting peer pressure.

The programme personnel of SANCA are limited to qualified social workers and professional nurses who are of opinion that this programme is well worth implementing. The TADA programme is well received at schools in KwaZulu Natal.

Finally, the programme's goals greatly concur with the National Institute on Drug Abuse's (2001: 1-3) prevention principles and are explained in Table 17.

Table 17: Programme effectiveness: TADA

Nr.	Question	Yes	Uncertain	No
1.	Is the prevention programme designed to enhance protective factors and move toward reversing or reducing known risk factors?	X		
2.	Does the prevention programme target all forms of drug abuse, including the use of tobacco, alcohol, cannabis and inhalants?	X		
3.	Does the prevention programme include skills to resist drugs when offered?	X		
4.	Does the prevention programme strengthen personal commitments against drug use?	X		
5.	Does the prevention programme increase social competency (e.g. in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use?	X		
6.	Does the prevention programme include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone?	X		
7.	Does the prevention programme include a parent or caregivers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects?	X		
8.	Is the prevention programme(s) long-term, in other words implemented over the child's school career with repeat interventions to reinforce the original prevention goals?			X
9.	Is the prevention effort family-focused, i.e. focused on both parents and children?	X		
10.	Is the prevention effort focused on parents only?			X

Nr.	Question	Yes	Uncertain	No
11.	Is the prevention programme focused on children only?			X
12.	Is the prevention programme developmentally appropriate?	X		
13.	Is the prevention programme culturally sensitive?	X		
14	Is the prevention programme(s) cost-effective?	X		
	TOTAL	11	-	3

The TADA programme holds much potential and conforms to 78.5% of the above mentioned substance abuse prevention principles. Herewith it is noted that the goals for this programme are clear and based on the theoretical social environmental or learning model. Programme material is well matched and sensitive to the intended audience. The programme shows much strength but has as yet, not been formally evaluated.

3.3.4 South African Police Services – South African Narcotics Bureau (SANAB): Community Education

The South African Narcotics Bureau – SANAB – is a unit of the South African Police Services whose major objectives are to investigate and prosecute substance related incidents throughout all the provinces of South Africa. However, as a small subdivision of community related services, SANAB provides awareness and knowledge of the nature and extent of substance use, abuse and dependence to the community to increase perceptions of risk and enhance awareness of substance related policies, programmes and services. Accordingly, youth

substance abuse prevention can occur in all primary and secondary schools, throughout KwaZulu Natal, if so requested.

The key activities/methods employed by the South African Narcotics Bureau (SANAB) in community education to the youth include: (a) provision of drug information (e.g. talks, slide shows to display drugs), (b) discussion groups, and (c) referrals and interventions. The main aim of this service, however, is to raise awareness about the negative effects of substance abuse and to bring about a reduction in this behaviour. The programme structure (e.g. number of sessions, time span) varies and by using didactic instruction, SANAB facilitators can address groups of between three and 600 respondents at a time. This service is available and implemented throughout South Africa, and is based on the information-only prevention model.

Programme success is measured by means of (a) Feedback that indicates change in substance related attitudes, (b) requests for more information, (c) early identification of substance abusers, and (d) fewer children that drop out of school because of substance abuse. In addition, however, the Bureau (SANAB) found that very few schools request this community service, despite the fact that they have been informed of it through their Department of Education and Culture. Notwithstanding, the only conclusion to come to is a possible lack of interest.

Members of SANAB, responsible for this community service, are qualified police officers who describe their satisfaction with their service as good.

Programme effectiveness is described in Table 18.

Table 18: Programme effectiveness – SANAB

Nr.	Question	Yes	Uncertain	No
1.	Is the prevention programme designed to enhance protective factors and move toward reversing or reducing known risk factors?			X
2.	Does the prevention programme target all forms of drug abuse, including the use of tobacco, alcohol, cannabis and inhalants?	X		
3.	Does the prevention programme include skills to resist drugs when offered?			X
4.	Does the prevention programme strengthen personal commitments against drug use?	X		
5.	Does the prevention programme increase social competency (e.g. in communications, peer relationships, self-efficacy, and assertiveness) in conjunction with reinforcement of attitudes against drug use?			X
6.	Does the prevention programme include interactive methods, such as peer discussion groups, rather than didactic teaching techniques alone?			X
7.	Does the prevention programme include a parent or caregivers' component that reinforces what the children are learning, such as facts about drugs and their harmful effects?			X
8.	Is the prevention programme(s) long-term, in other words implemented over the child's school career with repeat interventions to reinforce the original prevention goals?			X
9.	Is the prevention effort family-focused, i.e. focused on both parents and children?			X
10.	Is the prevention effort focused on parents only?			X

Nr.	Question	Yes	Uncertain	No
11.	Is the prevention programme focused on children only?	X		
12.	Is the prevention programme developmentally appropriate?	X		
13.	Is the prevention programme culturally sensitive?	X		
14	Is the prevention programme(s) cost-effective?	X		
	TOTAL	6		8

Community education, as a secondary function of the South African Narcotics Bureau (SANAB), conforms to 42.8% of the above-mentioned substance abuse prevention principles. Herewith it is noted that this service clearly articulates its goals and spells out its expected behavioural changes. The researcher also identified the programme content and material as culturally and ethnically sensitive, which has been successfully implemented in highly diverse primary and secondary schools that encompassed urban, suburban and rural communities. The rationale for the programme is based on information dissemination. The programme shows much strength but has as yet, not been formally evaluated.

3.3.5 Other Social Welfare Non-Governmental Organizations

Over the years the entire social welfare sector has established a range of services to address the problem of drug abuse. Services that include (a) drug prevention, (b) early intervention, (c) treatment, (d) rehabilitation, and (e) after care services. South African facilities thus

make provision for substance abuse prevention and treatment of dependency on a short and long-term basis with multi-disciplinary professional teams providing the service.

In an effort to strengthen substance-related preventive efforts the majority of Non-Governmental Organizations in South Africa use school based substance abuse prevention programmes that they developed themselves. The content of these programmes concur greatly and focus on the development of life skills. This include (a) decision making, (b) communication, (c) problem solving, (d) feelings – management of emotions, (e) self-awareness and self-esteem, (f) values clarification, (g) risk factors (consequences), (h) responsibility, (i) stress management, (j) conflict management, (k) dealing with peer pressure, (l) importance of recreation, (m) resistance skills, and (n) providing relevant, honest facts regarding substance abuse (Louw & Amorim, 1999: 81). Programme activities and methods employed by these programmes include:

- Drug information;
- Discussion groups;
- Referrals and interventions;
- Provision of written policy framework;
- Multiple teaching methods (e.g. case studies, experiential learning, role plays, group work and community projects);
- Inclusion of teachers and parents as well as students as target recipients;
- Parental and community participation, and
- Provision of healthy alternatives to substance use (Louw & Amorim, 1999: 82).

To date, none of these programmes have been subjected to formal evaluation.

However, in KwaZulu Natal, there is a partnership forged between the Non-Governmental Welfare Sector (e.g. Durban Children Society, "Natal Chistelike Vroue Vereniging" and "Christelik-Maatskaplike Diens") to refer all substance related services to the South African National Council on Alcoholism and Drug Dependence (SANCA). On mutual agreement SANCA is thus responsible for all Non-Governmental substance abuse prevention efforts in KwaZulu Natal.

3.3.6 Other South African Prevention programmes and interventions

3.3.6.1 National Drug Recognition Programme

One of the major problems in combating and preventing drug abuse is a lack of field workers trained in recognizing signs and symptoms of drug abuse. Against this background, Christo Mynhardt (CSIR) initiated in 1996 contact with the Los Angeles Police Department to access their successful Drug Recognition Expert Programme. As a result a South African national steering group was mobilized and a similar programme launched, namely the South African Drug Recognition Programme. The programme makes it possible for a non-medical person (law enforcement, officer, social or health worker, teacher) to recognize effectively the signs and symptoms of drug use. Drugs are classified into seven main categories and it is possible to differentiate the signs and symptoms of the different categories and also identify multiple drug use. The programme is in the process of being implemented in South Africa among arrestees. Care will be taken to

monitor and evaluate it and accommodate lessons learnt (Brewis, 1999: 26).

3.3.6.2 Drug-Free Marshals (DFM)

The Drug-Free Marshals is a national anti-drug campaign aimed at teens and pre-teens with the purpose of helping the youth to make the important decision to remain drug-free and to assist others to make the same decision. The programme began with an original group of 200 children who were sworn in as "Drug-Free Marshals" by the Drug Demand Reduction Office of the FBI in Los Angeles and from that beginning has come a grassroots campaign of kids and adults across the world. Accordingly, in South Africa, "Drug-Free Marshals" are co-ordinated by the Church of Scientology, who tries to involve the youth in creating a drug-free society. The main purpose is to give children the task to encourage others to be drug free in their pre-teens (5 – 12 years). This age group was chosen because they are more susceptible to education on refraining from drug use. Although this campaign has not yet been evaluated, improvements have been introduced. (Compare Brewis, 1999: 26; Drug-Free Marshals, 2002: 1-2.)

In South Africa, there are now more than 7000 Drug-Free Marshals, with the programme spreading all the time.

3.3.6.3 Soul City

Soul City is a multi-media health education and information initiative addressing a range of risk-behaviour such as alcohol use and smoking through the television and radio (in the vernacular), and via the print

media (handbooks serialised in newspapers). These initiatives are regularly formally evaluated (Brewis, 1999: 27).

3.3.6.4 Lion's-Quest Skills for Adolescence

Lion's-Quest Skills for Adolescents is an acknowledged standardized life skills substance abuse prevention programme, available and implemented in South Africa (Louw & Amorim, 1999: 81). The programme was developed by Quest National Centre (a Non-Profit Educational Organization) and has been endorsed by Lions International (Dryfoos, 1990: 165). This programme is currently running in various parts of the country, including KwaZulu Natal, and is designed to combat alcohol and drug abuse among young people by teaching them life skills (Brewis, 1999: 28).

See, Lion's-Quest Skills programme description, Chapter 4 (page 220).

In conclusion, empirical data collected with a schedule during structured interviews with 8 representatives of 8 core organizations in KwaZulu Natal suggest that two programmes, namely: Life orientation (Curriculum 2005) and Teenagers Against Drug Abuse (TADA) programme from SANCA seem to be more effective on preventing adolescent substance abuse than the DAP (Drug Abuse Prevention programme) of the Department of Social Welfare and Population Development or Community Education programme by the South African Narcotics Bureau (SANAB). Other Social Welfare Non-Governmental Organizations in KwaZulu Natal (e.g. Durban Children Society, "Natal Christelike Vroue Vereniging" and "Christelik-Maatskaplike Diens") do not render any substance abuse prevention

services to the youth as this is seen as a core function of SANCA. Finally, please note that *all* prevention efforts strengthen our communities, schools, families and individuals; some attempts are just more effective than others.

4. Section B: Quantitative findings based on the evaluation of the researcher's substance abuse prevention programme for early adolescents in KwaZulu Natal (Project Skills Development)

4.1 Research methods

4.1.1 Respondents

The respondents were 50 early adolescents between 11 and 14 years old from Sizani Primary School in Umhlali, a sub-urban area in the North coast of KwaZulu Natal. The school consists of black youth and draw a large portion of their learners from an informal settlement in Umhlali. Sizani Primary School was purposively selected, from all the schools in the North coast, on grounds of the following factors: (a) accessibility, (b) number of black youth in the school, and (c) interest to participate in the research study. Throughout the whole study the school principle, teachers and respondents gave their full cooperation and support to the researcher.

The study was explained to all the grade 6 learners in the school and a sample was drawn for both the experimental and comparison group according to the purposive procedure, without randomisation. This

implied that the study only included respondents that were judged to contain the most characteristics or typical attributes of all early adolescents. In order to address subjectivity as a real danger of this method the researcher and Life Orientation teacher identified respondents that conformed to the following requirements:

- Development phase: Early adolescence (between 11-14 years old)
- Permanent residence: North coast, KwaZulu Natal
- Population group: Black
- Youth with no obvious substance use/abuse problems. (See Chapter 1, page 32 for a more detailed description.)

These respondents could voluntarily participate with their parents/guardian's informed consent. (See Appendix 7, page 571.) A total of fifty learners that agreed, completed the self-constructed questionnaire in a group administered way.

4.1.2 Self-constructed questionnaire

The self-constructed questionnaire was used to evaluate the respondents' general attitude to substances and substance users, their knowledge of drugs, and their personal and social skills. (See Appendix 5, page 517.) The questionnaire consisted of 61 questions. Besides biographical information, statements were made about:

(a) Adolescent attitudes to drugs and drug users,
(b) Drugs and their effects,
(c) Peer pressure,
(d) Social problem solving,
(e) Assertiveness, and

(f) Communication.

The respondents completed the questionnaires in a group in a classroom with the researcher and an interpreter (i.e. the Life Orientation teacher) present. The questionnaire was presented in English – one of the main languages spoken by the learners. Although the questions were formulated in simple language, the interpreter was available to children who did not understand some of the questions. The participants' identities were not displayed on their responses and anonymity assured by the use of a number system for comparison of the pre- and post-test results. This system ensured confidentiality and a true reflection of attitudes, knowledge and skills.

The researcher utilized a comparison group pretest-posttest design. In other words the group-administered questionnaire was used in the pre-test, i.e. before implementation of the prevention programme (Project Skills Development), and post-test with both the experimental and comparison group. Eventually hundred (100) questionnaires were distributed with a 100% response rate.

4.2 Data analysis and interpretation

According to De Vos *et al.*, (2002: 222) quantitative data can either be analysed manually or by computer. In this study, the analysis of the quantitative data was done, in cooperation with the University of Pretoria's Statistical Department, by means of the computer. Herewith, the collected data (quantitative) is displayed by means of tables and graphic presentations.

Next, all quantitative data is presented, analysed and interpreted according to biographical details and personal and social skills development (i.e. general attitude to drugs and drug users, knowledge of drugs and skills development).

4.2.1 Biographical details

Biographical factors such as respondents' age, gender, race, home language, level of education, church affiliation and family variables such as marital state of parents and living arrangements are discussed below.

4.2.1.1 The respondents' age group

For most children, research has shown that the vulnerable periods are transitions, when they grow from one developmental stage to another (NIDA, 2001: 5). The first big transition for children is when they leave the security of the family and enter school. Later on, when they advance to early adolescence, children are likely to encounter substance use for the first time. Accordingly, when young people enter high school, they face social, psychological and educational challenges as they prepare for the future. Transitional challenges that can all lead to substance abuse.

However, to establish support during early adolescence as a high-risk period for substance use, information on the respondents' **age** was sought to (a) affirm age-specific and developmentally appropriate assistance during this period of transition, and (b) to insure participant homogeneity.

Table 19 demonstrates the age composition of the respondents.

Table 19: Age composition of respondents participating in the study

AGE		Respondents		TOTAL
		Experimental group	Comparison group	
11 years old	Frequency	5	7	12
12 years	Frequency	5	10	15
13 years	Frequency	4	6	10
14 years	Frequency	11	2	13
TOTAL	Frequency	25	25	50

The researcher comes to the following conclusions:

(a) The development phase for all the respondents is early adolescence. In other words, all the respondents are in the age range 11 to 14 years.

(b) There is a reasonably equal representation and distribution of respondents for the ages: 11 years (24%), 12 years (30%), 13 years (20%) and 14 years (26%).

(c) The majority (30%) of respondents are 12 years old. The latter's representation in the experimental and comparison group is reproduced as the relation (5:10). For the category 12 years old,

the comparison group thus contains twice as much (50%) respondent's as the experimental group.

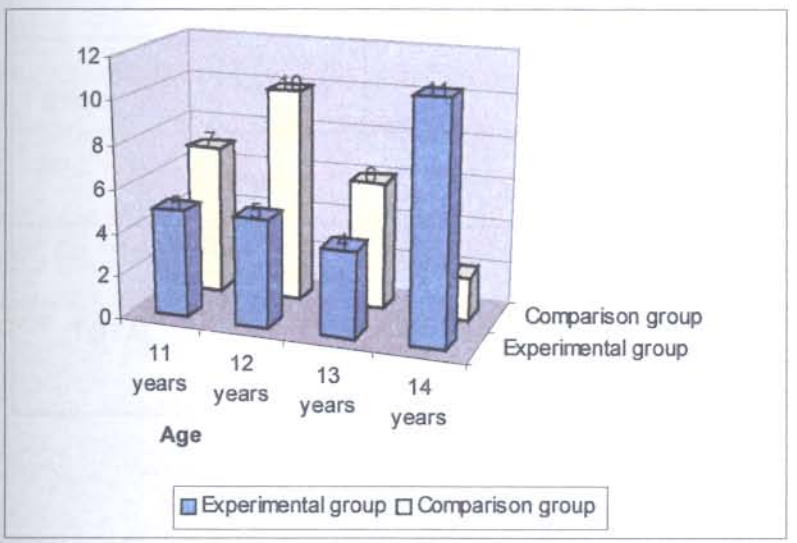
(d) The age 11 years old account for 24% (12 respondents) of the sample (N = 50) whereof 5 respondents are in the experimental group and 7 in the comparison group.

(e) The age 14 years old account for 26% of the sample (N = 50). Representation in the experimental group is 11 and comparison group 2. The majority of 14 year old respondents is thus in the experimental group.

(f) The minority (20%) of the learners are 13 years old, with 4 respondents in the experimental group and 6 in the comparison group.

A column chart of the data in Table 19 is given in Figure 9.

Figure 9: A column chart of the age of respondents participating in the study



4.2.1.2 The respondents' gender

The target population of this study is youth, and more specifically early adolescents in KwaZulu Natal. Information on the respondents' **gender** was thus sought to show that both sexes (male and female) was represented in the target group.

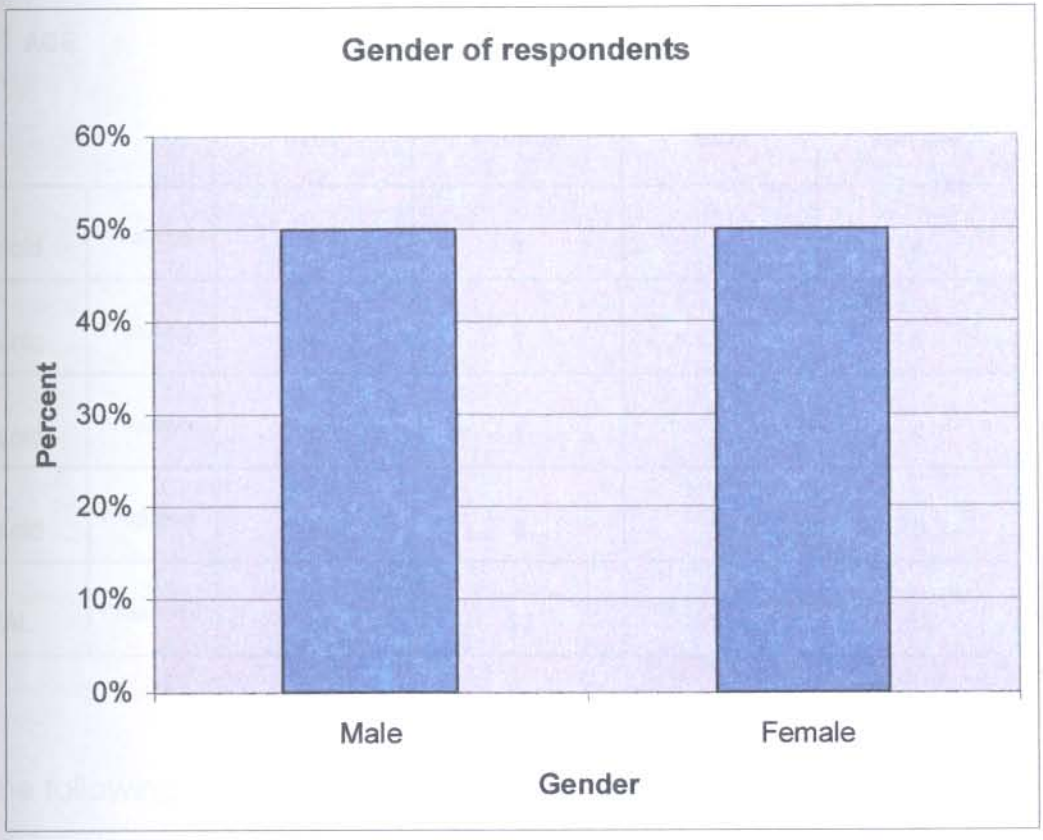
Table 20 reflects an equal representation of the respondents' according to their gender.

Table 20: Gender of respondents participating in the study

GENDER		Respondents		TOTAL
		Experimental group	Comparison group	
Male	Frequency	13	12	25
	Percent	52%	48%	100%
Female	Frequency	12	13	25
	Percent	48%	52%	100%
TOTAL	Frequency	25	25	50
	Percent	100%	100%	200%

The same data, as presented in the above table, are now visually displayed. Figure 10 below is a bar graph of the gender distribution of respondents participating in the study.

Figure 10: A bar graph of the gender of respondents participating in the study



The above figure indicates that there were 25 (50%) boys and 25 (50%) girls participating in the study. In the experimental group 13 respondents were male and 12 female. In the comparison group12 respondents were male and 13 female.

The researcher, however, was also interested in the relationship or correlation between the variables age and gender.

The scores for these variables are summarized in Table 21.

Table 21: The respondents' age by their gender

AGE		Experimental group		Comparison group		TOTAL
		GENDER				
		Male	Female	Male	Female	
11 years old	Frequency	1	4	3	4	12
12 years old	Frequency	4	1	5	5	15
13 years old	Frequency	3	1	2	4	10
14 years old	Frequency	5	6	2	0	13
TOTAL	Frequency	13	12	12	13	50

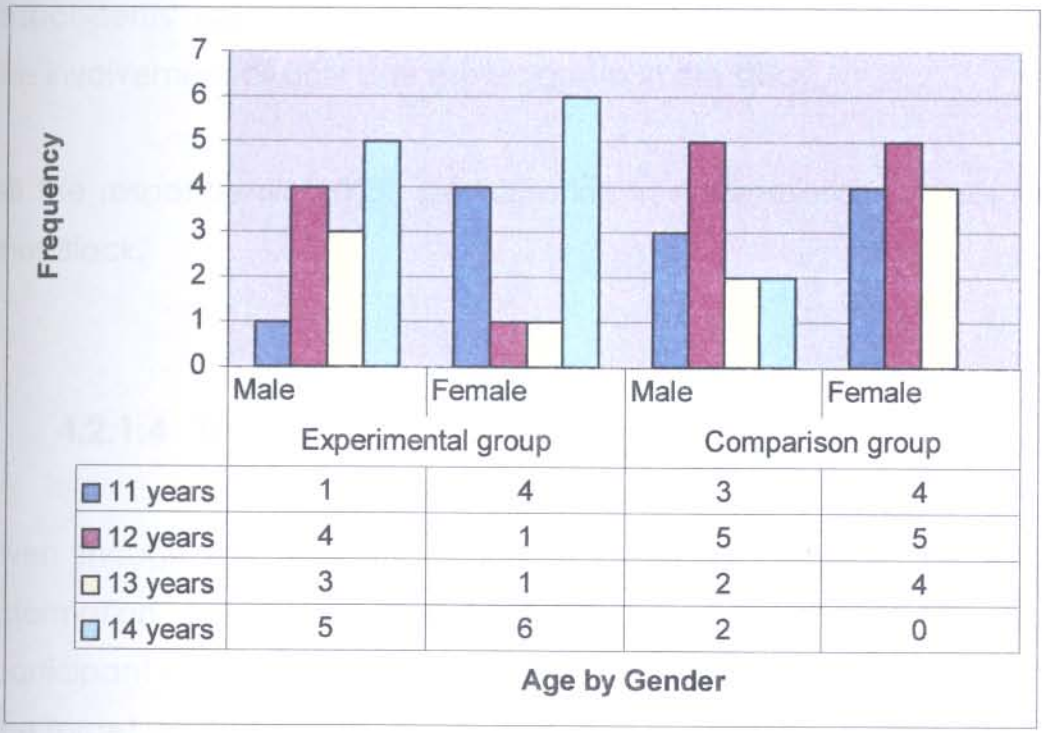
The following is thus concluded:

- In the age category 11 years old, 4 respondents are male and 8 female. Female representation in the experimental- and comparison group is exactly the same whereas male representation is lower in the experimental group (1:3).
- From the youth that are 12 years old, 9 respondents are male (4:5) and 6 female (1:5). This makes male representation in this age category higher for males than females. In other words the distribution for 12-year-old males in the experimental and comparison group are nearly the same, against female representation that include only 1 female respondent in the experimental group against 5 female respondents in the comparison group.

- In the age category 13 years old, 5 respondents are male (3:2) and 5 female (1:4). Comparatively speaking, the proportion of 13-year-old males and females are thus even.
- The age category 14 years old consists of 7 males and 6 females. Note that female representation for this age is limited to the experimental group (6:0). In other words there is no 14-year-old female respondents in the comparison group. Male representation is in a relation of (5:2) and thus the highest for this age.

Figure 11 shows a column chart of the age distribution of respondents participating in the study by their gender.

Figure 11: A column chart of the respondents age by their gender



	Experimental group: Male	Experimental group: Female	Comparison group: Male	Comparison group: Female
11 years	1	4	3	4
12 years	4	1	5	5
13 years	3	1	2	4
14 years	5	6	2	0

Note that the biggest number of male and female respondents in the experimental group is in the category of 14 years old, whilst the smallest number of respondents is also present in the age category 14 years old of the comparison group. Herewith, female representation is especially low for ages 12 and 13 of the experimental group that is measured against much higher numbers of female representation in the comparison group. Finally, low male representation is also identified for the age category 11 years old of the experimental group, unlike the higher numbers of male representation in the comparison group.

4.2.1.3 The respondents' race/ethnicity

There is ethnic and inherited cultural differences in substance use and abuse among adolescents. Accordingly, prevention programmes should be culturally sensitive (NIDA, 2001: 2). Information on the respondents' **race/ethnicity** was thus necessary to show and confirm the involvement of only one ethnic group in the study.

All the respondents (100%) participating in this research project were thus Black.

4.2.1.4 The respondents' home language

Even though the respondents are all from the same ethnic group, information on their **home language** was sought to (a) affirm participant cultural homogeneity, and (b) insure further description of the target group.

Table 22 reflects that the majority of respondents were Zulu speaking youth.

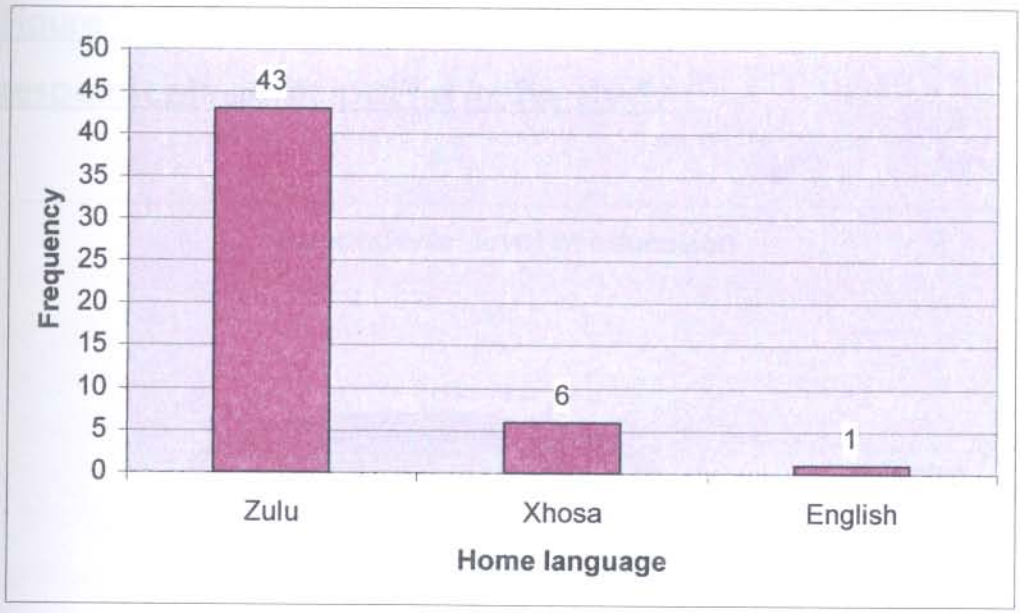
Table 22: Home language of respondents participating in the study

HOME LANGUAGE		Respondents		TOTAL
		Experimental group	Comparison group	
Zulu	Frequency	23	20	43
	Percent	92%	80%	172%
Xhosa	Frequency	2	4	6
	Percent	8%	16%	24%
English	Frequency	-	1	1
	Percent	-	4%	4%
TOTAL	Frequency	25	25	50
	Percent	100%	100%	200%

It is clear that from the experimental group, 23 (92%) respondents speaks Zulu, and only 2 (8%) Xhosa. Whilst the comparison group included the following: 20 (80%) Zulu speaking respondents, 4 (16%) Xhosa speaking respondents and 1 (4%) English speaking respondent.

Figure 12 provides a graphic display of this variable for al respondents participating in the study.

Figure 12: A bar graph of the home language of respondents participating in the study



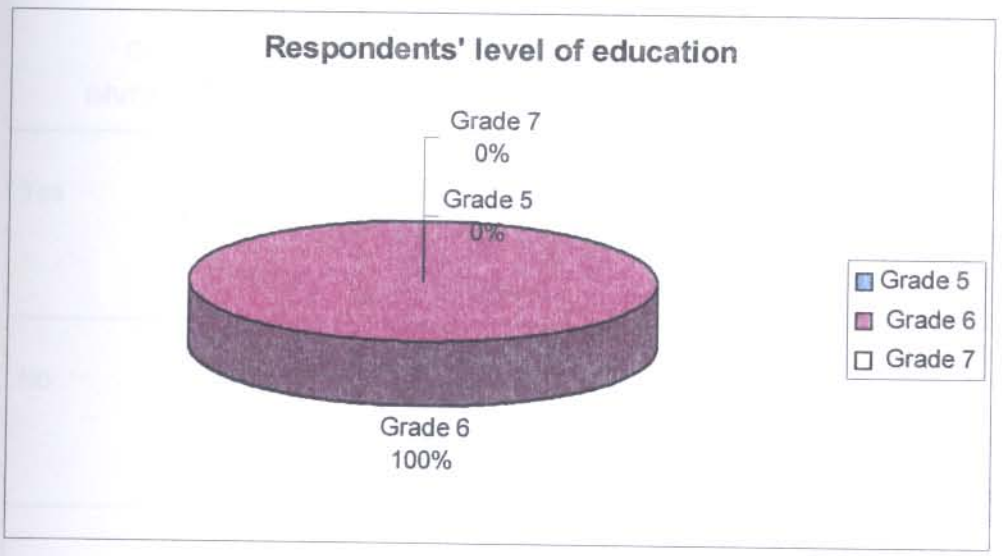
The home language distribution is thus as follows: 43 (86%) of respondents were Zulu speaking; 6 (12%) were Xhosa speaking; and 1 (2%) reported English as their home language.

4.2.1.5 The respondents' level of education

The researcher's intervention (i.e. a substance abuse prevention programme for early adolescents in KwaZulu Natal) is a primary school-based substance abuse prevention programme that targets individual adolescents in the classroom. The respondents' (i.e. early adolescents') level of education within a developmentally sensitive and pedagogic correct, context is thus of interest.

Figure 13 shows that all the respondents, whose ages fluctuate between 11 to 14 years old, are currently in grade 6.

Figure 13: A pie chart of the level of education of respondents participating in the study



The school grade distribution is thus limited to grade 6 learners.

4.2.1.6 The respondents' church affiliation

Strong bonds with prosocial institutions such as the family and religious organizations have been identified as a protective factor (i.e. a factor associated with reduced potential for substance use) against youth substance use/abuse. (See Chapter 3, page 155.) Information on **church affiliation** was thus sought to show participant involvement or lack of involvement with a prosocial institution like the church.

Table 23 gives an indication of the respondents' church affiliation.

Table 23: Church involvement of the 50 respondents participating in this study

CHURCH INVOLVEMENT		Respondents		TOTAL
		Experimental group	Comparison group	
Yes	Frequency	20	23	43
	Percent	80%	92%	172%
No	Frequency	5	2	7
	Percent	20%	8%	28%
TOTAL	Frequency	25	25	50
	Percent	100%	100	200%

The majority of respondents (86%) belonged to a church/religious group. From which 20 respondents are represented in the experimental group and 23 in the comparison group. Yet, a total of 7 (14%) respondents (5 in the experimental group and 2 in the comparison group) indicated a lack of or limited integration with a social regulatory institution such as the church.

The researcher concludes that through church affiliation most of the respondents (86%) are more protected against the use of substances, than the remaining 14%, which are probably at risk for substance use/abuse.

4.2.1.7 Family unit

The family unit often plays a significant role in the development and maintenance of problematic patterns of substance use among children and adolescents. As noted in Chapter 3 (page 163), parent/family variables can either put a child at risk or build a sense of resiliency in the individual adolescent. Indeed, underscoring the need to consider the following information on the family unit or more specifically marital state of the respondents' parents and corresponding living arrangements.

4.2.1.7.1 Marital state of respondents' parents

Table 24 gives an indication of the respondents' parental marital state.

Table 24: Marital state of respondents' parents

MARITAL STATE		Respondents				TOTAL
		Pre-test		Post-test		
		Experimental group	Comparison group	Experimental group	Comparison group	
Married	Frequency	5	5	5	4	19
	Percent	20%	20%	20%	16%	76%
Single parent	Frequency	5	4	9	9	27
	Percent	20%	16%	36%	36%	108%

MARITAL STATE		Respondents				TOTAL
		Pre-test		Post-test		
		Experimental group	Comparison group	Experimental group	Comparison group	
Not married but living together	Frequency	15	16	11	12	54
	Percent	60%	64%	44%	48%	216%
TOTAL	Frequency	25	25	25	25	100
	Percent	100%	100%	100%	100%	400%

From the above table we can see at a glance that most of the respondents' caretaker(s) or parents (54%) are not married but living together. A total of 19% are married and 27% single parents.

Of interest are the different responses in the pre-test and post-test results for both experimental and comparison groups. Participant responses to the categories "single parent" and "not married but living together" shows the greatest change. The category "single parent" increase from 9 to 18 and the category "not married but living together" decrease from 31 to 23. This may reflect uncertainty or confusion of respondents about:

(a) This particular question, or
(b) Their parent's marital state.

At this age, however, early adolescents (11–14 years old) should be quite certain about their parent's marital status. The only conclusion to

come to is that this question (i.e. marital state of respondents' parents) confused some of the respondents.

The researcher is also interested in the following relationships between the variables:

(a) Marital state and gender,
(b) Marital state and age, and
(c) Marital state and living arrangement.

Tables 25, 26 and 27 give the distribution of scores.

Table 25: Marital state by gender of respondents' participating in the study

MARITAL STATE		Experimental group		Comparison group		TOTAL
		GENDER				
		Male	Female	Male	Female	
Married	Frequency	1	4	2	3	10
Single parent	Frequency	1	4	3	6	14
Not married but living together	Frequency	11	4	7	4	26
TOTAL	Frequency	13	12	12	13	50

The following is concluded from the above table:

- From the 10 respondents who indicated their parents are married, 3 are male and 7 female. For this category the relation male to female in the experimental group is (1:4) and (2:3) in the comparison group. Females are thus better represented in this category.

- In the category "single parent," 4 respondents were male and 10 female. The relation male to female in the experimental group is (1:4) and (3:6) in the comparison group. Making female representation in this category higher than male representation.

- From the 26 respondents who indicated their parents are not married but living together, 18 are male and 8 female with the highest representation of males (11) in the experimental group. The relation male to female in the experimental group is (11:4) and (7:4) in the comparison group. In this category female representation in the experimental and comparison group is thus equal. However, male representation is high in this category.

The researcher concludes that although female representation is consequently high in all three categories of marital state (i.e. married, single parent and not married but living together), male representation is highest for the category "not married but living together."

Table 26 gives the distribution of scores for the variables marital state and age.

Table 26: Marital state by age of respondents' participating in the study

MARITAL STATE		Experimental group				Comparison group				TOTAL
		AGE								
		11 years	12 years	13 years	14 years	11 years	12 years	13 years	14 years	
Married	Frequency	3	-	-	2	-	4	1	-	10
Single parents	Frequency	-	-	1	4	3	3	2	1	14
Not married but living together	Frequency	2	5	3	5	4	3	3	1	26
TOTAL	Frequency	5	5	4	11	7	10	6	2	50

The researcher interprets the data as follows:

- In the "married" category, respondents indicated: 3 eleven year olds, 4 twelve year olds, 1 thirteen year old, and 2 fourteen year olds. The ages 11 to 14 is thus represented in this category. Included in the experimental group are 3 eleven year olds and 2 fourteen year olds. The comparison group contains 4 twelve year olds and 1 thirteen year old. Ages that are represented in the category "married" of the experimental group are absent in the comparison group.
- Respondents from single parent families show a fairly even age distribution with 3 eleven year olds, 3 twelve year olds, 3 thirteen year olds, and 5 fourteen year olds. From the 5 respondents in the experimental group 1 is 11 years old and 4 are fourteen years

of age. The comparison group contains 3 eleven year olds, 3 twelve year olds, 2 thirteen year olds, and 1 fourteen year old. Consequently the researcher concludes that even though there is no representation of the ages 11 and 12 in the category "single parent" of the experimental group, ages 11 to 14 are well represented in the comparison group.

- The "not married but living together" category contains the majority of respondents aged 11 to 14 years. The age distribution includes 6 eleven year olds, 8 twelve year olds, 6 thirteen year olds, and 6 fourteen year olds. Represented in the experimental group are 2 eleven year olds, 5 twelve year olds, 3 thirteen year olds, and 5 fourteen year olds. The comparison group contains 4 eleven year olds, 3 twelve year olds, 3 thirteen year olds, and 1 fourteen year old.

Table 27 give the distribution of scores for the variables marital state by living arrangement (i.e. living with both parent, one parent or grandparents).

Table 27: Marital state by living arrangement of respondents' participating in the study

MARITAL STATE		Experimental group			Comparison group			TOTAL
		LIVING ARRANGEMENT						
		Mother and father	One parent	Grandparents	Mother and father	One parent	Grandparents	
Married	Frequency	5	-	-	4	1	-	10

MARITAL STATE		Experimental group			Comparison group			TOTAL
		LIVING ARRANGEMENT						
		Mother and father	One parent	Grandparents	Mother and father	One parent	Grandparents	
Single parents	Frequency	-	4	1	-	7	2	14
Not married but living together	Frequency	12	-	3	10	1	-	26
TOTAL	Frequency	17	4	4	14	9	2	50

The data is interpreted as follows:

- In the category "married," 9 respondents live with both their mother and father whilst 1 lives with one parent only. In the experimental group 5 respondents indicated that they live with their mother and father. Similarly, 4 respondents in the comparison group indicated that they live with their mother and father. From the comparison group 1 respondent also lives with one parent only. Where respondents' parents are thus married (N = 10), a high percentage (90%) of them live with both their biological parents.
- Respondents from single parent families (N = 14) mostly (78,5%) live with one parent. From the 14 respondents in this category, 3 live with their grandparents. Comparatively speaking, the comparison group has a higher response rate in this category (9:5). Four and 7 respondents, respectively from the

experimental and comparison group, live with one parent only. To a lesser extent (1:2), grandparents thus provide accommodation to their grandchildren, as single parents provide the living themselves.

- In the "not married but living together" category it is indicated that the majority of respondents (22, i.e.12 in the experimental group, and 10 in the comparison group) live with their mother and father. Herewith, one respondent from the comparison group live with a single parent, and 3 respondents from the experimental group live with their grandparents. Children thus live with both their parents, even though the latter is not legally married.

Statistical significance – Parents marital state by living arrangement

To determine the statistical significance of the correlation between parents marital state by living arrangement, the use of the chi-square test of statistical significance needs to be mentioned. This test that has been developed to answer the question whether any results obtained by data analysis are statistically significant, i.e. are they meaningful and not caused by chance. In theory this test levels can be arbitrarily chosen, but in practice conventions have been developed which prescribe that the test are usually performed on either the 0,05 or the 0,01 level of significance (De Vos, 1998: 233). For the purpose of this study the test is performed at 0,05 level of significance. This means, that there is a 95% chance that the results are due to a combination of independent variables, and not to chance. So, to answer the question whether the respondents' family unit differs significantly from marital state by living arrangement, the chi-square test was performed. A table (Table 28) was compiled displaying the degrees of freedom,

value and probability. In fact, for the experimental group (sample size 25) there is 4 degrees of freedom and the table indicates that the chi-square of 0,003 is significant at the 0,05 level of significance. That is, that 89% of the cells have expected counts less than 5. Accordingly, for the comparison group, with 4 degrees of freedom and a value of 18,4351, the chi-square of 0,0010 is also significant. Implying that 78% of the cells have expected counts less than 5.

Table 28: Chi-square test of significance

	Degrees of Freedom	Value	Probability (P-Value)
Experimental group	**4**	**21,4706**	**0.0003**
Comparison group	**4**	**18,4351**	**0,0010**

The researcher concludes that there is statistically speaking a **significant difference on the 0,05 level of significance between the variables: marital state and living arrangement.**

4.2.1.7.2 Living arrangements

Living arrangements create a family context or living environment for the adolescent that can either put the child at risk or build a sense of resiliency and protect him/her against substance use/abuse. This parent/family variable should thus be considered.

Table 29 gives an indication of the living arrangements for respondents.

Table 29: Living arrangements of respondents participating in this study

LIVING ARRANGEMENTS		Pre-test		Post-test		TOTAL
		Experimental group	Comparison group	Experimental group	Comparison group	
Mother and father	Frequency	17	14	17	13	61
	Percent	68%	56%	68%	52%	244%
Mother only	Frequency	3	8	3	9	23
	Percent	12%	32%	12%	36%	92%
Father only	Frequency	1	1	1	1	4
	Percent	4%	4%	4%	4%	16%
Grandparents	Frequency	4	2	4	2	12
	Percent	16%	8%	16%	8%	48%
TOTAL	Frequency	25	25	25	25	100
	Percent	100%	100%	100%	100%	400%

The following is thus clear:

- Most of the respondents (61%) live with both their parents or with their mother (23%) only. A small portion lives with their

grandparents (12%) and hardly any with their father as single parent (4%).

- The pre-test and post-test results for the categories "mother and father" and single parent (i.e. mother only and father only) differ for the comparison group. The initial or pre-test for the category "mother and father) of the comparison group is 14, but measured again (post-test) it is 13. Accordingly, the pre-test for the category "mother only" of the comparison group is 8, and at the post-test 9.

The researcher is also interested in the following relationships between the variables: (a) Living arrangement and gender, and (b) Living arrangement and age.

Tables 30 and 31 give the distribution of scores.

Table 30: Living arrangement by the gender of respondents participating in this study

LIVING ARRANGEMENT		Experimental group		Comparison group		TOTAL
		GENDER				
		Male	Female	Male	Female	
Mother and father	Frequency	9	8	7	7	31
	Percent	36%	32%	28%	28%	124%
One parent	Frequency	1	3	5	4	13
	Percent	4%	12%	20%	16%	52%

LIVING ARRANGEMENT		Experimental group		Comparison group		TOTAL
		GENDER				
		Male	Female	Male	Female	
Grandparents	Frequency	3	1	-	2	6
	Percent	12%	4%	-	8%	24%
TOTAL	Frequency	13	12	12	13	50
	Percent	52%	48%	48%	52%	200%

The researcher concludes the following

- A total of 16 male and 15 female respondents live with their mother and father. This category comprises the majority of male and female respondents for both the experimental and comparison group. The distribution of the respondents' gender in the category "mother and father" is nearly equal.
- Six males and 7 females live with one parent only. A reasonably even distribution for gender, even though the relation, male to female for the experimental and comparison group is respectively (1:3) and (5:4). Male and female representation in the comparison group is thus greater than that in the experimental group.
- The living arrangement for respondents with grandparents includes 3 males and 3 females living with their grandparents. Four of these 6 respondents is represented in the experimental group (3 male and 1female respondent) and 2 in the

comparison group. Male representation in the comparison group for the category "grandparents" is nought.

- From a total of 25 male respondents and 25 female respondents the majority (62%) live with both their parents. Only 26% of the respondents (6 males and 7 females) live with one parent. Living arrangements with grandparents constituted only 12% of the population.

The respondents' living arrangement according to their age is reflected in Table 31.

Table 31: Living arrangement by the age of respondents participating in this study

LIVING ARRANGEMENT		Experimental group				Comparison group				TOTAL
		AGE								
		11 years	12 years	13 years	14 years	11 years	12 years	13 years	14 years	
Mother and father	Frequency	5	3	2	7	3	6	4	1	31
One parent	Frequency	-	-	1	3	3	3	2	1	13
Grandparents	Frequency	-	2	1	1	1	1	-	-	6
TOTAL	Frequency	5	5	4	11	7	10	6	2	50

The following is thus displayed:

- In the category "mother and father" respondents indicated representation of 8 eleven year olds, 9 twelve year olds, 6

thirteen year olds, and 8 fourteen year olds. Included in the category "mother and father" of the experimental group are 5 eleven year olds, 3 twelve year olds, 2 thirteen year olds, and 7 fourteen year olds. The comparison group contains 3 eleven year olds, 6 twelve year olds, 4 thirteen year olds, and 1 fourteen year old. The researcher concludes that there is a reasonably equal representation between the ages 11 to 14 years old in the category "mother and father" of the variable living arrangement.

- A living arrangement with one parent according to the age of respondents comprises: 3 eleven year olds, 3 twelve year olds, 3 thirteen year olds, and 4 fourteen year olds. Representatives from ages 11 and 12 years old are absent in the experimental group. The latter include 1 thirteen year old and 3 fourteen year olds. The comparison group include most of the representation for this category with 3 eleven year olds, 3 twelve year olds, 2 thirteen year olds, and 1 fourteen year old.
- Respondents' representation in the category "grandparents" is low (12%). Two twelve year olds, I thirteen year old and 1 fourteen year old forms the experimental group. In the comparison group representation of the ages 13 and 14 is absent and includes only 1 eleven and twelve year old respectively.
- The researcher concludes that the majority (62%) of respondents aged 11 to 14 years old, live with both their mother and father.

4.2.2 Personal and Social Skills Development

The focus of this section is on the respondents' personal and social skills development. A focus derived from the theoretical base of Project Skills Development, namely the Social environmental/learning model or

Social influences model. In other words the researcher's approach to substance abuse prevention through personal and social skills development is generally referred to in the literature as psychosocial inoculation or social inoculation training, that is, training that will protect adolescents from "infection" by future social influences to abuse substances. (See Chapter 4, page 210.) Furthermore, this section on personal and social skills development is set out in a way, which generally reflects the learning experience as a continuous process, which starts with attitudes, moves to knowledge and information enhancement and then to skills development. It focuses on building on the knowledge, information and skills that adolescents already have.

Also note that the researcher concurs with Dielman (1995: 125) who indicates that: "Changes in attitudes or knowledge do not correlate with subsequent behaviour changes." Yet, the underlying premises of this study is not to establish negative attitudes concerning substance use/abuse, but rather to empower, i.e. increase respondents' personal and interpersonal power, by (a) shaping attitudes in a positive way, (b) enhancing substance specific knowledge, and (c) improving their skills to prevent the adoption of substance abuse.

Important aspects regarding the area "Personal and Social Skills Development" are set out below.

4.2.2.1 Goal

To show strengthening of the experimental group's personal and interpersonal power by utilizing a comparison group to compare differences in the experimental group's attitudes, knowledge, and

personal and social skills, before (pre-test) and after (post-test) participation in Project Skills Development.

4.2.2.2 Key elements of the programme (Project Skills Development)

a) General attitude to drugs and drug users
b) Knowledge of drugs, and
c) Skills development.

4.2.2.3 Programme topics

The following programme topics (and programme content) are based on the literature of this study and include:

a) Adolescent attitudes to drugs and drug users (i.e. the importance of examining adolescent attitudes; the origin of attitudes; the media as attitude source; and attitude exercises.)
b) Understanding drugs and their effects (i.e. what I need to know about drugs and their effects; what drugs are; types of drugs; drugs and their effects; what affects the effect; costs and benefits of drugs; and will you or won't you take drugs?)
c) Peer pressure (i.e. why it is important to include peer pressure in the programme; how peer pressure evolved; the importance of peer pressure for adolescents; how peer pressure can put you at risk for substance use/abuse; and how to cope with peer pressure.)

d) Social problem solving: Techniques to promote self-control (i.e. delayed gratification; rules; how to solve problems; and responsibility.)
e) Social problem solving: Relieving stress, anxiety and pressure (i.e. stress; relaxation; physical exercise; and lifestyle)
f) Developing assertiveness skills (i.e. what is assertiveness; the essence of assertiveness; knowing your rights; fundamental assertive skills; and self-protective skills.)
g) Communication skills (i.e. empathy; validation; "I feel" statements; positivism; physical proximity; touch; eye contact; reinforcement; and the practice of communication skills).

(See Appendix 3, page 415 for the content of the complete programme.)

4.2.2.4 Targeted risk factors and targeted protective factors

a) Targeted risk factors

Risk factors are those factors present in an adolescent's life that makes him more likely to use/abuse substances. (See Chapter 3, page 155.) By comparing the chosen theoretical framework with the identified risk factors in Chapter 3, the researcher targeted the following risk factors to manage through Project Skills Development, i.e.

- Adolescent attitudes towards substance use/abuse, and
- Peer influences.

b) Targeted protective factors

As discussed in Chapter 3 (page 155) protective factors are those factors that reduce the likelihood and level of substance use and abuse. Despite the risk youth experience in certain environments, some adolescents are able to resist substance abuse. Protective factors balance risks by either reducing the impact of the risk or changing the way a person responds to the risks. By identification of specific protective factors to focus on in Project Skills Development, the researcher hoped to build on strengths that can reduce the likelihood of substance abuse.

The selected protective factors are:

- Communication skills, and
- Social problem-solving skills.

The researcher concludes that the respondents' attitude, knowledge and skills can thus be measured according to (a) key elements, (b) programme topics, and/or (c) risk and protective factors.

Table 32 provides a summary in this regard.

Table 32: Measurement according to key elements, topic and/or risk and protective factor(s)

Nr.	Key element	Topic	Risk factor	Protective factor
1.	General attitude to drugs and drug users	Adolescent attitudes to drugs and drug users	X	

sub-hypothesis: **If early adolescents undergo a school based substance abuse prevention programme then their attitudes towards substances and substance users will be influenced in a positive way.**

Based on the literature, eleven general statements about adolescent attitudes to drugs and drug users were thus included in the self-constructed questionnaire. These statements are summarized, with the respondents' responses to them, and ranked in three categories, i.e. Agree, Uncertain and Disagree in Table 33.

Table 33 presents a frequency distribution of the respondents' general attitudes to drugs and drug users by utilizing a pre-test and post-test for both experimental and comparison group.

Table 33: Frequency distribution of the respondents' general attitude to drugs and drug users

Statement	Adolescents' general attitudes to drugs and drug users											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
My attitude to drugs and people who use drugs, come from personal experience.	-	4	21	1	5	19	3	17	5	3	13	9
People who use drugs are evil sinners.	17	4	4	12	4	9	18	1	6	12	3	10
My view of drugs and people who use drugs come from my friends.	9	7	9	11	4	10	10	6	9	10	8	7

Statement	Adolescents' general attitudes to drugs and drug users											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
Newspapers mostly focus people's attention on the dangers of illegal drugs, like cannabis.	19	5	1	19	5	1	23	1	1	19	5	1
I got my ideas about drugs and people who use drugs form the media, for instance newspapers, TV and/or radio.	24	-	1	22	1	2	25	-	-	22	1	2
People who use drugs are dangerous.	21	1	3	21	2	2	20	2	3	18	3	4
My ideas about drugs and people who use drugs come form reading and/or studying library books.	11	5	9	10	6	9	14	9	2	7	11	7
My ideas about drugs and people who use drugs come from my school teacher(s).	14	3	8	15	2	8	20	1	4	16	4	5
Drug addiction is a disease/illness.	13	7	5	9	10	6	20	4	1	14	7	4
Drug users are "normal" people who use drugs to cope with the pressures of everyday life.	7	12	6	15	6	4	20	2	3	13	6	6
My view of drugs and people who use drugs come from my relatives.	2	2	21	1	7	17	5	2	18	1	5	19
TOTAL	137	50	88	136	52	87	178	45	52	135	66	74

The following is indicated:

- The sum of the pre-test scores on "Agree", "Uncertain" and "Disagree" are rather similar for both the experimental and comparison group. Compare:

(a) Experimental group	(b) Comparison group
Agree (137)	Agree (136)
Uncertain (50)	Uncertain (52)
Disagree (88)	Disagree (87)

- The most obvious change between pre-test and post-test results is the increased frequency of "agree" responses by the experimental group. The sum of the pre-test scores are 137 and post-test results 178. In other words an increased frequency of 41. In contrast, the comparison groups' pre-test and post-test results for this variable are nearly similar, i.e. a pre-test of 136 and post-test of 135.

- The total amount of the experimental groups' scores on "uncertain," decreases from a pre-test score of 50 to a score of 45 in the post-test. The comparison groups' scores however, increase from a frequency of 52 (pre-test) to 66 in the post-test.

- On adding the scores of disagree, the results indicate another change between pre-test and post-test results as there is a decrease in frequency of "disagree" in the experimental group. The sum of the pre-test results are 88 and post-test results 52. The comparison groups' pre-and post-test results, however also shows a decline, i.e. from 87 to 74, but not to the same extent as the experimental group.

From the next table, Table 34, the mean scores of respondents' attitudes to drugs and drug users can be seen.

Table 34: Mean scores of respondents' attitudes to drugs and drug users

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	25	0,51	0,37	-0,09	1,45
Comparison group	25	0,20	0,30	-0,18	1,00

The mean for the experimental and comparison group is respectively calculated as 0,51 and 0,20. The standard deviation of both groups is 0,37 and 0,30.

Test of Statistical significance: The researchers utilized the Kruskal-Wallis test, i.e. a test used for multiple-sample comparisons in the social sciences and are based on the chi-square sampling distribution. Accordingly, the Kruskal-Wallis test is implemented to test if there is any significant differences between the average differences (pre- and post-test) for the experimental and comparison group.

For the variable "attitudes to drugs and drug users" the Kruskal-Wallis test statistic is 8,98 with a P-value of 0,0027 using a chi-square distribution with 1 degree of freedom. This compares favourably with the 0,05 level of significance as a P-value smaller as 0,05 indicates a statistical significant difference. The researcher concludes that **there is a statistical significant difference in the experimental groups' attitudes to drugs and drug users, with a 95% chance that the results are due to Project Skills Development and not to chance.** The sub-hypothesis is therefore confirmed.

4.2.4 Knowledge of drugs

Another key element of Project Skills Development is drug information or knowledge of drugs. This variable was addressed to test the following sub-hypothesis: **If early adolescents undergo a school based substance abuse prevention programme then their substance specific knowledge will increase.**

Ten general statements about drugs and drug users were included in the self-constructed questionnaire. These statements were all based on drug facts that were dealt with in the literature and information provided in Project Skills Development. The statements were all formulated to be true or correct. In other words, respondents were expected to finally agree with all the statements, as they were all correct. The latter is summarized in Table 35, with the respondents' responses to them in the earlier mentioned categories, i.e. (a) Agree, (b) uncertain, and (c) disagree.

Table 35 thus reflects a distribution of the respondents' responses to the substance specific statements.

Table 35: Frequency distribution of the respondents' knowledge of drugs

Statement	Knowledge of drugs			
	Pre-test		Post test	
	Experimental group	Comparison group	Experimental group	Comparison group

	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
Most illegal drugs started life in a laboratory as legal medicines.	9	8	8	9	8	8	19	3	3	7	12	6
People take drugs because it is an exiting thing to do.	6	8	11	6	12	7	3	14	8	7	13	5
After taking drugs, you always have to come down; and the higher you go, the harder you fall.	9	10	6	14	7	4	13	6	6	9	11	5
Some medicines prescribed by doctors are just as harmful as some of the illegal street drugs.	14	6	5	14	7	4	15	6	4	10	12	3
Drinking one or two glasses of alcohol, for example beer or wine, is socially acceptable for adults.	14	4	7	17	4	4	23	2	-	19	2	4
Alcohol, for example beer or wine, relaxes you.	11	7	7	9	7	9	15	2	8	5	12	8
Some drugs numb the brain and body and kills pain.	19	5	1	10	8	7	19	4	2	13	11	1
A drug called "magic mushrooms" is illegal in South Africa.	-	10	15	2	12	11	12	11	2	6	11	8
Some drugs make you see, hear and feel things that are not real.	14	7	4	14	6	5	23	2	-	16	2	7
Some drugs can make a person more alert and energetic.	11	7	7	9	10	6	13	7	5	9	12	4
TOTAL	107	72	71	104	81	65	155	57	38	101	98	51

This table indicates the following:

- In the category "Agree" the sum of the pre-test scores for the experimental and comparison group is respectively 107 and 104. After participation in Project Skills Development the post-test results for the experimental group is 155. The comparison groups' post-test results are 101. The experimental groups drug knowledge was enhanced from 107 to 155 correct answers,

whilst the comparison groups' drug knowledge basically stayed the same with a decline from 104 to 101 correct answers.

- The total number of "Uncertain" responses to substance specific statements by the experimental group during the pre-test are 72 and post-test 57. For the comparison group pre-test results are 81 and post-test results 98. This indicates that the experimental groups' uncertainties declined whilst the comparison groups' uncertainties increased.
- The sum of the pre-test scores for the category "Disagree" of the experimental and comparison group are 71 and 65. Post-test results for the experimental group show a sharp decline from 71 to 38. Post-test results for the comparison group also decline from 65 to 51. This indicates a clear increase in the drug knowledge of the experimental group with an inferior noticeable increase in the drug knowledge of the comparison group.

From Table 36 the mean scores of respondents' knowledge of drugs can be seen.

Table 36: Mean scores of respondents' knowledge of drugs

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	**25**	**0,32**	**0,46**	**-0,80**	**1,00**
Comparison group	**25**	**0,04**	**0,28**	**-0,60**	**0,90**

This table reflects the mean scores of respondents' knowledge of drugs.

Analysis of the mean scores for the experimental group (0,32) and comparison group (0,04) indicates significant differences in the average between the two groups. The standard deviation of both groups is 0,46 and 0,28.

According to the Kruskal-Wallis test the P-value for this variable is 0,0113 using a chi-square distribution with 1 degree of freedom. This compares favourably with the 0,05 level of significance as a P-value smaller as 0,05 indicates a statistical significant difference. The researcher concludes that **there is a statistical significant difference in the experimental groups' drug knowledge, with a 95% chance that the results are due to Project Skills Development and not to chance**. The sub-hypothesis is thus confirmed.

4.2.5 Skills development

In this section data on skills development is presented, analysed and interpreted. The researcher's goal with this variable was to test the following sub-hypothesis: **If early adolescents undergo a school based substance abuse prevention programme then their personal and social skills will be enhanced.**

Skills development includes discussion of the following:

(a) Peer pressure,

(b) Social problem solving: Techniques to promote self- control,

(c) Social problem solving: Relieving stress, anxiety and pressure,

(d) Developing assertiveness skills, and

(e) Communication skills.

4.2.5.1 Peer pressure

Peer pressure is a risk factor for adolescent substance abuse. A focus derived from the theoretical base of Project Skills Development, namely the Social environmental/learning model or Social influences model. The researcher thus assumes that:

(a) Social influences, namely peers, poses a risk to substance abuse, and that

(b) Adolescents can be trained to become aware of and resist social situational pressures (i.e. peer pressure) to use substances of abuse.

Peer pressure is thus addressed to show strengthening of respondents' awareness and skills within peer group relationships.

Five general statements about peer group relations were included in the self-constructed questionnaire. These statements are based on the literature and information presented to respondents in the session on peer pressure covered in Project Skills Development. The statements are summarized in the Table 37, with the respondents' responses to them in the earlier mentioned categories, i.e. Agree, Uncertain and Disagree.

Table 37 reflects a distribution of the respondents' responses to the peer related statements.

Table 37: Frequency distribution of peer pressure

Statement	Peer pressure											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
My friends can get me to do things I would not normally do, for instance to drink beer.	3	5	17	2	10	13	6	5	14	3	9	13
Once I have made a decision I believe in, I usually stick to it.	13	5	7	18	3	4	19	5	1	19	2	4
I am lonely.	7	5	13	8	7	10	9	3	13	6	6	13
I have enough friends.	22	3	-	22	1	2	24	-	1	22	1	2
I am able to go against the group sometimes.	20	1	4	17	5	3	21	2	2	19	5	1
TOTAL	65	19	41	67	26	32	79	15	31	69	23	33

The researcher concludes the following:

- On adding the pre-test scores of "Agree," the results for the experimental and comparison group is respectively 65 and 67. After participation in Project Skills Development the post-test results for the experimental group is 79. The comparison groups' post-test results are 69.

- The sum of the scores on "Uncertain" responses to substance specific statements by the experimental group during the pre-test are 19 and post-test 15. For the comparison group pre-test results are 26 and post-test results 23. Both the experimental group and comparison group show a decline in their uncertainties about peer relationships.
- The total number of pre-test results for the category "Disagree" of the experimental and comparison group are respectively 41 and 32. Post-test results for the experimental group show a decline from 41 to 31. Post-test results for the comparison group basically stayed the same, i.e. 32 to 33.

Table 38 shows the mean scores for peer pressure.

Table 38: Mean scores for peer pressure

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	**25**	**-0,13**	**0,52**	**-1,20**	**0,60**
Comparison group	**25**	**-0,20**	**0,40**	**-1,00**	**0,60**

The mean for the experimental and comparison group is respectively calculated as –0,13 and -0,20. The standard deviation of both groups is 0,52 and 0,40.

The Kruskal-Wallis test statistic is 0,66 with a P-value of 0,4157. Compared with the 0,05 level of significance **there is not a statistical**

significant difference in the experimental groups' awareness of peer group relations.

4.2.5.2 Social problem solving: Techniques to promote self-control

Skills development is an important element of Project Skills Development. Social problem solving, or more specifically techniques to promote self control is thus addressed to show strengthening of respondents' awareness of techniques to promote self-control.

Five statements about self-control were included in the self-constructed questionnaire. These statements are based on information presented to respondents in the session on techniques to promote self-control covered in Project Skills Development. The literature based statements and the respondents' responses to them are summarized in Table 39.

Table 39 reflects a distribution of the respondents' responses to the statements on self-control.

Table 39: Frequency distribution of techniques to promote self-control

Statement	Self-control			
	Pre-test		Post test	
	Experimental group	Comparison group	Experimental group	Comparison group

	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
I am regularly bothered by a guilty conscience.	17	3	5	18	5	2	23	2	-	19	4	2
I usually do my homework, even when I don't feel like it.	20	3	2	17	6	2	15	4	6	22	1	2
I usually do things at the spur of the moment.	5	7	13	8	5	12	15	6	4	9	10	6
I usually solve problems by carefully thinking things through before making any decisions.	19	4	2	22	3	-	21	3	1	19	5	1
I set limits on what I will and will not do.	22	2	1	14	4	7	24	1	-	19	3	3
TOTAL	83	19	23	79	23	23	98	16	11	88	23	14

From the above table the following is clear:

- In the category "Agree" the sum of the pre-test scores for the experimental and comparison group is respectively 83 and 79. After participation in Project Skills Development the post-test results for the experimental group is 98. The comparison groups' post-test results are 88.

- The sum of the scores on "Uncertain" responses to substance specific statements by the experimental group during the pre-test are 19 and post-test 16. For the comparison group pre-test results are 23 and post-test results 23. The experimental groups' uncertainties about self-control declined whilst the comparison groups' uncertainties stayed the same.

- The total number of pre-test scores for the category "Disagree" of the experimental and comparison group are both 23. Post-test results for the experimental group show a decline from 23 to

11. Post-test results for the comparison group also lessen from 23 to 14.

Table 40 summarizes the mean scores of respondents' techniques to promote self-control.

Table 40: Mean scores of respondents' techniques to promote self-control

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	**25**	**0,28**	**0,34**	**-0,40**	**0,80**
Comparison group	**25**	**0,34**	**0,50**	**-0,80**	**1,00**

The mean score for the experimental and comparison group is respectively calculated as 0,28 and 0,34 with the standard deviation of both groups 0,34 and 0,50.

The Kruskal-Wallis test statistic is 0,53 with a P-value of 0,4648. Compared with the 0,05 level of significance **there is not a statistical significant difference in the experimental groups' techniques to promote self-control.**

4.2.5.3 Social problem solving: Relieving stress, anxiety and pressure

Another aspect of social problem solving that was addressed by Project Skills Development is techniques or ways to relieve stress, anxiety and pressure. This is addressed to show strengthening of respondents' awareness of adaptive coping strategies.

Five related statements were included in the self-constructed questionnaire. Statements that were all based on the literature and the information presented to respondents in the session on techniques or ways to relieve stress, anxiety and pressure. The statements are summarized in Table 41, with the sum of the respondents' responses to them in the categories Agree, Uncertain and Disagree.

Table 41 reflects a distribution of the respondents' responses to the statements.

Table 41: Frequency distribution of ways to relieve stress, anxiety and pressure

Statement	Relieving stress, anxiety and pressure											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
I get a natural high from exercise.	21	2	2	20	1	4	24	1	-	21	3	1

Statement	Relieving stress, anxiety and pressure											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
An enjoyable activity, like swimming in the sea, makes me feel good.	24	-	1	19	2	4	18	5	2	14	3	8
I am usually a calm person.	19	1	5	13	7	5	16	5	4	18	4	3
I am easy-going.	18	2	5	17	4	4	15	7	3	17	5	3
I am easily discouraged by new challenges.	6	8	11	5	10	10	11	5	9	7	11	7
TOTAL	88	13	24	74	24	27	84	23	18	77	26	22

- In the category "Agree" the sum of the pre-test scores for the experimental and comparison group is respectively 88 and 74. After participation in Project Skills Development the post-test results for the experimental group is 84. The comparison groups' post-test results are 77.
- The sum of the scores on "Uncertain" responses to substance specific statements by the experimental group during the pre-test are 13 and post-test 23. For the comparison group pre-test results are 24 and post-test results 26. Both the experimental and comparison groups' uncertainties about self-control declined whilst the comparison groups' uncertainties increased.
- The total number of pre-test scores for the category "Disagree" of the experimental is 24 and comparison group 27. Post-test results for the experimental group show a decline from 24 to 18. Post-test results for the comparison group also lessen from 27 to 22.

In Table 42 a distribution of the mean scores of respondents' techniques to relieve stress, anxiety and tension is presented.

Table 42: Mean scores of respondents' techniques to relieve stress, anxiety and tension

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	**25**	**-0,06**	**0,42**	**-1,00**	**0,60**
Comparison group	**25**	**-0,02**	**0,47**	**-1,20**	**0,80**

The mean score for the experimental group is –0,06 and comparison group –0,02 with the standard deviation of both groups respectively 0,42 and 0,47.

The Kruskal-Wallis test statistic is 0,24 with a P-value of 0,6246 using a chi-square distribution with 1 degree of freedom. Compared with the 0,05 level of significance **there is not a statistical significant difference in experimental groups' techniques to relieve stress, anxiety and tension.**

4.2.5.4 Developing assertiveness skills

Another important aspect of skills development that was addressed in Project Skills Development is assertiveness. This variable was included to show a strengthening of respondents' communication-, i.e. assertiveness skills.

Ten general statements about assertiveness were included in the self-constructed questionnaire. These statements are based on the information provided to the respondents during the assertiveness session(s) of Project Skills Development. The literature based statements and the respondents' responses to them are summarized in Table 43.

Table 43: Frequency distribution of assertiveness skills

Statement	Assertiveness skills											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
I get what I want without fighting with my brothers and/or sisters.	20	2	3	19	4	2	21	-	4	19	3	3
My friends think I am a leader.	10	9	6	9	12	4	21	3	1	12	10	3
I usually believe people when they compliment me.	22	1	2	23	2	-	22	2	1	17	6	2
I am willing to defend that, which I believe in.	21	2	2	21	2	2	21	3	1	20	2	3
I frequently feel that people ignore the things I say.	10	7	8	11	8	6	16	6	3	15	8	2
I often tell jokes and funny stories to my friends.	24	-	1	21	2	2	23	1	1	20	2	3
Sometimes I keep quiet in conversation because I am afraid people will laugh or criticize me for my views.	15	5	5	14	4	7	22	2	1	16	3	6
I find it easy to criticize (judge) my friends.	15	4	6	16	3	6	20	4	1	20	3	2
I am usually very talkative when I am with people I know well.	25	-	-	23	2	-	24	-	1	24	1	-
I often feel that people disapprove of the things I say	9	8	8	2	11	12	12	5	8	11	6	8

Statement	Assertiveness skills											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
and do.												
TOTAL	171	38	41	159	50	41	202	26	22	174	44	32

The following is thus indicated:

- The sum of the scores on "Agree" responses to the above mentioned statements by the experimental group during the pre-test are 171 and post-test 202. For the comparison group the total number of pre-test results are 159 and post-test results 174. Both the experimental and comparison group show an increase in their responses the category "Agree".
- The sum of the pre-test results for the category "Uncertain" of the experimental and comparison group are 38 and 50. Post-test results for the experimental group show a lessening of uncertainties (from 38 to 26). Post-test results for the comparison group also decreased from 50 to 44.
- On adding the scores of "Disagree" the total amount of pre-test results for the experimental and comparison group are both 41 each. After participation in Project Skills Development the post-test results for the experimental group is 22. The comparison groups' post-test results are 32.

Table 44 reflects the mean scores of respondents' assertiveness skills.

Table 44: Mean scores of respondents' assertiveness skills

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	25	0,30	0,34	-0,50	0,90
Comparison group	25	0,11	0,34	-0,40	0,80

From the above results it can be seen that the mean score for the experimental group is 0,30 and comparison group is 0,11. The standard deviation of both groups respectively is 0,34 and 0,34.

The Kruskal-Wallis test statistic is 4.12 with a P-value of 0,0425 using a chi-square distribution with 1 degree of freedom. This compares favourably with the 0,05 level of significance as a P-value smaller as 0,05 indicates a statistical significant difference. The researcher concludes that **there is a statistical significant difference in the experimental groups' assertiveness, with a 95% chance that the results are due to Project Skills Development and not to chance.**

4.2.5.5 Communication skills

The development of communication skills is an important aspect of Project Skills Development. This variable is thus addressed to show strengthening of respondents' communication skills.

Five statements about this skill were included in the self-constructed questionnaire. These statements are based on the literature and

information presented to respondents in the session on communication skills in Project Skills Development. The statements are summarized as:

- I don't like talking to people who are always complaining about life.
- I am interested in other people's thoughts
- I find it difficult to talk about my feelings
- When I talk to my friends I look into their eyes to show my interest and full attention.
- I try to understand and react to other people's feelings in a caring and responsible way.

The frequency distribution of respondents' communication skills is presented in Table 45.

Table 45: Frequency distribution of communication skills

Statement	Communication skills											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
I don't like talking to people who is always complaining about life.	16	4	5	17	3	5	16	2	7	21	2	2
I am interested in other people's thoughts.	22	1	2	17	7	1	23	-	2	17	6	2
I find it difficult to talk about my feelings.	11	5	9	11	9	5	13	9	3	11	11	3
When I talk to my friends I look into their eyes to show my interest and full attention.	19	3	3	14	8	3	22	1	2	20	4	1

Statement	Communication skills											
	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
I try to understand and react to other people's feelings in a caring and responsible way.	12	6	7	11	11	3	21	3	1	16	5	4
TOTAL	80	19	26	70	38	17	95	15	15	85	28	12

- On adding the pre-test scores of "Agree," the results for the experimental and comparison group is respectively 80 and 70. After participation in Project Skills Development the post-test results for the experimental group is 95. The comparison groups' post-test results are 85.
- The sum of the scores on "Uncertain" responses to the statements on communication by the experimental group during the pre-test are 19 and post-test 15. For the comparison group pre-test results are 38 and post-test results 28. Both the experimental group and comparison group show a decline in their uncertainties about effective communication skills.
- The total number of pre-test results for the category "Disagree" of the experimental is 26 and comparison group 17. Post-test results for the experimental group show a decline from 26 to 15. Post-test results for the comparison group also lessen from 17 to 12.

Table 46 present the mean scores of respondents' communication skills.

Table 46: Mean scores of respondents' communication skills

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	25	0,24	0,45	-0,80	1,20
Comparison group	25	0,26	0,35	-0,40	0,80

It can thus be seen that the mean score for the experimental group is 0,24. The comparison group' mean score is 0,26. The standard deviations for both these groups are 0,45 and 0,35.

The Kruskal-Wallis test statistic is 0,01 with a P-value of 0,9217 using a chi-square distribution with 1 degree of freedom. Compared with the 0,05 level of significance the researcher concludes that **there is not a statistical significant difference in the experimental groups' communication skills after exposure to Project Skills Development.**

4.2.5.6 Collective summary of Skills development

A collective summary of skills development as the third and last key element of Project Skills Development includes the composition of the sum of scores from the following programme combination, i.e.: peer-group relations, social problem solving, assertiveness and communication. Table 47 gives a summary of the results.

Table 47: Frequency distribution of Skills development as a whole

Skills	Pre-test						Post-test					
	Experimental group			Comparison group			Experimental group			Comparison group		
	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree	Agree	Uncertain	Disagree
Peer pressure	65	19	41	67	26	32	79	15	31	69	23	33
Social problem solving: To promote self control	83	19	23	79	23	23	98	16	11	88	23	14
Social problem solving: To relief stress, anxiety and pressure	88	13	24	74	24	27	84	23	18	77	26	22
Assertiveness	171	38	41	159	50	41	202	26	22	174	44	32
Communication	80	19	26	70	38	17	95	15	15	85	28	12
TOTAL	487	108	155	449	161	140	558	95	97	493	144	113

The following is thus clear:

- On adding the pre-test scores of "Agree," the results for the experimental and comparison group is respectively 487 and 449. After participation in Project Skills Development the post-test results for the experimental group is 558. The comparison groups' post-test results are 493.
- The sum of the scores on "Uncertain" responses to substance specific statements by the experimental group during the pre-test are 108 and post-test 95. For the comparison group pre-test results are 161 and post-test results 144. Both the experimental

group and comparison group show a decline in their uncertainties.

- The total number of pre-test results for the category "Disagree" of the experimental and comparison group are respectively 155 and 140. Post-test results for the experimental group show a decline from 155 to 97. Post-test results for the comparison group also lessened from 140 to 113.

In the next table, Table 48 the mean scores of skills development for respondents from the experimental and comparison group can be seen.

Table 48: Mean scores of skills development

	N	Mean	Standard Deviation	Minimum	Maximum
Experimental group	**25**	**0,16**	**0,25**	**-0,37**	**0,70**
Comparison group	**25**	**0,10**	**0,21**	**-0,67**	**0,40**

The mean score for the experimental group is 0,16. The comparison groups' mean score is 0,10. Consequently the standard deviation of both these groups is 0,25 and 0,21.

The Kruskal-Wallis test statistic is 0,16 with a P-value of 0,6901 using a chi-square distribution with 1 degree of freedom. Compared with the 0,05 level of significance **there is not a statistical significant difference in the experimental groups' personal and social skills after exposure to Project Skills Development**. The researcher concludes that even

though the sub-hypothesis that read: "*If early adolescents undergo a school based substance abuse prevention programme then their personal and social skills will be enhanced*" was not confirmed a positive movement (i.e. in the development of assertiveness skills) did occur among the respondents.

Finally, consideration is given to the combined key elements, (i.e. skills development, adolescent drug attitudes and knowledge) of Project Skills Development.

4.2.5.7 Attitude, drug knowledge and skills

The combined mean scores of the key elements of Project Skills Development are summarized in Table 49.

Table 49: Mean scores of Project Skills Development

Key element	Respondents	N	Mean	Standard Deviation	Minimum	Maximum	P-value	Degrees of freedom
Attitudes to drugs and drug users	Experimental group	25	0,51	0,37	-0,09	1,45	0,0027	1
	Comparison group	25	0,20	0,30	-0,18	1,00		
Drug knowledge	Experimental group	25	0,32	0,46	-0,80	1,00	0,0113	1
	Comparison group	25	0,04	0,28	-0,60	0,90		
Skills	Experimental group	25	0,16	0,25	-0,37	0,70	0,6901	1
	Comparison group	25	0,10	0,21	-0,67	0,40		

To summarize:

- Attitudes to drugs and drug users

  There is **statistically a significant difference** in the experimental groups' attitudes to drugs and drug users, with a 95% chance that the results are due to Project Skills Development and not to chance.

- Knowledge of drugs

  There is **a statistical significant difference** in the experimental groups' drug knowledge, with a 95% chance that the results are due to Project Skills Development and not to chance.

- Skills development

  Compared with the 0,05 level of significance, **there is not a statistical significant difference** in the experimental groups' personal and social skills after exposure to Project Skills Development even though **a positive movement** (i.e. in the development of assertiveness skills) **did occur** among the respondents. Exact measurement of the different components of "Skills development" is difficult because the researcher didn't make use of standardized assessment tools, for instance the personality functioning scales that would lead to more precise measures.

Two out of the 3 key elements of Project Skills Development was thus successful in that it strengthened the experimental group's personal and interpersonal power against substance abuse. These results are in the opinion of the researcher in line with the presentation form (i.e. a once off, 2-week intervention) of the programme as a whole. Within a short time span, variables like attitudes and factual knowledge can be

influenced, temporarily. The same holds true for skills development. Skills, however, needs to be practiced continuously to be effective in the long run. Prevention programmes should therefore be part and parcel of a continuous intervention effort throughout the development of the adolescent.

Also, within the context of risk and protective factors, the first key element and identified risk factor, "adolescent attitudes towards substance use/abuse" thus showed a statistical significant difference. The other risk factor (peer influences) however did not. Accordingly, the protective factors (i.e. communication skills and social problem solving skills) also didn't have the impact that was hoped for. The researcher concludes that the only statistical significant difference within the context of risk and protective factors were for "adolescent attitudes towards substance use/abuse."

The researcher is also interested in the following correlations between the variables biographical details (i.e. age, gender, marital state of parents, living arrangement) and personal and social skills.

4.2.6 Correlations between biographical details and personal and social skills

4.2.6.1 Age and personal and social skills

Age and personal and social skills may have an important correlation. Table 50 reflects the mean scores of the relationship between age and personal and social skills.

Table 50: Mean scores of the relationship between age and personal and social skills

PERSONAL AND SOCIAL SKILLS	AGE IN YEARS							
	Eleven		Twelve		Thirteen		Fourteen	
	Mean	Standard Deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Attitude to drugs and drug users	0,36	0,36	0,35	0,42	0,41	0,46	0,31	0,26
Drug knowledge	0,21	0,39	0,11	0,28	0,16	0,39	0,27	0,54
Drug skills	-0,03	0,23	0,16	0,19	0,26	0,14	0,13	0,26
○ Peer pressure	-0,33	0,44	-0,19	0,53	-0,10	0,33	-0,03	0,48
○ Self control	0,18	0,49	0,48	0,46	0,42	0,37	0,14	0,28
○ Stress	-0,17	0,45	-0,04	0,50	0,10	0,46	-0,03	0,34
○ Assertiveness	-0,02	0,19	0,23	0,32	0,44	0,32	0,22	0,41
○ Communication	0,17	0,52	0,28	0,32	0,24	0,30	0,29	0,46

N = 50

The statistical significance between age and personal and social skills are displayed in Table 51.

Table 51: Correlation between Age and personal and social skills

Personal and social skills	P-value	Degrees of Freedom
Attitude	0,9517	3
Drug knowledge	0,6527	
Al the skills together	0,0096	

Personal and social skills	P-value	Degrees of Freedom
○ Peer pressure	0,4603	
○ Self control	0,0370	
○ Stress	0,6210	
○ Assertiveness	0,0148	
○ Communication	0,9800	

The following is deduced from the above:

- Compared with the 0,05 level of significance the researcher concludes that there is not a statistical significant correlation between age and (a) adolescent attitudes to drugs and drug users, (b) drug knowledge, (c) peer pressure, (d) stress, and (e) communication. However, the correlation between age and al the skills together has a P-value of 0,0096 and is as such a statistical significant relationship. Other statistical significant correlations between age are: self-control and assertiveness.

4.2.6.2 Gender and personal and social skills

The researcher is also interested in the correlation between gender and personal and social skills.

The Kruskal-Wallis one-way analysis of variance test results are summarized in Table 52:

Table 52: Correlation between Gender and personal and social skills

Personal and social skills	P-value	Degrees of Freedom
Attitude	0,2354	1
Drug knowledge	0,0140	
Al the skills together	0,1958	
○ Peer pressure	0,6519	
○ Self control	0,9135	
○ Stress	0,2492	
○ Assertiveness	0,3695	
○ Communication	0,5621	

From the above table the following is clear:

- Compared with the 0,05 level of significance there is not a statistical significant correlation between gender and (a) adolescent attitudes to drugs and drug users, (b) peer pressure, (c) self control, (d) stress, (e) assertiveness, and (f) communication. Also, the correlation between gender and all the skills together have a P-value of 0,1958 and is as such not a statistical significant relationship. The only statistical significant correlation is between gender and drug knowledge.

4.2.6.3 Family unit and personal and social skills

Another important correlation may be between the family unit and personal and social skills. Table 53 reflects the mean scores of the relationship between the variables marital state of parents and personal and social skills of respondents.

Table 53: Mean scores of the correlation between Marital state of parents and personal and social skills of respondents

PERSONAL AND SOCIAL SKILLS	MARITAL STATE					
	Married		Single parent		Not married but living together	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Attitude to drugs and drug users	0,36	0,27	0,18	0,31	0,44	0,41
Drug knowledge	0,32	0,35	0,22	0,33	0,11	0,45
Drug skills	0,17	0,23	0,13	0,15	0,11	0,27
○ Peer pressure	0,06	0,41	-0,10	0,46	-0,28	0,46
○ Self control	0,28	0,46	0,37	0,51	0,28	0,37
○ Stress	-0,02	0,43	-0,06	0,38	-0,04	0,49
○ Assertiveness	0,26	0,41	0,14	0,24	0,22	0,38
○ Communication	0,20	0,55	0,27	0,36	0,25	0,37

Herewith the Kruskal-Wallis one-way analysis of variance test results:

Table 54: Correlation between Marital state of parents and personal and social skills of respondents

	P-value	Degrees of Freedom
Attitude	0,1361	2
Drug knowledge	0,4495	
Al the skills together	0,9010	
○ Peer pressure	0,1010	
○ Self control	0,7095	
○ Stress	0,9410	

	P-value	Degrees of Freedom
○ Assertiveness	0,7490	
○ Communication	0,9318	

- Compared with the 0,05 level of significance there is not a statistical significant correlation between the marital state of parents and any of the personal and social skills of respondents, as the latter all have P-values greater than 0,05. In other words, there is not a statistical significant relationship between the variables marital state of parents and personal and social skills of respondents.

4.2.6.4 Living arrangement and personal and social skills

The last correlation the researcher is interested in is between living arrangement and personal and social skills. Table 55 reflects the mean scores of the relationship between the mentioned variables.

Table 55: Mean scores of the correlation between Living arrangement and personal and social skills

PERSONAL AND SOCIAL SKILLS	LIVING ARRANGEMENT					
	Mother and father		One parent		Grandparents	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Attitude to drugs and drug users	0,37	0,32	0,17	0,31	0,67	0,51

PERSONAL AND SOCIAL SKILLS	LIVING ARRANGEMENT					
	Mother and father		One parent		Grandparents	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Drug knowledge	0,17	0,42	0,15	0,41	0,35	0,25
Drug skills	0,12	0,26	0,12	0,16	0,21	0,18
○ Peer pressure	-0,17	0,46	-0,05	0,36	-0,37	0,64
○ Self control	0,25	0,39	0,35	0,50	0,50	0,41
○ Stress	-0,02	0,44	-0,12	0,39	0,03	0,57
○ Assertiveness	0,20	0,37	0,15	0,25	0,37	0,42
○ Communication	0,23	0,42	0,25	0,34	0,33	0,45

The statistical significance between living arrangement and personal and social skills are displayed in Table 56.

Table 56: Correlation between living arrangement and personal and social skills

	P-value	Degrees of Freedom
Attitude	0,0508	2
Drug knowledge	0,4051	
Al the skills together	0,6075	
○ Peer pressure	0,3307	
○ Self control	0,3489	
○ Stress	0,5452	
○ Assertiveness	0,5561	
○ Communication	0,9186	

From the above table the following is clear:

- Compared with the 0,05 level of significance there is not a statistical significant correlation between living arrangement and (a) attitude, (b) drug knowledge, and (c) all of the personal and social skills.

5. Summary

In this chapter the researcher presented, analysed and interpreted dominant quantitative findings (Section B) based on the evaluation of a substance abuse prevention programme for early adolescents in KwaZulu Natal, combined with qualitative/quantitative findings (Section A) from the review of the state of existing substance abuse prevention programmes in KwaZulu Natal.

Chapter 7 will thus focus on a general summary, conclusions and recommendations.